IJAAR PUBLISHING®

Research Journal of Management Practice | ISSN: 2782-7674
Vol. 5, Issue 11 (2025) | www.ijaar.org/rjmp

TOTAL QUALITY MANAGEMENT (TQM) AND ORGANIZATIONAL PERFORMANCE: AN EXPLORATION OF ISSUES

[1]Chioma Francisca Okeke, [2]Odieli Joyce Ifeyinwa, [3]Ezeanolue Ekwutosi Theresa

[1,2,3]Department of Business Administration, Faculty of Management Sciences, Chukwuemeka Odumegwu Ojukwu University, Igbariam, Anambra State Nigeria

Correspondence email: franciscaokeke34@gmail.com, anumbajoyce2016@gmail.com, ekwyezeanolue@gmail.com

ABSTRACT

This paper explores critical issues of Total Quality Management (TQM) and how it is associated with organizational performance. It relies on the international body of literature and case-based experiences to focus on the essence of TQM as a systemic and strategic philosophy relying on leadership commitment, quality-culture driven, data-driven in decision making, and continuous improvement. The review reveals that TQM has a dual dimension consisting of soft and hard dimensions including leadership, culture and employee empowerment on one hand and process management, measurement, supplier relations on the other hand that interact to achieve sustainable performance outcomes. In spite of the demonstrated advantages, organizations are still confronted by difficulties related to leaders disengaging, culture defiance, inadequate measurement system, and poor digital preparedness. As the recent empirical research notes, the effects of TQM on performance are usually indirect, mediated through such constructs as organizational learning, social responsibility, organizational agility and sustainability practices. By combining TQM with other complementary systems like digital transformation and environmental management, enterprises have an ideal opportunity to unlock its potential in terms of providing competitiveness, and long-term excellence within the organizations. The study finds that in order to define TQM it is important to see it not as a stagnant tool but as an organizational capability that evolves and has to adjust to changing situations continuously, which makes the study valuable both to scholars and practitioners.

Keywords: *Total Quality Management, organizational performance, leadership, quality culture, Quality 4.0, sustainability*

Okeke, C. F., Odieli, J. I. & Ezeanolue, E. T. (2025). Total Quality Management (TQM) and Organizational Performance: An Exploration of Issues. *Research Journal of Management Practice. 5*(11), 1-14. DOI: https://doi.org/10.5281/zenodo.18115213

INTRODUCTION

Over the past three decades, Total Quality Management (TQM) has been recognized as one of the most powerful management philosophies that have dominated organizations today. First of all, as a strategic reaction to increasing global competition, demands on higher value by customers and necessity of permanent improvement TQM was developed out of the groundbreaking works of W. Edwards Deming (1986) and Joseph Juran (1992). Although the philosophy has been refined over time, its purpose still remains the same which is simply to incorporate quality to all processes within the organization so that it is not only efficient, but also sustainable in the long term and competitive.

In today's new and unstable business world, marked by transformations propagated by the digital, globalization, and post-pandemic reorganization, TQM has gained a new meaning. According to recent studies, companies that have adopted the principles of TQM are more likely to perform better than their colleagues in terms of customer satisfaction, ability to innovate, and supply chain resilience (Zhang, Zhao, and Kumar, 2020; Singh and Sushil, 2021). Furthermore, the researchers claim that the concepts of quality management are not limited to the manufacturing businesses alone, but go far beyond them, into services, healthcare, education, and the state (Abdallah and Abou-Moghli, 2022). This is a development of the overall understanding that quality is not only a technical issue but also a strategic unlocking point in enhancing performance in an organisation.

In spite of all these developments, the introduction of TQM as a part of organizational strategy has been fraught with problematic issues. Research has shown that there are continuing challenges on how to align the commitment with operations, how to interfere with the resistance, which is established within the organizational culture and how to establish an effective performance measurement system that goes beyond the compliance stage to drive learning and improvement (Yunis, Tarhini, and Kassar, 2018; Dubey et al., 2020). These issues indicate that though TQM has already revealed its worth as a management ideology, its deployment is usually disproportionate, and, in certain occasions, symbolic and not substantive, depending upon situational factors.

It is within this context that this paper takes an exploratory position. It does not seek to test hypotheses, or do empirical statistical analysis. Rather, it is a synthesis of knowledge based on the existing literature and cross-industry case studies to outline the most important aspects determining TQM success. Special attention is paid to the practice of leadership, organizational culture, or performance measurement systems as the elements that define success or failure of TQM implementation. In this way, the paper adds to a continuing discourse of research about quality management, providing a theoretical basis that can support future empirical investigations but also introduce a guide to practitioners who want to implement TQM concepts in their organizational strategies.

CONCEPTUAL AND THEORETICAL ISSUES

Total Quality Management (TQM) is a comprehensive management philosophy, combining a strategy, a culture, processes and the use of data to drive decision making to improve the outputs of an organization and customer satisfaction on a continual basis. TQM has the following principles, which the American Society of Quality (ASQ) expounds on: customer focus, employee involvement, process orientation, strategic alignment, continual improvements and fact-based decision making (ASQ, 2025).

Such principles will enhance the culture of quality that encourages cooperation at all levels of the organization and focuses on the long-term interests rather than on immediate profits. This

belief is further supported by the recent empirical examinations as leadership commitment remains the core of successful TQM implementation. Al Faruq, Sioutou, and Alauddin (2023) establish that top management should proactively lead in enthusiastically supporting the quality efforts, proper funding of facilities, and integration of quality with business strategies to achieve higher performance indicators. The absence of a management team that supports TQM is usually given as a shoving block to the success of TQM. Moreover, modern studies indicate that TQM does not only result in operational efficiency, but also in the morale and customer satisfaction of employees. As it is shown by Chan and Abdullah (2024), in the case of the private healthcare sector, the implementation of TQM principles resulted in a more patient-centered approach, greater involvement of staff, and improved quality of service that could also be measured. In the same sense, Alghamdi (2024) demonstrated how incorporation of TQM in the manufacturing process had the potential to deeply transform the defects and waste the organization, taking the productivity and profitability to the next level. Creative trends also suggest that there shall be the growing integration of TQM with agile and lean methods that will enhance their responsiveness and the elimination of waste, which have become more pertinent in the current, fast-changing business landscape (Invensis Learning, 2025). It is this synergy that generates a quicker delivery cycle, lower costs and more aligned customers, which solidifies competitiveness. The nature of TQM is, therefore, strategic as well as systemic in that it requires strong leadership, culture of quality, constant learning, and effective use of data to ensure excellence of the organization. This body of the recent literature has revealed that organizations that adopt these aspects of TQM have been found to perform better as compared to their peers, especially where there is inter-departmental harmony in the implementation of such quality programs.

TQM COMPONENTS AND VARIABLES

The modern literature seems to come to a two-layered perspective of Total Quality Management (TQM):

1. **Core Soft components (socio-cultural)** that includes: leadership, culture, employee involvement/empowerment, training and
2. **Core Hard parts (technical)** that encompasses: the process management, measurement and analysis, design and improvement techniques and the supplier/relationship control. The soft side constructs the context of quality and the hard side inculcates disciplined routines.

The new group of empirical studies confirms that soft practices stimulate (and, often, mediate) the effects of hard practices on performance and innovation (Masoudi, 2024; Zelalem & Woldesemayat, 2024).

Core soft components (People and the culture)

One of the elements that is vital in the success of TQM is leadership commitment. It offers guidance, resource allocation and join quality targets to strategic planning. As an example, Zelalem and Woldesemayat (2024) discovered leadership to be the most predictive of the TQM dimensions in Ethiopian higher education institutions towards innovation. Training and employee empowerment is also critical. Ali, Johl, Muneer, Alwadain, and Ali (2022) have shown that training and empowerment as some of the soft practices directly contribute to organizational preparedness to adopt the Industry 4.0, whereas Lehyani, Zouari, Ghorbel, Tollenaere, and Sa (2023, U) have established that knowledge management and soft TQM elements have a significant impact on the effectiveness of employees in Tunisian SMEs. Lastly, it has been observed that developing a quality culture can enhance the propagation of

the soft practices to the quantifiable performance enhancement (Yilmaz, Cankaya, &Kaynak, 2024).

Core hard components (methods and processes)

Technically, process management, and continuous improvement emerge as the main contributors of hard TQM. Tessema, Gashaw, Negash, and Wei (2025) demonstrated that environmentally sustainable hospitals engaging in structured process management demonstrated massive returns in the pursuit of improvements in environmental sustainability. Measurement and analysis, a fact-based decision-making process via statistical process control, audits, and performance indicators are also pivotal with a body of studies continuing to point to their importance in increased innovation and operational effectiveness (Zelalem & Woldesemayat, 2024). In addition, the combination with technical design and improvement concepts, like benchmarking, failure mode effects analysis (FMEA), and quality function deployment (QFD), has been shown to have a positive interaction with the soft elements, more specifically leadership and culture (Masoudi, 2024; The TQM Journal, 2023). The third dimension that is recurring is supplier and relationship management, as external partnerships seem to take a strong place in terms of anchoring systemic quality (The TQM Journal, 2024).

TQM variable sets used in recent research.

When trying to operationalize TQM to surveys and exploratory studies, researchers most of the time adapt models previously used by the Malcolm Baldrige National Quality Award (MBNQA) or create one similar to the idea. They are generally customer focus, leadership, strategic planning, process management, continuous improvement, workforce focus, measurement and analysis (Tessema et al., 2025; Yilmaz et al., 2024). It is important that the variables are tested as individual constructs as well as in an integrated model, as evidence has shown that soft practices are frequently the facilitators of effective implementation of hard practices (Masoudi, 2024).

How components interact.

There are indications of a soft → hard → outcomes cascade. In order to predict innovation performance, Masoudi (2024) identified both soft and hard TQM as significant considerations, whereby soft TQM is the influence of the former on the latter. Equally, Ali et al. (2022) reaffirmed previous findings using SEM and neural network modeling that employee empowerment and the support of the leadership team in manufacturing SMEs strengthens the use of technical TQM approaches. These results indicate the interdependence of the TQM variables since the soft practices influence organizational readiness, whereas hard practices translate quality into measurable results.

EMPIRICAL REVIEW: TQM AND ORGANIZATION PERFORMANCE

A rising body of contemporary evidence documents that Total Quality Management (TQM) enhances organizational performance, but that effects largely work through mediators, including learning, corporate social responsibility (CSR), and quality culture. The study by Tajouri and Lakhal (2024) establishes that the positive influence of TQM practices on organizational performance and innovation is indirect through the mediating role of organizational learning; the size of a firm preconditions the strength of the discussed links, and the learning abilities of an organization represents a key to transforming TQM into results (Tajouri & Lakhal, 2024).

Complementing this, Chaher and Lakhal (2024) separated financial and non-financial performances and discover that TQM concisely increases non-financial performance (e.g., service quality, customer satisfaction), whereas its outcome on financial performance is indirect, and it occurs mediated through CSR; CSR, then, promotes both financial and non-financial performances. These findings contribute to understanding the mixed findings in the literature where only the bottom-line measures are measured (Chaher & Lakhal, 2024).

Culture also plays a role beyond any process or learning mediator. In the Colombian study (Navarro and Naranjo, 2025), using a 2025 SEM approach on Colombian manufacturers data, the researchers confirm that a positive linkage between quality culture and performance is not only direct but larger in size due to formal practices of quality management i.e., TQM mediates the quality-culture performance relationship. The model explains significant differences in the performance indicators, both financial and non-financial which adds more weight to the argument that TQM should be embedded in a cultural, fostering environment (Navarro & Naranjo, 2025).

These mechanisms are also supported by sector wise evidences. In privately owned healthcare, multi-site researches claim that an integrated TQM initiative leads to increase in growth and service quality, which again is spread through internal process capacities and practices focused on stakeholders (Chan & Abdullah, 2024). Latest findings show that the relationship between TQM and service performance is mediated by organizational agility especially in an industry such as banking where responsiveness is the strategic priority (Chan & Abdullah, 2024; Al-Edrus et al., 2025).

At the systems-level, cross-study syntheses reveal that contemporary TQM often interacts with sustainability and green practices to determine outcome. An example is a recent study in Sustainability, which illustrates how TQM may moderate the outcome of CSR on environmental performance among corporations, harmonizing quality processes with the sustainability agenda that is gaining grounds on the path to competitive advantage (Khalili et al., 2023). Recent manufacturing research combined TQM with environmental management, digital quality 4.0 competences, green supply chains, and innovation to model competitive advantage and performance within 2025 cross-industry data. These results support the idea that the advantages of TQM are ensured optimally in the combination with practices of digital quality 4.0 and environmental management, as well as with high interdependencies between them (Khalili et al., 2023; Nair & Gupta, 2024).

Generally the empirical evidence is in line: TQM has a positive correlation with organizational performance in different contexts, yet the paths to performance mostly pass through organization learning, CSR, agility and quality culture. These papers indicate that managers cannot hope to achieve short-term financial benefits out of TQM but must develop aligned capabilities and stakeholders activities that translate TQM routines into long-term and sustainable financial and non-financial performance.

BENEFITS OF TOTAL QUALITY MANAGEMENT (TQM) TO ORGANIZATIONS

There is a direct and quantifiable impact of TQM on the organizational performance through the application of quality principles in the daily running of organizations. The integration of TQM practices in the context of micro, small and medium size enterprises (MSMEs) in Indonesia have been proven to have a great positive impact on the efficiency of the operations, quality of services and customer satisfaction. All these advantages are amplified by the presence of a well-built organizational culture that promotes the idea of continuous improvement and employee participation (Pramudita & Noviar, 2023). Equally, within the

medical care industry, hospitals that had incorporated the TQM models, specifically those that placed special focus on the ideas of leadership dedication, worker involvement, and the systemic enhancement measures, had significant increases in the financial performance and the operational efficiency. This fact underscores the fact that TQM is not only an optimization of internal operations as it allows organizations to realize long-term performance benefits which enhance competitiveness and value provision (Colak and Akyuz, 2023).

Based upon these results, researchers and practitioners have determined that there are a set of particular benefits that emanate as a result of adopting TQM. These benefits are not limited to efficiency gains, but also improved innovation and organizational learning, increased flexibility which reinforces competitive advantage, and the creation of effective systems to control quality. These benefits will be discussed in more detail in the following sub-headings based on recent empirical research in various industries.

TQM promotes innovation and organizational learning: The most notable advantage of Total Quality Management (TQM) is that it encourages both innovation and organizational learning, which is becoming more and more essential to firms operating in the competitive and technology-driven markets of nowadays. Although in the past, TQM was created to enhance efficiency and product quality, modern research has shown that the principles of TQM when applied adequately, provide the conditions that support ongoing knowledge sharing, experimentation, and innovative problem-solving (Dhaouabi, Ellouze, and Karray, 2023). A study across manufacturing companies in Tunisia discovered that, in addition to raising performance, TQM programs also drove innovation by promoting organizational learning. It proves that TQM is a part of establishing a culture of learning, which subsequently leads to the flexibility and competitiveness (Dhaouadi et al., 2023).

TQM implementations foster creativity among employees, product development with customers in mind, as well as, a structured feedback system. Institutionalization of learning processes and creation of a culture of innovation ensures TQM organizations are capable of staying fast and strong within the dynamic business environments.

Improves competitive advantage and organizational flexibility: Although, another important advantage of Total Quality Management (TQM) is that it helps to improve organizational flexibility and hence competitive advantage. In the modern business world characterized by high rates of technological change, globalization and customer demands that can vary across different periods, organisations cannot just perform the tasks with efficiency, but also exhibit agility and adaptability. Such flexibility is made possible by TQM that fosters the creation of structural and cultural support that ensure continuity of improvement and employee empowerment, as well as customer-oriented processes (Al-Momani, Al-Hyari, and Al-Majali, 2023).

There are a number of ways in which TQM helps in promoting flexibility. To begin with, its process-oriented nature helps organizations to spot inefficiencies, design workflows and restructure production systems to meet changes in the market faster. Second, the emphasis of TQM on employee participation fosters an active working force capable of providing innovative responses to new issues, and this means that the time interval between the environmental changes and organizational changes will be shortened (Akram and Farooq, 2024). Third, the customer-focused philosophy of TQM makes sure that companies are

attentive to changing market demands, so a company can make changes to products and services to maintain competitiveness (Colak & Akyuz, 2023).

A recent report on the Jordanian telecommunications sector has shown that although TQM practices had a direct positive impact on sustainable competitive performance, this effect was much larger when organizational flexibility was added (Al-Momani et al., 2023). This is an indication that TQM provides the company with routines and culture that are required to sustain quality standards, whereas flexibility guarantees the ability of these standards to be modified to suit the dynamic market environment. It is also the case that according to studies in both manufacturing and service-oriented fields, companies that have strong TQM systems have a higher possibility to initiate fast product innovations, tailor solutions, and switch directions of operations in a manner that can keep them ahead of the curve (Pramudita & Noviar, 2023; Hussain, Raza, and Shah, 2024).

Thus, TQM is not merely a source of stabilizing and standardization, but is an environment of responsive competitiveness. TQM permits firms to seek operational excellence and strategic responsiveness by enforcing flexibility into the processes and culture. This two-pronged ability is critical in the case of organizations who pursue sustainable competitive advantage in unstable settings.

TQM also improvesefficiency and quality control: The ability to increase efficiency and improve quality control in organizational processes is one of the most obvious and the best-known advantages of Total Quality Management (TQM). TQM at its core focuses on methodical gradual enhancement, standardization, and elimination of waste - values that directly enhance the efficiency of operations and make sure that the quality standards are constantly met (Deming, 1986; Juran, 1992).

TQM enhances efficiency through integration of systematic problem solving techniques like Plan-Do-Check-Act (PDCA) cycles, statistical process control and continuous feedback systems. These are tools that help organizations detect flaws, improve processes and maximize their use of resources. The outcome is a decrease in the number of production errors, a reduction in the cycle time, and a rise in cost-efficiency (Hussain, Raza, and Shah, 2024). In addition to savings in costs, efficiency gains also open up organizational space to strategic activities like innovations and customer interactions.

In the meantime, quality control is enhanced by the customer-oriented philosophy of TQM. Organizations are able to minimize the variability in products and services by establishing explicit quality standards and orienting employees in terms of outcome ownership and end up registering greater customer satisfaction. Indonesian MSMEs, as an example, TQM practices have been observed to support the internal quality control mechanisms, which led to the elimination of errors and higher consistency in output (Pramudita and Noviar, 2023). Likewise, Pakistani organizations stated that the adoption of TQM increased the level of adherence to the quality norms, enhanced the product reliability, and triggered the observable enhancement of the overall performance (Akram & Farooq, 2024).

In production, efficiency and control were improved, which resulted in increased profitability and increased competitive advantage (Hussain et al., 2024). In this way, TQM contribution towards efficiency and quality control shows the duality of value of the approach: it helps organizations to do more with less and at the same time maintains the satisfaction of

customers with their expectations fulfilled. This is a combination of cost-effectiveness and reliability that are pillars of organizational sustainability and competitiveness.

In a nutshell, the advantages of Total Quality Management go way beyond its conventional purpose of enhancing efficiency and product quality. The results of TQM in various industries underscore the fact that it has the direct benefit of promoting organization performance by creating innovation and learning, instilling flexibility that breeds competitive edge, and increasing efficiency and quality control processes. All these advantages combined makes it clear that TQM is not only a collection of functional tools but a comprehensive management philosophy that will equip organizations with the ability to not only enjoy short term performance benefits, but also long-term sustainability. TQM helps companies to stay robust, customer-oriented and strategically competitive in the current dynamic business environment by making sure leadership, culture and continuous improvement practices are aligned.

THE CHALLENGES AFFECTING TQM IN ORGANISATIONS

Despite its popularity nowadays, organizations tend to meet numerous barriers that dull the outcomes of Total Quality Management (TQM). This literature combines these barriers into leadership / governance gaps; culture and change resistance; capability and resourcing gaps; data and measurement friction; digital and Quality 4.0 preparedness; and cross-boundary (supplier / department) integration.

Gaps in leadership and governance: Lack of strong executive sponsorship, disjointed decision rights, and misalignment of strategies and quality-related plans continue to be the dominant stumbling blocks. A BMJ Open Quality scoping review of intervening roles on quality projects showed that although senior leaders can drive planning and resource mobilisation, time limits, mixed levels of supervisory skill, and centralised leadership organisational structure tend to stall implementation and acceptance by the rank and file employees (Gagnon, Breton, & Gaboury, 2024). In a manufacturing environment, a group best-worse method study in the Iranian food industry ranked low top management involvement and poorly defined strategic direction as the most important hurdles to implementation of TQM (Mohammadpour, Afrasiabi, & Yazdani, 2024).

Culture and change resistance: Subordinative culture, fear of reproach, insufficient collaboration of staff deteriorate constant improvement. A 2024 scoping review in the BMC Health Services Research journal, demonstrated that cultural barriers to CQI/TQM, including resistance to change, reluctance to report errors and blame-oriented climates are reocurring across the world, and the review recommends culturally deliberate culture-building and psychological safety as viable counter measures (Ault et al., 2024). The case study report of the Syrian tertiary hospital in 2025 Scientific Reports also witnessed hierarchies and a lack of resources to allow providers to place increased emphasis on TQM practices (Al-Mouwasat University Hospital study; authors as listed in the article, 2025).

Incompetency, Inadequate training, and resource constraints: Resource constraints and inadequacy of human resources in terms of preparedness, competence and availability of 'protected time to work on improvement activities are the perennial shortcomings. In the BMJ Open Quality review, it was recognized that the quality initiatives often lack manager bandwidth and uneven supervisory capacity, which undermines coaching and day-to-day management of improvement teams (Gagnon et al., 2024). Lack of training and skills, resource inadequacy and work overload were also identified as cross-context barriers, and remedies include structured mentoring and supportive supervision (Ault et al., 2024).

Data and measurement frictions: Organizations struggle with immature information systems, poor quality data or delayed data and measurement burden which diminishes Evidence-Based Management (EBM) decision making. The BMC review also pointed at the technical barriers which includes poor Electronic Medical Records (EMR)/IT infrastructure, and lack of data quality, and it equally stated that hybrid reporting systems and improved data flows were required (Ault et al., 2024).

Digitalization and Quality 4.0 prerequisites: As organizations increasingly integrates analytics, automation and connected systems into quality processes, new challenges to adoption arise in the form of gaps in skills and IT architectures imperfectly overlaid on traditional TQM issues.

Cross-boundary integration (departments and suppliers): TQM demands horizontal process ownership which in most cases comes in conflict with the siloed structures. Industrial prioritization of the barriers in the food manufacturing industry revealed interdepartmental coordination issues and low supplier interfaces to be high leverage constraints (Mohammadpour et al., 2024). In healthcare, the lack of regional and local decision-maker may restrict the diffusion and sustainability of quality gains, and multilevel governance and shared objectives are therefore strongly recommended (Gagnon et al., 2024).

When all evidences were considered, however, it is clear that TQM fails not because of the instruments but because of less investment in socio-technical scaffolding, which entails organizational leadership practices, culture, skills, time, infrastructures to support data, and coordination across levels, which are sorely wanting to make continuous improvement routine (Ault et al., 2024; Gagnon et al., 2024; Mohammadpour et al., 2024; Scientific Reports case study authors, 2025).

CONCLUSION

This survey conducted has shown that Total Quality Management (TQM) is an essential strategic and operational core to any organization which aims at sustainable competitiveness. The arguments on the nature and meaning of TQM summarizes that it is a system and is also strategic in nature and needs top management support, quality driven culture, decision making based on data and continuous improvement to make organizations processes aligned with the long run objectives.

The elements and aspects of TQM were revealed to work on two axes namely; soft-factors including leadership, culture and employee empowerment, and hard factors including process management, measurement and supplier relations. Recent empirical evidence reaffirms the importance of the soft elements in that they offer the cultural and behavioral backdrop through which technical practices could flourish.

Despite all this, it is evident that TQM has major problems in organizations. The reasons behind these challenges reported are leadership disengagement, cultural resistance, resource constraints, poor measurement systems and the lack of digital readiness which have been reported severally to negate the impact of TQM. These challenges all point to the fact that implementation needs not only the tools and methodologies but the socio-technical conditions to prompt quality initiatives as sustainable.

The empirical review on TQM and performance made it clearer that TQM has a positive relationship with organizational performance irrespective of the industry and national setting. Nonetheless, the evidence is overwhelming in the way TQM influence is normally indirect, through the performance of practice notes on organizational learning, quality culture, CSR,

agility, and sustainability. A mix of issues explain why outcomes are not uniform across contexts and why organizations that consider TQM as a stand-alone technical program have more limited success.

A combination of the above findings leads the reviewer to conclude that TQM is not a once in a lifetime initiative but a growing organizational capacity that has to be constantly adjusted to an ever changing environment. Its next steps depend on combining it with complementary concepts like sustainability, CSR and digital transformation (Quality 4.0). The findings present an opportunity to more scholars to conduct an additional empirical study with a multi-level and longitudinal model to further determine causal mechanisms that explain value delivery of TQM. To practitioners the lesson is clear: TQM delivers only when the leadership is determined, cultural change is committed, and when capabilities created and sustained are deep enough to turn quality management into competitive asset and a sustainable source of competitive advantage.

RECOMMENDATIONS

To overcome the challenges that have been compromising the Total Quality Management (TQM), an overall and long-run approach that enhances the technical and cultural premises of quality should be adopted. A major priority is the strengthening of commitment of leadership and governance structure. When the executives publicly support quality programs and incorporate them into the strategic efforts, they establish an organization-wide alignment tone. Leaders must not only provide sufficient resources but act as an example of desired behaviors pointing towards the constant improvement because the employees should trust that the leaders are committed to continuous improvement (Gagnon, Breton, & Gaboury, 2024; Mohammadpour, Afrasiabi, & Yazdani, 2024).

It is also vital to develop a favorable culture of quality. One of the reasons behind the failure of numerous organizations lies in the fact that their norms of hierarchy and resistance to change rob them of free dialogue and the reporting of errors. Making work environments free of blame and focus on learning, giving feedback and collaborating are significant steps to reduce the cultural resistance. This environment necessitates open communications, rewarding of quality oriented initiatives and the use of participative processes where employees feel they have been given power to lead process improvements (Ault et al., 2024).

A very important recommendation is the intentional investment in training, capacity building, and resource support. Organizations should appreciate that quality management mandates expertise in certain fields, including statistical process control, data analysis and root-cause problem solution. These skill gaps can be filled with structured learning and professional development programs, and sufficient time allocated to activities related to the process of quality improvement will ensure that employees will not consider TQM as an extra burden, which sets new demands that are incompatible with the current work.

It is also very important that robust data systems should be integrated. A vast number of organization have seen their measurement practices to be weak or out of date and this dilapidates the basis of fact driven decision making. By coming up with integrated quality information systems that provide real time feedback along with good performance indicators, managers can convert the data into actionable intelligence that will align the operational processes with customer value and strategic objectives in a more factual manner (American Society for Quality, 2025).

Additionally, as the quality management is transforming towards the digital age, companies have to be ready to enter a Quality 4.0 world. Creating digital readiness entails investing into

IT infrastructure, state of the art analytics and automation of processes and slowly inculcating technologies and their applications into TQM cyber-schemes. Resistance to technology can be reduced by rolling out technology gradually through pilot projects and firms can incorporate the lessons learnt into the larger organization planning.

Lastly, it has also become critical to implant sustainability and social corporate responsibility in quality processes. Empirical research studies in the past few years prove that the experience of TQM in terms of financial and non-financial performance is even more elevated when it is coupled with CSR efforts and environmental goals (Chaher & Lakhal, 2024). Making sustainability a formal part of quality solutions enables organizations to build trust with all stakeholders, and also improves long-term competitiveness.

All in all it is not enough to adopt technical tools to surmount the obstacles to TQM. It requires implementation of concentric forms that include systemic strengthening by leadership involvement, cross-cultural concordance, capacity building, competent data systems, digital aptitude, cross-boundary cooperation, and sustainability. Organisations that closely follow such recommendations tend to make TQM more a capability and less a symbolic exercise that leads to long term excellence in an organization.

REFERENCES

Abdallah, A. B., & Abou-Moghli, A. A. (2022). The impact of total quality management practices on organizational performance in Jordanian service sector. *International Journal of Business Excellence*, *27*(2), 239–255. https://doi.org/10.1504/IJBEX.2022.120234

Akram, M., & Farooq, A. (2024). The role of total quality management in improving organizational performance: Evidence from Pakistan's manufacturing sector. *Journal of Business and Management Research*, *6*(2), 45–60. https://jbmr.com.pk/index.php/Journal/article/view/271

Al-Edrus, S., Ahmad, N., & Rahman, A. (2025). *Total Quality Management, organizational agility and service quality* (*Total Quality Management & Business Excellence*). https://doi.org/10.1080/14783363.2025.2451355

Al Faruq, M., Sioutou, T., & Alauddin, M. (2023). The significance of total quality management implementation challenges: A case study in healthcare. African Journal of Public Administration and Development, 3(1), 45-63. https://apsdpr.org/index.php/apsdpr/article/view/841/1628

Alghamdi, S. H. (2024). Implementation of Total Quality Management (TQM) in organizations and business. International Journal of Economics and Management Research, 3(2), 322–332. https://doi.org/10.55606/ijemr.v3i2.227

Ali, K., Johl, S. K., Muneer, A., Alwadain, A., & Ali, R. F. (2022). Soft and hard total quality management practices promote Industry 4.0 readiness: A SEM–neural network approach. Sustainability, 14(19), 11917. https://doi.org/10.3390/su141911917

Al-Momani, A., Al-Hyari, K., & Al-Majali, M. (2023). Total quality management, organizational flexibility, and sustainable competitive performance: Evidence from

Jordanian telecommunications. *Journal of Organizational Effectiveness, 10*(3), 467–489. https://doi.org/10.13140/joe.ecohumanism.6088

American Society for Quality (ASQ). (2025). Total Quality Management (TQM): What is TQM? Retrieved from https://asq.org/quality-resources/total-quality-management

Ault, B., Chanie, T., Serhan, M., & Shiferaw, F. (2024). A scoping review of continuous quality improvement in healthcare systems: Conceptualization, models and tools, barriers and facilitators, and impact. *BMC Health Services Research, 24*, 933. https://doi.org/10.1186/s12913-024-10828-0

Chaher, D., &Lakhal, L. (2024). The impact of TQM on financial and non-financial performance: The mediating role of corporate social responsibility. *The TQM Journal, 37*(6), 1687–1715. https://doi.org/10.1108/TQM-08-2023-0244

Chan, K. W., & Abdullah, R. (2024). Total quality management (TQM) for sustainable growth performance in the private healthcare sector. Problems and Perspectives in Management, 22(4), 229–242. http://dx.doi.org/10.21511/ppm.22(4).2024.18

Çolak, A., & Akyüz, M. (2023). Total quality management practices and organizational sustainability in healthcare: Evidence from Turkish hospitals. *Sustainability, 15*(21), 15430. https://doi.org/10.3390/su152115430

Deming, W. E. (1986). *Out of the crisis*. Cambridge, MA: MIT Press.

Dhaouadi, M., Ellouze, M., & Karray, Z. (2023). Total quality management, organizational learning and innovation: Evidence from Tunisian manufacturing firms. *International Journal of Quality & Reliability Management, 40*(3), 657–676. https://doi.org/10.1108/IJQRM-06-2022-0188

Dubey, R., Gunasekaran, A., Childe, S. J., Bryde, D. J., Giannakis, M., Foropon, C., Roubaud, D., & Hazen, B. T. (2020). Big data analytics and artificial intelligence pathway to operational performance under the effects of entrepreneurial orientation and environmental dynamism: A study of manufacturing organisations. *International Journal of Production Economics, 226*, 107599. https://doi.org/10.1016/j.ijpe.2019.107599

Gagnon, J., Breton, M., & Gaboury, I. (2024). Decision-maker roles in healthcare quality improvement projects: A scoping review. *BMJ Open Quality, 13*(1), e002522. https://doi.org/10.1136/bmjoq-2023-002522

Hussain, S., Raza, H., & Shah, M. (2024). Enhancing efficiency and quality control through total quality management: Evidence from Pakistan. *Journal of Contemporary Management and Technology Studies, 5*(1), 23–41. https://ympn.co.id/index.php/JCMTS/article/view/35

Invensis Learning. (2025). 6 Key trends in quality management to watch in 2025. Retrieved from https://www.invensislearning.com/blog/quality-management-trends/

Juran, J. M. (1992). *Juran on quality by design: The new steps for planning quality into goods and services*. New York, NY: Free Press.

Khalili, S., Kordestani, A., & Ahmadi, H. (2023). The mediating role of total quality management between corporate social responsibility and corporate environmental performance. *Sustainability, 16*(17), 7401. https://doi.org/10.3390/su16177401

Lehyani, F., Zouari, A., Ghorbel, A., Tollenaere, M., & Sá, J. C. (2023). Knowledge management and total quality management impact on employee effectiveness in emerging industries: Case of Tunisian SMEs. Sustainability, 15(5), 3872. https://doi.org/10.3390/su15053872

Masoudi, E. (2024). The mediating role of hard quality management in the relationship between soft quality management and innovation performance. SEISENSE Journal of Management, 7(1), 117–134. https://doi.org/10.33215/3txfzp10 journal.seisense.com

Mohammadpour, M., Afrasiabi, A., & Yazdani, M. (2024). Identifying and prioritising the barriers to TQM implementation in food industries using group best–worst method (a real-world case study). *International Journal of Productivity and Performance Management, 73*(10), 3335–3362. https://doi.org/10.1108/IJPPM-11-2023-0602

Navarro, G., & Naranjo, G. (2025). Quality culture, quality management, and organizational performance: A structural model for the manufacturing sector. *Sustainability*, *17*(9), 3934. https://doi.org/10.3390/su17093934

Pramudita, R., & Noviar, D. (2023). The influence of total quality management on organizational performance in MSMEs: The mediating role of organizational culture. *Journal of Business and Organizational Management,5*(2), 101–118. https://jurnal.upnyk.ac.id/index.php/jbom/article/view/14523

Scientific Reports case study authors. (2025). A comparative study of total quality management in healthcare from provider and patient perspectives at Al-Mouwasat University Hospital. *Scientific Reports.*https://doi.org/10.1038/s41598-025-08512-2

Singh, R. K., & Sushil. (2021). Quality management for sustainability: An empirical study in Indian manufacturing industries. *The TQM Journal, 33*(6), 1458–1477. https://doi.org/10.1108/TQM-10-2020-0241

Tajouri, O., & Lakhal, L. (2024). The impact of TQM practices on organizational performance and on innovation: The mediating role of organizational learning. *International Journal of Quality & Reliability Management, 41*(5/6), 1457–1495. https://doi.org/10.1108/IJQRM-06-2022-018

Tessema, G., Gashaw, T., Negash, Y., & Wei, Y. (2025). Enhancing corporate sustainability through total quality management: Evidence from Ethiopian private hospitals. SAGE Open. https://doi.org/10.1177/21582440251329575

Yilmaz, O., Cankaya, S. Y., & Kaynak, H. (2024). A systematic literature review of the integration of total quality management and Industry 4.0: Enhancing sustainability performance through dynamic capabilities. Sustainability, 16(20), 9108. https://doi.org/10.3390/su16209108

Yunis, M., Tarhini, A., & Kassar, A. (2018). The role of TQM and strategic agility in enhancing organizational performance: A dynamic capability approach. *International*

Journal of Quality & Reliability Management, *35*(10), 2136–2160. https://doi.org/10.1108/IJQRM-10-2017-0206

Zelalem, D., & Woldesemayat, H. (2024). The effect of TQM practices on innovation: Evidence from Ethiopian ATVET colleges. Journal of Innovation and Entrepreneurship, 13, Article 60. https://doi.org/10.1186/s13731-024-00460-x

(Context on TQM dimensions and sustainability) Unveiling the contextual effects of TQM to achieve sustainability performance. The TQM Journal. (2024). https://doi.org/10.1108/TQM-05-2023-0124

(Background on soft vs. hard interplay) Leveraging the hard and soft elements of TQM: The interplay of benchmarking and improvement processes. The TQM Journal. (2023). https://doi.org/10.1108/TQM-01-2022-0045

Zhang, D., Zhao, X., & Kumar, A. (2020). Impact of digital transformation on total quality management: A study of manufacturing firms. *International Journal of Production Research*, *58*(23), 7292–7311. https://doi.org/10.1080/00207543.2020.1734127