

# The Role of Total Quality Management and Organizational Culture in Enhancing Employee Performance: Towards Sustainable Public Service Development

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## Abstract

*This study explores the impact of Total Quality Management (TQM) on employee performance, focusing on the mediating role of organizational culture in fostering sustainable and human-centric development within public institutions. Conducted at the Pekanbaru State Asset and Auction Service Office (KPKNL), this research employs SEM-PLS to analyze data from 42 employees. The findings highlight the importance of integrating TQM with a supportive organizational culture to enhance both employee performance and institutional responsiveness to societal needs. The study contributes to the discourse on sustainable public service management by underscoring the value of quality-oriented and inclusive organizational practices.*

**Keywords:** *Total Quality Management, Organizational Culture, Employee Performance, Public Sector, Continuous Improvement*

## Introduction

In an era defined by rapid technological advancement and increasing global challenges, public sector institutions are compelled to innovate not just for operational efficiency but also to foster human-centric and sustainable work environments. Total Quality Management (TQM) emerges as a pivotal strategy for aligning organizational practices with the broader goals of social well-being and institutional accountability.

In an era defined by rapid technological advancement and dynamic global competition, public sector institutions are increasingly compelled to enhance their operational effectiveness and service delivery. As governments face growing demands for accountability, transparency, and efficiency, management frameworks such as Total Quality Management (TQM) have emerged as transformative tools to address these challenges (Goetsch & Davis, 2020). Originally conceived for industrial applications, TQM has evolved into a versatile approach suitable for diverse organizational contexts, including public administration, where the focus extends beyond profitability to encompass stakeholder satisfaction and public trust (Deming, 1986).

The core principles of TQM—customer focus, continuous improvement, and employee involvement—are particularly relevant in the public sector, where the quality of service delivery often determines the legitimacy and effectiveness of government operations (Kotler & Keller, 2021). Through systematic process improvements and a commitment to excellence, TQM helps organizations navigate complex institutional frameworks while fostering innovation and adaptability (Cameron & Quinn, 2011).

A critical determinant of TQM's success lies in its integration with organizational culture. Schein (2016) defines organizational culture as the collective values, norms, and practices that influence how work is conducted within an organization. A culture aligned with quality management principles can amplify the benefits of TQM, fostering collaboration, accountability, and a shared commitment to organizational goals. Hofstede's (2010) cultural dimensions theory further illustrates that the adaptability and inclusiveness of an organization's culture significantly impact the effectiveness of management interventions like TQM.

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Employee performance, a key metric for organizational success, is intrinsically linked to both TQM and organizational culture. Performance theories emphasize the interplay of individual motivation, leadership, and organizational support in shaping outcomes (Mathis & Jackson, 2012). Recent empirical studies underscore the positive impact of TQM on employee performance, particularly when mediated by a supportive and quality-oriented culture (Sunarsi et al., 2023). For example, employees operating within a culture that values innovation and collaboration are more likely to demonstrate higher productivity, creativity, and commitment.

In the context of public administration, institutions such as the Pekanbaru State Asset and Auction Service Office (KPKNL) operate in high-pressure environments characterized by rigid bureaucratic structures and demanding stakeholder expectations. Despite notable improvements in organizational performance, challenges persist in achieving optimal efficiency and employee engagement. The role of TQM, mediated by organizational culture, becomes increasingly vital in addressing these gaps.

This study aims to bridge the research gap by exploring the influence of TQM on employee performance within a public sector institution, with a focus on the mediating role of organizational culture. Specifically, it investigates the extent to which TQM principles and cultural alignment contribute to enhanced performance outcomes at KPKNL Pekanbaru. By addressing these issues, the study seeks to provide actionable insights for policymakers and practitioners in the public sector striving for operational excellence and sustainable development.

Public sector organizations, unlike their private sector counterparts, operate under strict regulations and face unique challenges such as resource limitations and rigid bureaucratic frameworks. TQM provides a pathway to address these challenges by promoting efficiency, transparency, and stakeholder engagement. Recent studies also suggest that integrating sustainability principles within TQM frameworks can further enhance its applicability in public administration (Goetsch & Davis, 2020). This aligns with the increasing global emphasis on sustainable development goals (SDGs), where public institutions play a critical role.

## Literature Review

### *Total Quality Management (TQM)*

TQM has evolved significantly since its inception, adapting to technological advancements and changing organizational needs. As noted by Goetsch and Davis (2020), TQM incorporates modern tools such as Lean and Six Sigma to streamline operations and enhance efficiency. Deming (1986) introduced the PDCA cycle as a core component of TQM, emphasizing iterative improvement processes.

Kotler and Keller (2021) assert that customer-centricity is a defining feature of TQM, requiring organizations to align their objectives with stakeholder needs. Moreover, Gibson et al. (2020) highlight employee engagement as a cornerstone of successful TQM implementation, emphasizing the need for training and empowerment initiatives.

### *Organizational Culture*

Organizational culture, defined as the shared values and norms within a company, plays a pivotal role in shaping employee behavior and management practices (Schein, 2016). Cameron and Quinn (2011) identify four dominant culture types—clan, adhocracy, market, and hierarchy—and argue that a culture aligned with quality initiatives fosters better organizational outcomes.

Recent studies by Sunarsi et al. (2023) suggest that organizations with strong cultural values centered on collaboration, innovation, and accountability are more likely to realize the full potential of TQM. These findings align with Hofstede's (2010) cultural dimensions theory, which emphasizes the importance of adaptability in dynamic organizational.

### *Employee Performance*

Employee performance is influenced by an array of factors, including leadership, motivation, and organizational support (Bass & Riggio, 2006). Mathis and Jackson (2012) classify performance into dimensions such as productivity, quality, and timeliness, which serve as benchmarks for evaluating employee effectiveness.

Recent empirical studies indicate a significant relationship between TQM practices and improved employee performance. Hamsinah et al. (2023) highlight that employees in organizations with TQM programs often report higher levels of job satisfaction and commitment, leading to enhanced productivity. Furthermore, Setiawan (2021) demonstrates that effective leadership and cultural alignment amplify the positive impact of TQM on performance.

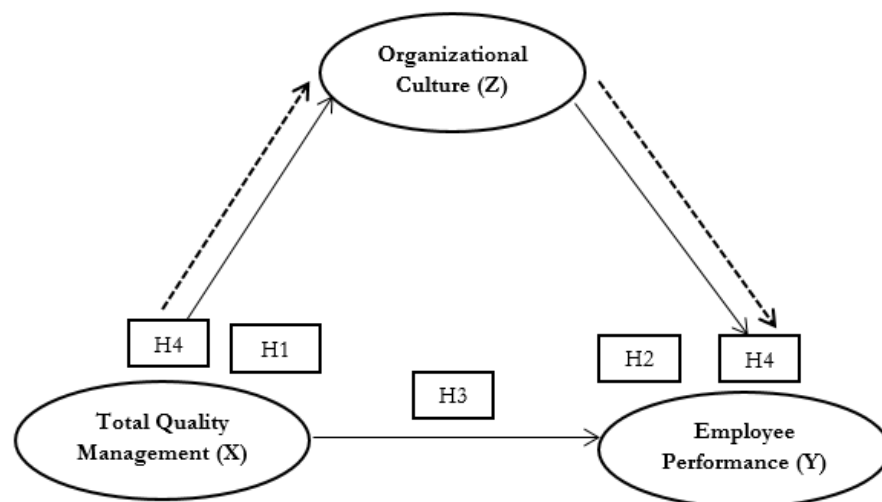
### *Sustainability as a Dimension of TQM*

Modern TQM frameworks emphasize not only operational efficiency but also sustainability and social responsibility. According to Elkington (1997), the triple bottom line—economic, social, and environmental goals—can be integrated into TQM practices to create a holistic management approach. Public institutions adopting these principles can align their operations with broader societal goals, thereby enhancing public trust and institutional legitimacy.

### *The Impact of Leadership in TQM Success*

Bass and Riggio (2006) emphasize the importance of transformational leadership in embedding TQM principles within an organization. Leaders who inspire and motivate their teams can foster a culture of quality and continuous improvement. This is particularly relevant in public sector institutions, where leadership often plays a pivotal role in overcoming resistance to change and driving organizational transformation.

## Methodology



**Figure 1:** Framework for Thought

### *Research Design*

This study employs a descriptive quantitative approach, focusing on the relationship between Total Quality Management (TQM), organizational culture, and employee performance. The Structural Equation Modeling-

Partial Least Squares (SEM-PLS) technique was used to analyze direct and indirect relationships among the variables. SEM-PLS is particularly suitable for this study as it allows for the simultaneous testing of complex relationships between multiple constructs (Ghozali & Latan, 2020).

#### *Population and Sample*

The study was conducted at the Pekanbaru State Asset and Auction Service Office (KPKNL), with a total population of 42 employees. The saturated sampling method was employed, ensuring that all members of the population were included as respondents. This approach minimizes sampling bias and provides comprehensive insights into the organizational dynamics.

#### *Data Collection*

Data were collected through a structured questionnaire distributed electronically via Google Forms. The questionnaire comprised three main constructs—TQM, organizational culture, and employee performance—each measured using validated indicators on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

#### *Measurement and Validation*

The constructs were validated through convergent and discriminant validity tests. Convergent validity was assessed using the Average Variance Extracted (AVE), with a threshold value of 0.5 or higher indicating adequacy (Ghozali & Latan, 2020). Reliability was measured using Cronbach's Alpha and Composite Reliability (CR), ensuring internal consistency of the instruments.

#### *Data Analysis*

SEM-PLS analysis was conducted in two stages:

1. Measurement Model Evaluation (Outer Model)

This involved testing the reliability and validity of the constructs. Indicators with loadings below 0.6 were excluded to enhance model fit.

2. Structural Model Evaluation (Inner Model)

Hypotheses were tested by analyzing path coefficients and significance levels using bootstrapping with 5,000 samples. The R-squared values for endogenous variables were interpreted to assess the explanatory power of the model.

## Results

### *Descriptive Analysis*

**Table 1:** Performance Index of KPKNL (2020–2023)

Year	Max Index (%)	Actual Index (%)
2020	120	100.27
2021	120	113.16
2022	120	114.19
2023	120	116.22

Table 1 presents the annual performance index of KPKNL Pekanbaru over four years, showing a consistent improvement from 100.27% in 2020 to 116.22% in 2023. Although the index increased annually, it did not reach the maximum target of 120%, indicating room for further optimization.

*Measurement Model Results***Table 2:** Measurement Model Results

Construct	AVE	Cronbach's Alpha	Composite Reliability
Total Quality Management	0.589	0.81	0.86
Organizational Culture	0.609	0.83	0.88
Employee Performance	0.579	0.79	0.84

The AVE values for all constructs exceeded 0.5, confirming adequate convergent validity (see Table 2). Cronbach's Alpha and Composite Reliability values were also above the recommended threshold of 0.7, indicating strong internal consistency.

*Structural Model Results***Table 3:** Structural Model Results

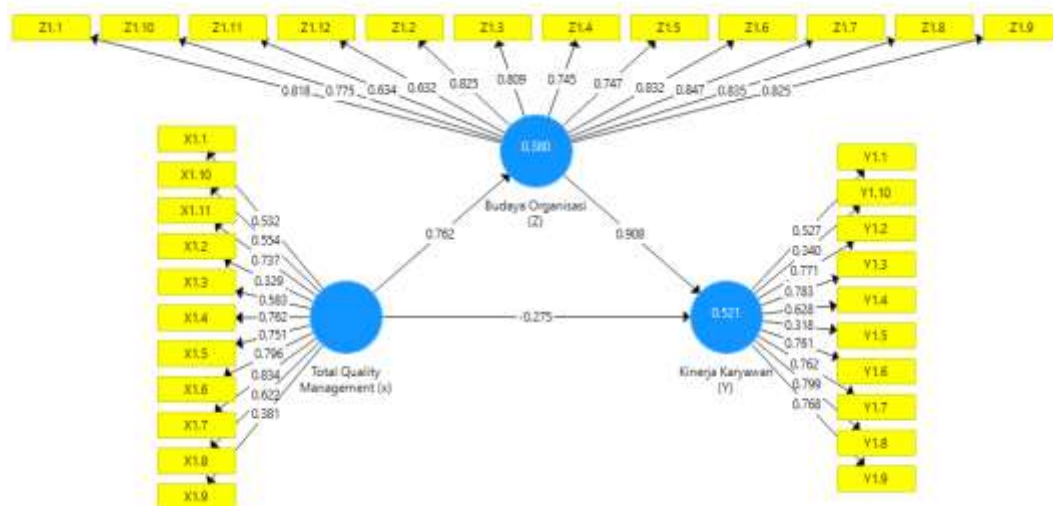
Path	t-Statistics	p-Value	Conclusion
TQM → Organizational Culture	9.789	<0.001	Accepted
Organizational Culture → Employee Performance	8.159	<0.001	Accepted
TQM → Employee Performance	2.162	0.032	Accepted
TQM → Organizational Culture → Employee Performance	5.437	<0.001	Accepted

## 1. Direct Effects:

- TQM significantly influenced organizational culture ( $t=9.789$ ,  $p<0.001$ ).
- Organizational culture significantly influenced employee performance ( $t = 8.159$ ,  $p<0.001$ ).
- TQM had a significant direct effect on employee performance ( $t = 2.162$ ,  $p = 0.032$ ).

## 2. Indirect Effects:

- TQM indirectly influenced employee performance through organizational culture ( $t = 5.437$ ,  $p<0.001$ ).

**Figure 2:** Results of Phase I Data Processing

#### *Explained Variance (R-squared):*

1. Organizational culture explained 56.1% of the variance ( $R^2 = 0.561$ ).
2. Employee performance explained 50.8% of the variance ( $R^2 = 0.508$ ).

#### *Performance Trends Analysis:*

While the performance index of KPKNL has consistently improved, a detailed breakdown of contributing factors such as employee training, process optimization, and stakeholder feedback could offer additional insights. For example, data on employee participation in TQM initiatives or customer satisfaction levels could strengthen the findings and provide actionable recommendations for further improvement.

#### *Cross-Comparison with Similar Institutions:*

Comparing KPKNL's results with similar public sector organizations can contextualize its performance and highlight areas for benchmarking. For instance, assessing whether other institutions have achieved similar improvements under TQM implementation can validate the generalizability of the findings.

## **Discussion**

The findings of this study provide valuable insights into the dynamics of Total Quality Management (TQM), organizational culture, and employee performance within the context of public sector institutions. Each result is discussed in detail, highlighting its implications and alignment with existing literature.

### 1. The Role of TQM in Shaping Organizational Culture

The significant relationship between TQM and organizational culture confirms that quality management practices are instrumental in fostering a supportive and collaborative organizational climate. This aligns with Schein's (2016) assertion that an organization's culture can either enable or hinder the implementation of strategic management frameworks. TQM principles, such as continuous improvement and employee involvement, inherently promote values of trust, collaboration, and accountability, which are critical for cultivating a quality-oriented culture.

In the context of KPKNL Pekanbaru, the adoption of TQM has encouraged a shift toward a more participatory and adaptive culture. Employees are more likely to take ownership of their tasks when they perceive that management values their contributions and provides clear quality benchmarks (Hofstede, 2010). This transformation is essential in public sector settings, where hierarchical structures often inhibit innovation and employee engagement.

### 2. The Mediating Effect of Organizational Culture on Employee Performance

Organizational culture was found to mediate the relationship between TQM and employee performance significantly. This finding supports Cameron and Quinn's (2011) framework, which posits that cultural alignment is crucial for translating management strategies into measurable outcomes. A culture that prioritizes quality and collaboration enhances employees' ability to align their efforts with organizational goals, ultimately improving performance.

For instance, in KPKNL Pekanbaru, the emphasis on continuous improvement as a core TQM principle has fostered a culture of learning and innovation. Employees are encouraged to identify inefficiencies and propose solutions, which not only enhances their problem-solving skills but also contributes to overall organizational performance. This aligns with the work of Sunarsi et al. (2023), who found that a strong quality-oriented culture reduces resistance to change and increases employee motivation.

### 3. Direct and Indirect Effects of TQM on Employee Performance

The direct relationship between TQM and employee performance highlights the immediate benefits of adopting quality management practices. By streamlining processes, reducing redundancies, and setting clear performance standards, TQM directly enhances productivity and efficiency. These findings are consistent with studies by Goetsch and Davis (2020), which emphasize the operational advantages of TQM in improving task execution and accountability.

However, the indirect effects through organizational culture provide a more nuanced understanding of TQM's impact. This pathway underscores the importance of embedding TQM principles into the organizational ethos rather than merely implementing them as standalone practices. Employees in organizations with a supportive culture are more likely to internalize TQM values, leading to sustained performance improvements. For example, the integration of TQM at KPKNL Pekanbaru has not only improved task efficiency but also strengthened employee commitment to organizational objectives.

### 4. Implications for Public Sector Institutions

The findings have significant implications for public sector institutions, which often face unique challenges such as rigid bureaucratic structures, limited resources, and high stakeholder expectations. TQM offers a framework to address these challenges by promoting efficiency, transparency, and stakeholder satisfaction. However, its success depends on the organization's ability to foster a culture that supports quality and continuous improvement.

In the case of KPKNL Pekanbaru, the implementation of TQM has demonstrated that even within bureaucratic environments, fostering a culture of collaboration and innovation can significantly enhance performance outcomes. These insights are particularly relevant for other public institutions aiming to modernize their operations and improve service delivery.

### 5. Theoretical Contributions

This study contributes to the growing body of literature on TQM and its applications in the public sector. While existing studies have predominantly focused on private sector organizations, this research highlights the adaptability and effectiveness of TQM in public service settings. It also underscores the critical role of organizational culture as a mediator, offering a more comprehensive understanding of how management practices influence performance.

### 6. Limitations and Future Directions

While the findings provide robust insights, the study is not without limitations. The cross-sectional nature of the research limits its ability to capture long-term effects of TQM and cultural changes. Future studies could adopt a longitudinal design to explore how these relationships evolve over time. Additionally, expanding the scope to include other public sector organizations would enhance the generalizability of the findings.

Emerging trends such as digital transformation and the integration of artificial intelligence in public administration also present opportunities for future research. Exploring how these technologies interact with TQM principles could provide valuable insights into modernizing public sector management.

### 7. Sustainability and Public Value

The integration of TQM in public institutions such as KPKNL aligns with the broader goals of creating public value and contributing to sustainable development. By focusing on stakeholder satisfaction and institutional responsiveness, TQM helps organizations address not only internal inefficiencies but also external societal needs. This aligns with the concept of public value as articulated by Moore (1995), which emphasizes the importance of aligning public sector performance with societal expectations.

#### 8. Enhancing Employee Engagement Through TQM

Employee involvement is a cornerstone of TQM success. The findings underscore that fostering a participatory culture can significantly enhance employee commitment to quality initiatives. Programs such as continuous training, recognition, and participatory decision-making are critical for embedding TQM principles at all organizational levels.

#### 9. Addressing Organizational Resistance to TQM

Resistance to change remains a significant barrier to TQM implementation, particularly in hierarchical organizations like KPKNL. Strategies to mitigate this resistance include clear communication of the benefits, phased implementation, and involving employees in the design and evaluation of TQM processes. Hofstede's (2010) cultural dimensions theory highlights the need for adapting TQM strategies to the unique cultural characteristics of public institutions.

#### 10. The Role of Digital Transformation

Integrating digital tools into TQM frameworks can amplify its impact. For example, digital dashboards can provide real-time insights into performance metrics, enabling managers to make data-driven decisions. Future studies could explore the synergies between TQM and emerging technologies like artificial intelligence (AI) and blockchain in enhancing public sector efficiency.

### Conclusion

This study provides a comprehensive understanding of the interplay between Total Quality Management (TQM), organizational culture, and employee performance within the public sector. The findings highlight the pivotal role of TQM as a strategic framework for fostering continuous improvement and achieving operational excellence. At the Pekanbaru State Asset and Auction Service Office (KPKNL), TQM not only directly influenced employee performance but also enhanced it indirectly through the mediating role of organizational culture.

#### *Key Insights and Contributions*

##### 1. Direct Impact of TQM

TQM directly contributes to improving employee performance by introducing structured processes, reducing inefficiencies, and setting clear performance benchmarks. These findings underscore the importance of implementing TQM principles such as customer focus, teamwork, and continuous improvement in public sector organizations.

##### 2. The Mediating Role of Organizational Culture

The study reveals that organizational culture serves as a critical mediator, amplifying the impact of TQM on performance outcomes. A quality-oriented culture encourages employee engagement, innovation, and collaboration, aligning individual efforts with organizational objectives. This insight is particularly valuable for public institutions striving to create a work environment conducive to high performance.

##### 3. Strategic Implications for Public Sector Institutions

The results demonstrate that TQM can be effectively adapted to the unique challenges of the public sector, such as bureaucratic rigidity and resource constraints. However, its success depends on cultivating an organizational culture that supports quality and continuous improvement. Public institutions must prioritize cultural transformation alongside the implementation of management frameworks to achieve sustainable performance gains.



#### 4. Broader Theoretical Implications

This study contributes to the existing body of literature by extending the application of TQM to the public sector, an area that has received limited attention in previous research. The integration of organizational culture as a mediating variable provides a nuanced understanding of how TQM influences performance, offering a valuable framework for future studies.

#### *Practical Recommendations*

To maximize the benefits of TQM and foster a culture of excellence, the following strategies are recommended:

##### 1. Leadership Commitment

Leaders must champion TQM principles and actively foster a culture that supports continuous improvement.

##### 2. Employee Training and Engagement

Regular training programs and participatory decision-making processes should be implemented to enhance employee understanding and ownership of TQM initiatives.

##### 3. Continuous Monitoring and Feedback

Performance metrics should be monitored consistently, and feedback mechanisms should be established to identify and address areas for improvement.

#### *Future Research Directions*

While this study offers significant insights, several avenues for future research remain. Longitudinal studies could provide a deeper understanding of how TQM and cultural dynamics evolve over time. Additionally, exploring the integration of digital tools and technologies such as AI in TQM frameworks could yield valuable insights into modernizing public sector management practices. Comparative studies across different public institutions or countries could further validate the findings and enhance their applicability.

#### *Final Thoughts*

In conclusion, the successful implementation of TQM in the public sector requires more than just procedural changes; it demands a holistic transformation of organizational culture. By integrating TQM principles with a strong and supportive culture, public institutions can achieve enhanced employee performance, operational efficiency, and stakeholder satisfaction. The case of KPKNL Pekanbaru serves as a testament to the transformative potential of this approach, offering a roadmap for other public sector organizations aiming to excel in an increasingly competitive and dynamic environment.

## References

- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership*. Psychology Press.
- Cameron, K. S., & Quinn, R. E. (2011). *Diagnosing and changing organizational culture: Based on the competing values framework* (3rd ed.). Jossey-Bass.
- Deming, W. E. (1986). *Out of the crisis*. MIT Press.
- Elkington, J. (1997). *Cannibals with forks: The triple bottom line of 21st-century business*. Capstone Publishing.
- Ghozali, I., & Latan, H. (2020). *Partial least squares: Concepts, techniques, and applications using SmartPLS 3.0* (2nd ed.). Diponegoro University Publishing Agency.

- Goetsch, D. L., & Davis, S. B. (2020). *Quality management for organizational excellence: Introduction to total quality management* (9th ed.). Pearson.
- Griffin, R. W., & Moorhead, G. (2014). *Organizational behavior: Managing people and organizations*. Cengage Learning.
- Heizer, J., & Render, B. (2014). *Operations management* (10th ed.). Pearson Education.
- Hofstede, G. (2010). *Cultures and organizations: Software of the mind*. McGraw-Hill.
- Kotler, P., & Keller, K. L. (2021). *Marketing management* (15th ed.). Pearson.
- Mathis, R. L., & Jackson, J. H. (2012). *Human resource management*. South-Western Cengage Learning.
- Moore, M. H. (1995). *Creating public value: Strategic management in government*. Harvard University Press.
- Nasution, M. N. (2015). *Integrated quality management* (3rd ed.). Ghalia Indonesia.
- Schein, E. H. (2016). *Organizational culture and leadership* (5th ed.). Jossey-Bass.
- Sunarsi, D., Narimawati, U., Munna, A. S., & Pawar, A. (2023). The influence of Total Quality Management (TQM) and organizational culture on employee job satisfaction. *Equilibrium: Scientific Journal of Economics*, 18(2), 156–168. <https://doi.org/10.24269/equilibrium.v18i2.2023.pp156-168>