



The Impact of Total Quality Management on Organisational Performance: The Mediating Role of Perceived Customer Satisfaction in The Sri Lankan Telecommunications Industry

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Abstract

Total Quality Management (TQM) has been widely recognised as an important determinant of organisational performance. Nevertheless, empirical evidence on TQM practices associated with organisational performance and customer satisfaction in service industries in emerging markets remains limited. Accordingly, this study investigates the impact of TQM practices on organisational performance of Sri Lanka's telecommunications industry, including the mediating role of perceived customer satisfaction. This study conceptualises TQM practices, including leadership commitment, customer focus, employee involvement, and process management, as an integrated organisational capability using the Resource-Based View and Dynamic Capabilities Theory. Data were collected from 248 managerial and professional employees in Sri Lanka's telecom sector. The hypothesised relationships were tested using Partial Least Squares Structural Equation Modelling (PLS-SEM) with bootstrapping for mediation analysis. TQM enhances organisational performance primarily through customer satisfaction, with mediation analysis confirming a significant indirect effect alongside a reduced but still significant direct effect. TQM's direct impact on performance is minimal, but its strong influence on customer satisfaction

drives substantial organisational gains. The findings suggest that TQM is associated with organisational performance through both a direct pathway and, importantly, an indirect pathway operating through perceived customer satisfaction. The study shows that TQM enhances organisational performance in Sri Lanka's telecom sector primarily by converting internal practices into customer-driven outcomes.

Keywords: *Emerging Economy; Organisational Performance; Perceived Customer Satisfaction; Telecommunications Industry; Total Quality Management*

JEL Codes: L96, L15, and M11

1. Introduction

Telecommunications is considered to be the most significant industry for the new digital economy. Its state-of-the-art technology greatly contributes to other industries across the country. Telecom infrastructure improves the standard of living, enhances financial performance, and improves industry productivity in developing countries such as Sri Lanka (Wattegama, 2021). As services evolve from traditional voice-based services to data-driven, real-time digital services, telecom service companies offer customers more reliable, faster, and better service. Digital technologies evolve in response to market competition and complex organisational performance requirements. They are equipped to deliver ever-better service consistently, even amid operational complexity, environmental uncertainty, and financial constraints.

Total quality management (TQM) practices are considered a significant determinant of organisational performance (Powell, 1995; Kaynak, 2003). Key components include process management, continuous improvement, customer focus, employee involvement, and leadership commitment for enhancing quality (Deming, 1986; Dean & Bowen, 1994). Although originally

developed for manufacturing, TQM practices have been effectively adapted to the service sector, where quality cannot be assessed before delivery, but rather through the collective effort of service provision and customer participation (Flynn et al., 1994). The telecommunications industry faces numerous customer complaints, such as network failures, billing errors, and unsatisfactory customer service, which strongly contribute to perceived dissatisfaction and switching behaviour. Hence, implementing TQM practices in the telecom industry is not only for daily operations but a strategic issue that affects customer retention and survival.

Industry 4.0 technologies and the new Quality 4.0 paradigm strengthen TQM practices through digital transformation. Advanced analytics, automation, artificial intelligence (AI), and real-time monitoring systems control organisational processes and performance through data-based, technology-enabled mechanisms (Sony et al., 2020; Carvalho et al., 2021). Multiple studies have highlighted that TQM practices such as leadership commitment, customer focus, employee involvement, and process management support successful digital transformation and enhance organisational performance (Antony et al., 2022; Sader et al., 2019). Therefore, TQM practices need to be implemented as a strategic organisational capability. It enables organisations to detect environmental changes, respond proactively, and continually improve their processes in highly competitive environments. Prior empirical studies have pointed out that leadership commitment, customer focus, employee involvement, and process management positively affect process efficiency, cost reduction, and service reliability (Kaynak, 2003; Powell, 1995). In service industries, customer satisfaction has been considered a significant outcome of TQM practices and a strong predictor of organisational performance (Fornell et al., 1996; Parasuraman et al., 2005).

On the other hand, there are gaps in the literature. TQM research first started in manufacturing industries in Western countries, with less involvement in service industries in developing

countries. This situation was due to a relatively stable organisational environment and a relatively mature quality management system (Antony et al., 2022). Telecommunications received relatively little attention as an infrastructure-dependent and service-intensive industry in developing countries. Although the TQM-organisational performance relationship is linear, it was suggested that internal quality improvements do not impact financial performance indicators (Kaynak, H., 2003). In previous quality management models, customer satisfaction was considered as an output that confirms benefits, whereas the mediating mechanism of perceived customer satisfaction between TQM practices and organisational performance was not fully conceptualised and empirically tested (Kaynak, 2003; Sila & Ebrahimpour, 2005).

Global studies have already suggested that TQM practices positively contribute to organisational performance (Xu et al., 2026). Customer satisfaction influences financial performance (Pawanr et al., 2025). However, there are still considerable conceptual and empirical gaps among service industries within developing countries. Empirical research in the Sri Lankan telecommunication sector (e.g., Jayasekara et al., 2020; Perera & Priyanath, 2018) has mainly focused on discrete external service quality dimensions and their immediate effects on perceived customer satisfaction. The key areas that have not been tested are investigated here. Firstly, TQM practices, including leadership commitment, customer focus, employee involvement, and process management, are not clear in telecom operators in Sri Lanka (Aichouni et al., 2024; Pawanr et al., 2025). Secondly, perceived customer satisfaction as an explanatory mediating mechanism in the relationship between TQM practices and organisational performance is less explored in the Sri Lankan setting (Twaissi et al., 2025). Thirdly, it is observed that previous local studies conceptualising TQM as a resource-based capability and a dynamic modification instrument aligned with theories such as the Resource-Based View (RBV) and Dynamic Capabilities Theory (DCT) in an infrastructure-

dependent, high-churn competitive market remain unexplored (Aichouni et al., 2024; Xu et al., 2026).

Therefore, this study investigates the impact of TQM on organisational performance and the RBV complemented by Dynamic Capabilities Theory to examine the mediating role of perceived customer satisfaction to fulfil these identified gaps. The primary research question investigated is: What impact do TQM practices have on an organisation's performance in the Sri Lankan telecommunications industry, with perceived customer satisfaction as a mediator?

Accordingly, the following objectives are derived for the Sri Lankan telecommunications industry.

- (1) To investigate the direct impact of TQM practices on organisational performance.
- (2) To investigate the impact of TQM practices on perceived customer satisfaction.
- (3) To examine the impact of perceived customer satisfaction on organisational performance.
- (4) To test the mediating role of perceived customer satisfaction on the relationship between TQM practices and organisational performance.

The study is grounded in the Resource-Based View and Dynamic Capabilities Theory, and it empirically tests identified key constructs. In doing so, this paper contributes to quality management theory and practice by empirically demonstrating the dual-route mechanism through which integrated TQM practices influence organisational performance within Sri Lanka's telecommunications industry and also tests the mediating role of perceived customer satisfaction.

2. Literature Review and Theoretical Framework

2.1 Total Quality Management (TQM): Conceptual Foundations and Evolution

Total Quality Management (TQM) is a management philosophy that views an organisation as a whole and pursues long-term success through leadership commitment, customer focus, employee involvement, and process management in quality-related activities (Deming, 1986; Dean & Bowen, 1994). The prior focus of quality management shifted from technical quality control to a behavioural and cultural perspective, including practices such as leadership commitment, customer focus, employee involvement, process management, quality teams, and organisational learning, thereby establishing TQM as a cohesive management philosophy rather than a single operational method (Flynn et al., 1994; Powell, 1995).

The literature establishes the distinction between "hard" and "soft" TQM. Hard TQM relates to the process attributes and the systems required under TQM, based on process management, the use of statistical quality tools, benchmarking, and a strategic quality plan. Similarly, soft TQM is leadership-based and supported by employee involvement in training and educational development and communication within the organisation and with customers. Hard TQM practices are the structural and technical components, while soft TQM practices are more conducive to continuous quality success, particularly in service-intensive sectors (Sila & Ebrahimpour, 2005; Zu, 2009). Prior research has also shown that TQM is more beneficial in service-based industries, such as telecommunications, banking, and health care, where customers' perceptions directly affect organisational performance (Parasuraman et al., 2005; Talib et al., 2013).

The emergence of Industry 4.0 technologies has once again drawn attention to quality management, with a new paradigm, Quality 4.0, underpinning the integration of digital tools, including big data analytics, automation, and artificial intelligence, into quality activities (Sony et al., 2020; Carvalho et al., 2021). Although Quality 4.0 increased access to data and introduced emerging predictive quality control, some scholars caution that digital technologies cannot replace

the basic approaches of TQM. Emerging digital quality management, TQM, still depends on leadership support, a skilled workforce, and an organisational culture that cultivates continuous improvement – the basics of traditional TQM approaches (Antony et al., 2022; Sader et al., 2019). Accordingly, TQM remains at the heart of managerial philosophy, even in the digitally transforming organisational landscape.

2.2 TQM Practices and Organisational Performance

Numerous empirical studies have investigated the relationship between TQM practices and organisational performance. TQM positively affects performance indicators such as cost reduction, productivity improvement, service quality, and market positioning (Powell, 1995; Kaynak, 2003). For instance, Kaynak (2003) revealed that quality performance directly and indirectly affects organisational performance through leadership commitment, customer focus, employee involvement, and process management practices. Parallel findings were obtained for manufacturing firms (Doty, Glick, & Huber, 1993) and service organisations (Swamidass & Newell, 1987), providing evidence that TQM positively influences organisational performance.

2.3 Perceived Customer Satisfaction in Quality Management

Perceived customer satisfaction (PCS) is a key concept in the quality management and service marketing literature. Satisfaction is defined as the comparison between expectations and the actual performance of the service delivery according to the expectancy–disconfirmation paradigm (Parasuraman et al., 1988; Fornell et al., 1996). In the service sector, customers evaluate products and services based on experience; perceived satisfaction is a key predictor of customer loyalty, such as repurchase intentions and positive word of mouth (Ladhari, 2009). It is therefore considered a primary driver of long-term organisational success. Customer behaviour is also

important in TQM implementation, as quality improvement efforts are considered the ultimate goal. Customer orientation, process standardisation, and employee responsiveness collectively contribute to customer delight by improving service reliability and perceived value (Sila & Ebrahimpour, 2005; Talib et al., 2013). In the telecom industry, network availability, billing system reliability, complaint-handling efficiency, and service support are mostly driven by perceived consumer satisfaction (Perera & Priyanath, 2018; Jayasekara et al., 2020).

2.4 Perceived Customer Satisfaction as a Mediating Mechanism

Some evidence suggests that perceived customer satisfaction may mediate the relationship between TQM and organisational performance. Higher levels of service quality lead to greater customer satisfaction and loyalty, which in turn lead to greater profits and organisational growth (Heskett et al., 1994). TQM practices positively affect organisational performance through quality performance and customer-related outcomes (Kaynak, 2003). Fornell et al. (1996) also discovered a positive correlation between strong financial performance, market value and customer satisfaction. According to Sila and Ebrahimpour (2005), customer-orientated quality practices positively influence customer satisfaction, thereby strengthening organisational performance in service industries. A dearth of research on the mediation effects of customer satisfaction in the telecom industry in developing countries (Perera et al., 2018). Therefore, the mediating role of perceived customer satisfaction as a means of communication in the relationship between TQM practices and organisational performance has not been sufficiently explored or tested before.

2.5 Key Constructs on the Telecommunications Sector

Various service industries, including the telecom industry, examine the impact of quality management practices on firm performance. Dissatisfied customers may churn due to low

switching costs, which negatively impacts firm performance. Customer satisfaction or dissatisfaction has greatly affected organisational performance. Service reliability, complaint handling, and transparency were found to be critical drivers of customer satisfaction and loyalty in the Sri Lankan telecom industry (Wijetunge, 2016; Jayasekara et al., 2020). Dynamic capabilities theory represents sensing and seizing capabilities in service attributes. Telecom companies consider customer expectations when switching costs are low (Teece et al., 1997). Many prior studies examined separate constructs, such as dimensions of service quality or direct applications of customer satisfaction, aiming to develop broader theoretical frameworks and relationships (Zhao et al., 2021). Relatively little research has examined the impact of internal organisational factors, such as quality management systems, on performance.

2.6 Theoretical Framework: RBV and Dynamic Capabilities

Based on the resource-based view (RBV) and dynamic capabilities theory (DCT), this study examines how TQM practices lead to organisational performance through perceived customer satisfaction. RBV argues that firms can develop sustainable competitive advantage based on internal resources and capabilities that are valuable, rare, imperfectly imitable, and non-substitutable (Barney, 1991). Accordingly, TQM practices such as leadership commitment, customer focus, employee involvement, and process management are organisational-specific and socially complex capabilities. They improve internal operational efficiency, process reliability, service consistency, and organisational performance (Powell, 1995). Consequently, RBV underpins the hypothesised linkage between TQM practices and organisational performance -H1 (TQM→OP). DCT, however, explains how organisations detect changing customer needs, capture opportunities for improvement, and realign processes and resources in response to environmental changes (Teece et al., 1997). Accordingly, TQM activities have the potential to enhance such

adaptive mechanisms, which could in turn lead to heightened perceptions of customer satisfaction –H2 (TQM → PCS). Perceived customer satisfaction is then expected to have implications for the performance of the organisation through its effects on customer retention, loyalty, and positive word of mouth from the market- H3 (PCS → OP). The combined theoretical lens implies that perceived customer satisfaction serves as the market-facing mechanism through which TQM capabilities translate into organisational performance (H4: TQM → PCS → FP), while RBV accounts for the direct TQM–performance linkage and DCT explains the mediating route linking TQM practices to customer perceptions. In other words, RBV accounts for the mechanism of value creation. Similarly, Dynamic Capabilities Theory explains how TQM-facilitated organisational adaptation enables internal quality practices to be translated into customer perceptions. Perceived customer satisfaction subsequently contributes to the market-facing pathway towards organisational performance.

2.8 Empirical Evidence and Emerging Research Gaps

A growing body of literature demonstrates the transformation of quality management from traditional inspection- and sampling-based techniques (Garvin, 1988) towards an organisation-wide philosophy. Quality culture is essential for establishing and sustaining operational excellence. Major quality-management paradigms, including TQM (Deming, 1986; Juran, 1989), Six Sigma's DMAIC methodology (Montgomery, 2013), Lean Management (Womack & Jones, 1996), 5S workplace organisation (Hirano, 1995), Quality Circles (Ishikawa, 1985), Kaizen (Imai, 1986), Total Productive Maintenance (Nakajima, 1988), ISO 9001:2015 quality management systems (ISO, 2015), and Business Excellence Models such as EFQM (2020) and Baldrige (NIST, 2023), collectively demonstrate quality-management with isolated tools or practices when implemented as a stand-alone initiative, cannot create a sustainable competitive advantage. Contemporary

empirical studies identify leadership commitment, organisational culture, and stakeholder participation as key enablers of operational excellence (Morgan do Oliveira & Gomes, 2025; Unnikrishnan & Tikoria, 2025). Configuration-based analyses also identify multiple equifinal pathways to superior organisational performance (Ahsan & Ullah, 2025).

In otherward, data-driven Quality 4.0 applications, including the Internet of Things (IoT), artificial intelligence (AI), digital twins (Sader et al., 2019; Pandey et al., 2025), are advancing toward Quality 5.0 and Excellence 5.0 paradigms. More sophisticated technological initiatives are balanced with human-centric, organisational resilience, environmental sustainability and ethical governance (Deleryd, 2025; Montera et al., 2026; Paixão et al., 2026). Between 2020 and 2026, the academic literature concerning TQM, customer satisfaction, and organisational performance has flourished (Aichouni et al., 2024; Sahoo, 2023). Previous seminal studies examined the direct influence of soft and hard quality management practices (TQMP) on business performance (Bouranta et al., 2022). However, emerging evidence has focused on more complex structural relations (i.e., mediation mechanisms), contextualization of service sectors and digital quality applications in developing countries (Aburayya et al., 2020; Al-Dhaafri et al., 2021; Pawar et al., 2025). Conventional TQM-based practices are, however, being infused with digital Quality 4.0 paradigms in telecom ICT infrastructure (Aichouni et al., 2024; Sahoo, 2023). Empirical studies focused on South Asian and Middle Eastern telecoms markets reveal that customer orientation and continuous improvement in service quality are the key drivers for customer retention and satisfaction. This leads to increasing market share and profitability in the firm (Aburayya et al., 2020; Bouranta et al., 2022). As a result, contemporary work tries to focus on these second-order effects and contends. The effect of TQM on organisational performance is predominantly latent in nature through fulfilling customers ' needs and exceeding their expectations (Aburayya et al.,

2020; Al-Dhaafri et al., 2021; Bouranta et al., 2022; Fraihat et al., 2023). Customer satisfaction has been a key operational driver in translating quality practices into competitive advantage in service-related and high-technology industries (Bouranta et al., 2022; Fraihat et al., 2023). There is recent evidence that hard TQM aspects such as process automation and technological infrastructure contribute to deriving operational efficiencies in the short run. However, turning those advantages into financial and strategic performance depends heavily on customer-oriented outcomes (Al-Dhaafri et al., 2021).

2.9 Positioning of the Present Study

Certain aspects of service quality in the Sri Lankan telecommunication industry have been studied in the past. However, no studies have examined real-time TQM as a holistic, system-wide strategic asset. Such an approach would integrate leadership commitment, customer focus, employee participation, and process management into a unified framework. Earlier studies in Sri Lanka measured service quality aspects in isolation (Jayasekara et al., 2020; Perera & Priyanath, 2018). This study investigates TQM as a strategic organisational-level resource. This research does not treat customer satisfaction as a mere end-state. Instead, it views perceived customer satisfaction as a vital intervening medium. Through this medium, internal TQM capabilities are translated into long-term company performance (Aichouni et al., 2024; Twaissi et al., 2025). The structural model, rooted in the Resource-Based View (RBV) and Dynamic Capabilities Theory (DCT), seeks to address three specific gaps in the literature.

To this end, the paper develops and empirically tests an integrated conceptual framework that combines TQM principles with strategic management theories in the developing telecommunications market to address these three gaps. First, in characterising TQM as a holistic internal system rather than an ensemble of fragmented quality tools, Aichouni et al. (2024) bridge

the internal systems gap by including leadership commitment, employee involvement, process management, and customer focus. Secondly, this study addresses the unexplored mediation process. It defines Perceived Consumer Satisfaction as a significant operational mechanism. Through this mechanism, internal TQM competencies are converted into superior and sustainable organisational results (Twaissi et al., 2025). Third, to address the gap in theoretical foundation, this paper draws on the Resource-Based View (RBV) and Dynamic Capabilities Theory (DCT). It conceptualises TQM as an effective, scarce, and dynamic organisational capability. Such a capability enables service providers to sense and fulfil customer needs while reducing churn in infrastructure-dependent environments. In doing so, the study bridges the gap in theoretical consideration.

Table 1: Synthesis of Empirical Literature on TQM, PCS, and OP

Author & Year	Sector / Context	Theoretical Basis & Methodology	Core Focus / Major Findings	Identified Gap / Limitation Addressed by Present Study
Jayasekara et al. (2020)	Telecommunications (Sri Lanka)	Empirical Survey / Quantitative Analysis	Examined individual service quality dimensions and their isolated impacts on perceived customer satisfaction.	Analysed quality dimensions in silos without evaluating TQM as an integrated, firm-level strategic system.
Perera & Priyanath (2018)	Service Sector (Sri Lanka)	Empirical Survey / Descriptive Statistics	Evaluated operational performance factors across local service firms.	Lacked structural integration of perceived customer satisfaction as a mediating mechanism and omitted strategic theory (RBV/DCT).

Author & Year	Sector / Context	Theoretical Basis & Methodology	Core Focus / Major Findings	Identified Gap / Limitation Addressed by Present Study
Aburayya et al. (2020)	Service / Public Sector (Middle East)	Quantitative / Structural Equation Modeling	Investigated TQM practices and operational efficiency outcomes in service environments.	Evaluated direct TQM outcomes without addressing complex mediation paths or digital quality integration.
Al-Dhaafri et al. (2021)	Public / Service Sector (MENA Region)	SEM / Quantitative Assessment	Analysed the effect of TQM and organisational excellence on performance.	Did not model perceived customer satisfaction as a primary operational bridge in high-churn telecom environments.
Bouranta et al. (2022)	Service Industry	SEM / Survey- based Analysis	Evaluated the direct impacts of soft and hard TQM practices on performance outcomes.	Focused primarily on direct relationships, leaving the indirect dynamic capabilities pathway underexplored.
Aichouni et al. (2024)	Industrial & Service Sectors	Systematic Review / SEM Empirical Analysis	Assessed TQM implementation and operational practices in emerging markets.	Highlighted a distinct Internal Systems Deficit regarding TQM operationalised as a unified, holistic construct.
Twaissi et al. (2025)	Service & Technology Sectors	SEM Path Analysis	Explored performance determinants in technology-driven service providers.	Highlighted an Unexamined Mediation Mechanism regarding Perceived Customer Satisfaction across infrastructure-heavy networks.

Author & Year	Sector / Context	Theoretical Basis & Methodology	Core Focus / Major Findings	Identified Gap / Limitation Addressed by Present Study
Xu et al. (2026)	Cross-Industry Global Synthesis	Meta-Analysis / k = 92 SEM Studies	Confirmed a moderate pooled direct effect ($\beta = 0.367$) of TQM on overall performance, noting higher effect sizes for composite TQM models ($\beta = 0.408$).	Synthesised global aggregate data but called for context-specific studies in emerging, high-churn infrastructure sectors.
Present Study	Telecommunications (Sri Lanka)	PLS-SEM / RBV & Dynamic Capabilities Theory	Evaluates TQM as an integrated systemic resource, testing Perceived Customer Satisfaction as a mediating mechanism.	Fills the internal systems, mediation, and theoretical grounding gaps within an emerging telecom market.

(Source: Literature Review)

As reviewed in Table 1, qualitative and operational studies address the question of how quality has been managed within the telecommunications sector in developing countries. This has generally relied on case-specific evaluations of service quality attributes or dimensions, which lack theoretical rigour (Jayasekara et al., 2020; Perera & Priyanath, 2018). TQM implementation is widely acknowledged to improve operational outcomes. However, the structural mechanisms that translate embedded quality practices into perceived customer satisfaction remain under-articulated. This gap extends to how such practices ultimately drive organisational performance in infrastructure-intensive services. By framing TQM as both a strategic resource and a dynamic capability, this study contributes to the literature through the RBV and DCT, thereby addressing the gaps discussed above. Rooting the framework in the RBV and DCT allows TQM

to be conceptualised as a holistic, firm-level dynamic resource. It is viewed not as a set of isolated instruments but as an integrated capability. This study has been extended to include four primary structural relationships. These relationships serve to empirically test the theoretical framework.

3. Hypothesis Development

3.1 Total Quality Management and Organisational Performance

Organisational performance is influenced by the resources and capabilities of the firm, with the difficulty of imitation suggested by the resource-based view (RBV) (Barney, 1991). According to the RBV, TQM practices—such as leadership commitment, customer focus, employee involvement, and process management—constitute strategic organisational resources (Powell, 1995). The cultural roots and organisational routines behind these practices are causally ambiguous and difficult for competitors to imitate (Barney, 1991; Powell, 1995). TQM practices are embedded in shared values, managerial behaviours, and a system of continuous improvement, whereas physical assets such as network facilities can be purchased or replicated with sufficient capital. Therefore, TQM practices will impact performance and sustainability when embedded within the organisation. When successfully implemented, TQM practices deliver greater efficiency, fewer service failures, and higher overall organisational performance in service industries such as telecommunications (Kaynak, 2003). Therefore, the following hypothesis can be formulated.

H1: Total Quality Management (TQM) practices have a significant positive impact on organisational performance in the Sri Lankan telecommunication industry.

3.2 Total Quality Management and Customer Satisfaction

Dynamic capabilities refer to an organisation's ability to monitor changing customer requirements. They also involve identifying opportunities for improvement and reconfiguring internal competencies in response to external shifts (Teece et al., 1997). Under this paradigm, TQM practices—such as leadership commitment, customer focus, employee involvement, and process management—strengthen adaptive capacity. They achieve this through organisational learning, enhanced customer experience, and evidence-based decision-making. The service is adapted to meet evolving customer needs. Leadership commitment, customer focus, employee involvement, and process management drive higher perceived customer satisfaction. In the telecommunications industry, adopting TQM practices is essential. Low switching costs mean that service quality is co-produced by both customers and providers. As a result, customer churn arises when performance is unsatisfactory. Under these circumstances, TQM practices enable the delivery of services that are more dependable, more responsive, and more standardised for customers. Effective quality management enhances organisational operations. These improvements directly contribute to higher customer satisfaction (Flynn et al., 1994; Talib et al., 2013). Therefore, the following hypothesis is formulated.

H2: Total Quality Management (TQM) practices have a significant positive impact on perceived customer satisfaction in the Sri Lankan telecommunication industry.

3.3 Perceived Customer Satisfaction and Organisational Performance

Perceived customer satisfaction is the key market-based asset that mediates the transformation of organisational technical resources and capabilities into organisational performance outcomes. According to the RBV, perceived customer satisfaction generates continued revenue, stable relationships, and positive word of mouth. Together, these outcomes support long-term organisational performance (Fornell et al., 1996). Hence, perceived customer satisfaction is

considered a valuable outcome that promotes Competitive advantage. The Service–Profit Chain improves through service quality. Higher service quality yields greater customer satisfaction, which in turn strengthens customer loyalty and profitability (Heskett et al., 1994). In highly competitive markets and amid economic uncertainties, perceived customer satisfaction has a significant impact on corporate financial and market performance. Accordingly, internal quality management practices affect the performance of the entire organisation. Therefore, the following hypothesis is formulated.

H3: Perceived customer satisfaction has a significant positive impact on organisational performance in the Sri Lankan telecommunication industry.

3.4 Mediating Role of Perceived Customer Satisfaction

Implementing TQM practices enhances operational efficiency and service reliability within an organisation. These improvements create long-term performance gains, shaped by internal changes as perceived by customers. According to the Resource-Based View (RBV) of the firm, internal resources and capabilities become sources of competitive advantage when they are used to deliver greater value to customers (Barney, 1991). Therefore, having better processes alone is not enough unless the outcomes benefit customers. On the contrary, Dynamic Capabilities Theory also focuses on the role of such feedback mechanisms in driving organisational change and learning (Teece, Pisano & Shuen, 1997). Perceived customer satisfaction results from excellent service delivery and the alignment of internal processes with market expectations. Accordingly, perceived customer satisfaction serves as a mediating mechanism between TQM practices and organisational performance. This mediating mechanism is particularly critical in service-dominant and highly competitive industries such as telecommunications. In these contexts, success depends heavily on customer retention, loyalty, and market image. Therefore, the following hypothesis is formulated.

H4: Perceived customer Satisfaction significantly mediates the relationship between Total Quality Management (TQM) practices and organisational performance in the Sri Lankan telecommunication industry.

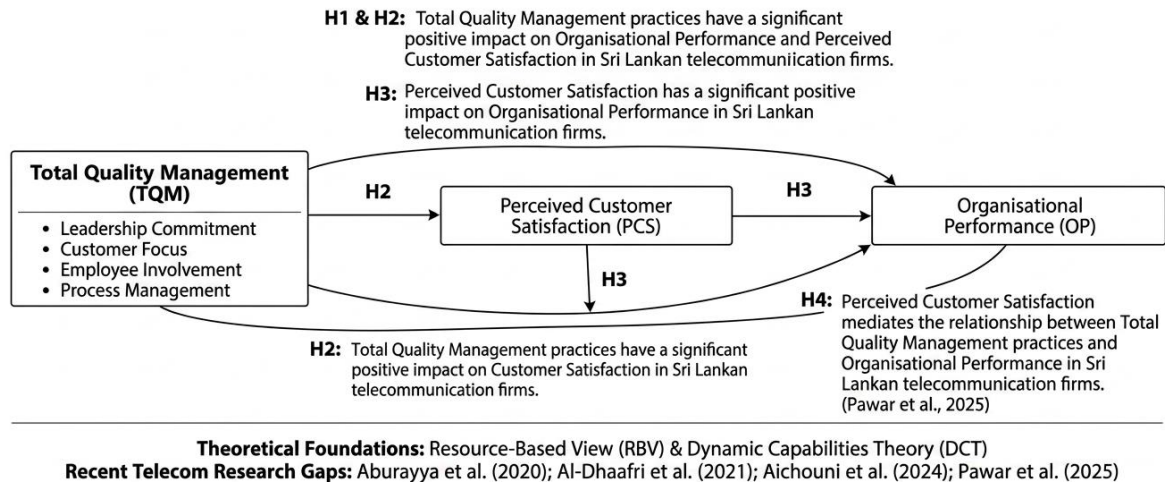


Figure 1. Conceptual framework of the study

Figure 1 presents the research model. It illustrates the direct and mediating relationships among TQM practices, perceived customer satisfaction (PCS), and organisational performance (OP), consistent with the Resource-Based View (RBV) and Dynamic Capability Theory (DCT). TQM practices are treated as intangible strategic assets and capabilities, represented by leadership commitment, customer focus, employee involvement, and process management. These socially complex, firm-specific activities directly contribute to superior organisational performance. Grounded in the Resource-Based View (RBV) and Dynamic Capability Theory (DCT), the model reconceptualises customer satisfaction as the mediating pathway through which TQM practices influence organisational performance. Customer satisfaction, as a feedback-driven mechanism, translates internal quality enhancements into market-based outcomes. Accordingly, the proposed

conceptual framework posits positive relationships among the key constructs—TQM practices, customer satisfaction, and organisational performance. (H1) TQM practices positively influence organisational performance; (H2) TQM practices positively influence customer satisfaction; (H3) customer satisfaction positively influences organisational performance; and (H4) customer satisfaction mediates the relationship between TQM practices and organisational performance, reflecting both direct and mediated performance outcomes in the telecommunications industry.

4. Methodology

4.1 Research Design

This study adopts a quantitative, cross-sectional survey design to test the hypothesised relationships between Total Quality Management (TQM) practices, perceived customer satisfaction (PCS), and organisational performance (OP) in the Sri Lankan telecommunications industry. The analytical approach is Partial Least Squares Structural Equation Modelling (PLS-SEM) using SmartPLS 4.0, chosen for its suitability in handling complex mediation models, higher-order constructs, and relatively small sample sizes (Kaynak, 2003; Sila & Ebrahimpour, 2005).

4.2 Population and Sample

The study population comprises professional and managerial employees in Sri Lanka's telecommunications industry. The sampling frame comprises employees from four leading telecom providers in Sri Lanka: Dialog, SLT, Hutch, and Airtel. The sampling technique follows purposive sampling, selecting respondents directly involved in quality management, customer service, or operational performance. A total of 250 questionnaires were distributed through HR departments and professional networks using Google Forms. Of these, 248 valid responses were

collected, yielding a response rate of 99.2%. Two incomplete questionnaires were excluded. The unit of analysis is the individual employee's perception of organisational practices and outcomes. Ethical approval was obtained from the university's ethics committee, and informed consent was secured from all participants. Data collection took place between January 2026 and May 2026.

4.3 Measurement Model

Constructs: TQM practices (higher-order construct) comprised four first-order dimensions: leadership commitment, customer focus, employee involvement, and process management. Other higher-order constructs were perceived customer satisfaction (PCS) and organisational performance (OP) (financial and non-financial indicators).

Indicators: TQM was measured with 12 items adapted from Kaynak (2003), Powell (1995), and Zu (2009). PCS was measured with 3 items adapted from Parasuraman et al. (1988) and Fornell et al. (1996). OP was measured with 5 items adapted from Bouranta et al. (2022) and Xu et al. (2026). All items were adapted to the Sri Lankan telecommunications context.

Table 2: Measurement Items and Sources ‘

Constructs	Item Code	Item in Words
TQM	LC1	Leadership commitment to quality
TQM	LC2	Leadership for operational efficiency
TQM	LC3	Leadership commitment to performance
TQM	CF1	Customer Focus for Efficiency
TQM	CF2	Customer Focus on Quality
TQM	CF3	Customer Focus on Performance
TQM	EI1	Employee Involvement for Efficiency
TQM	EI2	Employee Involvement in Quality

TQM	EI3	Employee Involvement in Performance
TQM	PM1	Process Management for efficiency
TQM	PM2	Process Management to quality
TQM	PM3	Process Management for performance
PCS	PCS1	TQM in customer satisfaction
PCS	PCS2	DT in customer satisfaction
PCS	PCS3	Customer focus on customer satisfaction

Higher-order construct specification: TQM was modelled using the repeated-indicator approach (all 12 items linked to both first-order and second-order constructs). Reliability and validity were assessed through Cronbach's alpha, composite reliability (CR), average variance extracted (AVE), and discriminant validity (HTMT). The study guaranteed anonymity, used validated scales, and applied correct statistical methods. The findings are credible and applicable because of a solid theoretical foundation and alignment with previous research, and the cross-sectional design prevents causal claims.

4.4 Data Analysis Procedure

Software: SmartPLS 4.0. Direct effects were examined to test hypotheses H1-H3. Bootstrapping: 5,000 resamples, bias-corrected confidence intervals (Hair et al., 2019). Collinearity checks: Variance Inflation Factor ($VIF < 5$). Common-method bias: Harman's single-factor test and full collinearity assessment. Structural model evaluation: Path coefficients, R^2 values, effect sizes (f^2), predictive relevance (Q^2), and mediation effects. Mediation analysis: The indirect effect was tested using a joint significance test in the first stage and bootstrapping in the second stage, consistent with the preconditions for mediation analysis. Indirect effects were tested via bootstrapping and reported with standard errors, t-values, p-values, and 95% confidence intervals.

4.5 Respondent Profile

A comprehensive demographic profile—including age, gender, education, years of experience, and firm affiliation—will be presented in Table 3 to contextualise the sample.

4.6 Pilot Testing and Adaptation Procedure

The Pilot study was performed with 20 managerial and professional engineers from two telecom operators not included in the final sample. This ensured clarity, contextual relevance, and reliability of the adapted scales. Reliability analysis indicated Cronbach's alpha > 0.70 for all constructs, showing acceptable internal consistency. While removing redundant or ambiguous items, the final set comprised 12 TQM indicators, 3 PCS items, and 5 OP items.

5. Results and Findings

5.1 Sample Profile and Descriptive Statistics

Table 3: Respondent Profile (n = 248)

Variable	Category	Number (n)	Percentage (%)
Gender	Male	165	66.5
	Female	83	33,5
Age	<30 years	38	15.3
	30-39 years	108	43.5
	40-49 years	82	33.1
	50 years and above	20	8.1
Job Positions (Managerial)	Top-Level management	44	17.7
	Middle-level management	157	63.3
	Operational-level management	47	19.0

Educational Qualification	PhD	9	3.6
	Master's Degree	126	50.8
	Bachelor's Degree	105	42.3
	Diploma	6	2.4
	Other	2	0.8
Work Experience	Below 5 Years	24	9.7
	6-10 Years	31	12.5
	11-15 Years	33	13.3
	16-20 Years	58	23.4
	21-30 Years	70	28.2
	Over 30 Years	32	12.9

Source: Survey Data (2026)

Based on demographic characteristics, the sample was predominantly male, with males accounting for 66.5% and females 33.5% of respondents, organisational designation and years of work experience. Most respondents (96.7%) possessed at least a bachelor's degree, and most had more than 5 years of experience in the telecommunications industry. This profile indicates that the participants were well educated and had experience with or exposure to organisational processes, quality management systems, and performance measurement systems. The sample was predominantly composed of middle-level managers (63.3%), while top-level and operational-level respondents accounted for 17.7% and 19.0%, respectively. Further, 50.8% of respondents hold a master's degree, and 64.5% have 16 or more years of experience, indicating substantial exposure to organisational processes, quality-management practices, and performance-related activities, including customer satisfaction. The respondents' managerial positions, educational qualifications, and industry experience provide a relevant basis for assessing perceptions of TQM, PCS, and organisational performance in the telecommunication industry.

Table 4: Descriptive Statistics of Key Study Variables (n = 248)

Variable	Mean (M)	Standard Deviation (SD)	Skewness	Kurtosis
Total Quality Management (TQM)	5.65	0.99	-1.52	2.51
Perceived Customer Satisfaction (PCS)	5.71	0.97	-1.41	2.44
Organisational Performance (OP)	5.64	0.90	-1.54	3.18

(Source: Data Analysis)

Note. All constructs were measured using multi-item scales on a 7-point Likert scale, with higher values indicating stronger agreement with the construct statements.

Descriptive statistics for the major variables used in the study are reported in Table 4. The positive results on the score scales show that perceived satisfaction and identification were rather high for each of the constructs: Total quality management (TQM) practices had a mean of 5.65 (SD = 0.99), Perceived Customer Satisfaction (PCS) had a mean of 5.71 (SD = 0.97), and Organisational performance (OP) had a mean of 5.64 (SD = 0.90) within the Sri Lankan telecom industry. The negative skewness values indicate a left-skewed distribution, which is acceptable for multivariate analysis. These values indicate a relatively high level of quality management practices, perceived customer satisfaction, and organisational performance within the respondents' organisations. The construct-level standard deviations indicate moderate variation in respondents' scores with no tendency toward extreme variation. The descriptive statistics indicate sufficient variation in the construct scores for subsequent measurement and structural model assessment.

5.2 Measurement Model Assessment

Composite scores for TQM practices, perceived customer satisfaction, and organisational performance were computed as the mean of the corresponding items in the measurement scales. The construct scores exhibited moderate negative skewness; however, PLS-SEM does not require normally distributed data, and the observed distributions did not prevent subsequent analysis. The

distributional characteristics were considered acceptable for PLS-SEM, which does not impose the assumption of multivariate normality. Moreover, diagnostic tests indicated no multicollinearity among the explanatory variables. Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS was used to evaluate the measurement model. The evaluation of overall measurement properties gave us confidence that the measurement model was sufficient; as such, we proceeded to test our structural model and associated hypotheses.

5.2.1 Indicator Reliability, Internal Consistency, and Convergent Validity

The values for each construct and dimension are shown in the following table.

Table 5: Indicator Reliability (Outer Loadings), Internal Consistency, Reliability and Convergent Validity

First-order Construct and Dimensions	No. of Indicators	Minimum Loading	Maximum Loading	Minimum Indicator Reliability	Maximum Indicator Reliability	Cronbach's Alpha	Composite Reliability	AVE
Customer Focus	3	0.936	0.952	0.876	0.906	0.941	0.962	0.895
Employee Involvement	3	0.935	0.944	0.874	0.891	0.935	0.959	0.885
Leadership Commitment	3	0.941	0.947	0.885	0.897	0.954	0.970	0.916
Process Management	3	0.898	0.935	0.806	0.874	0.907	0.942	0.844
Perceived Customer Satisfaction (PCS)	3	0.768	0.882	0.590	0.778	0.794	0.880	0.711
Organisational Performance (OP)	5	0.847	0.957	0.717	0.916	0.946	0.959	0.824

Source: SmartPLS Output (2026)

The measurement assessment demonstrated satisfactory reliability and convergent validity for the four first-order TQM dimensions, PCS, and OP. All minimum indicator-reliability values are above 0.50. The lowest value is PCS (0.590), which is still acceptable. The Cronbach's Alpha coefficients vary between 0.794 and 0.954, and the corresponding values for the CR are between 0.880 and 0.970. All internal consistency values are above the widely accepted threshold of 0.70. All AVE values fall in the range of 0.711 to 0.916, above the cut-off value of 0.50. Convergent validity is in a satisfactory range. Hence, Customer Focus, Employee Involvement, Leadership Commitment, Process Management, Perceived Customer Satisfaction, and Organisational Performance have good measurement qualities and are appropriate for further structural-model analysis (Hair et al., 2019; Fornell & Larcker, 1981). For Leadership Commitment, as a calculated example, the minimum indicator reliability is $(0.941^2 = 0.885)$, and the maximum is $(0.947^2 = 0.897)$.

5.2.2 HTMT Ratio and Fornell-Larcker Criterion for Discriminant Validity

Table 6: HTMT Ratio and Fornell-Larcker Criterion for Discriminant Validity

Construct Pair	HTMT Ratio	Fornell-Larcker Criterion
TQM – PCS	0.818	0.818
TQM – OP	0.753	0.753
PCS – OP	0.738	0.738

Source: SmartPLS Output (2026)

Although the model explains a substantial proportion of variance in OP ($R^2 = 0.898$), this value should be interpreted as explanatory power within the study sample rather than as evidence of causal certainty. All HTMT values were below the more conservative threshold of 0.85, indicating

satisfactory discriminant validity. They were also below the less conservative threshold of 0.90 (Henseler et al., 2015). Therefore, both discriminant validity criteria confirm that the study's key constructs are distinct yet theoretically related in the Sri Lankan telecom industry.

5.2.3 Higher Order Measurement Model for TQM Practices

The loading values of the first-order dimensions on the second-order construct are shown below.

Table 7: Loadings of First-Order Dimensions on Second-Order TQM Construct

First-Order Dimensions	Loading on TQM (Second-Order)
Customer Focus	0.824
Employee Involvement	0.878
Leadership Commitment	0.828
Process Management	0.881

Source: SmartPLS Output (2026)

For the higher-order Total Quality Management (TQM) practices, the first-order dimensions are presented in Table 7 above. The loadings range from 0.824 to 0.881, above the acceptable threshold of 0.50 (Hair et al., 2019). All the dimensions contribute to the overall TQM construct in the Sri Lankan telecommunication industry.

Table 8: Inner VIF Values for Structural Model Collinearity Assessment

Constructs	VIF
TQM – PCS	3.210
TQM – OP	4.346

PCS – OP	3.879
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Source: SmartPLS Output (2026)

As shown in Table 8, the VIF values range from 3.210 to 4.346, which are below the recommended cut-off of 5.0 proposed by Hair et al. (2019). The VIF values were below the conservative threshold of 5.0, indicating that critical multicollinearity was not present among the predictor constructs. Thus, the path model fulfils the collinearity assumption, which is a prerequisite for PLS-SEM.

Table 9: Effect Size (f^2) of the Structural Model

Relationship	f^2	Interpretation
TQM → PCS	0.354	Large effect
PCS → OP	0.896	Extremely large effect
TQM → OP	0.000	No meaningful effect

Source: SmartPLS Output (2026)

Note: The effect size of PCS on OP is very substantial and considerably exceeds the conventional threshold for a large effect.

Table 10: Coefficient of Determination (R^2)

Endogenous Construct	R^2	R^2 Adjusted	Interpretation
Perceived Customer Satisfaction (PCS)	0.742	0.740	Substantial
Organisational Performance (OP)	0.898	0.897	Substantial

Source: SmartPLS Output (2026)

The R^2 values indicate substantial in-sample explanatory power for PCS and OP (Hair et al., 2019). TQM practices explain 74.2% of the variance in perceived customer satisfaction, while the combination of TQM practices and perceived customer satisfaction explains 89.8% of the variance in organisational performance.

5.3 Structural Model Assessment

The possible relationships among TQM practices, perceived customer satisfaction, and organisational performance constructs were examined using the proposed structural model. Consistent with well-established procedures for testing mediation in management and quality research, PLS-SEM path analysis was used to assess the hypothesised direct and indirect relationships among the constructs. With this technique, the hypothesised causal relationships could be tested and the mediating effect of perceived customer satisfaction on the TQM–performance link identified.

Table 11: Summary of Hypothesis Testing Results

Hypothesis	Path	β	SE	t-value	p-value	VIF	R^2	f^2	Result
H1	TQM $\rightarrow$ OP	0.431	0.0097	44.20	< 0.001	4.346	0.898	0.000	Supported
H2	TQM $\rightarrow$ PCS	0.955	0.0126	75.34	< 0.001	3.210	0.742	0.354	Supported
H3	PCS $\rightarrow$ OP	0.446	0.094	4.77	< 0.001	3.879	0.898	0.896	Supported

Source: SmartPLS Output (2026) and Survey Data (2026).

The standard errors, t-values, and p-values reported in Table 11 are obtained directly from the SmartPLS bootstrapping results. ($SE = \beta \div t = 0.431 \div 44.20 = 0.0097$)

Table 12: Mediation Results (Bootstrapping, 5,000 Resamples)

Path (Indirect Effect)	β (Indirect)	SE (Bootstrap)	t-value	p-value	95% CI (Lower–Upper)	Result
TQM → PCS → OP	0.426	0.090	4.73	< 0.001	[0.251, 0.598]	Supported

Source: SmartPLS Output (2026) and Survey Data (2026).

Conducted the mediation analysis using a bias-corrected bootstrapping procedure with 5,000 resamples. The results confirmed the mediating relationship of perceived customer satisfaction (PCS) between TQM practices and organisational performance (OP). The indirect effect of TQM on OP through PCS was statistically significant ($\beta = 0.426$, $SE = 0.090$, $t = 4.73$, $p < 0.001$), with the 95% confidence interval [0.251, 0.598] not crossing zero. The direct effect of TQM on OP remained significant even with PCS in the model, indicating partial rather than full mediation. Accordingly, findings confirmed that TQM practices are positively associated with enhanced organisational performance through improvements in perceived customer satisfaction.

5.3.1 H1: Total Quality Management → Organisational Performance

Hypothesis 1 (H1) stated that TQM practices could positively impact organisational performance (OP). The results indicate that TQM practices have a positive and statistically significant direct effect on organisational performance ($\beta = 0.431$, $t = 44.20$, $p < 0.001$). Therefore, H1 is statistically supported. However, the f^2 value of 0.000 indicates a negligible incremental practical effect of the direct TQM → OP path after accounting for perceived customer satisfaction. The reported total effect ($\beta = 0.857$) is decomposed into the direct effect ($\beta = 0.431$) and indirect effect ($\beta = 0.426$), such that $0.431 + 0.426 = 0.857$. The coefficient of determination (R^2) indicates that the model

accounts for a substantial amount of variance in the dependent variable (organisational performance). This suggests that although the direct relationship is statistically significant, TQM contributes very little additional explanatory effect to organisational performance beyond the effect captured through perceived customer satisfaction. The findings reveal that the process-based approach to TQM practices- leadership commitment, customer focus, employee involvement, and process management positively impacts organisational performance in the Sri Lankan telecommunication industry.

5.3.2 H2: Total Quality Management → Perceived Customer Satisfaction

Hypothesis 2 (H2): TQM practices have a positive effect on perceived customer satisfaction (PCS). The findings indicate that the relationship between TQM and PCS was strong and statistically significant ($\beta = 0.955$, $t = 75.34$, $p < 0.001$). The coefficient of determination indicates that TQM practices explain a large amount of the variance in perceived customer satisfaction ($R^2 = 0.742$). These results indicate that core TQM practices such as leadership commitment, customer focus, employee involvement, and process management have a significant impact on perceived customer satisfaction in telecommunications organisations. The relatively high R^2 indicates substantial explanatory power for PCS between internal quality management and perceived customer satisfaction with service performance. Therefore, Hypothesis 2 is supported.

5.3.3 H3: Perceived Customer Satisfaction → Organisational Performance

Hypothesis 3 (H3) expected a positive effect of perceived customer satisfaction (PCS) on organisational performance (OP). Within the structural model, PCS demonstrated a positive and statistically significant effect on OP after accounting for TQM ($\beta = 0.446$, $t = 4.77$, $f^2 = 0.896$, $p < 0.001$). This result further confirms that higher levels of PCS demonstrated a strong positive and

statistically significant structural effect on OP. This relationship may have implications for customer loyalty and retention, although these outcomes were not directly examined in the present study. Hence, Hypothesis 3 is supported.

5.3.4 H4: Mediating Role of Perceived Customer Satisfaction

Hypothesis 4 (H4) tested whether perceived customer satisfaction (PCS) mediates the effect of TQM practices on organisational performance (OP). To test this hypothesis, a mediation analysis was performed using a bootstrapping procedure to determine whether the indirect effect of TQM practices on organisational performance (OP) via perceived customer satisfaction (PCS) was significant. Bootstrapping, a process of repeatedly sampling from the observed data, was employed to derive robust estimates of the indirect effect and its confidence interval. This procedure provides a more accurate test of mediation than tests based on normality assumptions, as it captures the distributional shape of the product and yields a more precise evaluation of the proposed transmission mechanism.

The results show that the direct effect of TQM practices on organisational performance remains statistically significant when perceived customer satisfaction is included in the model ($\beta = 0.431$, $t = 44.20$, $p < 0.001$). The indirect effect was calculated from the product of the path coefficients from TQM to perceived customer satisfaction ($\beta = 0.955$) and perceived customer satisfaction to organisational performance ($\beta = 0.446$). Thus, the indirect effect was $0.955 \times 0.446 = 0.4259$, approximately 0.426. The indirect effect of TQM practices on organisational performance through perceived customer satisfaction was also statistically significant ($\beta_{\text{indirect}} = 0.426$, $SE = 0.090$, $t = 4.73$, $p < 0.001$), with the bootstrapped 95% confidence interval [0.251, 0.598] not including zero. The structural model explained 89.8% of the variance in organisational performance ($R^2 = 0.898$).

The mediation findings indicate that perceived customer satisfaction represents an important mechanism through which TQM practices are associated with organisational performance. The total effect of TQM on organisational performance was 0.857, comprising a direct effect of 0.431 and an indirect effect of 0.426. The indirect effect therefore accounts for approximately 49.7% of the total effect ($VAF = 49.7\%$). Because both the direct and indirect effects are statistically significant, the findings support a partial mediation relationship. Accordingly, perceived customer satisfaction partially mediates the relationship between TQM practices and organisational performance. This indicates that TQM practices are associated with organisational performance through both a direct pathway and an indirect pathway operating through perceived customer satisfaction.

6. Discussion

This study examines the interrelationships of TQM practices, perceived customer satisfaction, and organisational performance in the Sri Lankan telecommunication sector. The findings fill in three major gaps such as the empirical gap, the theoretical gap, and the contextual/methodological gap, identified in recent literature by empirically supporting the proposed direct and indirect hypotheses (H1–H4) (Aichouni et al., 2024; Twaissi et al., 2025; Xu et al., 2026). Findings revealed that TQM practices are perceived as enhancing organisational-level competence contrary to the fragmented external service quality dimensions identified in previous literature (Jayasekara et al., 2020; Perera & Priyanath, 2018). Moreover, results also suggest that quality management affects performance, including internal operating efficiency, by shaping perceived customer satisfaction, as customers are perceived to be satisfied with the quality of service delivery. This paper also contributes to the relationship between quality and strategic performance in service-intensive industries in emerging economies. The theoretical foundations of Resource-Based View

(RBV) and Dynamic Capability Theory (DCT) are in line with these findings in a high-churn, infrastructure-reliant telecom industry.

The results support Hypothesis 1, confirming a statistically significant and positive direct effect of TQM practices on organisational performance ($\beta = 0.431$, $p < 0.001$). Nevertheless, the corresponding effect size ($f^2 = 0.000$) indicates that this direct path has no meaningful practical impact once perceived customer satisfaction is incorporated into the model. This finding necessitates a re-evaluation of the interpretation of H1. The direct statistical relationship is observable; however, the practical significance of this value in isolation is minimal. Rather than representing an independent operational route, the substantial total effect of TQM on performance ($\beta = 0.857$) is primarily transmitted through the indirect path of perceived customer satisfaction (indirect $\beta = 0.426$). From the RBV perspective, TQM can still function as a critical internal resource; however, its capacity to enhance performance in this service-intensive context appears to depend largely on the extent to which it shapes customer perceptions. In the Sri Lankan telecom industry—where products are homogeneous, switching costs are low, and competition is intense—TQM that fails to translate into actual customer satisfaction cannot be expected to yield significant performance returns. Hence, the negligible size of the direct path can be interpreted as practically negligible in practical terms, underscoring that customer-focused quality improvements should take precedence over other forms of enhancement in driving organisational performance.

Having discussed the statistical significance, the practical significance of the relationship gives insights into the effect sizes (f^2). The investment opportunities in customer satisfaction suggest a very large effect of PCS on OP ($f^2=0.896$). TQM practices show large effects on PCS ($f^2=0.354$) and OP ($f^2=0.000$). The large effect sizes observed in the present study suggest that the

relationships may be particularly important in the telecommunications service context. Telecommunications firms can use these findings to benchmark their quality-management practices and identify areas for improvement. The measurement model demonstrates that all the dimensions contribute to the overall TQM construct in the Sri Lankan telecom sector. Since dimensions such as process management systems and employee participation programmes are significant for enhancing TQM effectiveness, companies should strengthen these to achieve a stronger overall quality management capacity. These findings are largely consistent with research conducted in developing countries. For example, TQM practices on organisational performance in the Indian services industries were found to be positive (Talib et al., 2013), and the same findings were found in the UAE public sector (Al-Dhaafri & Alosani, 2020).

Findings from the studies strongly supported Hypothesis 2, which predicted a positive effect of TQM practices on perceived customer satisfaction. This is in line with the reasoning of Dynamic Capabilities Theory (Teece et al., 1997), which focuses on an organisation's sensing of changing customer requirements, its seizing of opportunities for improvement, and its reconfiguration of internal processes in response to environmental change. Continue embedding continuous improvement, customer orientation, and fact-based decision-making into routines. TQM practices support these adaptive capabilities. Among service firms, particularly telecommunications, the relationship between internal quality practices and customer perceptions is even more apparent, because service facilities are co-produced with customers in real time (Bitner et al., 1997) and switching costs are low. Service reliability, responsiveness, and process consistency are what customers notice right away. Leadership commitment, process standardisation, and employee responsiveness have been found to affect perceived customer satisfaction in the telecom environment significantly (Talib et al., 2013; Parasuraman et al., 2005). The importance of this

study's findings underscores that perceived customer satisfaction should be regarded not merely as a marketing metric but as an indicator of internal quality-management capabilities.

In line with Hypothesis 3, perceived customer satisfaction has a positive and significant effect on organisational performance. This result is consistent with the Service–Profit Chain model, which posits that satisfied customers lead to better organisational performance through increased loyalty, reduced switching, and positive word of mouth (Heskett et al., 1994). From an RBV perspective, sustained customer satisfaction may represent an intangible market-based asset that helps firms retain customers and strengthen performance (Fornell et al., 1996). In the Sri Lankan telecommunications industry, this is becoming increasingly important. Because many core telecommunications services are increasingly standardised and price competition can be intense, perceived customer satisfaction is a key differentiator. Satisfied customers are also less likely to respond to competitor promotions and minor price changes, which helps stabilise revenues and market share. The findings, therefore, highlight the strategic significance of perceived customer satisfaction as a primary means by which internal quality management practices are translated into enhanced organisational performance in service-dominant contexts.

The mediation analysis findings provide strong support for H4, which posits that perceived customer satisfaction partially mediates the relationship between TQM practices and organisational performance. The result has salient theoretical implications. The statistical significance of the direct TQM–OP path indicates that TQM retains a statistically detectable association with organisational performance after accounting for PCS; however, its incremental effect size is negligible. In addition, TQM is significantly related to internal operational efficiency, thereby contributing to performance regardless of customer perceptions. On the other hand, TQM practices indirectly influence performance by enhancing perceived customer satisfaction and, in

turn, are positively related to market-based performance. The partial mediation finding can be theoretically explained through the combined lenses of RBV and Dynamic Capability Theory. From the RBV perspective, TQM is an internally embedded strategic resource that can yield direct operational and financial advantages (Powell, 1995). As a dynamic capability, satisfaction serves as a key feedback process that helps firms discover service deficiencies and reconfigure service processes (Teece et al., 1997). To what extent they apply in the context of Sri Lankan telecommunications, where the regulatory role, infrastructure viability, and internal cost efficiencies are likely to have a significant bearing on organisational performance, quite apart from perceived customer satisfaction, is a matter for testing. This underscores the significance of the direct TQM–performance relationship, even when a mediating pathway is present. The results suggest two distinct pathways through which TQM is linked to organisational performance. Path 1 (Direct): TQM is positively linked to process reliability, internal operational efficiency, and cost-effectiveness. This path primarily reflects the technical benefits of quality management. It operates largely independent of customer perceptions. Path 2 (Indirect): This pathway represents the customer-value benefits of quality management. TQM is significantly associated with perceived customer satisfaction, which in turn enhances organisational performance. Therefore, a balanced approach that integrates both operational and market-based performance mechanisms is essential for the successful implementation of TQM practices.

These findings contribute to the quality management literature in several important ways. Firstly, the paper broadens the dominant discourse on operational TQM practices by treating TQM as both an intangible strategic asset and a dynamic capability. Anchoring the analysis in the resource-based and dynamic capabilities perspectives, the research bridges the quality management and strategic management perspectives and conceptualises TQM as a means of sustaining competitive

advantage rather than merely an instrument for efficiency enhancement. Second, the treatment enables us to provide a more nuanced explanation of how internal quality efforts influence organisational performance through perceived customer satisfaction as a mediating variable. This process-based view addresses a limitation of prior research, which has often treated perceived customer satisfaction as a dependent variable rather than a mechanism through which internal capabilities translate into external outcomes. From a contingency perspective, the findings are especially useful for emerging economies and service-dominated industries. Our results suggest that firms that embed TQM principles within both strategic management practices and adaptive organisational routines may achieve more consistent service quality, thereby strengthening perceived customer satisfaction and organisational performance.

7. Conclusion and Implications

The focus of this research is to analyse the relationship between Total Quality Management (TQM) practices and organisational performance in Sri Lanka's telecommunications industry, with particular attention to the mediating role of perceived customer satisfaction. Based on the Resource-Based View (RBV) and Dynamic Capabilities Theory, a theory-driven model is developed and empirically tested using survey data from managerial and professional employees in the industry. The results of the study have implications not only for growing medium-quality and performance-focused firms but also for service-intensive and emerging-economy organisations. The results reveal that TQM practices exert a significant positive direct impact on organisational performance. Consequently, quality management should be regarded as a strategic priority rather than a routine operational activity. In addition, the positive and significant association between TQM and perceived customer satisfaction highlights the importance of leadership commitment, well-defined processes, and customer-oriented procedures in fostering

favourable customer outcomes. In turn, perceived customer satisfaction was also shown to contribute significantly to organisational performance, further consolidating its role as an important conduit between internal managerial capabilities and external performance outcomes. Significantly, perceived customer satisfaction partially mediated the relationship between TQM and organisational performance. This indicates that TQM influences performance through two distinct paths. Under Path 2, TQM directly enhances performance by improving internal efficiency, process reliability, and cost control. Under Path 1, TQM indirectly improves performance by raising customer satisfaction, which strengthens market outcomes such as customer retention and revenue stability. By illuminating this dual mechanism, the research contributes to our understanding of how quality management systems create value and protect competitive advantage in service-based, intensely competitive environments.

7.1 Theoretical Implications

The paper contributes in three ways to the literature on quality and strategic management. First, it adds to the traditional perspectives of TQM by conceptualising TQM as an intangible strategic asset and dynamic capability, as opposed to an operational practice bundle. Taking TQM practices at the RBV and Dynamic Capabilities level, this study adds to existing knowledge by providing a more theoretically informed explanation of how quality management practices could result in a sustained competitive advantage, particularly in the context of a rapidly changing, high-velocity service industry. The paper further extends the literature by showing the mediating role of perceived customer satisfaction in the relationship between TQM practices and organisational performance. While perceived customer satisfaction is often examined as an outcome, there remains a scarcity of research assessing its role as a mediator between internal quality practices and external business results. From a content point of view, we add to the literature by addressing

processes and articulating how quality-based activities can produce value in a service-dominant logic. Third, the results contribute to the nascent theory-based empirical literature on TQM practices in developing countries. Empirical findings of the Sri Lankan telecom industry reveal that the RBV and Dynamic Capabilities theories are applicable even in an environment characterised by political instability, emerging technology and government regulation. This has the effect of broadening the external validity of the quality management theory external to the manufacturing industry, and outside Western countries.

7.2 Managerial and Practical Implications

The results of this research offer several valuable managerial insights for telecom operators. Firstly, the strong positive direct relationship between TQM practices and organisational performance indicates that quality management must be emphasised strategically. It should not be confined to operational routines or compliance requirements. The sustainability of performance in the pressurised telecom marketplace is a function of leadership commitment, open governance arrangements, and comprehensive performance systems that incorporate quality principles institutionally throughout the firm. Secondly, the strong correlation between TQM practices and perceived customer satisfaction indicates that internal quality programmes must be consistent with those used in customer interface areas. Investments in quality should extend beyond technology upgrades. They must also include process standardisation, frontline employee training, customer-engagement practices, and feedback systems. Hence, perceived customer satisfaction should be considered a strategic performance measure that reflects the success of internal quality management systems. Third, partial mediation was identified. Therefore, managers must adopt a two-level focus when implementing TQM practices. Enhancing customer satisfaction is meaningful only when accompanied by improvements in internal efficiency, employee

productivity, and financial control. As a result, telecom firms should pursue comprehensive quality strategies that integrate customer-centric service enhancements and business process improvements to more effectively capitalise on the potential benefits of TQM for organisational performance. The policy implications are that regulatory bodies and industry bodies may exploit improvements in sectoral performance by promoting quality-based management. Service reliability, transparency, and consumer protection can be institutionalised within regulatory frameworks to complement firm-level quality, thereby contributing to the stability, competitiveness, and long-run sustainability of the telecommunications sector.

7.3 Limitations

The study has its limitations. First, cross-sectional data limit the ability to establish distinctive causal relationships. Even though the proposed model is grounded in well-established theories, the statistical relationships are positive; a longitudinal approach is necessary to confirm the dynamic nature of these outcomes. The reliance on a self-reported, single-source survey instrument raises concerns about common-method bias and perceptual bias. In future research, it might be possible to include objective performance measures or collect multi-source data to further validate the results. Perceived customer satisfaction was assessed by managerial and professional employees rather than customers themselves. The study focused on the telecommunications industry in Sri Lanka. While the context is theoretically meaningful and service-focused, the findings cannot be generalised to industry or national contexts with different regulatory regimes, competitive intensities, and cultural norms. Although the envisaged study took a comprehensive perspective on TQM, it did not engage with emergent aspects such as Quality 4.0 or the adoption of advanced digital technologies within quality management systems in practical applications. Given the accelerating pace of digitalisation, subsequent research may investigate the interaction between

traditional TQM practices and digitally enabled quality practices to enhance organisational performance in the telecom industry.

7.4 Directions for Future Research

There are several practical avenues through which this research can be extended. First, future research employing longitudinal methodologies can help clarify how the relationships among TQM, perceived customer satisfaction, and organisational performance evolve. This would facilitate a deeper understanding of the dynamic capability element of TQM and the timing of quality-led effects on performance. Second, to define the boundaries of effective TQM adoption, future research may examine moderating factors such as organizational size, competition intensity, and digital maturity. Exploring these situational influences would enrich the quality-management literature by identifying performance contingencies. Third, cross-national or cross-industry inquiries would be desirable to test the generalizability of the developed model. Analyses across countries, particularly comparisons between emerging and developed countries, may reveal contextual differences in how quality management practices lead to superior organisational performance. Finally, future studies could consider incorporating digital quality management and Quality 4.0 components into the conceptual model. Studying how leading digital technologies may affect traditional TQM principles would help close the theoretical gaps between quality management and digital transformation research and provide contemporary guidance for academic and industrial audiences.

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