Guest editorial: What does combining soft and hard TQM take to achieve organizational excellence?

1. Introduction

Achieving organizational excellence has been widely considered more of an art than a science (Forbes, 1994). Total quality management (TQM) – a management philosophy centered around the principles of continuous improvement, teamwork and customer focus (Dean and Bowen, 1994) – embodies a tension toward organizational excellence (Cavallone and Palumbo, 2022). Implementing TQM necessitates a customized design of management practices, adapting teamwork, continuous improvement and customer focus to the firm's distinguishing attributes to advance its organizational processes and enhance available sources of competitive advantage (Prajogo and Sohal, 2003).

Viewing TQM as an art entails discovering the emerging interplay between tangible techniques aimed at ensuring the reliability of organizational processes (*i.e.* hard TQM) and intangible practices intended to establish an empowering climate in the workplace (*i.e.* soft TQM), which promotes engagement and teamwork among employees (Fotopoulos and Psomas, 2009). Balancing hard and soft TQM facilitates the development of a committed workforce that prioritizes stakeholders' interests and, thereby, guides management decisions toward achieving viable organizational excellence (Rahman and Bullock, 2005). This perspective aligns with the firm's interpretation as a socio-technical system, stressing the integration of the technical attributes necessary for maintaining reliable and high-quality work systems with the social features of the organization in a joint optimization perspective (Fox, 1995).

Although scholars agree on the interconnectedness of hard and soft TQM practices and their importance for accomplishing business excellence (Kaynak, 2003), previous research yielded conflicting insights and inconsistent recommendations about how to combine the two to pave the way for organizational excellence (Psomas *et al.*, 2014; Rahman, 2004). First, the literature emphasizes the crucial role of soft TQM practices in nurturing the firm's competitive advantage by stimulating the employees' engagement and commitment (Samson and Terziovski, 1999; Powell, 1995). Second, the challenge of balancing soft and hard TQM practices has blurred the understanding of the impact of TQM on organizational performance (Hendricks and Singhal, 1997), prompting scholars and practitioners to scrutinize the gap between the ideal and actual implementation of TQM (Zbaracki, 1998).

This special issue aims to rekindle the scientific debate about the interplay between hard and soft TQM, shedding light on their contents and processes (Reed *et al.*, 1996) and discovering the paradoxes that affect their implementation (Choi and Eboch, 1998). Before providing an overview of the articles in this collection, the editorial examines the current state of scientific knowledge surrounding the interaction between hard and soft TQM practices. To achieve this, we employed a rapid realist approach to review this study domain's state of the

art. The editorial unfolds as follows. The next section outlines the study design. The report of the findings is then presented, identifying the streams which populate the scientific debate and the roots in which such streams are rooted. Finally, we introduce the contributions hosted in this special issue, arranging an integrative framework to push forward our understanding of the balance between hard and soft TQM.

2. Methods

We employed a realist approach to assessing the scholarly debate about balancing soft and hard TQM. Realist reviews have an explanatory purpose and aim to uncover evidence about the contexts and mechanisms influencing the outcomes of the investigated phenomenon (Hunter *et al.*, 2022; Pawson *et al.*, 2005). Our focus was on the joint optimization of hard and soft TQM practices. We sought to gather insights into the institutional and organizational contexts and mechanisms that facilitate the exploitation of TQM to accomplish business excellence and pave the way for enhanced organizational viability.

Following Saul *et al.* (2013), our study design was structured into three steps, graphically depicted in Figure 1. First, we defined the search string to collect relevant scientific contributions. Alongside examining the interplay between soft and hard TQM practices, we decided to capture the contrast between tangible and intangible initiatives to pursue continuous quality improvement. Given our general goal of exploring the interconnectedness between soft and hard TQM practices, we refrained from identifying specific methods, such as "process improvement" for hard TQM and "employee involvement" for soft TQM. Hence, our search string consisted of two components: one related to soft TQM and the other to hard TQM. We used the Boolean operator "AND" to connect these two components. We
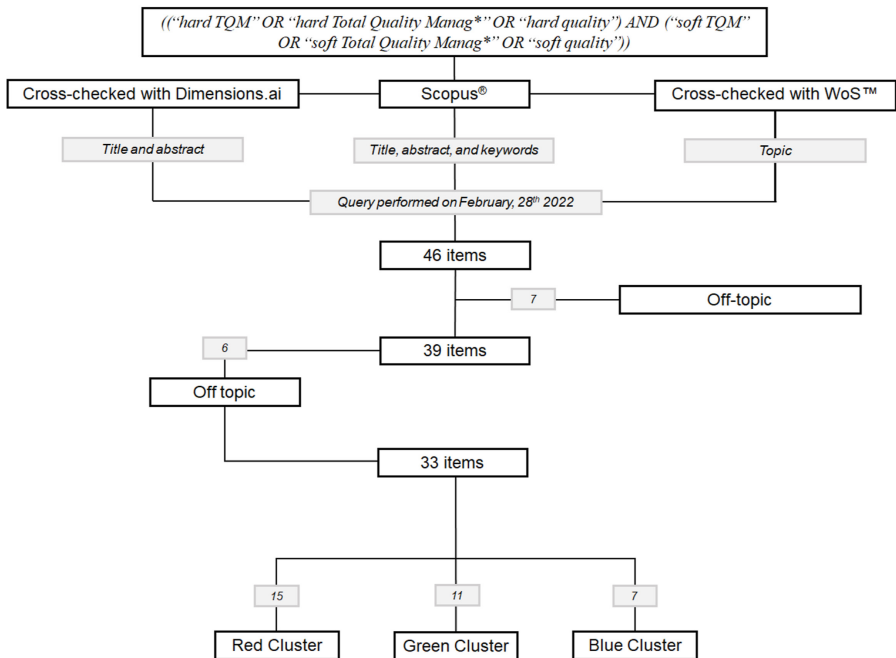
Figure 1.
The process of items collection, analysis and clusterization through bibliographic coupling

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incorporated in the string the Boolean operator "OR" and the asterisk (*) to account for potential variations of the search terms. The final search string is reported as follows:

(("hard TQM" OR "hard Total Quality Manag*" OR "hard quality") AND ("soft TQM" OR "soft Total Quality Manag*" OR "soft quality"))

The research was accomplished in three databases: Digital Science & Research Solutions' Dimensions, Elsevier's Scopus® and Clarivate Analytics' Web of Science (WOS™). The search approach varied across databases to fit the attributes of search engines. More specifically, items were searched for "title and abstract" in Dimensions, "title, abstract and keywords" in Scopus® and "topic" in WoS™. Data collection was conducted on February 28th, 2023, and resulted in 42 items from Dimensions, 46 from Scopus® and 41 from WoS™. After screening the results and removing off-topic items, we found that Scopus® yielded the most significant number of articles, with Dimensions and WoS™ providing a subset of those found in Scopus®. Therefore, we elected Scopus® as the data source of this review.

In the second step of our research, we conducted a thorough analysis of collected items to ensure that they fit our aim of gathering evidence of the interplay between soft and hard TQM. Seven items were excluded from the initial dataset as they did not pertain to TQM or lacked pertinent information about the interplay between tangible and intangible initiatives aimed at quality improvement. Hence, 39 articles served as the basis for this editorial. In this study protocol's third and final step, we analyzed and organized the selected contributions by conducting two bibliometric analyses. On the one hand, the items were clustered based on the bibliographic coupling to identify the research streams driving advancements in the study domain. Altogether, 33 articles were coupled, with six items being excluded due to weak citation links. On the other hand, a co-citation analysis of the bibliographically coupled items was accomplished. This allowed us to identify the conceptual roots of the scholarly debate. As detailed in the following section, we used an interpretive and narrative approach to report our study findings.

3. Findings
3.1 Bibliographic coupling
Figure 2 presents the results of bibliographic coupling. Overall, three clusters were retrieved, which represented distinct research streams. The first cluster – labeled "red" – includes 15 contributions that explore the mechanisms underlying the relationship between hard and soft TQM. The second cluster – marked as "green" – comprises 11 items that delve into the contextual factors influencing the combination of hard and soft TQM. The third cluster – identified as "blue" – consists of seven records highlighting the outcomes resulting from the alignment of hard and soft TQM practices.

Combining hard and soft TQM is vital to achieve excellence and gains a sustainable competitive advantage. Items in the red cluster support this assumption, claiming that harmonizing tangible and intangible TQM practices increases organizational performance. In examining the interplay between soft and hard TQM, scholars have highlighted the importance of the former, which is crucial for establishing the firm's strategic and managerial uniqueness. Intangible practices – *e.g.* employee involvement and empowerment – provide a fertile ground for designing and implementing hard TQM, such as process control and statistical quality improvement. The interplay between intangible and tangible TQM practices is complex and multifaceted, involving various mechanisms and contextual factors. Rahman and Bullock (2005) argue the need for an integrated approach to TQM that considers both hard and soft practices and the importance of leadership support and communication in facilitating their implementation.
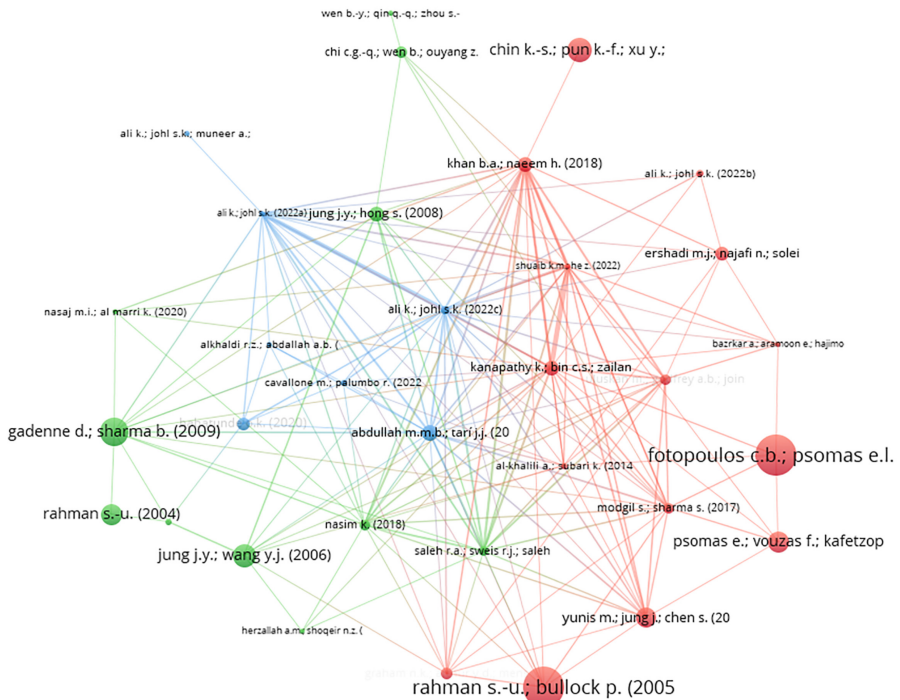
Figure 2.
The results of
bibliographic coupling

Source(s): Author's own creation

Similarly, Shuaib and He (2022) suggest that a balance between hard and soft practices is necessary to achieve quality outcomes, highlighting the role of organizational culture in accomplishing joint optimization. Al Khalili and Subari (2014) investigate the influence of organizational contexts, such as industry type and organizational size, on the relationship between hard and soft TQM practices. In addition, Bazrkar et al. (2022) examine the role of human resource management (HRM) practices in mediating the relationship between hard and soft TQM. These studies provide valuable insights into the mechanisms and contextual factors that shape the interplay between soft and hard TQM interventions, highlighting the need for a customized and integrated approach to achieve business excellence through continuous quality improvement.

In light of these arguments, the underlying mechanisms of the interplay between hard and soft TQM practices achieve salience. A comprehensive understanding of the relationship between hard and soft TQM practices can be attained by adopting a socio-technical perspective of the firm, which acknowledges the social and technical sides of organizational dynamics. Moreover, the process-based view of quality should be overcome, which predominantly focuses on the tangible aspects of organizational dynamics. This involves challenging conventional wisdom, which deals with hard and soft practices as parallel systems (Psomas et al., 2014). Drawing on Modgil and Sharma (2017), soft TQM practices should be introduced to establish a supportive ground for continuous quality improvement. These practices involve creating a culture of trust, communication and collaboration and providing people with the necessary training and resources to advance their skills and knowledge. In other words, soft TQM is crucial for creating a setting that sustains the

implementation of hard TQM practices that are process oriented. Indeed, tangible techniques may fail to achieve their goals without an organizational culture and climate backing their performance.

In this regard, a sequential mechanism is proposed, where the arrangement of tangible and process-oriented techniques follows the initiation of intangible practices empowering the workforce and fostering business excellence. According to Khan and Naeem (2018), implementing soft TQM practices can lead to a committed and motivated workforce willing to embrace and participate in TQM. Fotopoulos and Psomas (2009) suggest that this sequential mechanism heralds enhanced organizational performance since a culture of collaboration and continuous improvement nurtures hard TQM practices. Three soft TQM factors are considered especially relevant for this purpose. First, committed top management is required. Top managers should demonstrate commitment through a people-centered leadership style that empowers employees and generates motivation to achieve excellence (Graham et al., 2014). Committed top management ensures that the firm's members are aligned toward its goals and objectives, inspiring people to act accordingly to the strategic organizational guidelines. Second, HRM and development (HRMD) techniques are essential for building a competent and enthusiastic workforce. HRMD enhances employees' knowledge, skills and capabilities, complementing committed top management by strengthening the individual and collective impact on continuous quality improvement (Ali and Johl, 2022a). Besides, they boost organizational adaptiveness to changes in the competitive domain, nourishing agility and responsiveness. The focus on continuous learning ushered by HRMD promotes a culture of excellence within the organization, facilitating the implementation of hard TQM (Chin et al., 2002). Lastly, stakeholder orientation emphasizes value co-creation and engages partners in pursuing business excellence, catalyzing the arrangement of tangible TQM (Ershadi et al., 2019). Stakeholder orientation values satisfaction and recognizes the importance of involving external interlocutors – i.e. customers, suppliers, regulators and communities – in paving the way for excellence. By involving stakeholders in the pursuit of excellence, the firm can better understand their needs and expectations, envisioning value propositions that fully address them. Furthermore, embracing a stakeholder orientation encourages collaboration and knowledge sharing, pushing innovation and energizing continuous quality improvement.

Within this framework, the "green" cluster emphasizes the importance of contextual factors in the interplay between soft and hard TQM practices. The literature suggests that internal organizational characteristics and external factors, such as competition and stakeholders' expectations, influence the implementation of TQM. The firm must take a context-aware approach that considers internal and external factors to ensure the successful implementation of TQM practices. Several scholars have highlighted the importance of the task environment in shaping the relationship between intangible and tangible TQM practices. Competition and rivalry, for instance, can encourage top management to implement quality improvement initiatives and stimulate the implications of soft TQM practices on tangible initiatives intended for quality improvement. According to Nasim (2018), competition incentivizes the firm to incorporate quality management practices into its operational and strategic functions, triggering increased performance. Besides, positive exchanges with stakeholders support efforts toward organizational excellence, facilitating the establishment of a corporate culture that nurtures the design and implementation of soft and hard TQM (Rahman, 2004).

The "blue" cluster represents the integration of soft and hard TQM practices and their positive effects on individuals and the firm. By combining intangible and tangible initiatives intended for quality improvement, people are encouraged to engage in TQM, fostering empowerment and motivation to achieve organizational goals. According to Cavallone and Palumbo (2022), integrating soft and hard TQM practices leads to greater readiness for change, both from a relational and technological perspective. This reduces resistance to

change, improving the firm's adaptability to the evolving external environment (Ali *et al.*, 2022). Alongside lowering resistance to change, employees' empowerment leads to more reliable and effective organizational processes. As Abdullah and Tarí (2012) point out, this enhances performance, engaging people to delight stakeholders. This is because integrating soft and hard TQM practices results in a more cohesive and efficient organizational structure better equipped to meet the evolving demands of stakeholders.

3.2 Co-citation analysis

Figure 3 shows the results of the co-citation analysis, which involved the top 100 references with the highest total strength of co-citation links. The study produced three clusters representing the conceptual foundations of the scientific discourse regarding the interplay between soft and hard TQM. The "red" cluster, comprising 37 items, is characterized by a socio-technical understanding of quality management, maintaining the need for integrating TQM practices into the firm's organizational culture (Bou-Llusar *et al.*, 2009). According to this perspective, TQM is not merely conceived of as a technical solution but as a trait of the corporate culture, becoming an integral part of the firm's way of doing business (Baird *et al.*, 2011). By incorporating soft and hard TQM practices into their organizational culture, the firm can shape a work environment that fosters continuous improvement and promotes individual and collective commitment to achieving excellence (Naor *et al.*, 2008). Integrating TQM into the corporate culture has many advantages. Among other things, it leads to a shared understanding of quality objectives and the creation of a common language that helps people align their work practices with organizational goals. This engenders a sense of ownership and accountability for quality at all firm levels, resulting in improved quality outcomes (Bou-Llusar *et al.*, 2009).
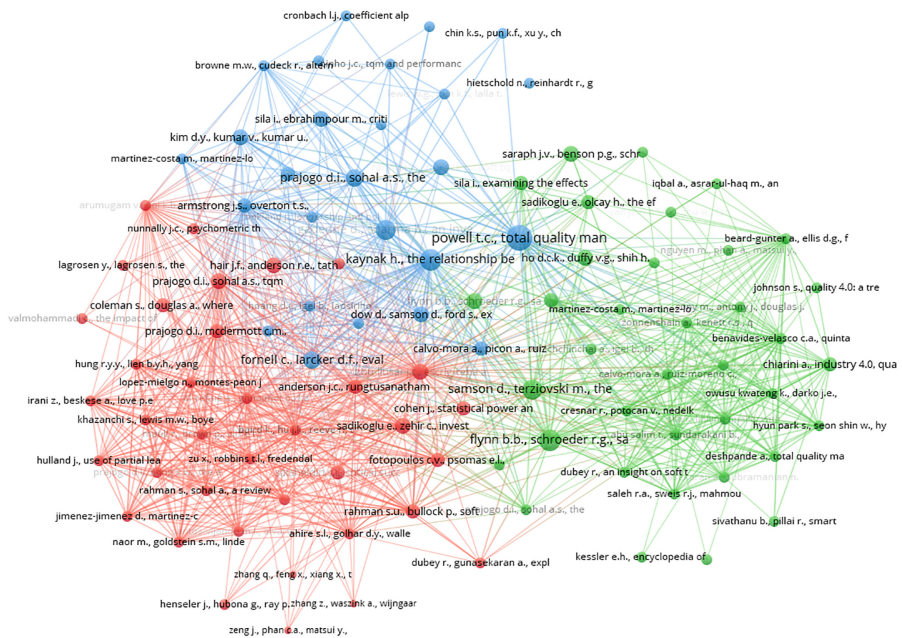

Figure 3.
The results
of co-citation analysis

Source(s): Author's own creation

The "green" cluster, which consists of 37 articles, endorses the joint optimization of soft and hard TQM practices to gain a viable competitive advantage (Flynn *et al.*, 1995). This perspective highlights that tangible and intangible TQM practices are critical resources contributing to organizational success (Dubey, 2015; Saleh *et al.*, 2018b). The balanced combination of these practices creates a unique and firm-specific bundle of resources that is inimitable and expected to enhance corporate performance, regardless of the institutional constraints and challenges that affect the firm's functioning (Sila, 2007). These considerations are consistent with a resource-based view, assuming that competitive advantage relies on developing unique and valuable assets that are difficult for competitors to imitate (Benavides-Velasco *et al.*, 2014). However, harmonizing soft and hard TQM practices is insufficient for sustainable organizational excellence. These practices should be integrated into their strategic patterns, processes and systems (Saleh *et al.*, 2018a). This requires a systemic approach to TQM that acknowledges it as an attribute of the corporate identity (Dean and Bowen, 1994). The lack of a systemic approach prevents the firm from fully leveraging the benefits of soft and hard TQM practices, disrupting its ability to contribute to the organization's competitive advantage (Benavides-Velasco *et al.*, 2014).

The "blue" cluster comprises 26 contributions investigating the relationship between hard and soft TQM practices (Calvo-Mora *et al.*, 2013). Soft and hard TQM practices complement in the organizational excellence puzzle (Kim *et al.*, 2012). Soft TQM practices facilitate the implementation of hard TQM, providing the foundation for the entire quality management system (Oakland, 2011). Soft TQM generates an organizational ground that stimulates employee empowerment, engagement and a sense of ownership toward corporate objectives (Dow *et al.*, 2009). This is achieved through training, communication and leadership, which enact a work climate conducive to continuous improvement (Kim *et al.*, 2012). Hard TQM takes root in such infrastructure of soft practices, substantiating the focus on organizational excellence through process management and control (Dow *et al.*, 2009). A combined approach that harmonizes soft and hard TQM practices is essential for achieving organizational excellence. By incorporating soft and hard techniques in the TQM philosophy, the firm creates a corporate culture of sustainable excellence, develops employees' capabilities and establishes viable sources of competitive advantage (Calvo-Mora *et al.*, 2013).

## 4. An integrative framework to frame the special issue
The debate about the relationship between soft and hard TQM has been vivid for decades, attracting scholars and practitioners' interest. Scientific contributions in this domain espouse two prevailing conceptual perspectives: the socio-technical theory and the resource-based view of the firm. The former assumes that continuous quality improvement involves a balance of intangible and tangible factors, which intertwine to advance corporate performance. The latter envisions the mix of soft and hard TQM practices as a distinctive bundle of resources that concurs in building sources of competitive advantage.

Combining these two conceptual perspectives, TQM is framed as an idiosyncratic attribute of the firm. It is encapsulated in the corporate culture, shaping a work environment that promotes continuous quality improvement and enhances individual and collective commitment to achieving sustainable sources of competitive advantage. Furthermore, it relies on tangible practices intended for quality improvement, which orient employees' empowerment and teamwork to an effort aimed at accomplishing business excellence. A sequential relationship connects soft and hard TQM. Soft techniques establish the backbone of hard TQM practices. More specifically, intangible practices are the foundation for implementing tangible quality improvement actions, which focus on process management and control. A positive organizational context facilitates the design and implementation of

hard TQM practices, generating employees' commitment and willingness to partake in organizational excellence. This requires a work climate that inspires people and encourages the adoption of a quality orientation to cope with the pressures generated by an increasingly competitive domain. Balancing soft and hard TQM engenders organizational resilience, enabling the firm to thrive in an increasingly competitive environment.

The contributions in this special issue enable us to shed light on the interplay between soft and hard TQM, advancing our understanding of how they intertwine to set the ground for organizational excellence. They contribute to the arrangement of an integrative framework graphically depicted in Figure 4. Implementing TQM requires strong management commitment since leaders are crucial in promoting and supporting quality initiatives. As Psychogios highlights, leadership plays a central role in the success of TQM implementation. Effective leadership helps establish a quality culture that promotes continuous improvement and fosters a sense of ownership and responsibility among employees. Leaders must inspire and motivate people to embrace quality initiatives and create an environment encouraging participation, innovation and experimentation. Psychogios emphasizes developing soft skills, such as communication, collaboration and coaching, to create a work climate that fosters quality excellence, develops a shared vision of quality and promotes a culture of continuous improvement, thus paving the way for enhanced corporate performance and competitiveness.

Empowering people has been argued to have significant implications on organizational performance, embodying soft TQM orientation. Cucino and colleagues argue that leadership styles based on empowerment are positively associated with employees' job satisfaction and commitment. Through empowerment, leaders create a positive workplace that engages people in organizational decision-making. This facilitates the design and implementation of
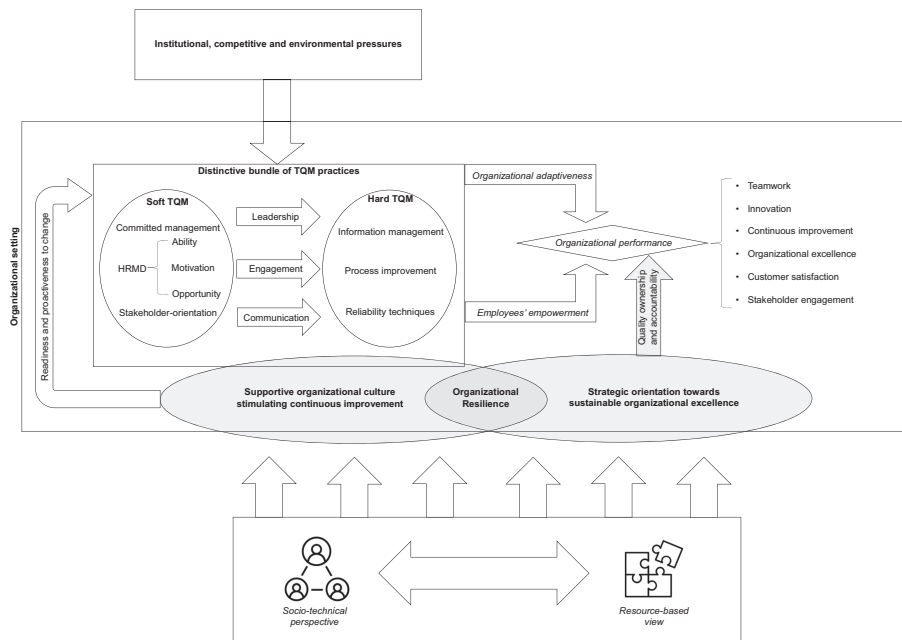
Figure 4.
An integrative representation of the study findings

Source(s): Author's own creation

hard TQM practices, adding to the reliability of management processes. In their study, Testa *et al.* highlight the importance of training and interpersonal communication in realizing the benefits of empowerment and engagement. The authors argue that, among HRMD practices, training is vital to improve employees' skills and knowledge, which are conducive to continuous quality improvement. Moreover, they suggest that training should align with the firm's strategic goals and objectives and focus on developing technical and soft skills to achieve business excellence.

Echoing these arguments, Torre and coauthors propose that training bridges the gap between the individual and the corporate quality orientation, facilitating the translation of TQM practices from the micro to the meso level of the firm. They argue that training enacts a consistent sensemaking of TQM practices, promoting the alignment of individual and collective goals and enhancing the employees' ability to work collaboratively toward a common objective. By providing people with the necessary knowledge and skills to understand and implement TQM practices, training is a catalyst to create a quality-oriented culture that permeates the firm. Moreover, training nurtures a sense of ownership and accountability, encouraging people to take responsibility for proactively identifying and addressing quality issues. As a result, training enhances the organization's capacity to deliver high-quality products and services that meet the evolving stakeholders' expectations.

Training should be harmonized with other HRMD practices to substantiate the link between soft and hard TQM. In line with these arguments, Flamini *et al.* recommend that HRMD practices facilitate the fit between employees' capabilities and the firm's quality objectives. HRMD sustains establishing a quality culture where people are motivated and committed to continuously improving quality. HRMD enables the synthesis of leadership, training, communication and empowerment in a homogeneous bundle of resources, creating a corporate culture imbued with trust, collaboration and innovation. Culture sets the conditions for successfully implementing tangible TQM techniques, such as statistical process control and benchmarking.

It is worth noting that hard TQM triggered by intangible quality improvement initiatives has positive implications on organizational adaptiveness, which is crucial to success. Chen argues that achieving a comprehensive assessment of how soft TQM affects tangible quality improvement and how hard TQM advances the reliability and dependability of management processes is crucial to accomplish business excellence. Chen's arguments stress the importance of a balanced approach to quality management. While tangible techniques provide the foundation for quality management, they are insufficient for continuous quality improvement. Soft initiatives, such as leadership, vision and communication, implement a quality-oriented culture that effectively realizes business excellence. By jointly optimizing soft and hard TQM, the firm generates idiosyncratic success factors and fosters a corporate culture oriented toward sustainable and continuous quality improvement. Furthermore, as De Koeijet and colleagues argue, balancing soft and hard TQM boosts adaptiveness within the firm, adding to the employees' desire to advance organizational performance and promoting positive sensations at work.

From this standpoint, aligning soft and hard TQM practices activates a virtuous cycle of quality improvement, consistent with the findings of Filippi and coauthors. The combination of soft and hard TQM practices should be leveraged to promote change and sustain quality improvement, contributing to corporate performance via a strategic orientation toward sustainable business excellence. This is especially relevant when the firm is concerned by a transition toward Industry 4.0. Focusing on this peculiar context, Margherita and Braccini propose that soft TQM is crucial to sustaining the shift toward digitalization. According to the authors, soft TQM practices based on employees' involvement and empowerment play a significant role in unleashing hard TQM techniques, making the firm capable of fully reaping the advantages of Industry 4.0.

Katsuda *et al.* have further advanced this argument by emphasizing the critical role that empowerment can play in the service industry. They interpret employees' empowerment as a micro-level strategy to support meso- and macro-level attempts to realize business excellence through tangible quality management initiatives. At the micro level, empowerment improves individual and team performance by enhancing motivation, satisfaction and commitment. At the meso level, it fosters a culture of continuous improvement and innovation, stimulating process control and reliability. At the macro level, it contributes to the strategic goals of the firm, aligning individual and collective efforts with the organizational mission, vision and values. Capolupo *et al.* recommend that excellence cannot be fully accomplished by looking within the firm's boundaries. Instead, business excellence should be pursued at the ecosystem level, including stakeholders in continuous quality improvement. The authors argue that the ecosystem approach is conducive to sustainable organizational excellence. In this context, soft and hard TQM practices complement and reinforce each other. Soft TQM facilitates the firm's integration with its ecosystem, while hard TQM techniques optimize internal processes and advance the value generated by the firm for external stakeholders. Integrating soft and hard TQM practices enacts a virtuous cycle of continuous improvement that leads to long-term viability.

Combining soft and hard TQM practices from an ecosystem perspective provides two advantages. As noted by Tambunan, it enables corporate efficiency and effectiveness by increasing process quality and reliability. This permits the firm to cope with the increasing complexity and dynamism of the competitive environment, meeting the evolving expectations of relevant stakeholders. Besides, as stressed by Cosimato *et al.*, the combination of soft and hard TQM practices fosters a sustainability orientation that extends the positive impact of TQM practices beyond organizational boundaries. Integrating hard and soft TQM practices empowers the firm to create a sustainability-oriented culture, quintessential in supporting its long-term social, environmental and economic goals.

5. Conclusions
The special issue does not offer a definitive solution to the soft and hard TQM puzzle. Conversely, it pretends to be a starting point for encouraging further attempts to explore the interplay between intangible and tangible quality practices and illuminate the path toward organizational excellence. Scholars have widely recognized the importance of soft TQM practices in setting the ground for hard TQM techniques. However, the mechanisms that govern such interplay are still poorly understood. Future research should attempt to achieve a deeper and more comprehensive understanding of how soft practices impact hard TQM, paving the way for sustainable organizational excellence.

Excellence cannot be realized by focusing exclusively on organizational boundaries. The exchanges between the firm and the external environment play a vital role in shaping the intertwinement of tangible and intangible initiatives for continuous quality improvement. This special issue provides a foundation for understanding the critical relationship between soft and hard TQM practices embracing an ecosystem and boundaryless perspective. However, there is a need for empirical evidence to frame business excellence according to this view. An interdisciplinary approach considering various factors is required for this purpose, illuminating how the institutional context, the corporate culture and stakeholders' involvement interplay to shape the balance between soft and hard TQM.

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