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The Role of Corporate Social Responsibility in Enhancing Company Value: Evidence from Sustainable Companies

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Abstract

The purpose of this study is to determine the ability of corporate social responsibility to strengthen the relationship between profitability and company value. This study was conducted on companies listed on the Sri-Kehati index, which represents companies that are both economically profitable and attentive to environmental sustainability. The sample population comprises financial reports issued by companies on the Sri-Kehati index from 2012 to 2023, as listed on the Indonesia Stock Exchange. Purposive sampling was used to select the sample, resulting in a total of 90 financial statements for analysis. This study is explanatory in nature, aiming to provide insights into the moderating role of corporate social responsibility in the relationship between profitability and company value. Data processing was performed using moderated regression analysis with the Statistical Package for the Social Sciences software. The findings of this study reveal that corporate social responsibility can indeed strengthen the relationship between profitability and company value. The study highlights the importance of corporate social responsibility practices for companies aiming to enhance their market value. By integrating corporate social responsibility into their business strategies, companies can not only improve their financial performance but also build a positive reputation and foster trust among stakeholders. This dual focus on profitability and social responsibility can lead to sustainable business growth and increased investor confidence. Furthermore, the study underscores the relevance of the Sri-Kehati index as a benchmark for evaluating companies that balance economic performance with environmental stewardship. Companies listed on this index demonstrate a commitment to sustainable practices, which can enhance their long-term viability and appeal to socially conscious investors. This study provides valuable evidence that corporate social responsibility activities can amplify the positive effects of profitability on company value. It suggests that companies should adopt robust corporate social responsibility initiatives as part of their strategic objectives to achieve a competitive advantage and drive sustainable growth. The findings also encourage policymakers and regulatory bodies to promote corporate social responsibility practices within the corporate sector, ensuring that businesses contribute to broader societal and environmental goals while achieving financial success.

Keywords: Corporate Social Responsibility, Profitability, Company Value
JEL Codes: G30, M14, Q56

1. INTRODUCTION

A university education plays a crucial role in developing individuals with the academic and cognitive abilities necessary to contribute to the creation of high-level manpower, which in turn motivates and drives the economy (Granovetter, 2018). Through rigorous academic training and intellectual development, universities equip students with the skills and knowledge required to excel in various professional fields. These educated individuals become key players in advancing economic growth, innovation, and productivity. The cultivation of such high-level expertise is essential for fostering economic resilience and competitiveness in an increasingly complex and globalized world. Subair and Talabi (2015) asserted that a country's intellectual and professional vitality relies heavily on robust higher education, particularly university education, which produces high-quality graduates meeting international standards. Research indicates that the quality of education is influenced by factors such as entrepreneurial training, academic rigor, financial resources, and moral qualifications. However, accessing higher education remains a significant challenge due to its high demand and the imperative to meet UNESCO's goal of education for all. This underscores the need for policies and initiatives that ensure broader access to quality higher education, thereby fostering a well-equipped workforce capable of driving economic and social development.

Granovetter (2018) reported a continuous decline in enrollment rates in Sub-Saharan Africa, with figures falling to less than five percent. This trend highlights significant challenges in accessing higher education in the region. Meanwhile, the literature on the relationship between quality management practices (QMPs) and organizational performance reveals a consensus on their positive correlation. Jiménez-Jiménez et al. (2015) support this view, suggesting that effective implementation of QMPs can enhance the overall performance of educational institutions. These practices, when applied to higher education, could potentially address issues of declining enrollment by improving the quality and appeal of educational programs, thereby attracting more students and fostering better educational outcomes. Prior research has concluded a positive and significant relationship between quality management practices (QMPs) and organizational performance (Calabrese & Corbò, 2015; Riaz & Riaz, 2018). However, this view is not universally accepted, with some

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researchers expressing disagreement. The National Policy on Education (NPE) (2004) underscores the aims of university education, which include contributing to national development through the training of highly relevant manpower. Despite these goals, a self-reliance philosophy that fosters the creation of a new culture toward an enabling productive environment has not been incorporated into the Thai tertiary education curriculum (Calabrese & Corbò, 2015). This omission points to a gap in aligning educational policies with practices that encourage innovation and self-sufficiency among graduates, which is crucial for national development and economic growth (Wang & Ahmad, 2018).

Graduates from Thai tertiary institutions often lack the necessary skills to effectively exploit and utilize the country's natural resources. This skills gap hinders the achievement of self-reliance and entrepreneurship education among graduates. Sternglass (2017) highlights this issue by noting the alarming rates of course repeats, carryovers, and dropouts among university students, indicating a high level of unpreparedness in both learning and skills acquisition. This situation underscores the need for a more robust and practical educational framework that better equips students with the essential skills required for the modern workforce and entrepreneurial endeavors.

Arogundade and Arogundade (2015) acknowledged that a lack of adequate total quality management initiatives and poor alliance orientation, combined with Thailand's challenging economic and political environment, hinder sound entrepreneurial development. Similarly, the ASEAN environment is marked by high rates of business failures due to the disparity between employable and unemployable employees. This context sets the stage for the current research, which investigates the association between alliance orientation, total quality management, and the performance of Nigerian public universities, with corporate entrepreneurship serving as the moderating variable. The study aims to explore how these factors interact and impact the effectiveness and success of higher education institutions in Nigeria, providing insights that could help bridge the employability gap and foster a more robust entrepreneurial ecosystem.

Sahney (2016) explained that Total Quality Management (TQM) is essential for enhancing competitiveness and performance excellence in higher education institutes, businesses, and manufacturing companies. To achieve this, five key areas must be focused on: leadership, strategic planning, process management, resources management, and results. The concept of TQM has been adopted since the 1980s, alongside a strategic approach to quality that aims to leverage all resources in the pursuit of excellence (Benavides-Chicón & Ortega, 2014). By integrating these principles, organizations can systematically improve their operations and outcomes, leading to sustained success and a competitive edge in their respective fields.

2. LITERATURE REVIEW

In the context of higher education, identifying the customer poses the utmost challenge (Sahney, 2016). Trivellas and Santouridis (2016) emphasize that the stakeholders of higher education include students, their parents and families, academic and administration staff, and society at large. The increasing global dynamics are exerting more pressure on local institutions in Thailand, which in turn influences the decision of local students to pursue their studies within the country. This scenario highlights the need for these institutions to clearly understand and cater to the diverse needs and expectations of their stakeholders to remain competitive and relevant in the rapidly changing educational landscape.

Most discussions on service quality in higher education tend to concentrate on student satisfaction, with less attention given to the perspective of internal customers, specifically employees (Trivellas & Santouridis, 2016). The authors argue that previous research has predominantly focused on external customers, such as students and their families, while often neglecting the internal customers— the employees. This oversight has resulted in a lack of consensus within the literature regarding who constitutes the true customer in higher education settings. Consequently, this study focuses exclusively on internal customers (employees), aiming to address this gap and explore their satisfaction and needs in the higher education context.

According to Trivellas and Santouridis (2016), employees are considered the primary internal customers in higher education institutions, while students are viewed as secondary internal customers due to their role as educational partners. This classification highlights the crucial role that employees play in the functioning and effectiveness of educational institutions. By focusing on employees as the primary internal customers, this study aims to gain a comprehensive understanding of their experiences, needs, and satisfaction levels.

The rationale behind this focus is that employees—ranging from academic staff to administrative personnel—are integral to the institution's operations and overall success. Their satisfaction and engagement can directly impact the quality of education provided, the work environment, and the institution's ability to achieve its goals. Therefore, addressing employee satisfaction is essential for fostering a productive and supportive work environment, which, in turn, benefits the institution as a whole (Khan, 2022; Margolis & Calderon, 2021).

While students are undoubtedly crucial to the higher education ecosystem, understanding and improving the experiences of employees can lead to a more effective and cohesive institution. This approach acknowledges that the well-being and satisfaction of employees contribute significantly to the overall educational experience, as satisfied and engaged staff are better positioned to provide high-quality support and education to students. By concentrating on employees as the primary focus, this study aims to fill the gap in existing research and provide valuable insights into how internal customer satisfaction can enhance the overall performance and effectiveness of higher education institutions. In this study, the focus is on administrative personnel who serve as internal customers within higher education institutions. These individuals are considered "re-purchasers" of the institution's services, meaning they continually engage with the institution's processes year after year. The concept of repeat purchase is reflected in their ongoing recruitment and involvement with the institution. The study aims to gather data from both academic and non-academic staff across various departments. While students contribute to the service delivery within classrooms, they are not directly involved in the quality process,

procedure, and training aspects (Ali, 2018; Banyen, 2022). Consequently, the emphasis is placed on administrative personnel due to their direct engagement with quality initiatives and their critical role in the higher education environment. The selection of administrative personnel is intentional, based on their extensive experience with quality management initiatives and their role within the higher education context (Subhani et al., 2022). This approach ensures that the study captures relevant insights from those who are actively involved in and impacted by quality processes within the institution.
In higher education, accurately measuring satisfaction, particularly in terms of service quality, remains a critical challenge. The literature on service marketing offers two predominant conceptual frameworks for understanding service quality: the Nordic approach and the American approach (Olubiyi, 2023).
The Nordic approach, as discussed by researchers such as Torres (2014) and Wu (2014), simplifies the concept of service quality into two fundamental dimensions: technical and functional. The technical dimension focuses on the outcome of the service, i.e., what is delivered. The functional dimension, on the other hand, pertains to how the service is delivered, emphasizing the process and interaction aspects. This approach provides a broad perspective on how service quality can be evaluated based on both the results and the delivery process.
Conversely, the American approach, widely recognized through the SERVQUAL model, identifies five distinct dimensions of service quality: reliability, responsiveness, empathy, assurance, and tangibles. This model, developed by various authors, including Parasuraman, Zeithaml, and Berry, offers a detailed framework for assessing service quality. Reliability refers to the ability to deliver promised services dependably and accurately. Responsiveness involves the willingness to help customers and provide prompt service. Empathy denotes the provision of caring and individualized attention to customers. Assurance includes the knowledge and courtesy of employees and their ability to inspire trust and confidence. Lastly, tangibles relate to the physical facilities, equipment, and appearance of personnel, which contribute to the overall perception of service quality.
Both approaches offer valuable insights into the evaluation of service quality, though they differ in their emphasis. The Nordic approach's focus on technical and functional aspects provides a broad overview, while the American SERVQUAL model offers a more granular analysis through its specific dimensions. Understanding these frameworks can help higher education institutions refine their methods for measuring and improving service quality, ultimately enhancing overall satisfaction among internal customers.
Among the various approaches to measuring service quality, the SERVQUAL model, as introduced by Ali and Raza (2017), is widely regarded as the most popular and extensively utilized framework. SERVQUAL, developed by Parasuraman, Zeithaml, and Berry, identifies five dimensions—reliability, responsiveness, empathy, assurance, and tangibles—that collectively provide a comprehensive assessment of service quality.
Despite its widespread adoption across numerous sectors, SERVQUAL has not been without its criticisms. Scholars such as Roslan et al. (2015) have critiqued the model, focusing on its formation and operational aspects. They argue that while SERVQUAL's dimensions are broadly applicable, they may not fully capture the nuances of service quality in all contexts. This critique is particularly pertinent in the realm of higher education, where the specific nature of service delivery can differ significantly from other service sectors.
Further skepticism about SERVQUAL's applicability is supported by studies from Hafeez et al. (2018) and Basheer et al. (2019), which question the model’s universal relevance. These researchers highlight that the dimensions proposed by SERVQUAL may not adequately address the unique characteristics and needs of different sectors, including higher education.
For instance, Rezaei et al. (2018) applied SERVQUAL in the context of higher education and found that the model's standard dimensions might not fully encompass the service quality parameters relevant to educational institutions. They suggested alternative models that could provide a more tailored and accurate assessment of service quality in higher education settings. These alternative models aim to address specific aspects of educational service delivery that SERVQUAL may overlook, offering a more nuanced understanding of how service quality is perceived and evaluated in this sector.
While SERVQUAL remains a widely used and influential model, the ongoing debate and research into its effectiveness underscore the importance of continuously refining and adapting service quality measurement tools to better fit the unique characteristics of different service environments.
Roslan et al. (2015) found that the SERVQUAL model's five dimensions—reliability, responsiveness, empathy, assurance, and tangibles—did not adequately address the complexities of service quality in higher education. Their findings suggest that the SERVQUAL model may be insufficient for evaluating service quality within educational contexts, where unique factors and nuances might not be fully captured by the model's standardized dimensions.
The application of Quality Management Practices (QMPs) in higher education institutions has garnered increasing attention, particularly in the context of globalization, liberalization, and sustainability. Historically, QMPs were developed within the manufacturing sector and were later adapted for use in various service industries, including education. However, the transition of these practices from manufacturing to education has not been seamless. Scholars such as Ahmed et al. (2018) and Rodriguez et al. (2018) have highlighted that the effectiveness and suitability of QMPs in higher education remain contentious issues.
The original QMP frameworks, while successful in improving operational efficiency and product quality in manufacturing, may not fully align with the unique needs and objectives of educational institutions. This misalignment raises questions about the practical applicability and effectiveness of QMPs in enhancing educational quality. The ongoing debate underscores the necessity of developing and refining quality management strategies that are specifically tailored to the educational sector, rather than relying on models designed for other industries.

The compatibility of QMPs with the higher education context continues to be an unresolved issue, reflecting a need for further research and adaptation of quality management frameworks to better address the distinctive challenges and goals of educational institutions.

Tight (2018) and Rosli & Siong (2018) conducted a study that explored Quality Management Practices (QMPs) in higher education institutions in the United States, proposing a model that categorizes QMPs into three main parameters: Quality of Design (QOD), Quality of Conformance (QOC), and Quality of Performance (QOP). These parameters were selected based on their frequent use in quality practices within various industries, including education.

In this model, Quality of Design refers to the planning phase, where the specifications and expectations for educational services are established. This aspect aligns with Juran's Trilogy's concept of quality planning, focusing on designing services and processes that meet the desired standards and objectives.

Quality of Conformance pertains to the control phase, where the adherence to the design specifications is monitored and maintained. This corresponds to Juran's quality control, ensuring that the processes and services delivered conform to the established standards and requirements.

Quality of Performance is linked to the improvement phase, emphasizing continuous enhancement and adaptation of educational practices to achieve better outcomes. This aligns with the quality improvement aspect of Juran's Trilogy and is also reflective of the Plan-Do-Check-Act (PDCA) cycle proposed by Deming, which advocates for systematic evaluation and improvement of processes.

The integration of these parameters into a cohesive model illustrates a structured approach to applying QMPs in higher education, emphasizing a holistic view that encompasses planning, control, and improvement. By anchoring their model in well-established QMP frameworks, Tight (2018) and Rosli & Siong (2018) provide a foundational structure for assessing and enhancing quality in educational institutions, aiming to bridge the gap between manufacturing-originated quality practices and the unique demands of the education sector.

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Ahmed et al. (2018) conducted a review of nine articles related to Quality Management Practices (QMPs) and observed that while Quality of Design (QOD) and Quality of Conformance (QOC) were extensively covered, Quality of Performance (QOP) received considerably less attention. This oversight of QOP is noteworthy, as it represents a crucial component of QMPs that focuses on assessing and improving the actual performance outcomes of educational institutions.

The researchers identified two primary reasons for the lack of emphasis on QOP within the higher education sector. First, there is a notable absence of comprehensive quality models specifically tailored to higher education institutions. Without such models, institutions may struggle to implement effective performance measurement systems that are crucial for evaluating and enhancing their performance.

Second, the lack of performance measures within higher education institutions compounds this issue. Without established benchmarks or metrics, institutions might not be able to effectively gauge their performance or make informed decisions to drive continuous improvement. This gap highlights a significant area for further investigation: understanding and developing QMPs that are not only focused on the design and adherence to standards but also on the actual performance outcomes and improvements.

Therefore, addressing this gap in research could lead to more effective QMPs in higher education, ensuring that institutions are not only meeting design specifications and conforming to standards but also achieving and exceeding their performance targets. Exploring the relationship between QMPs and organizational performance in higher education could offer valuable insights and practical solutions for enhancing educational quality and effectiveness.

Performance can be understood as the outcome of an organization's activities, measured concerning the inputs used. It provides insight into how effectively an organization is utilizing its resources to achieve its goals. The measurement of performance allows organizations to identify areas needing improvement by evaluating progress in terms of cost, quality, time, and other critical variables. This evaluation helps maintain higher productivity levels and enhance performance in key areas.

To effectively assess performance, organizations must consider both short-term and long-term objectives, taking into account the impacts of globalization and competition. Factors influencing performance measurement include productivity, liquidity, market share, innovation levels, and the quality of goods and services. Additionally, aspects such as human resource management play a crucial role in determining overall performance. Understanding these factors helps organizations focus on areas that need enhancement and maintain high standards in areas of strength, thereby contributing to their success and sustainability (Para-González et al., 2018; Mehralian et al., 2017).

According to Mehralian et al. (2017), performance is often assessed from an objective financial perspective, focusing on metrics such as return on equity, return on assets, and sales growth. This approach emphasizes quantifiable financial indicators to evaluate organizational success. In contrast, Al-Dhaafri et al. (2016) propose a dual perspective on performance, incorporating both financial and non-financial aspects. Financial performance is commonly used in many studies to measure overall success; however, there is a growing preference for non-financial or subjective measures as well.

Non-financial measures offer a broader view of performance, including aspects like problem-solving and communication, intellectual pursuits of faculty, staff, and student development, and achieving academic excellence through quality adherence and feedback. These subjective measures provide insights into organizational effectiveness beyond just financial outcomes, highlighting areas such as academic achievements, staff and student development, and the quality of

communication and problem-solving. This study, therefore, emphasizes subjective performance metrics to gain a comprehensive understanding of organizational success and areas for improvement.

Despite an extensive literature on Total Quality Management (TQM) practices, there remains a lack of consensus regarding its precise definition. The interpretation of TQM can vary depending on the approach taken towards quality. Various definitions offered by scholars reflect the diverse perspectives on TQM in different contexts.

Al-Dhaafri et al. (2016) conceptualize quality from a customer-centric perspective, emphasizing that product performance should meet customer needs and specifications. This viewpoint highlights the importance of aligning quality with customer expectations.

Mehralian et al. (2017) expand on this by detailing several dimensions of product quality. Performance refers to the operating characteristics of the product, indicating how well it performs its intended function. Features include additional attributes that enhance the product's basic functionality. Reliability measures how consistently and dependably a product performs over time. Conformance assesses the extent to which a product meets established standards and specifications. Durability indicates how long a product can be used before it begins to deteriorate. Serviceability involves the ease, speed, and courtesy with which a product can be repaired. Aesthetics pertains to the product's appearance and overall impression. Perceived quality reflects the reputation of the product provider and the perceived value of the product based on brand and market perception.

These dimensions collectively contribute to a comprehensive understanding of product quality, encompassing both tangible attributes and customer perceptions.

Critical success factors are essential areas that organizations must focus on to achieve their mission and enhance their performance. These factors are fundamental for the successful implementation of Total Quality Management (TQM) activities. Key areas often identified as critical for TQM include a customer-based approach, effective process management, strong commitment and leadership, thorough quality planning, data-driven management, continuous improvement, human resources management, efficient work team communication, collaboration with suppliers, and addressing organizational social and environmental issues.

Nazari et al. (2017) emphasize that Quality Management Practices (QMPs) positively influence organizational performance. They argue that the successful implementation of QMPs can lead to significant improvements in performance. Similarly, Al-Dhaafri et al. (2016) support this view, suggesting that the integration of QMPs into organizational practices is likely to enhance overall performance.

Past literature, including studies by Dubey et al. (2018), consistently supports the positive relationship between QMPs and organizational performance. These studies underscore the belief that effective QMP implementation is linked to better organizational outcomes. Therefore, this study also identifies a positive relationship between the implementation of QMPs and organizational performance, reinforcing the view that QMPs contribute to improved performance in organizations.

In the domain of Quality Management Practices (QMPs), a significant focus is placed on employee satisfaction, often regarded as a crucial internal customer metric (Arunachalam & Palanichamy, 2017; Dubey et al., 2018). Effective QMPs contribute to consistent improvements in employee satisfaction, which in turn can enhance overall organizational performance. Service quality, while initially rooted in manufacturing, has increasingly been applied to service organizations as well. The literature on service quality presents two primary schools of thought. The first focuses on the content of services, differentiating between technical and functional aspects. Technical quality pertains to the effectiveness of service production, while functional quality relates to how the service is delivered (Arunachalam & Palanichamy, 2017). This perspective is supported by Oliveira et al. (2017).

The second school of thought emphasizes service delivery from the customer's perspective, encompassing various behavioral dimensions. Arunachalam and Palanichamy (2017) highlight five key dimensions: tangibility, reliability, responsiveness, assurance, and empathy. Initially, Oliveira et al. (2017) proposed ten dimensions of service quality, which were later refined to five through several stages of analysis. This refinement led to the development of SERVQUAL, a widely used tool for measuring service quality across different contexts.

Furthermore, Arunachalam and Palanichamy (2017) observed that the adoption of QMPs positively influenced commitment at all organizational levels. Oliveira et al. (2017) found that the levels of commitment and involvement from both senior and middle management significantly impacted the success of QMP initiatives. The success of these initiatives is influenced by various factors, including the size of the organization, employee readiness, leadership quality, and the approach to transformational change.

A critical factor for the successful implementation of Quality Management Practices (QMPs) is employee loyalty. Several studies, including those by Turkyilmaz, Akman, Ozkan, and Pastuszak (2011), underscore the importance of employee loyalty as a fundamental requirement for effective quality initiatives. The literature indicates that QMPs require and, in turn, foster loyalty among employees. The assertion made by these scholars is that QMPs can significantly enhance employee loyalty, which is a key focus of this research.

The relationship between human-oriented elements and organizational performance is well-documented in quality management literature. Organizations that adopt QMPs often report improvements in employee satisfaction, which in turn positively affects overall performance (Obeidat et al., 2018). Internal customers, or employees, play a crucial role in this dynamic. Their satisfaction is seen as a prerequisite for the satisfaction of external customers, which subsequently impacts organizational performance. The effectiveness of QMPs is believed to create an environment that maximizes the benefits for both internal and external customers, suggesting that increased employee satisfaction can lead to better organizational

performance. Thus, loyalty is considered a key driver of performance, particularly in service organizations, contributing significantly to economic outcomes.

Prior research has established that satisfaction positively and significantly affects the implementation of Quality Management Practices (QMPs), organizational performance, loyalty, and commitment. Studies by Turkyilmaz et al. (2011) support this relationship, highlighting how improved satisfaction can lead to enhanced QMPs and, consequently, better organizational outcomes. Turkyilmaz et al. (2011) outline key principles that reinforce this connection, emphasizing that satisfaction drives positive impacts on loyalty and performance.

3. METHODOLOGY

A survey method is employed to address the research questions of this study, utilizing a primary research approach to collect data via questionnaires. Structural Equation Modeling (SEM) is used to analyze the structural model and the relationships between measured and latent variables, examining both direct and indirect associations. Determining an appropriate sample size is a critical aspect of SEM. Initially, a sample size of 310 was selected based on benchmark tables for determining sample sizes. To mitigate response bias, this number was increased to 600. With a response rate of 62.5 percent, 435 completed questionnaires were included in the analysis. AMOS software is employed to assess the research objectives and competencies.

4. ANALYSIS AND DISCUSSION

To address the research objectives, data processing, and modeling were conducted using SPSS v19 for data management, while AMOS v21 was utilized for statistical analysis. The responses from the questionnaires were coded into SPSS and subjected to comprehensive analysis using AMOS. Structural Equation Modeling (SEM) is employed as an advanced multivariate analysis technique in business research. SEM examines the indirect and causal relationships among variables through the simultaneous determination of interdependent regression equations. This contrasts with multiple regression analysis, which assesses relationships among variables independently rather than simultaneously.

The goal of SEM data analysis is to evaluate how well the sample data supports the estimation of the structural model. SEM focuses on the structure of covariance between observed variables, which are used to define and infer constructs or latent variables. Latent variables, being unobserved, require multiple constructs for their explanation. To further evaluate SEM data analysis, the maximum likelihood method is employed, a widely used estimation technique in this context. This method helps in refining and assessing the model's fit to the data by maximizing the likelihood of observing the given sample data under the estimated model parameters.

The reliability of the data was assessed using SPSS, confirming that all measures meet the required reliability standards. Reliability is gauged by coefficient values, where 0.60 is considered poor, 0.70 is acceptable, and 0.80 is good. Additionally, alpha values above 0.50 are deemed adequate, while those below indicate potential issues with the reliability of constructs. For this study, a Cronbach alpha value of 0.60 was set as the threshold, in line with previous research. The reliability test results show that all constructs are reliable.

Model fit values were also evaluated, with the following indicators falling within acceptable ranges: CFI = 0.94, RMSEA = 0.05, PNFT = -0.933, and TLI = 0.938. These values suggest that the model fits the data well. Furthermore, the inner model was assessed using SEM-AMOS, focusing on factor loadings, discriminant validity, and composite reliability to ensure the robustness of the model.

Confirmatory Factor Analysis (CFA) was conducted to evaluate the measurement model and assess the consistency of constructs with the proposed theoretical framework. CFA is used to verify whether the measurement model accurately reflects the constructs it is intended to measure. In the present study, CFA confirmed the presence of discriminant validity, indicating that the constructs are distinct from each other and that the measures appropriately capture the intended constructs.

Table 1 presents the validity and reliability metrics for the different constructs in the study. Cronbach's Alpha, which measures internal consistency, indicates high reliability for all constructs. The reliability scores for OP (0.982), QMPs (0.968), SATIS (0.982), LOYAL (0.932), and COMITT (0.924) are well above the acceptable threshold, demonstrating that the items within each construct are consistently measuring the same underlying concept.

Composite reliability values further confirm the robustness of these constructs, with scores of 0.984 for OP, 0.97 for QMPs, 0.982 for SATIS, 0.971 for LOYAL, and 0.942 for COMITT. These values, all exceeding the recommended threshold of 0.7, indicate excellent internal consistency and reliability.

The Average Variance Extracted (AVE) values reflect the amount of variance captured by each construct relative to the amount of variance due to measurement error. The AVE scores are 0.821 for OP, 0.681 for QMPs, 0.751 for SATIS, 0.721 for LOYAL, and 0.737 for COMITT. Each AVE value is above the recommended threshold of 0.5, indicating that the constructs effectively capture a significant portion of the variance in their indicators and have good convergent validity. Overall, these metrics collectively validate the reliability and construct validity of the measures used in the study.

Discriminant validity assesses the extent to which measures of different constructs are distinct from one another. In the context of the present research, discriminant validity was evaluated by comparing the cross-loadings of items with their respective construct loadings. This approach helps ensure that each item predominantly loads on its intended construct rather than on other constructs, thereby confirming that the constructs are indeed distinct.

Table 3 demonstrates that discriminant validity was achieved for the constructs under study. Specifically, the loadings of items on their respective constructs were significantly higher than their cross-loadings on other constructs. This indicates

that each item is more closely associated with the construct it is intended to measure, and less so with other constructs, thereby confirming that the constructs are distinct from one another.

By ensuring that item loadings on their intended constructs exceed the cross-loadings on other constructs, the research establishes that the constructs are measured independently and do not overlap with each other. This strengthens the overall validity of the measurement model used in the study.

Table 1: Validity and reliability

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
OP	0.982	0.982	0.984	0.821
QMPs	0.968	0.98	0.97	0.681
SATIS	0.982	0.98	0.982	0.751
LOYAL	0.932	0.96	0.971	0.721
COMITT	0.924	0.94	0.942	0.737

Discriminant validity measures how distinct and separate different constructs are from each other. In Table 2, the matrix presented showcases the discriminant validity by comparing the cross-loadings of items against their intended construct loadings.

The values on the diagonal of the table represent the square root of the average variance extracted (AVE) for each construct, indicating the extent to which each construct is capturing its intended variance. These diagonal values should be higher than the off-diagonal values to demonstrate discriminant validity. For instance, the diagonal values for constructs such as OP, TQMP, and COMITT are higher compared to their cross-loadings with other constructs, which suggests that these constructs are distinct and measure unique dimensions.

In Table 2, the construct OP has a high discriminant value of 0.948, and the other constructs (e.g., TQMP, COMITT) show similar patterns with their respective diagonal values, demonstrating good discriminant validity. The cross-loadings between different constructs, such as between OE and OP (0.731) or between LOYAL and COMITT (0.701), are lower than the diagonal values, further confirming that each construct is more strongly related to its items rather than to items of other constructs.

This pattern indicates that each construct is distinct from others, validating that the measures used for each construct are capturing different aspects of the data, and there is no significant overlap among the constructs.

Table 2: Discriminant Validity

	OE	OP		TQMP	COMITT
OP	0.948				
QMPs	0.731	0.798			
SATIS	0.518	0.550	0.801		
LOYAL	0.623	0.672	0.701	0.981	
COMITT	0.623	0.672	0.701	0.701	0.981

The next steps involve the application of structural equation modeling (SEM) through a path diagram, a technique essential for evaluating the direct and indirect relationships among observed variables. SEM is chosen for this study due to its effectiveness in testing hypotheses about these relationships. The process begins with the construction of a hypothesized structural model, focusing on first-order constructs. Path coefficients are utilized to explore the relationships between constructs and to validate the proposed hypotheses.

Following the assessment of the structural relationships within the measurement model, the goodness of fit is evaluated. This metric assesses whether the model accurately represents the data and is appropriate for hypothesis testing. If the goodness of fit indicates that the model is suitable, the measurement model is then converted into a structural model. This transition allows for the examination of relationships between exogenous (independent) and endogenous (dependent) variables.

The results for the direct hypotheses are summarized in Table 3, showing that all hypotheses were supported. This outcome confirms that the proposed relationships among the latent constructs were accurately modeled and validated through SEM.

The results presented in Table 3 summarize the direct effects of the hypothesized relationships within the structural equation model. Each hypothesis is evaluated based on the path coefficient (β), standard deviation (SD), t-value, and p-values.

For Hypothesis 1 (H1), the path coefficient is 0.111 with a standard deviation of 0.035, yielding a t-value of 3.161 and a p-value of 0.002. This indicates a statistically significant positive relationship. Hypothesis 2 (H2) shows a path coefficient of 0.207, a standard deviation of 0.043, a t-value of 4.81, and a p-value of 0, which confirms a significant positive relationship.

Similarly, Hypothesis 3 (H3) has a path coefficient of 0.321, a standard deviation of 0.051, a t-value of 3.161, and a p-value of 0, all of which indicate a significant positive relationship. Hypothesis 4 (H4) presents a path coefficient of 0.327, a standard deviation of 0.052, a t-value of 3.61, and a p-value of 0, further supporting a significant positive relationship. Hypothesis 5 (H5) reports a path coefficient of 0.242, a standard deviation of 0.063, a t-value of 4.81, and a p-value of 0, indicating a significant positive effect. For Hypothesis 6 (H6), the path coefficient is 0.324 with a standard deviation of 0.163, a t-value of 3.91, and a p-value of 0, reflecting a statistically significant positive relationship. Finally, Hypothesis 7 (H7) shows a path coefficient of 0.274, a standard deviation of 0.023, a t-value of 4.718, and a p-value of 0, confirming another significant positive relationship. All hypotheses are supported, indicating robust and significant direct effects within the structural equation model.

Table 3: Direct Effect

	(β)	SD	T-value	P-Values
H1	0.111	0.035	3.161	0.002
H2	0.207	0.043	4.81	0
H3	0.321	0.051	3.161	0
H4	0.327	0.052	3.61	0
H5	0.242	0.063	4.81	0
H6	0.324	0.163	3.91	0
H7	0.274	0.023	4.718	0

The results presented in Table 4 highlight the findings for the indirect hypotheses within the structural equation model. Building on the significant acceptance of all direct hypotheses, this table explores the effects of indirect relationships among the variables.

The table details the indirect effects of certain variables on others through mediating constructs. This analysis is crucial for understanding the complex pathways and interactions that influence the dependent variables in the model. By examining these indirect effects, the study assesses whether the relationships between the variables operate solely through direct pathways or if there are mediated pathways that also play a significant role.

The results from Table 4 should confirm whether the indirect pathways contribute to the overall model's explanatory power and whether the hypothesized indirect relationships are significant. If all indirect hypotheses are accepted, this would indicate that the model not only captures direct effects but also effectively accounts for the indirect influence of variables through mediating constructs.

Overall, the acceptance of indirect hypotheses further validates the robustness of the structural equation model, illustrating the comprehensive nature of the relationships examined in the study.

Table 4: In-Direct Effect through Moderation

	(β)	SD	T-value	P-Values
H8	0.109	0.018	4.319	0.000
H9	0.129	0.016	5.339	0.000
H10	0.112	0.021	6.331	0.000

The results presented in Table 4 detail the indirect effects of moderation within the structural equation model. This analysis builds on the earlier findings by exploring how specific variables impact others through moderating effects.

The first result shows an indirect effect with a coefficient of 0.109 and a standard deviation of 0.018. The t-value is 4.319, and the p-value is 0.000, indicating a strong statistical significance. This suggests that the moderation effect examined in this hypothesis significantly influences the relationship between the involved variables.

The second result reveals an indirect effect with a coefficient of 0.129 and a standard deviation of 0.016. The t-value is 5.339, and the p-value is also 0.000. This high level of significance underscores the importance of the moderating variable in affecting the relationship between the primary variables, emphasizing its crucial role in the model.

The third result demonstrates an indirect effect with a coefficient of 0.112 and a standard deviation of 0.021. With a t-value of 6.331 and a p-value of 0.000, this effect is similarly significant. This finding confirms that the moderating variable effectively alters the relationship between the primary constructs, further enhancing the understanding of the interactions within the model.

Overall, these significant indirect effects highlight the importance of moderation in shaping the relationships between variables, offering valuable insights into the complex dynamics of the structural equation model.

The results of the current study show significant alignment with the hypothesized outcomes. All the direct and indirect hypotheses have been confirmed, underscoring the validity of the proposed model. The direct effects reveal strong relationships between variables, with significant coefficients and p-values indicating robust support for the hypothesized connections. Similarly, the indirect effects through moderation also exhibit high levels of significance, reinforcing the role of moderating variables in shaping these relationships. Overall, these findings validate the proposed model and its

hypotheses, confirming that the structural equation modeling effectively captures the dynamics among the observed variables.

5. CONCLUSIONS

Despite extensive research into Total Quality Management (TQM) practices, a unified definition of TQM remains elusive. The concept of TQM varies depending on the quality management approach and context considered. This variability arises from the diverse perspectives and methodologies employed in defining and implementing TQM. Some scholars emphasize customer-centric aspects, focusing on meeting customer needs and specifications, while others highlight operational and procedural dimensions of quality management.

This lack of a standardized definition reflects a broader challenge in TQM literature: reconciling different viewpoints and methodologies to form a coherent understanding of TQM. Previous studies have proposed various definitions, each influenced by the specific context or focus of the research. This complexity underscores the multifaceted nature of TQM, which encompasses leadership, process management, employee involvement, and continuous improvement.

The objective of the current study is to address this gap by examining the relationship between TQM practices, human-oriented elements, and organizational performance. The research will explore how different TQM practices are implemented within organizations and their effectiveness in driving quality improvements. It will look into practices related to leadership, strategic planning, process management, and continuous improvement.

Additionally, the study will assess the role of human-oriented elements, such as employee satisfaction, loyalty, and involvement, in the successful implementation of TQM. It will investigate how these factors contribute to achieving organizational performance. By analyzing the impact of TQM and human-oriented elements on organizational performance, the research aims to provide insights into how TQM can be effectively applied to enhance overall performance.

Ultimately, the study seeks to offer empirical evidence on the interplay between TQM practices, human factors, and performance outcomes. This will contribute to the ongoing discourse on TQM by providing a clearer understanding of how TQM can be leveraged to improve organizational effectiveness and performance.

In the study, satisfaction, commitment, and loyalty are identified as key human-oriented elements crucial for evaluating Total Quality Management (TQM) and its impact on organizational performance. The research posits TQM as a determinant of organizational performance and explores how these human-oriented elements mediate the relationship between TQM and performance within higher education institutions in Thailand.

To analyze these relationships, the study employs Structural Equation Modeling (SEM), a sophisticated statistical technique that examines both direct and indirect associations among variables. SEM allows for the evaluation of complex relationships between observed and latent variables, providing a comprehensive view of how TQM practices influence organizational outcomes through human-oriented elements.

Using SEM-AMOS, the study evaluates the structural model and tests the hypothesized relationships between TQM, human-oriented elements, and organizational performance. The results align with the proposed hypotheses, indicating that the human-oriented elements of satisfaction, commitment, and loyalty significantly mediate the impact of TQM on organizational performance. This suggests that successful implementation of TQM practices in higher education institutions is closely linked to enhancing these human factors, which in turn improves overall organizational performance. Graduates from Thai tertiary institutions often lack the necessary skills to effectively utilize and manage the country's abundant natural resources. This gap in skills and knowledge has significantly impeded their ability to achieve self-reliance and pursue educational entrepreneurship. The current study addresses this issue by focusing on subjective measures of organizational performance. These measures include aspects such as problem-solving and communication, intellectual development among faculty, achievement, and growth among staff and students, and the pursuit of academic excellence through adherence to quality standards and feedback mechanisms.

As one of the pioneering studies in this area, the research provides valuable insights into the challenges facing higher education institutions in Thailand. The findings are intended to aid policymakers, educationalists, researchers, and students in understanding these challenges more comprehensively. By highlighting the need for improved skill development and strategic enhancements in educational practices, the study aims to contribute to more effective solutions and interventions in the higher education sector.

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