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SAFETY CULTURE AND MANAGEMENT CAPABILITIES DRIVING ORGANIZATIONAL EFFECTIVENESS IN MARITIME TRANSPORT

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Abstract

This study empirically investigates how safety culture, customer relationship management (CRM), and quality management jointly drive organizational effectiveness within Thailand's maritime transport sector. Grounded in the Resource-Based View (RBV) theoretical framework, the research examines these vital intangible capabilities as synergistic drivers of sustained competitive advantage. Using a quantitative approach, the study collected empirical data from 270 maritime transport organizations through targeted executive surveys and analyzed them using partial least squares structural equation modeling (PLS-SEM). The findings robustly reveal that safety culture significantly and directly enhances both CRM and quality management, while concurrently exerting a direct positive effect on overall organizational effectiveness. Furthermore, CRM and quality management serve as crucial internal mediating mechanisms that significantly boost operational success. Ultimately, the study highlights that safety culture is not merely a regulatory compliance requirement but a foundational strategic resource. Integrating safety protocols with robust relationship and quality systems fundamentally empowers maritime firms to achieve sustainable organizational effectiveness amidst intensifying global competition.

Keywords: Organizational Effectiveness, Safety Culture, Quality Management, Customer Relationship Management, Maritime Transport

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Introduction

In a globalized economy, the maritime transport industry plays a pivotal role in logistics by facilitating international trade and connecting global supply chains. Maritime freight transport is the primary channel through which countries efficiently exchange goods, especially in trade-dependent economies. In Thailand, maritime transport is the dominant mode for international import and export and a critical backbone of national economic development. As an emerging economy operating under stringent global maritime standards, Thailand's maritime transport sector faces increasing pressure from intensified international competition, stricter safety regulations, and rising customer expectations (Rodrigue, 2020; UN Trade & Development, 2023). At the same time, many maritime transport operators continue to operate under resource-constrained conditions and face limited organizational resources for compliance investments and capability development. Under these circumstances, the maritime transport sector must not only comply with international operational standards but also strengthen internal organizational capabilities to remain competitive.

In the maritime transport industry, tangible assets such as vessels and equipment are increasingly standardized and widely accessible, making them less distinctive as sources of long-term competitiveness. Consequently, attention has shifted to internal organizational capabilities that support reliable operations, regulatory compliance, and sustained customer trust. Prior research in regulated and service-intensive industries suggests that intangible organizational factors such as safety practices, managerial systems, and relationship-based capabilities play an increasingly important role in shaping operational quality and organizational outcomes, particularly in industries such as maritime transport.

In Thailand's maritime transport sector, safety culture is recognized as a critical organizational capability that directly influences operational reliability and stakeholder confidence. Organizations with well-established safety practices are better positioned to reduce operational risks, improve efficiency, and enhance their reputation in environments characterized by strict regulatory oversight (Xi et al., 2025). In addition, quality management supports consistent, standardized service delivery across complex operational settings, including port operations and shipping routes, thereby improving process reliability and organizational credibility in international logistics markets (Xu et al., 2023). Customer relationship management (CRM) also represents an important organizational capability, enabling firms to understand customer needs, build long-term trust, and foster customer loyalty. Given that maritime transport customers typically prioritize safety, punctuality, and service reliability, effective relationship management plays a central role in sustaining revenue streams and competitive positioning (Kumar & Reinartz, 2018).

Despite the growing recognition of these internal organizational capabilities, existing studies in the maritime transport sector have often examined them in isolation. Limited attention has been paid to the synergistic interplay among safety culture, quality management, and customer relationship management and how these capabilities jointly contribute to organizational effectiveness, particularly within the context of Thailand's maritime transport industry. This gap is notable given Thailand's position as a trade-dependent emerging economy operating under global competitive and regulatory pressures.

Therefore, this study aims to empirically investigate how safety culture and management capabilities—specifically customer relationship management and quality management—jointly drive organizational effectiveness within Thailand's maritime transport sector. Grounded in the Resource-Based View (RBV) framework, the research focuses on these internal organizational capabilities to provide empirical insights into how maritime transport firms can achieve sustainable operational success and improve their competitive positioning amid intensifying global competition.

Literature Review

Theories Used in This Study

From the Resource-Based View (RBV) perspective, the variables examined in this study can be conceptualized as internal organizational resources and capabilities that systematically contribute to organizational effectiveness. Safety culture is a critical intangible resource embedded in employees' shared values, attitudes, and behavioral norms, and it exhibits key VRIN characteristics: it is valuable, rare, difficult to imitate, and imperfectly substitutable (Barney, 1991). A strong safety culture enables organizations to mitigate operational risks, enhance stakeholder confidence, and improve overall service quality, particularly in high-risk industries such as maritime transport (Aven & Ylönen, 2021; Xia et al., 2020). At the same time, Customer Relationship Management (CRM) and Quality Management can be understood as managerial capabilities that emerge from the effective orchestration of internal organizational resources (Teece et al., 1997). CRM functions as a relational resource that enables organizations to understand customer needs better, build trust, and sustain long-term relationships, thereby serving as a source of competitive advantage (Payne & Frow, 2005; Trainor et al., 2014). In contrast, Quality Management represents a process-based capability that supports standardized operations, reduces errors, and enhances consistency in service delivery, which is essential for reliability and performance in transport and logistics organizations (Psomas et al., 2014; Talib et al., 2013). According to the RBV framework, these resources and capabilities do not operate in isolation but interact synergistically. Safety culture serves as a foundational resource that strengthens CRM and Quality Management effectiveness by fostering responsible behavior, transparency, and proactive risk prevention across organizational processes (Aven & Ylönen, 2021; Prinsloo & Hofmeyr, 2022). Integrating these three elements therefore directly and positively affects organizational effectiveness, as reflected in service reliability, timeliness, damage reduction, and corporate reputation in international maritime markets (Rodrigue, 2020). Accordingly, this study adopts the RBV framework to systematically explain the interrelationships among safety culture, CRM, quality management, and organizational effectiveness within the context of Thailand's maritime transport industry.

The Impact of Safety Culture on Customer Relationship Management

Safety culture plays a crucial role in maritime transport, not only in accident prevention but also in building trust and long-term customer relationships (Hasanspahić et al., 2023). Customers recognize organizations with a strong safety culture as responsible, reliable, and capable of operating safely and efficiently (Samuels, 2022). Building safety culture begins with leadership prioritizing safety and encouraging employee participation at all levels to monitor and improve safety standards (Broadribb, 2024). Leaders must foster an environment conducive to risk disclosure, learning from errors, and interdepartmental collaboration. Promoting the Just Culture concept, which avoids punishing system-related errors and instead uses them as learning opportunities, directly builds confidence among employees and customers (Putra et al., 2024). When organizations demonstrate careful risk management and adaptability to learning, customers tend to trust the quality of service. Wulandari (2024) found that customers are more likely to trust and remain loyal to companies that transparently prioritize operational safety compared to those that do not.

Moreover, a strong safety culture strengthens organizational image, builds trust with business partners, and enhances international competitiveness. Based on this information, the first hypothesis is proposed:

Hypothesis 1 (H1): Safety Culture positively affects Customer Relationship Management.

The Impact of Safety Culture on Quality Management

In the maritime transport context, safety culture is central to establishing an effective quality management system in a high-risk industry. Shared safety values and behaviors among

employees reduce errors and accidents that could compromise service quality (Lin & Yau, 2023). A strong safety culture also promotes effective communication within the organization. This key factor enables agile quality management and timely responses to changing conditions, especially during crises such as severe weather or maritime emergencies (Lyu et al., 2026). Good communication reduces misunderstandings and supports rapid, accurate decision-making. Effective quality management in maritime operations requires developing personnel with deep safety awareness through systematic training and communication. Thus, safety culture is directly linked to human resource management approaches that support quality (Wulandari, 2024).

Safety culture also influences employee motivation and loyalty. When employees perceive genuine organizational concern for their safety and well-being, they tend to perform higher-quality work (Liang & Ilias, 2023). This engagement translates into standardized outputs and fewer customer complaints. Additionally, adopting the "Safety-II" approach, which focuses on learning from successful practices, enhances system adaptability and supports the development of resilient quality management systems over the long term (Qiao et al., 2021). Therefore, safety culture is not only a safety strategy but also a key mechanism promoting operational quality and competitive capability in maritime transport. Based on this information, the second hypothesis is proposed:

Hypothesis 2 (H2): Safety Culture positively affects Quality Management.

The Impact of Quality Management on Organizational Effectiveness

Quality management significantly influences organizational effectiveness in maritime transport, which faces global competition, technological changes, and rising customer expectations. Applying quality management concepts helps organizations improve processes, increase efficiency, and satisfy customers. The widely recognized ISO 9001 standard emphasizes continuous improvement, customer focus, and employee involvement at all levels, helping maritime organizations control processes effectively, reduce errors, and enhance global competitiveness (International Organization for Standardization, 2007).

Research by Ungureanu et al. (2023) found that integrated quality management systems in port organizations increased operational efficiency, reduced losses, and systematically improved processes, significantly enhancing organizational effectiveness. Quality management also fosters a quality-focused organizational culture and encourages continuous employee participation in process improvements (Canbay & Akman, 2023; Patyal et al., 2020; Yang et al., 2025). Technological advances such as digital systems and artificial intelligence (AI) in maritime transport improve planning accuracy and decision-making.

However, implementing quality management in maritime transport faces challenges such as internal resistance to change, insufficient training resources, and the complexity of coordinating multiple stakeholders. Therefore, strong top management support and systematic planning are essential to ensure effective quality improvement initiatives (International Organization for Standardization, 2007). Based on this information, the third hypothesis is proposed:

Hypothesis 3 (H3): Quality Management positively affects Organizational Effectiveness

The Impact of Customer Relationship Management on Organizational Effectiveness

Current studies indicate that Customer Relationship Management (CRM) is a vital strategy that directly influences organizational effectiveness in the maritime transport sector, an industry characterized by complex coordination and the need for rapid responses to customer requirements. One of the key contributions of CRM lies in its ability to enhance organizational operational efficiency. By enabling shipping companies to systematically track customer information and respond accurately and promptly to customer demands, CRM systems improve internal processes and reduce communication errors across organizational functions (Sudirjo et al., 2024). In addition to operational efficiency, CRM plays an important role in

strengthening customer satisfaction and loyalty through the delivery of tailored and responsive services. Furthermore, CRM-generated data give management deeper insights into customer behavior and market trends, supporting strategic planning for new service development, pricing strategies, and target market identification (Raj, 2024). Empirical evidence from Asian and ASEAN countries further supports the relationship between customer relationship management and positive organizational outcomes. Mangmee & Kookkaew (2023) found that service quality and CRM practices have a significant positive impact on customer loyalty. Similarly, Kahokaew & Nurittamont (2021) reported that CRM influences organizational outcomes through intangible assets, including corporate image, organizational culture, and customer trust. In addition, studies by Farmania et al. (2021) and Khan et al. (2022) confirmed the role of electronic CRM (e-CRM), customer satisfaction, and corporate reputation in enhancing customer loyalty within the Asian context. Based on this information, the fourth hypothesis is proposed:

Hypothesis 4 (H4): Customer Relationship Management positively affects Organizational Effectiveness.

The Impact of Safety Culture on Organizational Effectiveness

Safety culture substantially affects organizational effectiveness in the maritime transport sector, which is highly prone to accidents. It not only prevents adverse events but also significantly improves overall organizational performance (Hendrawan, 2019). Safety culture encompasses the beliefs and values regarding safety held by the organization and its employees, reflected in effective risk management, transparent communication, and learning from mistakes (Xi et al., 2025). Organizations with a strong safety culture typically reduce accidents and operational disruptions, which is especially critical in maritime transport, where minor errors can cause severe property damage and loss of life. Effective accident prevention lowers repair costs and downtime while preserving a positive image among stakeholders (Christian et al., 2009).

Research shows that organizations that prioritize safety culture achieve greater effectiveness by fostering efficient communication, teamwork, and trust among employees. Allowing employees to report anomalies or suggest process improvements without fear of punishment enhances system flexibility and responsiveness to changing situations (Xi et al., 2025). The link between safety culture and human resource development is also crucial. Organizations that promote continuous safety behaviors increase employee motivation, loyalty, and work quality while reducing turnover, all of which improve organizational effectiveness (Liang & Ilias, 2023). Additionally, safety culture influences trust from customers and business partners, supporting long-term business sustainability, especially in an era where customers value transparency and clear safety standards (Kabiesz & Tutak, 2024). Therefore, safety culture is not only a risk management tool but also a strategic approach to enhancing both internal effectiveness and external stakeholder perceptions. Based on this information, the fifth hypothesis is proposed:

Hypothesis 5 (H5): Safety Culture positively affects Organizational Effectiveness.

Based on the literature review, the conceptual framework is presented in Figure 1.

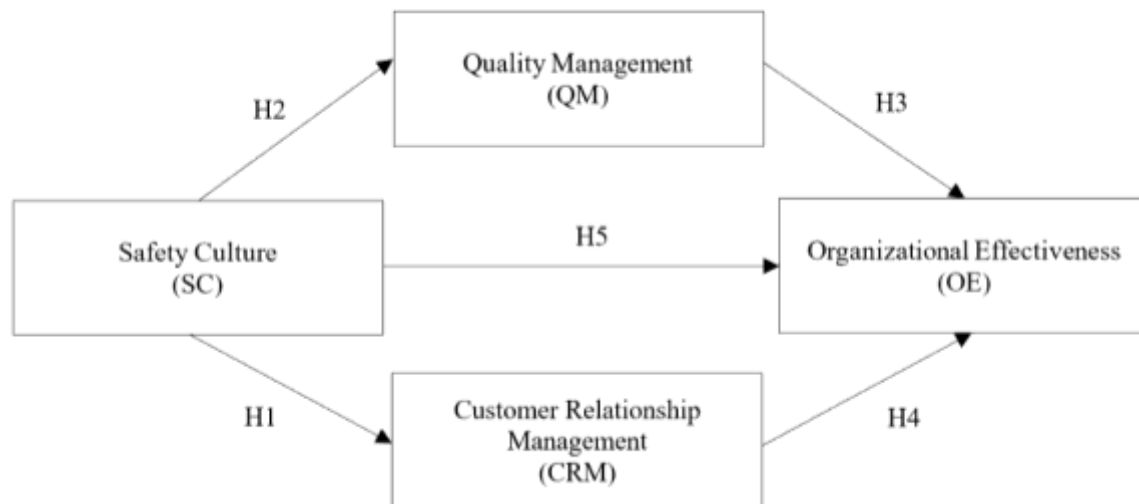


Figure 1 Research Conceptual Framework and Hypotheses.

Research Methodology

This research was reviewed and approved by the Rangsit University Ethics Review Board under approval number DPE. No. RSUERB2025-021.

Population and Sample

The population for this study comprised the maritime transport sector in Thailand. The unit of analysis was at the organizational level. The researcher collected data from freight forwarding agents and customs clearance agents in the maritime transport sector that are still operational and registered as limited companies. As of May 22, 2025, the total population consisted of 1,079 organizations. To ensure an appropriate representative sample for Structural Equation Modeling (SEM) analysis, the researcher applied the Rule of Thumb recommending a sample size of 10-20 times the number of observed variables (Hair et al., 2020)

This study included 18 observed variables, requiring a minimum sample size of 180 to 360 respondents. Data were collected from key informants, including top executives or their designated representatives within the maritime transport sector. A stratified random sampling technique was employed, with organizations classified according to their geographic regions in Thailand. Proportional sampling was applied to ensure nationwide representation. Based on proportional allocation, a total of 360 organizations were randomly selected from various provinces across all regions. Accordingly, 360 questionnaires were distributed, of which 270 were returned and deemed valid for analysis, yielding a response rate of 75.00 percent. This response rate is considered acceptable for organizational-level survey research.

Research Instrument

A questionnaire was used as the primary data collection instrument for this study. The questionnaire was developed based on validated measurement scales from prior studies related to safety culture, customer relationship management, quality management, and organizational effectiveness. All measurement items were adapted from established instruments in the literature (Table 1) and refined to reflect the operational and cultural context of Thailand's maritime transport sector. To ensure content validity, the questionnaire was evaluated by three experts with academic and professional expertise in logistics management, maritime transport, and research methodology. The item-objective congruence (IOC) values for all measurement items ranged from 0.67 to 1.00, exceeding the acceptable threshold of 0.50. All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Prior to the main data collection, a pilot test was conducted with 30 respondents. The reliability analysis demonstrated satisfactory internal consistency, with Cronbach's alpha coefficients ranging from 0.776 to 0.838 for all constructs. These values exceeded the

recommended minimum threshold of 0.70 and were consistent with the composite reliability estimates, indicating that the measurement instrument was reliable and suitable for subsequent analysis (Hair et al., 2020).

Statistics used in the research

This study used Partial Least Squares Structural Equation Modeling (PLS-SEM) to test the hypotheses. The PLS-SEM technique, a variance-based approach to structural equation modeling, was conducted using SmartPLS to evaluate the measurement and structural models. To assess the significance of the path coefficients in the model, the bootstrapping procedure was applied. Bootstrapping involves repeatedly resampling the data to generate new datasets; in this study, 5,000 bootstrap samples were drawn. According to Chin (1998) and Hair et al. (2022), 5,000 bootstrap iterations are sufficient for significance testing in structural equation modeling research. The data analysis process began with testing the Measurement Model to evaluate the validity and reliability of the constructs used in the study. Subsequently, the Structural Model was analyzed to test the proposed hypotheses, as presented in the research findings.

Table 1 Measurement Items.

Measurement Items	Source
Safety Culture (SC)	Al-Mekhlafi et al. (2021); Naji et al. (2021)
SC1: The organization implements safety-related learning.	
SC2: The organization reports incidents when errors occur.	
SC3: The organization has safety-promoting policies.	
SC4: The organization uses past errors as guidelines for improvement.	
SC5: The organization conducts emergency drills.	
Customer Relationship Management (CRM)	Bupu et al. (2023); Ngah et al. (2023)
CRM1: The organization provides facilities for customers.	
CRM2: The organization tailors its services to each customer's needs.	
CRM3: The organization provides information to service recipients.	
CRM4: The organization employs modern communication technologies.	
Quality Management (QM)	Yang et al. (2021); Marjan et al. (2022)
QM1: The organization plans its work.	
QM2: The organization performs tasks according to assigned plans.	
QM3: The organization inspects work before delivery to customers.	
QM4: The organization continuously improves work quality.	
Organizational Effectiveness (OE)	Kareem & Alameer (2019)
OE1: The organization delivers goods to customers in full quantity.	
OE2: The organization delivers goods to customers on time.	
OE3: The organization delivers goods without damage to customers.	
OE4: The organization delivers goods at an appropriate cost.	
OE5: The organization impresses customers with its service.	

Research Results

Demographic Characteristics of the Sample

The demographic analysis showed that 270 respondents completed the questionnaire, representing 75.00% of the total sample. Of these respondents, most were male (55.30%). The largest age group was 30-39 years old, comprising 41.50% of the sample. Regarding education level, most respondents held a bachelor's degree (75.50%). In terms of work experience, the largest group had 5-10 years of experience, representing 33.30%. The predominant business form in the sample was limited companies (95.20%).

Measurement Model Analysis

The measurement model was rigorously evaluated for convergent validity, discriminant validity, and internal consistency reliability. Convergent validity was established by examining the indicator loadings and the Average Variance Extracted (AVE). All indicator loadings ranged from 0.723 to 0.875, exceeding the recommended threshold of 0.70 and achieving statistical significance (Hair et al., 2022; Sarstedt et al., 2021). Furthermore, the AVE values for all latent constructs ranged from 0.538 to 0.670, exceeding the 0.50 minimum criterion and confirming that the constructs capture a substantial portion of the variance in their respective indicators. Discriminant validity was satisfactorily verified using both the Heterotrait-Monotrait (HTMT) ratio and the Fornell-Larcker criterion. The HTMT values ranged from 0.429 to 0.629, well below the conservative 0.90 threshold (Ab Hamid et al., 2017). Concurrently, the square root of the AVE for each construct was strictly greater than its correlations with all other latent variables in the model (Henseler et al., 2015). Finally, construct reliability was confirmed as both Cronbach's alpha coefficients (0.776 to 0.838) and Composite Reliability scores (0.853 to 0.890) exceeded the standard 0.70 benchmark, indicating robust internal consistency across all measures (Hair et al., 2020).

Table 2 Measurement Model Results

Observed Variables	Latent Variables	Factor Loading	Cronbach's alpha	CR	AVE
Safety Culture (SC)	SC1	0.740	0.786	0.853	0.538
	SC2	0.698			
	SC3	0.732			
	SC4	0.758			
	SC5	0.737			
Customer Relationship Management (CRM)	CRM1	0.791	0.776	0.857	0.602
	CRM2	0.829			
	CRM3	0.805			
	CRM4	0.667			
Quality Management (QM)	QM1	0.831	0.834	0.890	0.670
	QM2	0.839			
	QM3	0.875			
	QM4	0.723			
Organizational Effectiveness (OE)	OE1	0.781	0.838	0.885	0.607
	OE2	0.791			
	OE3	0.807			
	OE4	0.764			
	OE5	0.750			

Table 3 Discriminant Validity Assessment

Construct	HTMT				Fornell-Larcker				VIF
	CRM	OE	QM	SC	CRM	OE	QM	SC	
CRM					0.776				1.676
OE	0.629				0.508	0.779			1.454
QM	0.450	0.429			0.361	0.361	0.819		2.002
SC	0.529	0.483	0.589		0.418	0.399	0.478	0.733	1.208

Note: Bold values on the diagonal display the square root of AVE

Structural Model Analysis

As the maritime transport industry faced volatility in international logistics systems and increasingly stringent safety regulations, enhancing internal organizational capabilities became essential to improve effectiveness. This study aimed to analyze the roles of Safety Culture (SC), Customer Relationship Management (CRM), and Quality Management (QM) in Organizational Effectiveness (OE) within Thailand's maritime transport sector, using Partial Least Squares Structural Equation Modeling (PLS-SEM).

The structural model analysis revealed that the model explained a moderate level of variance in the dependent variables. The R^2 value for OE was 0.315, indicating that SC, CRM, and QM collectively explained 31.5% of the variance in OE. Meanwhile, QM and CRM had R^2 values of 0.229 and 0.175, respectively, reflecting the significant role of SC in driving internal organizational mechanisms related to both quality and customer relationships.

Path analysis within the PLS-SEM framework confirmed that all five research hypotheses were strongly supported, highlighting the structural importance of internal organizational capabilities. Safety culture exhibited a highly significant positive effect on both CRM ($\beta = 0.418$, $p < 0.001$) and QM ($\beta = 0.478$, $p < 0.001$), validating H1 and H2. This indicates that organizations embedding strong safety values systematically foster deeper customer trust and more robust quality control processes. Furthermore, both QM and CRM significantly enhanced OE ($\beta = 0.140$, $p = 0.023$, and $\beta = 0.386$, $p < 0.001$, respectively), thereby supporting H3 and H4. Finally, supporting H5, safety culture not only drove OE directly ($\beta = 0.171$, $p = 0.005$) but also exerted a substantial indirect influence through the mediating channels of CRM and QM (total indirect effect = 0.229). Cumulatively, these results substantiate the premise that cultivating a deeply ingrained safety culture is not merely a symbolic compliance measure, but a critical structural driver that elevates operational standards and sustainable organizational effectiveness.

Table 4 Path Coefficients Results

Hypothesis	Path	β	t-test	p-value	Result
H1	SC → CRM	0.418	7.941	0.000***	Supported
H2	SC → QM	0.478	9.218	0.000***	Supported
H3	QM → OE	0.140	2.278	0.023*	Supported
H4	CRM → OE	0.386	6.394	0.000***	Supported
H5	SC → OE	0.171	2.818	0.005**	Supported

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

To provide an overview of the effects among variables in the structural equation model, this study analyzed the influence of independent variables on dependent variables in terms of Direct Effect, Indirect Effect, and Total Effect. This analysis reflects the explanatory power and the transmission of effects among variables within the model. Additionally, the coefficient of determination (R^2) for each dependent variable was reported. The results of the analysis are summarized in Table 5 and illustrated in Figure 2.

Table 5 Direct Effects, Indirect Effects, Total Effects, and Coefficient of Determination

	Direct Effect	Indirect Effect	Total Effect	R^2
SC → CRM	0.418	-	0.418	0.175
SC → QM	0.478	-	0.478	0.229
SC → OE	0.171	0.229	0.400	0.315
CRM → OE	0.386	-	0.386	-
QM → OE	0.140	-	0.140	-

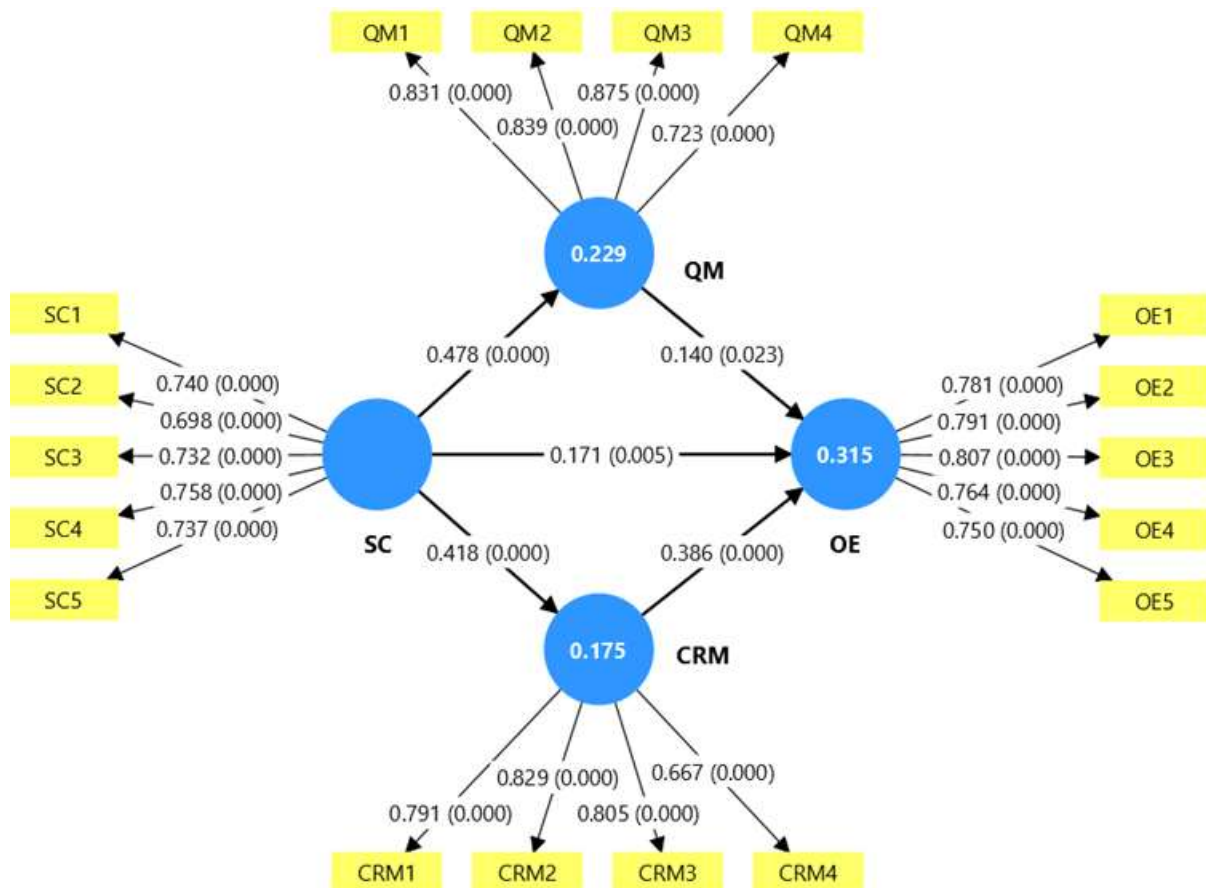


Figure 2 Finalized Model

Conclusion and Discussion

This study empirically investigated how safety culture and key management capabilities jointly drive organizational effectiveness within Thailand's maritime transport sector. Using Partial Least Squares Structural Equation Modeling (PLS-SEM), the findings showed that safety culture serves as a foundational strategic resource, exerting direct and indirect positive effects on organizational effectiveness by fostering systematic customer relationship management (CRM) and quality management. In an industry challenged by stringent global safety standards, labor constraints, and intensifying international competition, a robust safety culture extends beyond mere risk reduction. It shapes employee behavior, heightens operational awareness, and instills shared responsibility for service excellence, forming the cornerstone of enduring trust with customers and business partners.

Customer Relationship Management and Quality Management clearly emerged as internal mechanisms influencing organizational effectiveness. Organizations that effectively manage customer relationships are more likely to retain their customer base long-term and sustain customer satisfaction. Meanwhile, a robust quality management system directly reduces costs, enhances credibility, and ensures service consistency, collectively bolstering Thai operators' competitiveness in the international transport arena.

Overall, the results show that organizational culture, particularly the safety dimension, is not merely a value that promotes a positive work environment but also a fundamental structure that deeply influences operational strategies. Cultivating a strong internal safety culture is thus essential to elevating service quality, enhancing customer satisfaction, and directly improving organizational efficiency. In the context of Thailand's ongoing Logistics 4.0 policy aimed at upgrading maritime transport to international standards, these findings offer both empirical and policy-relevant insights. They can guide efforts to strengthen internal organizational

capabilities, especially by fostering a corporate culture that prioritizes safety, customer relationships, and quality across all processes. Such initiatives will help elevate Thailand's maritime transport industry to compete and grow sustainably in the long term.

Discussion of Empirical Findings

The empirical results validate the proposed conceptual framework, demonstrating the strong interconnectedness of internal organizational capabilities. Consistent with Aven & Ylönen (2021), safety culture was found to significantly enhance customer relationship management (CRM) because customers recognize organizations with a strong safety culture as responsible and trustworthy. When organizations prioritize safety through transparent leadership and cultivate a non-punitive environment that encourages learning from errors, personnel can work safely and efficiently, thereby fostering deep customer trust and international competitiveness (Prinsloo & Hofmeyr, 2022; Xia et al., 2020). Furthermore, safety culture plays a pivotal role in establishing effective quality management systems (Churruca et al., 2021). A shared commitment to safety reduces operational errors, promotes agile communication in response to changing conditions (Zhang et al., 2023), reduces misunderstandings to support rapid decision-making (Abeje & Luo, 2023), and boosts employee motivation, ultimately strengthening the organization's sustainable competitiveness (Ateeq et al., 2024).

In turn, these management capabilities significantly drive organizational effectiveness. Robust quality management practices enable maritime firms to streamline processes, increase efficiency, and reduce operational losses through continuous improvement, directly enhancing overall performance (Fraihat et al., 2023; Khakimov et al., 2024). Integrating technology and artificial intelligence further improves planning accuracy and reduces environmental impacts (Isidore et al., 2023), while consistently high-quality services strengthen customer trust and support long-term market expansion (Zubair, 2025). Concurrently, CRM serves as a vital strategic mechanism in this complex logistics environment (Sheth et al., 2023). By leveraging CRM data to understand customer behaviors, organizations can tailor services, optimize internal processes, increase sales revenue, and secure long-term brand loyalty (Park & Jung, 2025; Szwajca & Rydzewska, 2025; Wang, 2023).

Finally, the direct positive impact of safety culture on organizational effectiveness reaffirms that an embedded safety ethos is indispensable in preventing adverse events in accident-prone industries (Li et al., 2021). Transparent communication and a focus on learning from mistakes not only prevent costly property and human life losses but also preserve a positive stakeholder image (Santana-Martins et al., 2024). Fostering teamwork, building trust, and continuously promoting safety behaviors elevate employee motivation and work quality, collectively driving the organization's sustainable internal and external effectiveness (Altinpinar & Başar, 2022; Fuller et al., 2022).

The findings indicate that the effectiveness of intangible organizational capabilities cannot be fully understood without considering the socio-cultural and business context in which they are embedded. In Thailand's maritime transport sector, where business practices are strongly relationship-oriented and trust-based, safety culture functions beyond an internal control mechanism by serving as a relational signal that enhances organizational credibility in the eyes of customers. A sustained emphasis on safety practices, transparent communication, and learning from errors builds long-term customer trust and supports effective customer relationship management. Accordingly, safety culture emerges as a context-sensitive strategic resource that creates value not only through operational efficiency but also through its alignment with culturally embedded relationship management practices in the maritime transport sector in Thailand and the broader Asian context.

Theoretical Contributions

This study contributes to the logistics and maritime management literature by clarifying how the Resource-Based View (RBV) explains organizational effectiveness in the maritime

transport sector. The findings show that intangible organizational resources, particularly safety culture, can become operational advantages when systematically integrated with customer relationship management and quality management mechanisms. This research advances RBV theory by empirically illustrating how internal organizational capabilities support reliable service delivery, operational efficiency, and customer retention. This refined perspective enhances theoretical clarity and provides a more precise conceptual boundary for future empirical research on organizational performance in the maritime transport sector.

Practical Implications

The findings offer clear practical recommendations for executives in the maritime transport sector, emphasizing embedding a safety culture at all organizational levels while developing efficient CRM and quality systems that precisely meet customer needs. Organizations should invest in safety-promoting activities such as proactive training and employee engagement, while leveraging technology to support customer relationship management and monitor service quality. Promoting employee values and participation is key to building sustainability and long-term competitiveness.

Limitations

Although this study comprehensively covers key variables within the context of Thailand, several limitations should be considered. The sample focused exclusively on the maritime transport sector in Thailand, which may limit the generalizability of the findings to other countries. The use of online questionnaires may restrict the depth of qualitative data. Additionally, data were collected solely from the perspective of executives, which might not fully reflect the views of employees or service recipients.

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