






# “The mediating effect of information technology business strategic maturity on the relationship between organizational behavior and firm performance: A study of the Jordanian maritime industry”

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# THE MEDIATING EFFECT OF INFORMATION TECHNOLOGY BUSINESS STRATEGIC MATURITY ON THE RELATIONSHIP BETWEEN ORGANIZATIONAL BEHAVIOR AND FIRM PERFORMANCE: A STUDY OF THE JORDANIAN MARITIME INDUSTRY

## Abstract

This study aims to investigate the impact of organizational behavior and information technology business strategic maturity on firm performance within the Jordanian maritime industry. A quantitative research approach was employed, and data were collected through a questionnaire distributed to 157 IT managers and 190 managers from 347 operating maritime companies in Jordan. The research data underwent descriptive and analytical analysis to examine the proposed model. The findings indicate that organizational behavior significantly and positively affects firm performance, while information technology business strategic maturity also has a significant positive influence on firm performance. Additionally, the study reveals that IT-business strategic maturity mediates the relationship between organizational behavior and firm performance. These results highlight the significance of enhancing IT-business strategic maturity to strengthen the association between organizational behavior and firm performance in the Jordanian maritime industry. By leveraging effective organizational behavior practices and implementing robust information technology business strategic maturity, maritime companies can improve their performance, achieve operational efficiency, and facilitate strategic decision-making, ultimately enhancing their competitive position in the dynamic business environment.

## Keywords

information technology business strategic maturity,  
organizational behavior, performance, maritime, Jordan

## JEL Classification

L25, O32, L20

## INTRODUCTION

The maritime industry is pivotal in the global economy, contributing significantly to GDP and employment across nations. In this dynamic industry, achieving firm performance is crucial for the success and sustainability of maritime companies. Organizational behavior and information technology business strategic maturity are two key factors that impact firm performance.

Organizational behavior encompasses the actions, attitudes, and interactions of individuals within an organization, influencing its functioning and effectiveness. Effective organizational behavior practices, such as employee engagement, job satisfaction, and organizational commitment, have consistently demonstrated positive associations with firm performance in the maritime industry (Aydoğan & Arslan,



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2021). Leadership, organizational culture, and employee motivation are critical aspects of organizational behavior that significantly influence firm performance within the maritime context (Håvold & Oltedal, 2018).

Simultaneously, information technology business strategic maturity involves strategically integrating information technology with business objectives to achieve organizational goals. Effective information technology business strategic maturity practices, including IT governance, IT strategy, and IT alignment, have impacted firm performance across various industries (Ashrafi et al., 2020). In the maritime sector, information technology business strategic maturity practices such as IT governance, IT strategic planning, and IT investment management have positively influenced firm performance (Zhou et al., 2023). The successful integration of information technology business strategic maturity enhances operational efficiency, facilitates strategic decision-making, and promotes innovation capabilities, ultimately driving firm performance.

Despite the existing literature exploring the individual impacts of organizational behavior and information technology business strategic maturity on firm performance in the maritime industry, a research gap remains regarding the mediating role of information technology business strategic maturity in the relationship between organizational behavior and firm performance. Previous studies have examined the influence of organizational culture on firm performance, partially mediated by information technology business strategic maturity (Zhou et al., 2023). However, the mediating effect of information technology business strategic maturity on other aspects of organizational behavior, such as leadership and employee motivation, remains relatively unexplored. This study aims to fill this gap by investigating the mediating role of information technology business strategic maturity in the relationship between organizational behavior and firm performance within the Jordanian maritime industry.

The maritime industry in Jordan holds significant importance, contributing substantially to the country's GDP and employment landscape (UNCTAD, 2020). With 317 companies operating within this industry, it substantially affects Jordan's GDP and provides a considerable number of employment opportunities. The high number of companies can be attributed, in part, to special zones that facilitate and support maritime activities in the country. These special zones create an environment conducive to business growth and attract both local and international maritime companies, contributing to the sector's robustness and diversity.

However, it faces numerous challenges, including intense competition, evolving customer demands, and unpredictable market conditions (Jordan Maritime Commission, 2019). To thrive in this competitive environment and achieve sustainable growth, maritime firms in Jordan need to adopt effective organizational behavior practices and robust information technology business strategic maturity strategies. Understanding the dynamics of these factors and their interplay is crucial for enhancing the performance and competitive edge of Jordanian maritime companies in both local and global markets.

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## 1. LITERATURE REVIEW

Organizational behavior refers to studying how individuals and groups behave and how these behaviors can affect organizational effectiveness and performance (Robbins & Judge, 2019). Numerous studies have found a positive relationship between organizational behavior and firm performance (Gagné, 2018; Bunderson & Van der Vegt, 2018). For instance, Yesil and Kaya (2013) found that or-

ganizational behavior positively affects both financial and non-financial performance indicators in the Turkish hotel industry.

Moreover, Cui and Hu (2012) reviewed the relationship between organizational behavior and firm performance in the context of Chinese high-tech firms. The results showed that organizational behavior positively influences firm performance, indicating the importance of fostering a positive

organizational culture and employee behaviors to achieve better performance outcomes.

Information technology business strategic maturity, which refers to the alignment between an organization's IT and overall business strategy (Luftman et al., 2017), has been extensively studied concerning firm performance. These studies consistently demonstrate that a higher degree of alignment between IT and business strategies leads to improved firm performance outcomes (Ilmudeen et al., 2019). For example, Pesce and Neirotti (2023) investigated the impact of IT-business alignment on firm performance. They found a positive relationship, emphasizing the importance of aligning IT strategies with overall business objectives to achieve better performance outcomes. Similarly, Panda (2022) explored the link between IT-business alignment and firm performance, and their findings indicated that organizations with higher levels of alignment experience superior financial performance compared to those with lower levels of alignment. These studies collectively highlight the significance of information technology business strategic maturity and its role in enhancing firm performance through strategic alignment between IT and business strategies.

Despite the extensive literature exploring the individual relationships between organizational behavior, information technology business strategic maturity, and firm performance, only a few studies have investigated the mediating effect of information technology business strategic maturity on the relationship between organizational behavior and firm performance (Ilmudeen & Bao, 2020; Gerow et al., 2014).

Similarly, Panda and Rath (2018) examined the role of IT-business strategic alignment in enhancing organizational agility and performance within Indian financial enterprises. The findings indicated that IT-business strategic alignment positively influences organizational agility, improving firm performance. This underscores the importance of aligning IT with overall business strategies to achieve favorable performance outcomes.

Furthermore, research has shown that IT-business strategic alignment is crucial for improving firm performance. According to Luftman et al. (2017),

IT-business strategic alignment significantly impacts business performance, including financial performance, customer satisfaction, and innovation. The study also highlighted the importance of developing a comprehensive IT-business alignment framework to ensure that IT initiatives are aligned with business objectives and goals.

In the maritime industry, IT has played a crucial role in improving business operations, enhancing supply chain management, and providing better customer service. However, to realize these benefits, organizations must ensure that their IT initiatives are aligned with their business objectives and goals (Saldanha, 2020). IT-business strategic alignment can help maritime organizations achieve this goal by ensuring that IT investments are directed toward the areas with the most significant impact on business performance.

The maritime industry is a critical sector of the Jordanian economy, contributing significantly to GDP and employment. However, the industry faces several challenges, including intense competition, changing customer demands, and volatile market conditions (Alamouh et al., 2022). To remain competitive and achieve sustainable growth, maritime firms in Jordan need to adopt effective organizational behavior practices and information technology business strategic maturity practices that can enhance their performance.

Several studies have suggested that effective organizational behavior practices, such as leadership, employee motivation, and organizational culture, can significantly impact a firm's performance (Arnold, 2017). For instance, research has shown that effective leadership practices, such as transformational leadership, can positively influence employee motivation and job satisfaction, leading to improved firm performance (Nguon, 2022).

IT business strategic maturity is like watching a company grow and evolve, much like a person's journey through life. At its core, it's about how well an organization's IT strategy aligns with its overall business goals. Think of it as the wisdom that comes with age. A mature IT strategy seamlessly integrates with the broader business plan, bringing value and a competitive edge. Thus, we can picture it as a series of growth stages, similar to a child's

development. Furthermore, achieving higher maturity levels leads to better decision-making, cost efficiency, happier customers, and a competitive edge in the digital world. However, it requires dedication, investment, and an ongoing commitment to aligning IT with the organization's overall strategy (Sledgianowski et al., 2004).

Similarly, information technology business strategic maturity practices refer to the process of aligning IT strategies with business objectives to improve organizational performance (Luftman & Brier, 1999). Several studies have suggested that effective information technology business strategic maturity practices can significantly enhance a firm's performance by improving its operational efficiency, strategic decision-making, and innovation capabilities (Panda, 2022). For example, research has shown that effective IT governance practices, such as the use of IT performance metrics and IT investment evaluation, can significantly improve a firm's financial performance (Weill & Ross, 2005).

Given the significance of organizational behavior and information technology business strategic maturity in enhancing firm performance, there remains a gap in the current literature regarding the mediating effect of information technology business strategic maturity on the relationship between organizational behavior and firm performance in the Jordanian maritime industry. This study bridges this gap by investigating the mediating effect of information technology business strategic maturity on the relationship between different aspects of organizational behavior, including leadership, employee motivation, organizational culture, and firm performance within the Jordanian maritime industry. By exploring these dynamics, this study provides valuable insights into the interplay between organizational behavior, information technology business strategic maturity, and firm performance, thereby contributing to a better understanding of the factors that drive performance in the Jordanian maritime sector.

Specifically, the study investigates how information technology business strategic maturity mediates the relationship between organizational behavior and firm performance in the Jordanian maritime industry. While existing literature has

examined the individual relationships between organizational behavior, information technology business strategic maturity, and firm performance, there is a research gap regarding the mediating effect of information technology business strategic maturity on the relationship between organizational behavior and firm performance, particularly in the context of the Jordanian maritime industry.

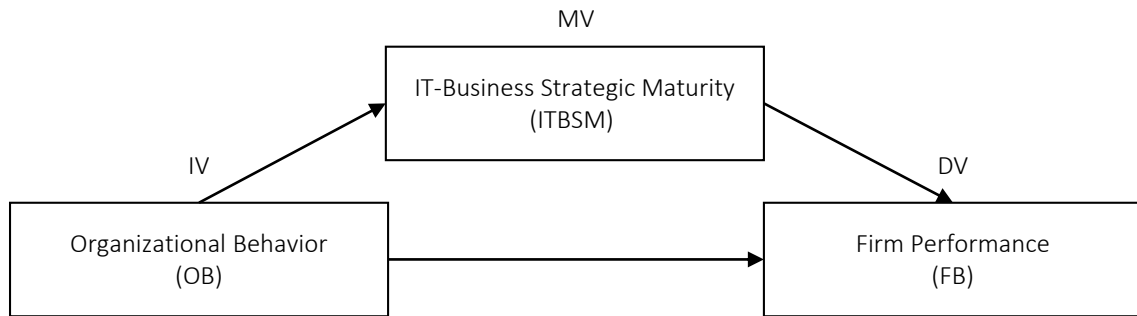
## 2. AIM

This study aims to investigate the mediating role of Information Technology Business Strategic Maturity (ITBMS) in the relationship between organizational behavior and firm performance within the Jordanian maritime industry. It seeks to comprehensively analyze organizational behavior and information technology business strategic maturity adoption in the industry, examining how these factors influence key firm performance indicators.

## 3. METHOD

This study used a quantitative research method to select a stratified sample of rank-and-file employees from 347 operating maritime companies in Aqaba and outside. To collect data, an online questionnaire using Google Forms was distributed to the selected respondents, including unit managers and IT managers, through coordination with their respective line managers. A total of 157 IT managers and 190 unit managers participated in this study. The collected data were analyzed using Smart-PLS 4, and factor loadings, Cronbach's Alpha, composite reliability, and convergent validity were evaluated to assess the reflective measurement models.

The study used a five-point Likert scale ranging from 1 "Strongly disagree," 2 "Disagree," 3 "Neutral," 4 "Agree," and 5 "Strongly agree," noting that these scales may need adaptation and translation into Arabic. Organizational behavior was measured using the five items developed by Ferine et al. (2021) and Saptia et al. (2021). Information technology business strategic maturity was measured using the six-item measure developed by



Note: IV: Independent Variable, MV: Mediating Variable, and DV: Dependent Variable.

Figure 1. Conceptual model

Luftman and Brier (1999) and Luftman et al. (2017). Firm performance was measured by three items using the measure developed by Ramezan et al. (2013).

The adopted dataset is distributed based on the responses from IT management or management/core business/planning. Table 1 shows the accurate distribution of the study sample.

Table 1. Sample distribution

Characteristics		Count	Column N %
In Aqaba City	IT management	52	14.9%
	Management/core business/planning	79	22.7%
Total		131	37.7%
Outside Aqaba City	IT management	105	30.2%
	Management/core business/planning	111	31.9%
Total		216	64%

Four hypotheses were designed to achieve the aim of the current study. Figure 1 shows a conceptual model.

Based on the literature review, the following hypotheses are developed:

H1: Organizational behavior significantly positively affects firm performance in the Jordanian maritime industry.

H2: Organizational behavior significantly positively affects information technology business strategic maturity in the Jordanian maritime industry.

H3: Information technology business strategic maturity significantly positively affects firm performance in the Jordanian maritime industry.

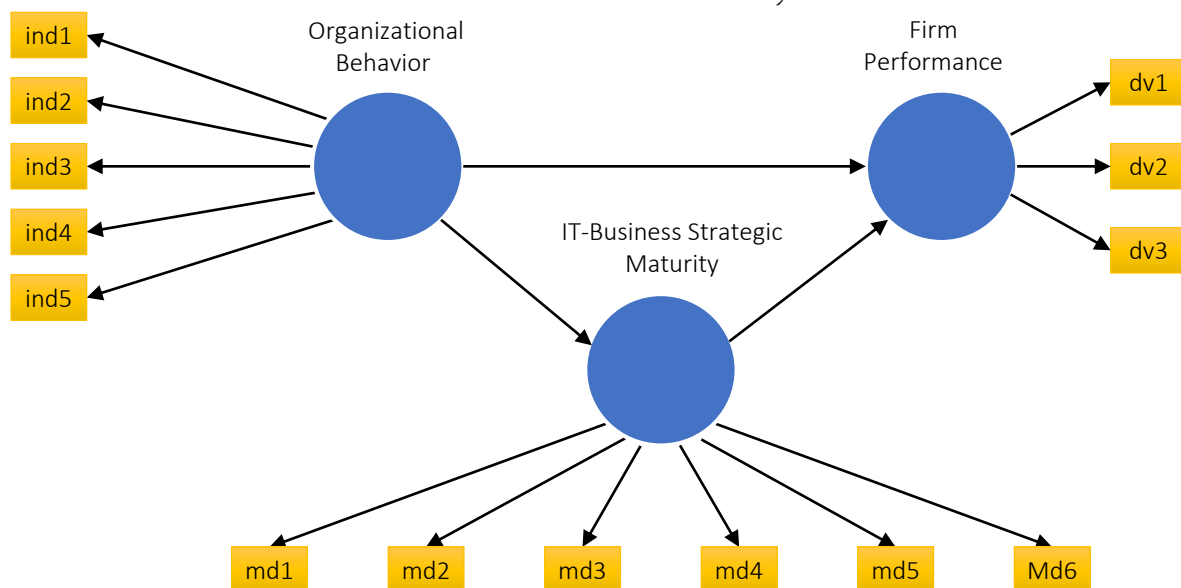


Figure 2. Initial model

*H4: Information technology business strategic maturity mediates the relationship between organizational behavior and firm performance in the Jordanian maritime industry.*

## 4. RESULTS

In the present study, Smart-PLS 4 was utilized to investigate the univariate skewness and kurtosis of all items (De Souzaabido & Da Silva, 2019). The findings indicated no missing values or items with extreme skewness or kurtosis in the collected data, which suggests that all study items are necessary. Additionally, preliminary regression analysis of the 347 cases revealed no significant outlying cases or overall undue effect. The initial model employed in this study is illustrated in Figure 2.

### 4.1. Model evaluation

The method recommended by Hair et al. (2014) was utilized to evaluate each reflective measurement model. This approach begins by evaluating factor loadings, estimating Cronbach’s Alpha, and composite reliability since these estimates are crucial in measuring internal consistency reliability and establishing convergent and discriminant validity. Sarstedt et al. (2021) affirmed that assessing average variance extracted (AVE) values is essential to evaluate the convergent validity of the measurement models. Table 2 demonstrates that the reflective measurement models meet the necessary quality criteria.

The study employed the guideline suggested by Hair et al. (2014) to assess the structural model. This involves evaluating collinearity among exogenous constructs, path coefficients, relevance, predictive accuracy of the model, and f-squared ( $f^2$ ) effect sizes. To check for collinearity among exogenous latent variables, the variance inflation factor (VIF) was used, and a good VIF value was less than 5 (Hair et al., 2014). Table 4 confirms that the VIF is less than 5, indicating no potential problem of collinearity among the exogenous constructs. Table 3 displays the discriminant validity assessment utilizing two hetrotrait-monotrait (HTMT) ratios, as proposed by Henseler (2017).

**Table 3.** Discriminant validity based on HTMT

Variables	Firm performance	ITBSM	Organizational behavior
Firm performance			
ITBSM	0.341		
Organizational behavior	0.672	0.354	

Note: ITBSM = information technology business strategic maturity.

**Table 4.** Collinearity assessment

Variables	Firm performance	ITBSM	Organizational behavior
Firm performance			
ITBSM	1.313		
Organizational behavior	1.313	1	

Note: ITBSM = information technology business strategic maturity.

**Table 2.** Factor loadings, Cronbach’s alpha, composite reliability, and convergent validity

Scale	Item	Loading	Cronbach’s Alpha	Composite Reliability	AVE
Organizational behavior	ind1	0.893	0.971	0.973	0.897
	ind2	0.963			
	ind3	0.952			
	ind4	0.966			
	ind5	0.960			
Information technology business strategic maturity	md1	0.679	0.851	0.828	0.502
	md2	0.765			
	md3	0.604			
	md4	0.701			
	md5	0.709			
	md6	0.753			
Firm performance	dv1	0.918	0.886	0.824	0.596
	dv2	0.924			
	dv3	0.909			
			0.908	0.961	0.841

**Table 5.** Final path coefficients assessment using a complete bootstrapping routine

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	p-values
ITBSM → Firm performance	0.179	0.187	0.051	3.531	0.000
Organizational behavior → Firm performance	0.657	0.657	0.034	19.088	0.000
Organizational behavior → ITBSM	0.488	0.501	0.037	13.045	0.000

Note: ITBSM = information technology business strategic maturity.

**Table 6.** Indirect effects significance testing

Scale	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics	p-values
Organizational behavior → ITBSM → Firm performance	0.088	0.093	0.026	3.425	0.001

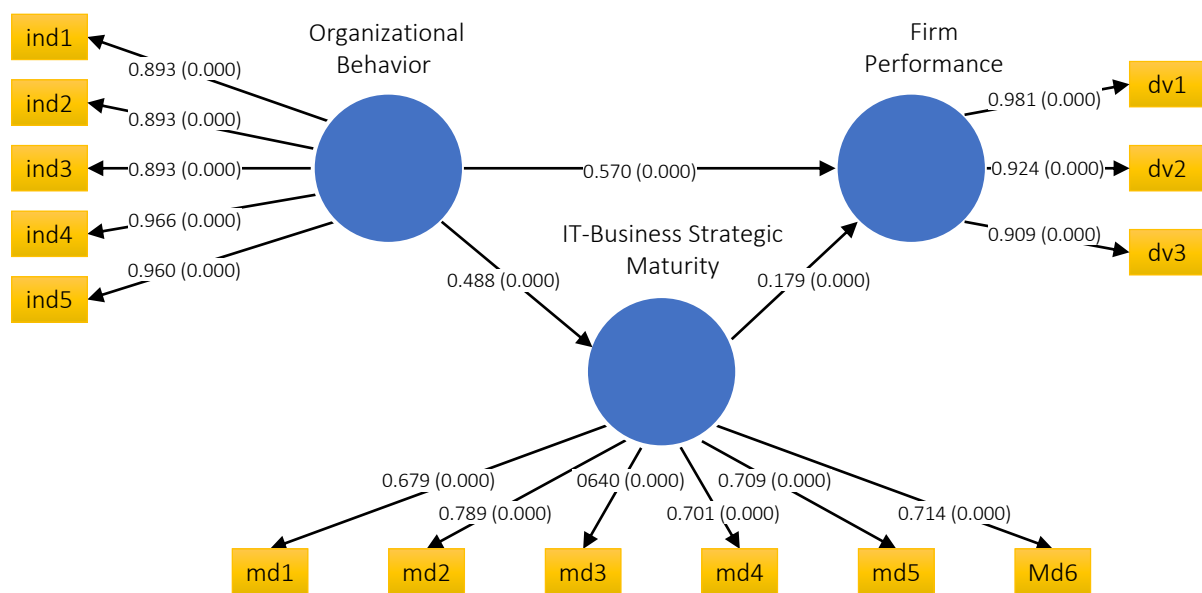
Note: ITBSM = information technology business strategic maturity.

To determine the significance and relevance of the path coefficients in the inner model, a complete bootstrapping routine with 5000 bootstrapped samples was performed. Table 5 demonstrates that the size of the direct effects was sufficient to justify their relevance, while Table 6 indicates that the indirect effects were significant. The final model, including the path coefficients and R squared (R<sup>2</sup>) values for the study of endogenous constructs, is shown in Figure 3.

According to Table 5, organizational behavior has a direct significant and positive relationship with firm performance ( $p < 0.05$ ), which means that as information technology business strategic maturity increases, firm performance increases as well; accordingly, hypothesis one is support-

ed. Based on the same results in Table 5, organizational behavior positively impacts information technology business strategic maturity ( $p < 0.05$ ), which supports hypothesis two. Data show that information technology business strategic maturity positively impacts firm performance ( $p < 0.05$ ), which means that hypothesis three is supported.

Table 6 shows that results are a positive indirect relationship between organizational behavior and firm performance, which means that as organizational behavior increases, information technology business strategic maturity increases as well, and then the increased information technology business strategic maturity helps increase firm performance, which supports hypothesis four.



**Figure 3.** Final model



Figure 3 shows that 23.8% of the information technology business strategic maturity was explained by organizational behavior, while organizational behavior and information technology business strategic maturity can determine 45.6% of firm performance. Thus, as shown in Table 5 and Table 6 and the mediating approach proposed by Hair et al. (2014), the mediating hypothesis is accepted. This means that information technology business strategic maturity positively mediates the relationship between organizational behavior and firm performance. According to Hair et al. (2014) and Nitzl et al. (2016), the mediating type resulting from the training effect on firm performance is partially mediated by information technology business strategic maturity.

## 5. DISCUSSION

The results provide valuable insights into the relationship between organizational behavior, information technology business strategic maturity, and firm performance in the Jordanian maritime industry. The findings support that effective organizational behavior practices, including leadership, employee motivation, and organizational culture, significantly impact firm performance (House et al., 2008). Specifically, this analysis revealed a positive and direct relationship between organizational behavior and firm performance. This suggests that maritime firms in Jordan can enhance their performance by implementing effective organizational behavior practices that foster strong leadership, motivate employees, and cultivate a positive organizational culture.

Additionally, the study highlights the importance of information technology business strategic maturity practices in driving firm performance. Consistent with Michelberger (2016), effective information technology business strategic maturity practices positively influence operational efficiency, strategic decision-making, and innovation capabilities. By aligning IT strategies with business objectives, maritime firms in Jordan can enhance their overall performance in a competitive environment characterized by changing customer demands and volatile market conditions (Lagoudis et al., 2017).

Moreover, the findings reveal the mediating role of information technology business strategic maturity in the relationship between organizational behav-

ior and firm performance. The results indicate that information technology business strategic maturity mediates organizational behavior and firm performance. This suggests that effective organizational behavior practices positively influence information technology business strategic maturity, enhancing firm performance. This finding aligns with Hair et al. (2014) and Nitzl et al. (2016). It highlights the crucial role of information technology business strategic maturity in translating the positive impact of effective organizational behavior practices into improved firm performance in the Jordanian maritime industry.

The implications of these findings for maritime firms in Jordan are significant. By adopting effective organizational behavior practices, such as fostering transformational leadership and cultivating motivating organizational culture, firms can enhance employee satisfaction, motivation, and performance. This, in turn, positively influences information technology business strategic maturity and leads to improved operational efficiency, strategic decision-making, and innovation capabilities. Ultimately, these factors contribute to enhanced firm performance and competitiveness in the maritime industry.

This study is among the first to examine the mediating effect of information technology business strategic maturity on the relationship between organizational behavior and firm performance in the Jordanian maritime industry. By bridging this gap in the literature, this paper provides valuable insights into the specific context of the maritime sector in Jordan. It offers actionable recommendations for maritime firms seeking to improve their performance.

This study emphasizes the significance of effective organizational behavior practices and information technology business strategic maturity strategies as drivers of firm performance in the Jordanian maritime industry. The findings highlight the positive impact of effective organizational behavior practices on information technology business strategic maturity and, subsequently, on firm performance. By recognizing the importance of leadership, employee motivation, and organizational culture and aligning IT strategies with business objectives, maritime firms in Jordan can enhance their performance and achieve sustainable growth in a highly competitive industry.

## CONCLUSION

This study sheds light on the critical role of organizational behavior and information technology business strategic maturity in determining firm performance within the Jordanian maritime industry. The findings demonstrate that effective organizational behavior, including strong leadership, employee motivation, and positive organizational culture, significantly influences firm performance. These practices enhance employee satisfaction, motivation, and overall organizational effectiveness. Moreover, the study highlights the importance of information technology business strategic maturity practices in driving firm performance in the maritime industry. Effective information technology business strategic maturity strategies, such as aligning information technology with business objectives, improving operational efficiency, and facilitating strategic decision-making, positively impact firm performance. The results emphasize the need for maritime firms in Jordan to adopt and implement robust information technology business strategic maturity practices to stay competitive in a dynamic business environment.

Furthermore, the study reveals that information technology business strategic maturity mediates the relationship between organizational behavior and firm performance. This implies that effective organizational behavior positively influences information technology business strategic maturity, which, in turn, enhances firm performance. By recognizing the mediating role of information technology business strategic maturity, maritime firms can leverage their organizational behavior initiatives to maximize their impact on firm performance through effective information technology business strategic maturity implementation.

Future research can develop an information technology maturity model that can be used to evaluate and improve information technology business strategic maturity in organizations. This would provide practical tools and frameworks for organizations to enhance their information technology and business strategies and improve their overall performance.

It is essential to acknowledge some limitations of this study. Firstly, it was conducted within a specific industry and geographic context, which may limit the generalizability of the findings to other industries or countries. Secondly, the study relied on self-reported survey data, which may introduce common method bias and potential measurement errors. Future research could address these limitations by conducting cross-industry and cross-country studies using diverse research methods to further validate and expand upon these findings.

## AUTHOR CONTRIBUTIONS

Conceptualization: Pedro Seva-Larrosa.

Data curation: Shadi Alabbadi.

Formal analysis: Pedro Seva-Larrosa.

Funding acquisition: Shadi Alabbadi.

Investigation: Shadi Alabbadi.

Methodology: Shadi Alabbadi, Pedro Seva-Larrosa.

Project administration: Francisco García-Lillo.

Resources: Shadi Alabbadi.

Supervision: Pedro Seva-Larrosa, Francisco García-Lillo.

Validation: Francisco García-Lillo.

Writing – original draft: Shadi Alabbadi.

Writing – review & editing: Pedro Seva-Larrosa, Francisco García-Lillo.

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