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Resilient Maritime Organisations – Strategic Directions for Performance in Times of Crisis

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ABSTRACT
Maritime enterprises operate in a volatile and international environment, making them highly susceptible to crises and disruptions. In such conditions, organisational resilience is essential for mitigating impacts, seizing opportunities and maintaining competitive advantage. This study investigates how competitiveness strategies mediate the relationship between organisational resilience and business performance among micro, small and medium-sized enterprises (MSMEs) in the maritime sector under crisis conditions. An online survey of maritime enterprise managers was analysed using structural equation modelling (SEM) with IBM SPSS and AMOS. Findings reveal that organisational resilience has no direct effect on business performance; instead, its influence is realised through competitiveness strategies. Cost leadership, differentiation, focus and hybrid approaches allow MSMEs to leverage resilience into improved market outcomes. The results underscore the need to translate resilience into a clear strategic direction to generate measurable benefits. Differentiation and hybrid strategies, in particular, appear most effective in strengthening market position. The study also identifies corporate reputation and customer loyalty as key resilience outcomes that should be fostered in both crisis and stable periods. This research provides a rare empirical perspective on organisational resilience in the maritime sector, contributing to a limited body of literature and offering actionable guidance for managers.

KEYWORDS
organisational resilience; competitiveness strategies; business performances; maritime sector; MSMEs

1. INTRODUCTION

Crises within organisations have become more frequent events with the advent of globalisation and internationalisation [1]. In a more complex and interdependent society, business systems are increasingly vulnerable to various threats. The most common crises in the maritime industry include: extreme weather events, geophysical disturbances, incidents, geopolitical events, labour disputes, cyber-attacks, economic and financial problems, and health crises [2]. During the pandemic, MSMEs faced serious challenges such as a lack of working capital, the need for digitalisation and a shortage of qualified workers. It has been established that organisational obstacles were the most influential, particularly liquidity problems and the lack of technical skills among employees, while issues such as changes in raw material prices and logistical delays were considered less significant for the resilience of MSMEs [3].

The concept of organisational resilience was introduced to describe the need for enterprises to adapt to rapid changes in the business environment [4]. Organisational resilience is a relatively new construct in the

management literature. The term was first placed in the context of organisations in the 1980s, and by the late 1990s, the topic attracted increasing interest from researchers [5]. However, there is still no consensus or generic solution as to how organisational resilience is achieved in business. Every organisation is unique and faces different and complex challenges. Viewing resilience as a multi-layered concept requires models that recognise this diversity. Resilience is the result of multiple interactions and connections between variables that foster the ability to resolve complex problems and discontinuities [6]. The most frequently mentioned attributes in defining organisational resilience are the abilities to adapt, cope and reconfigure [7]. Definitions emphasise survival or coping with crises, risks and changes [8]. The International Organization for Standardization (ISO) defines organisational resilience as "the ability of an organisation to absorb and adapt in a changing environment to enable it to deliver its objectives and to survive and prosper. More resilient organisations can anticipate and respond to threats and opportunities, arising from sudden or gradual changes in their internal and external context. Enhancing resilience can be a strategic organisational goal, and is the outcome of good business practice and effectively managing risk" [9]. In their review of management literature, Annarelli & Nonino defined organisational resilience as an organisation's ability to proactively confront disruptions and unexpected events thanks to strategic awareness and related operational management of internal and external shocks [10].

Despite the current relevance and importance of organisational resilience, the maritime sector has rarely been studied with regard to this phenomenon. However, studies show that it is necessary and significant to examine maritime operations in the context of a volatile, uncertain, complex and ambiguous environment [11]. Akpinar & Özer-Çaylan are among the first authors to address the definition of the concept of organisational resilience in the context of maritime operations. These authors state that the philosophy of organisational resilience enables participants in maritime operations to recognise regional and global trends, contributes to more efficient utilisation of organisational resources, assists in managing uncertainty, increases adaptive capacity to change, and overall enhances the flexibility and robustness of the organisation [12].

Previous research on resilience in the maritime sector has mainly focused on risk management, technological challenges, resilience in the supply chain, and the operational and infrastructural functioning of ports and shipping companies [13-16]. Gu & Liu conducted a systematic review of research on maritime resilience, concluding that research on this topic in the maritime domain began significantly later compared to other fields. Initially, a systems approach dominated, while since 2013, there has been increasing interest in the operational and infrastructural resilience of ports; by 2016, the focus shifted to sustainability and port disruptions, and after 2019, to environmental efficiency and safety [17]. The pandemic crisis further intensified research in the context of resilience in the maritime sector, given that organisational resilience is difficult to understand before being tested by the impact of a crisis [18-20]. Methodologically, case studies, conceptual models, empirical research, simulations and mathematical modelling, Bayesian networks, game theory, and complex network analysis are present [17, 21]. Studies are mainly focused on technical methods for risk analysis and assessment in maritime companies, aiming to understand the impact of risk. However, there is a lack of empirical research examining what specifically contributes to strengthening organisational resilience and how that resilience subsequently affects business performance [22].

A review of previous research reveals that, despite its strategic significance, the organisational dimension of resilience in the maritime industry has largely been overlooked. Akpinar & Özer-Çaylan, in their systematic review, noted that while there is a growing body of literature addressing resilience in maritime contexts, explicit focus on "organisational resilience" remains exceptionally rare, with the term "maritime resilience" more frequently encountered. A notable gap exists in empirical studies examining the mediating role of competitiveness strategies in converting resilience into measurable business outcomes, particularly within the context of smaller maritime nations such as Montenegro [12]. Although existing literature suggests that competitive strategies can bolster enterprise resilience during periods of crisis, few studies have specifically explored Porter's competitive strategies in this setting [23-26]. The first relevant work emerged in the healthcare sector, identifying relationships between resilience, competitive advantage and business performance; however, it remains insufficiently clear how organisational resilience integrates with competitive strategy and profitability within a unified theoretical framework [27, 28]. While the impact of combined competitive strategies on resilience has been studied in the transport sector [23, 25, 26], research within the maritime sector has so far focused only on a handful of studies – mainly in relation to marinas and specifically during the pandemic [29, 30].

This paper makes an original contribution to the literature by employing a validated conceptual model and structural equation modelling (SEM) to shed light on the mechanisms by which organisational resilience can

serve as a source of competitive advantage and stable business performance in times of crisis. Distinct from earlier studies, this research encompasses a broader range of micro, small and medium-sized enterprises (MSMEs) from the maritime sector, thus addressing a recognised theoretical gap and providing clear, practical guidance for managers within the industry [12]. The empirical research focuses on MSMEs operating in Montenegro's maritime sector, which are described as MSMEs given the specific context in which they operate.

The Montenegrin economy, as a small and open market economy, faces numerous challenges and opportunities arising from the processes of globalisation and the liberalisation of international trade. A period of dynamic economic growth was interrupted by a severe recession during the COVID-19 pandemic, but was followed by a rapid recovery in 2021 and continued growth in 2022. At the same time, economic flows were further affected by inflationary pressures resulting from rising global prices. Despite their vulnerability, MSMEs have demonstrated resilience and the potential for adaptation. Considering that they constitute a significant part of Montenegro's economic activity and that of the Western Balkan region, and are key to employment, innovation and competitiveness, the development of these enterprises is of crucial importance for long-term economic progress. Their orientation towards the EU market further emphasises the need to strengthen their resilience and strategic management in conditions of uncertainty [31]. The COVID-19 pandemic significantly disrupted the operations of MSMEs, highlighting the necessity of enhancing their resilience and ensuring long-term sustainable development [32].

Accordingly, there arises a need to clarify the central research question:

RQ: Do competitiveness strategies mediate the relationship between organisational resilience and business performance of MSMEs in the maritime sector under crisis conditions?

Three hypotheses arise from the research question:

H1: Organisational resilience of MSMEs in the maritime sector is positively related to competitiveness strategies.

H2: Organisational resilience of MSMEs in the maritime sector is positively related to business performance.

H3: Competitiveness strategies mediate the relationship between organisational resilience and business performance of MSMEs in the maritime sector.

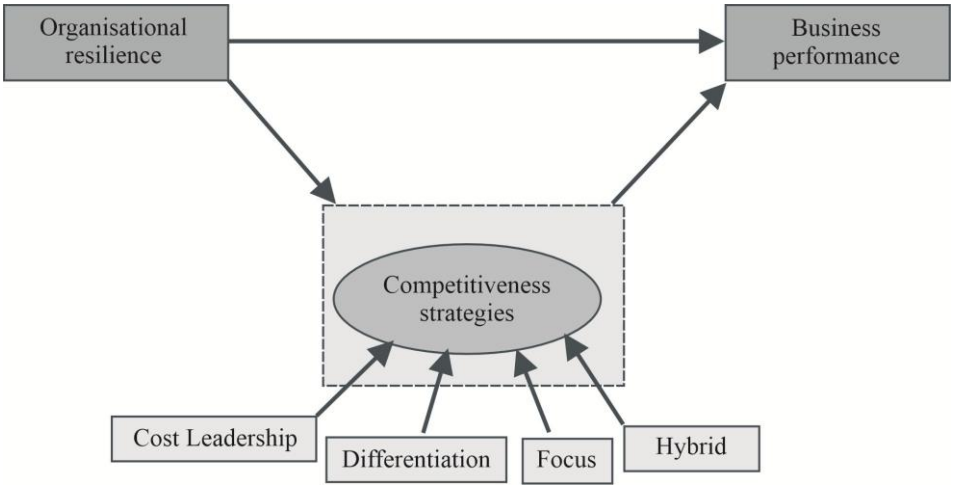

Figure 1 – Conceptual model

A model has been put forward that integrates organisational resilience, competitiveness strategies and business performance among MSMEs in the maritime sector (*Figure 1*). The model is premised on the assumption that there is a positive relationship between organisational resilience and competitiveness strategies (H1). For this hypothesis, the variables considered include cost leadership, offer differentiation, focus on a narrower market segment and a combined strategic direction – a hybrid model. The subsequent component of the model is concerned with testing the relationship between organisational resilience in maritime enterprises and business performance (H2). This hypothesis is grounded in the need for empirical research to examine the nature of the relationship between organisational resilience and business performance in crisis contexts [33]. Finally, it is proposed that competitiveness strategies play a mediating role in the relationship between organisational resilience and the performance of maritime enterprises (H3), representing an innovative

contribution to the literature. This hypothesis is driven by the need to address a gap in the literature and empirically test the causality among organisational resilience, competitiveness strategies and business outcomes [23, 25, 26, 27]. Taken together, the model presumes that organisational resilience in maritime enterprises acts as a mechanism for fostering competitive advantage and generating business performance under crisis conditions.

2. LITERATURE REVIEW

In an increasingly unstable market environment, acquiring and maintaining a competitive advantage is becoming a key challenge for modern enterprises. Small and medium-sized enterprises that are prepared to take risks during crises demonstrate greater resilience and a propensity for innovation [34]. Contemporary business strategies are increasingly focused on maintaining sustainability and resilience, rather than exclusively on economic efficiency [35, 36]. Research shows that enterprises possessing strategic agility and adjusting their operations in a timely manner will not be significantly affected by the impact of crises [37]. Organisational resilience, as the ability of an enterprise to identify risks, respond to crises and adapt to change, stands out as a key factor in long-term competitive advantage [24]. Liu & Zhang also consider that organisational resilience has a strong impact on achieving sustainable competitive advantage, and that this effect is realised through strategic capabilities, namely, the ability to formulate strategy and the ability to integrate resources [38]. In conditions of intense market competition, more resilient organisations, which are able to adapt to change more quickly and efficiently, can take the market positions of those competitors who fail to cope with crisis situations [12, 28]. Similar to natural ecosystems that collapse and are replaced by new, better-adapted systems, organisations that fail to respond to environmental challenges are overtaken by more agile and innovative actors [4]. In this context, Liu et al. emphasise that dealing with crises should also be viewed as an opportunity, whereby strategic thinking and adaptation to a turbulent environment can achieve sustainable development and build long-term competitive advantage [5].

Fathi et al. established that competitive advantage partially mediates the relationship between organisational resilience and business performance in the enterprises under study, using the example of the pharmaceutical industry. Specifically, the direct impact of organisational resilience on business performance was significantly stronger than the indirect impact realised through competitive advantage. This means that, although competitive advantage partially mediates the relationship between resilience and performance, most of the effect of organisational resilience on business performance is direct [27]. Porter's theory of generic strategies for competitiveness, which includes cost leadership, differentiation and focus, has long been dominant in strategic management. According to Porter, the cost leadership strategy is based on minimising operating costs, thereby enabling the achievement of higher profit margins; differentiation focuses on creating a unique and high-quality offering; while the focus strategy is oriented towards the needs of a clearly defined target consumer group [39]. However, contemporary authors highlight the limitations of applying "pure" strategies, especially in an unstable business environment, and advocate for an integrated, i.e. hybrid, model as a more flexible option [25, 40-44]. The hybrid strategy combines differentiation and cost leadership to provide high value at an affordable price, without losing competitive advantage [43]. Kaya emphasises that differentiated products, although requiring higher costs, can generate greater demand and enable savings through increased production volumes [30]. In transitional economies, the hybrid approach is more effective than applying a single strategy [45]. Băcanu demonstrates that small and medium-sized enterprises applied precisely such mixed strategies during the pandemic [46]. Kaliappen et al. confirm that hybrid strategies have a positive effect on organisational performance, while Claver-Cortés et al. note that decentralisation and organisational complexity support their development [40, 44]. Leitner & Güldenberg further confirm that combined strategies bring long-term benefits, particularly when combined with modern technologies and quality management [47]. Alnoor et al. conclude that, while "pure" strategies work in more stable economies, hybrid models become essential in transitional conditions [23]. Existing research in the field of transport activities indicates that different generic competitiveness strategies, such as differentiation, cost leadership and focus, can result in varying levels of organisational resilience to sudden crises. It is assumed that, by combining these strategies, enterprises could further strengthen their resilience, which would have a positive impact on their financial performance [23, 25, 26]. Different strategies for overcoming challenges demonstrate their strength and effectiveness depending on the intensity of the crisis experienced by small and medium-sized enterprises, but it is crucial to select the strategy that aligns with the company's strategic direction [48]. Ma argues that a lack of diversity in strategic positioning can result in a crisis affecting a company's key profit

area, increasing the risk of bankruptcy due to the inability to adapt quickly. Therefore, it is essential for enterprises to be prepared for unforeseen crises, which implies an increasing need to diversify competitiveness strategies. More diversified enterprises are characterised by greater flexibility and the ability to adapt their business focus, enabling them to respond effectively to various crisis challenges and maximise profit [49].

Enterprises in nautical tourism generally prefer a differentiation strategy, while they tend to adopt a cost leadership strategy in times of crisis [29, 50-52]. In tourism, the hybrid model – a combination of differentiation, cost leadership and a focus on specific customers – is frequently applied [51-53]. Combining differentiation and cost leadership enhances business performance. Firms that manage risks effectively and adapt quickly are better able to maintain a competitive advantage. Such developed resilience further improves business results, particularly with timely anticipation of changes [27].

Nevertheless, a significant number of authors emphasise that existing knowledge is largely based on systematic literature reviews, while empirical research that examines in more detail the factors driving organisational resilience, as well as its relationship with competitiveness and business performance under crisis conditions, remains limited [33].

The aim of this study is not to generalise its findings, but to contribute to a deeper understanding of the concept of organisational resilience, illustrated through the example of a small maritime economy such as Montenegro. However, Montenegro can be considered a good example of a small maritime economy relevant for studying organisational resilience, due to its key characteristics: operating under limited resources, a transitional economy, a high level of exposure to international cargo flows, and the dominant presence of micro and small maritime enterprises [23, 54, 55].

3. METHODOLOGY

For the needs of this research, a purposive sampling strategy was applied, targeting MSMEs operating in the maritime sector in the broadest sense (shipping, maritime transport, shipbuilding, port activities, agency, logistics, maritime tourism and related activities). The study examined MSMEs in Montenegro between June 2024 and December 2024. The starting point for identifying the target population was the Central Register of Business Entities of Montenegro, from which enterprises were selected according to the NACE code within the domain of maritime activities. NACE code is the statistical classification of economic activities in the European Community [56]. Due to the technical limitations of the register, which allows a maximum display of 50 results per activity code, an additional search was conducted by the municipality to ensure broader coverage and comprehensiveness of the sample. Furthermore, an additional criterion was applied: only enterprises that had been actively operating for at least three years were included in the sample, in order to ensure a certain level of organisational experience, particularly relevant for observing behaviour in crisis conditions. In the process of contacting enterprises (by email and/or telephone), it was found that a certain number of formally active enterprises were not conducting business activities in practice or were under financial blockade, and such enterprises were excluded from further research. After filtering, the final number of maritime sector enterprises identified as relevant for the research was 310. Of the total number of maritime enterprises contacted, 160 respondents, i.e. managers from 116 different maritime enterprises, completed the questionnaire, which represents more than one-third of the population. The sample structure reflected organisational size, with medium-sized and larger enterprises being proportionally represented by a greater number of respondents, while micro and small enterprises were represented by a single respondent each. This distribution allowed for the inclusion of diverse perspectives within larger organisational systems, while maintaining the representativeness and relevance of the responses across all categories of enterprises. More detailed sample characteristics are presented in *Table 1*.

Table 1 – Sample characteristics

Variables	Items	N	%	Variables	Items	N	%
Sex	Male	123	76.90%	Company size	Micro	75	46.90%
	Female	37	23.10%		Small	40	25.00%
Age	20-29	16	10.00%		Medium	27	16.90%
	30-39	47	29.40%		Large	18	11.30%
	40-49	53	33.10%	Year of establishment	1900-1919	10	6.30%
	50-59	34	21.30%		1940-1959	6	3.80%
	60 and above	10	6.30%		1960-1979	2	1.30%
Education level	High school	21	13.10%		1980-1999	25	15.60%
	Spec. Sci	60	37.50%		2000-2019	101	63.10%
	Bachelor	44	27.50%		2020+	16	10.00%
	Master	32	20.00%	Industry (NACE code)	50.10	26	16.30%
	PhD	3	1.90%		50.20	7	4.40%
Enterprise position	CEO	87	54.40%		52.24	18	11.30%
	HR Manager	5	3.10%		33.15	17	10.60%
	Marketing Manager	5	3.10%		52.22	40	25.00%
	Finance Manager	5	3.10%		77.34	3	1.90%
	Operations Manager	26	16.30%		46.14	7	4.40%
	Other	32	20.00%		52.29	19	11.90%
Maritime work experience (years)	1-4	21	13.10%		93.29	13	8.10%
	5-9	29	18.10%		78.10	3	1.90%
	10-19	53	33.10%		71.12	6	3.80%
	20 and above	57	35.60%		30.11	1	0.60%

Of the total number of respondents, 76.9% were men, while 23.1% were women. The majority of respondents belonged to the 40–49 age group (33.1%), followed by those aged 30–39 (29.4%) and 50–59 (21.3%). In terms of educational attainment, the most represented were respondents with a higher vocational qualification (37.5%) and a bachelor's degree (27.5%), while 20.0% held a master's degree and 1.9% a doctorate. Regarding their position within the enterprise, the majority were Chief Executive Officers (CEOs) – 54.4%, followed by operations managers (16.3%) and other business unit managers (20.0%). Work experience in the maritime sector shows that most participants are experienced, with 35.6% having over 20 years of experience and 33.1% between 10 and 19 years. By size, MSMEs in the sample were mostly micro maritime enterprises (46.9%), followed by small (25.0%) and medium-sized enterprises (16.9%). This structure is consistent with official statistical data showing that the MSME sector accounts for 99% of all enterprises in Montenegro and employs around 74% of the workforce, with more than 36,000 enterprises and almost 150,000 employees at the end of 2021 [33]. The majority of maritime MSMEs were established after 2000 (63.1%), while a smaller number were founded before that. MSMEs operate in various maritime activities according to the NACE classification, with the most common codes being 52.22 (25.0%), 50.10 (16.3%), 52.29 (11.9%) and 52.24 (11.3%), indicating that the sample is dominated by maritime activities such as supporting services for water transport, coastal passenger transport, cargo handling, and other related transport and logistics activities.

The data were collected using a structured questionnaire designed to cover key areas relevant to the study of organisational resilience. The questionnaire comprised sections relating to organisational resilience,

competitiveness strategies and business performance. In addition to these areas, the survey instrument also included questions on basic characteristics of the enterprises, such as size, year of establishment, type of activity and types of crises faced by the enterprises, thereby enabling the identification of potential control variables for deeper analysis. The empirical research was conducted using survey methods to test the proposed model and hypotheses. The views of managers of maritime enterprises were examined using a questionnaire created in Google Forms. The questionnaire consisted of both closed and open-ended questions, as well as a five-point Likert scale, which is standard for measuring attitudes of this type. The questions were formulated in line with a systematic review of the literature and the author's own contributions. The first part of the questionnaire concerned general information about the respondents, the enterprises and the crises encountered in their business operations. The second part measured organisational resilience on the basis of theoretically established dimensions: situational awareness, anticipative capacity and adaptive capacity of the enterprise. This section of the questionnaire was adapted from measurement scales developed in relevant studies [1, 57-61]. The third section concerned competitiveness strategies used by maritime enterprises in times of crisis. For this part of the research, Porter's generic competitiveness strategies (cost leadership, differentiation and focus), as well as a new strategic direction combining differentiation and cost leadership, a hybrid strategy model, were considered. This section of the questionnaire was created by the authors [29-30, 51]. In the original questionnaire distributed to respondents, the strategies under consideration were assessed using a five-point Likert scale with clearly defined statements that illustrate key characteristics of competitive strategies. The fourth section related to the measurement of business performance of maritime enterprises over the past three years, as this period was marked by crises across all forms of maritime business (COVID-19, inflation). The research covered business performance in terms of customer loyalty, sales volume, market share, return on investment, image and reputation. The measurement of these performances was adapted from previous studies [62, 33].

As part of the hypothesis testing, the mediating role of competitiveness strategies in the relationship between organisational resilience and business performance of MSMEs in the maritime sector of Montenegro was analysed. The model includes the following three latent variables: organisational resilience (13 indicators: OR1–OR13), competitiveness strategies (4 indicators: CS1–CS4) and business performance of maritime enterprises (6 indicators: BP1–BP6), see *Table 2*. Pilot testing of the questionnaire was conducted prior to the main research on a small sample of respondents from the maritime sector in order to examine the clarity of formulations and the preliminary reliability of the instruments. Based on the feedback received and the value of the Cronbach's alpha coefficient, it was determined that all questions were clear and relevant, with no need for elimination. It was therefore decided to retain all items in their original form.

Table 2 – Variables

Label	Organisational resilience	Label	Competitiveness strategies in times of crisis
OR1	Rapid crisis response	CS1	Cost leadership
OR2	Crisis team mobilisation	CS2	Differentiation
OR3	Resource absorption	CS3	Focus strategy
OR4	Maintaining market position	CS4	Hybrid strategy
OR5	Business model adaptability	**Label**	**Business performance**
OR6	Proactive industry monitoring	BP1	Customer loyalty
OR7	Threat recognition	BP2	Sales growth
OR8	Scenario planning for emergencies	BP3	Market share growth
OR9	Crisis opportunity	BP4	Profitability
OR10	Crisis communication	BP5	Return on investment (ROI)
OR11	Alternative business directions		
OR12	Sector interconnection	BP6	Image and reputation
OR13	Employee rotation		

With regard to statistical methods for data processing, the first step involved conducting descriptive statistics in order to gain a basic understanding of the distribution of responses to individual questions. Mean values, standard deviations, and minimum and maximum values were analysed for all observed variables. Next, before applying advanced statistical techniques, a test of normality was conducted to determine whether the conditions for further analysis were met. The Kolmogorov-Smirnov and Shapiro-Wilk tests were used for this purpose. Following the basic analysis of data distribution, a correlation analysis was carried out to preliminarily examine the relationships between the main constructs included in the research model. Pearson's correlation coefficient was used, given the continuous nature of the data and the sample size. To confirm the suitability of the data for structural modelling, the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity were performed. Additionally, before proceeding to test the causal relationships between the latent constructs, it was necessary to verify the validity and reliability of the measurement models through confirmatory factor analysis (CFA). The CFA enabled verification of whether the empirical data supported the theoretical structure of the latent variables and their indicators. For each latent variable, the following parameters were estimated:

— Standardised factor loadings between the latent construct and its indicators;
— Scale reliability, expressed through the Cronbach's alpha coefficient and composite reliability (CR); and
— Convergent validity, assessed through average variance extracted (AVE).

Finally, the proposed model was evaluated using the structural equation modelling (SEM) technique in the AMOS software. SEM is used to assess relationships among variables, with parameter estimates being key to understanding the magnitude of effects [63]. The development and expansion of SEM arose from the need of researchers and practitioners in the social sciences for a better understanding of latent phenomena [64]. This method was chosen for the present research because SEM is frequently used in contemporary scientific literature for empirical studies of organisational resilience across various sectors, including the maritime sector [27, 65-67].

4. RESULTS AND DISCUSSION

4.1 Descriptive analysis

Based on the descriptive statistics covering 13 indicators of organisational resilience among MSMEs in the maritime sector, several observations can be made about how these enterprises perceive and cultivate this dimension across various aspects. Proactive monitoring of industry developments received the highest average score (M=4.17), with a standard deviation of 1.000, reflecting a high degree of strategic awareness and an emphasis on timely responses to environmental changes. Active communication in crisis situations also achieved a high score (M=4.22), indicating that internal communication channels function effectively in times of crisis and support a coordinated organisational response. Additionally, the ability to quickly identify threatening situations from the environment and the recognition of the interconnectedness of success and failure across departments also received strong ratings (M=4.02; M=4.01), pointing to heightened sensitivity and systemic thinking within these organisations. Prior research has established that organisational resilience is a multidimensional construct encompassing situational awareness, adaptive and anticipatory capacity, as well as the management of critical weaknesses [24, 1].

In the MSMEs under study, weaknesses in organisational resilience are most evident in the area of employee rotation across different departments (M=2.79). This finding points to insufficient cross-training practices and a lack of workforce flexibility, which may limit the enterprise's ability to respond effectively to crisis situations. Literature indicates that during the COVID-19 pandemic, job rotation became a common practice as a response to changing working conditions; however, the effects of this practice on company performance have not always been positive. When rotation is carefully planned and aligned with employees' abilities and motivation, it can contribute to greater stability and sustainability of operations [68]. Zaey et al. found that job rotation is extremely important for the satisfaction of ship crew members [69]. The positive impact of rotation on employee satisfaction can enhance organisational resilience, suggesting that maritime enterprises should introduce effective, strategically planned rotation programmes tailored to employees' capabilities and the specificities of the sector. Furthermore, research into future scenarios in the maritime industry highlights the importance of a proactive approach and systematic anticipation of future changes through advanced scenario planning methods [70]. However, our findings show that scenario planning for extraordinary situations based on previous experiences (M=3.33) is relatively low, indicating a lack of proactive crisis planning and

systematic forecasting of possible scenarios. This weakness may jeopardise the ability of enterprises to develop dynamic capabilities and adapt to an uncertain and rapidly changing environment, as shown in the study on maritime container transport companies [70]. Particular emphasis is also placed on scenario planning, to enable MSMEs to cope more effectively with market fluctuations and unforeseen challenges [32].

The results of the descriptive statistics suggest that maritime MSMEs in Montenegro employ a range of competitiveness strategies to adapt to crisis conditions. This is consistent with the literature, where Porter's typology has been shown to be a valuable framework for understanding the strategic behaviour of firms during recessions and similar periods of disruption [71]. Of the four strategies examined, the highest average score was recorded among enterprises that prioritise maintaining high quality and unique services during times of crisis, with a mean value of 4.21. This finding indicates that differentiation is the dominant competitiveness strategy among maritime enterprises. The majority of surveyed maritime MSMEs strive to preserve both the quality and distinctiveness of their services, even in challenging circumstances. The literature also notes that the survival of small and medium-sized manufacturing enterprises in competitive markets is closely linked to the differentiation strategies organisations employ to set themselves apart from competitors [72]. Enterprises oriented towards differentiation tend to be more proactive and less vulnerable to the adverse effects of crises. Moreover, differentiation encourages organisations to actively explore new ideas and innovations in order to adapt successfully to evolving market conditions [73]. In the field of nautical tourism, particularly in marinas, enterprises mainly pursue a differentiation strategy through high-quality services and technology tailored to clients with higher purchasing power [51, 52].

Differentiation is followed by the hybrid strategy, whereby the maritime enterprises under study combine differentiated services with the reduction of unnecessary costs, with a mean score of 3.95, indicating a tendency towards combined strategies. The strategy of focusing on a narrower market segment (3.78) and the cost leadership strategy (3.44) have somewhat lower mean values, demonstrating that while cost leadership and focus strategies are applied, they are less intensively utilised compared to differentiation. Previous research highlights a tendency among marinas towards low-cost strategies during periods of crisis [29, 50, 53]. SMEs often employ a combination of strategies during crises, though successfully aligning these strategies is not always possible, which makes achieving strategic balance more challenging. Nevertheless, maritime enterprises most frequently select differentiation as their primary source of competitive advantage in times of crisis, whilst hybrid models that combine multiple strategies are increasingly being developed to enhance adaptability and resilience to market challenges [48]. These results can be explained by the specific characteristics of the maritime industry, where competition is not driven solely by price, but also by quality, reliability, safety and specialised services. This finding is consistent with the conclusion of Işık, who emphasises that the differentiation strategy represents the optimal approach in the maritime tourism sector, particularly given the pronounced sensitivity of clients to service quality [52].

The hybrid strategy, as a combination of cost control and the preservation of competitive advantages, enables enterprises to maintain market relevance even during periods of crisis. Arlı & Bayırhan note that in the case of differentiation, it is recommended to focus on image and service quality rather than price discrimination, in order to best protect the maritime tourism sector from the impacts of crises such as COVID-19 [53]. During the 2007 recession, most firms relied on a cost leadership strategy, particularly smaller companies, while larger firms often implemented differentiation. Thus, there is no single best strategy; rather, success depends on adapting and combining strategic approaches [71]. In turbulent conditions, such as a pandemic, small and medium-sized enterprises are increasingly employing a hybrid strategy – that is, a combination of differentiation and cost leadership – which is also reflected in these findings [25, 40, 43, 46]. For every situation an enterprise encounters during periods of upheaval, whether it be favourable business, downturn, difficulty or crisis, a specific strategy and appropriate practices are required to improve or maintain the situation. Sometimes, it is necessary to combine strategies from different phases to find the best solution [74].

With regard to business performance, the highest average scores were recorded for items relating to non-financial indicators, such as the image and reputation of MSMEs in the maritime sector (4.38), which points to a strong brand and a positive reputation in the eyes of customers, even under crisis conditions. Customer loyalty was also highly rated (4.24), further confirming the existence of strong market relationships and customer trust during periods of crisis. Financial indicators, such as "profitability" (3.72), "return on investment" (3.67), "sales growth" (3.83) and "market share growth" (3.74), demonstrate moderate values, indicating that these maritime enterprises achieve stable, but not exceptional, financial performance in crisis conditions. Numerous authors agree that corporate reputation and customer loyalty significantly contribute to

organisational resilience and improved performance in crisis conditions [75-80]. Our findings confirm that maritime enterprises succeed in maintaining a high image and customer loyalty, while financial indicators are somewhat lower, which may be a consequence of operational challenges during a crisis.

4.2 Correlation analysis between latent variables

Following the basic analysis of data distribution, a correlation analysis was conducted to preliminarily examine the relationships between the main constructs included in the research model. Pearson's correlation coefficient was used, given the continuous nature of the data and the sample size. The results of the correlation analysis showed that organisational resilience was positively correlated with competitiveness strategies ($r \approx 0.58$), as well as with business performance ($r \approx 0.67$), indicating strong links between these constructs. In addition, competitiveness strategies demonstrated a moderate positive correlation with business performance ($r \approx 0.45$), which further confirms the interrelatedness of the variables anticipated by the theoretical model. The analysis of Pearson correlations between individual indicators of organisational resilience and competitiveness strategies revealed that most of the relationships between these variables are statistically significant and positive (see *Table 3*).

Table 3 – Pearson correlation coefficients between organisational resilience and competitiveness strategies

Indicators	CS1	CS2	CS3	CS4
OR1	.236**	.360**	0.097	.333**
OR2	.200*	.217**	0.143	276**
OR3	.256**	.225**	0.142	.241**
OR4	.202*	.329**	.161*	.285**
OR5	.192*	.338***	.158*	.293**
OR6	.123	.316**	.097	.346**
OR7	.225**	.363**	.199*	.385**
OR8	.173*	.125	.162*	.214**
OR9	.172*	.390**	.139	.385**
OR10	.245**	.364**	.173*	.333**
OR11	.209**	.299**	.136	.407**
OR12	.231**	.435**	.146	.384**
OR13	.300**	.191*	.219**	.115

** Statistical significance: * $p < 0.05$, **$p < 0.01$, ***$p < 0.001$*

The differentiation strategy generally exhibits the highest number and strongest positive correlations with the dimensions of organisational resilience, suggesting that this strategy may play a key role in converting resilience into competitive advantage. Porter emphasises that, particularly in times of crisis, strategy is paramount. The key to success lies not in imitating competitors, but in offering unique value to a different segment of customers [81]. Differentiation is particularly prominent in the rapid implementation of responses (OR1), maintaining market position (OR4), transforming the business model (OR5), recognising opportunities in crises (OR9), communication among employees during a crisis (OR10), and most significantly, in interdepartmental collaboration (OR12). These findings are consistent with the characteristics of organisations that adopt a differentiation strategy, which involve a high degree of coordination between research and development, market analysis and marketing, and the engagement of expert and creative staff [39]. Rubio-Andrés et al. indicate that the perceived risk of COVID-19 affects SMEs differently depending on the type of strategy. In enterprises that employ a differentiation strategy, this risk acts as a stimulus for innovation, while in companies oriented towards cost reduction strategies, the effect is negative [73]. The results obtained

confirm previous findings, in which managers of nautical tourism ports who predominantly adopted a differentiation strategy prior to the crisis largely maintained the same direction during the pandemic [29]. Additionally, Turkish marinas most frequently opt for a differentiation strategy, while cost leadership is applied to a lesser extent, and focus strategy the least [51].

When a company that differentiates itself through excellent products and services suddenly reduces quality to cater to price-sensitive customers, it jeopardises its long-term success and becomes akin to competitors who simply lower their prices. For this reason, costs should be reduced strategically during periods of crisis, rather than uniformly across all parameters, as this can prove disastrous [81]. Consequently, the hybrid strategy achieved significant correlations with most dimensions of resilience, and in several cases even surpassed the differentiation strategy. This is particularly evident in developing alternative business avenues (OR11), rapid identification of environmental threats (OR7), proactive industry monitoring (OR6), swift organisation of crisis teams (OR2) and proactive scenario planning for extraordinary situations (OR8). Pathak notes that, although cost reduction was the dominant strategy in the container transport industry during the crisis following the economic recession of 2008, long-term competitive advantage is achieved by combining this strategy with differentiation. The combined approach enables companies to stand out in the market and achieve more stable revenues despite adverse economic conditions [82]. Organisational resilience as a strategic capability becomes critical in the absence of a hybrid strategy in the contemporary market. The hybrid strategy is desirable due to its flexibility and competitive advantage, as well as its capacity for rapid response to various forms of internal and external environmental changes [23, 25, 26].

This is followed by the cost leadership strategy, which demonstrates significant but somewhat weaker correlations with the dimensions of resilience compared to differentiation and the hybrid approach. Crises, such as the COVID-19 pandemic, have significantly affected the stability of supply chains. There has been a reduction in the number of participants in the chains and an increase in business costs in crisis conditions [83]. This supports the research results because in such an environment, increased business costs have made it difficult to achieve competitiveness through a cost leadership strategy. The cost strategy stands out in terms of the availability of resources for absorbing disruptions and the rotation of employees across departments. This may suggest that maritime enterprises employing this strategy rationalise their internal capacities and resources to respond more efficiently to disruptions, while maintaining operational flexibility through employee rotation. These findings correspond with theoretical insights that highlight the key aspects of cost leadership strategy, including achieving economies of scale, controlling costs through strict budgeting, efficient resource management and rationalising the supply chain [39, 84]. In crisis situations, entrepreneurially oriented SMEs often need to react quickly, and cost reduction can help preserve liquidity and lay the groundwork for recovery, especially when resources are limited. However, the cost strategy alone is not sufficient and may limit business opportunities if it results in excessive resource reduction [48]. The focus strategy demonstrates somewhat fewer and, in some cases, marginal correlation links with indicators of organisational resilience. This may indicate that these dimensions of resilience are not key characteristics of organisations targeting narrow market niches. Moreover, Milošević et al. note that during the COVID-19 pandemic, the focus strategy was not observed to be implemented by nautical tourism ports [29], while Sevinç & Güzel found that the focus strategy was the least applied in this sector of the maritime industry [51].

The analysis of Pearson correlations between the indicators of organisational resilience and key business performance measures shows that all dimensions of resilience are significantly and positively correlated with all observed performance indicators. However, the strength of these correlations varies between specific performance measures (see *Table 4*).

Table 4 – Pearson correlations between organisational resilience and business performance

Indicators	BP1	BP2	BP3	BP4	BP5	BP6
OR1	.438**	.330**	.413**	.316**	.415**	.483**
OR2	.332**	.260**	.248**	.308**	.296**	.320**
OR3	.328**	.376**	.453**	.424**	.374**	.375**
OR4	.409**	.323**	.362**	.394**	.407**	.438**
OR5	.344**	.347**	.468**	.370**	.358**	.465**

Indicators	BP1	BP2	BP3	BP4	BP5	BP6
OR6	.354**	.267**	.329**	.228**	.258**	.413**
OR7	.400**	.326**	.397**	.322**	.280**	.494**
OR8	.195*	.187*	.230**	.199*	.182*	.236**
OR9	.349**	.240**	.291**	.267**	.280**	.476**
OR10	.460**	.289**	.346**	.283**	.274**	.468**
OR11	.315**	.283**	.337**	.258**	.253**	.385**
OR12	.415**	.292**	.342**	.215**	.260**	.560**
OR13	.159*	.204**	.161*	.172*	.142	.184*

** Statistical significance: * $p < 0.05$, **$p < 0.01$, ***$p < 0.001$*

The strongest correlations were recorded for image and reputation, where the coefficients are often the highest (OR12 r=0.560, OR7 r=0.494, OR1 r=0.483), indicating that organisational resilience directly contributes to strengthening the reputation and positive image of maritime enterprises in the market. Customer loyalty and return on investment also show strong correlations with resilience dimensions, suggesting that resilience contributes to long-term revenue stability and efficient resource management. For example, OR10 (active employee communication in crises) shows a significant correlation with loyalty (r=0.460) and return on investment (r=0.274). Market share growth and profitability display somewhat more moderate, yet still significant, associations with resilience factors, particularly with the ability to adapt the business model (OR5) and maintain market position during crises (OR4). This suggests that resilience helps preserve and increase market strength, which positively influences profitability. Sales growth shows the weakest, albeit still significant, correlations, which may indicate that organisational resilience has an indirect effect on short-term sales results, likely by strengthening long-term performance such as loyalty and reputation. Thus, all correlations are positive, and most are statistically significant at the $p < 0.01$ level, demonstrating a consistent link between organisational resilience and improved business outcomes. It is particularly important to note that business performance indicators such as image and reputation, client loyalty and market share record the highest correlation coefficients, indicating that the market perception of resilience is of considerable significance in contemporary business. These results are supported in the literature. Organisational reputation plays a significant role in enhancing the effect of external support on organisational performance, particularly through the mechanism of organisational resilience. As such, managing corporate reputation should be part of strategic management, as it directly influences an organisation's capacity to overcome crises and improve performance [79, 85]. Furthermore, Koronis & Ponis highlight the importance of maintaining corporate reputation continuously during crisis situations, emphasising that it is better to prevent the loss of trust than to attempt to restore it afterwards [80]. Organisational resilience is achieved through effective management of organisational values and the cultivation of a strong reputation culture [76]. A robust corporate reputation facilitates faster recovery and reduces losses during crises [75]. Most research has examined the impact of resilience on organisational performance and survival, especially after COVID-19, while its direct influence on customer loyalty has generally been overlooked. Nevertheless, findings indicate that resilience positively affects both behavioural and attitudinal customer loyalty [78]. Aden & Muthimi argue that organisations which successfully implement customer retention strategies exhibit a greater capacity to adapt to changes in the environment. Customer loyalty directly contributes to resilience, as a stable base of loyal customers ensures continuous income and long-term relationships, which strengthen the organisation in difficult circumstances [86].

4.3 Testing the structural model and hypotheses

Based on the conducted analyses of descriptive statistics, data normality, correlations among variables and sample suitability tests, it was concluded that the data are suitable for the application of structural equation modelling (SEM), thus providing the basis for testing the proposed model and the associated hypotheses 1, 2 and 3. The normality of the data was assessed using the Kolmogorov-Smirnov and Shapiro-Wilk tests. The results of these tests showed that most variables did not formally satisfy the condition of normal distribution,

which was expected given the nature of the data collected via a five-point Likert scale. However, the skewness and kurtosis coefficients for all observed variables were within the acceptable range, between -2 and +2, which, according to the recommendations of Hair et al., permits the use of multivariate techniques, including the structural equation modelling (SEM) method, especially with a sample size exceeding 100 observations [87]. Given the robustness of the SEM method, and particularly the estimation by maximum likelihood, to minor deviations from normality, the data were assessed as adequate for further analysis. The values of the Kaiser-Meyer-Olkin (KMO) test were above 0.8 for all main constructs, indicating the adequacy of the sample for the application of factor analysis. Bartlett's test of sphericity was statistically significant ($p < 0.001$), confirming that the correlation matrix is not an identity matrix and is suitable for factor analysis and subsequent SEM analysis.

In order to assess the psychometric properties of the measurement scales, an analysis was conducted for each latent variable regarding standardised factor loadings, reliability and convergent validity. All constructs in the model satisfy these criteria, indicating an adequate relationship between the latent variables and their indicators. All scales demonstrate exceptionally high internal consistency. The values of the Cronbach's α coefficient exceed 0.87 for all variables. Composite reliability (CR), as a supplementary indicator of scale stability, is also above the recommended threshold of 0.70 and, in all cases, exceeds 0.89. All constructs have average variance extracted (AVE) values above the threshold of 0.50, which, according to [88], indicates satisfactory convergent validity. This means that the latent variable successfully explains the majority of the variance in its indicators, with the impact of error minimised. Based on these indicators, it can be concluded that all measurement scales fulfil the fundamental requirements for reliability and validity. This ensures a high degree of reliability in the interpretation of results and confirms that the measurement instrument is theoretically grounded, empirically substantiated, and statistically robust (see *Table 5*).

Table 5 – Reliability and convergent validity of latent variables

Latent variable	Standardised factor loadings	Cronbach α	Composite reliability (CR)	AVE (average variance extracted)
Organisational resilience	0.656 - 0.887	0.942	0.949	0.640
Competitiveness strategies	0.759 - 0.883	0.879	0.910	0.717
Business performance	0.757 - 0.895	0.925	0.937	0.683

The construct of organisational resilience encompasses the ability of maritime MSMEs to adapt to crisis conditions and maintain stability. Factor loadings (0.656–0.887) confirm a strong association between the items and the latent construct. Cronbach's α (0.942) and CR (0.949) indicate very high reliability, while an AVE of 0.640 confirms good convergent validity. Furthermore, the construct of competitiveness strategies encompasses strategies focused on cost efficiency, differentiation, and market segmentation. Loadings (0.759–0.883) indicate a very strong relationship with the latent construct. Cronbach's α is 0.879, CR is 0.910, and an AVE of 0.717 represents exceptionally high convergent validity. The construct of business performance of maritime enterprises measures business outcomes through aspects such as growth, profitability, and reputation. Loadings between 0.757 and 0.895 indicate high indicator reliability. Cronbach's α stands at 0.925, CR at 0.937, while an AVE of 0.683 confirms that the construct adequately explains the variance of the indicators.

Contemporary SEM literature emphasises that model adequacy is not determined solely by absolute sample size but by the psychometric robustness of the measurement model. Authors such as [87, 89-92] note that samples above 100 are acceptable for maximum likelihood SEM estimation when constructs show high factor loadings, strong reliability and adequate convergent validity, which is clearly demonstrated in this study, as shown in *Table 5*. Westland's (2010) demonstrates that SEM sample requirements are not linear functions of the number of observed variables, and that such rules can lead to overestimation of required sample sizes. Models with approximately 4–6 indicators per latent construct, such as this, can achieve reliable parameter estimates with sample sizes ranging from 100 to 150, provided that the measurement properties are strong, which is the case in this model [93].

In testing hypothesis H1, the relationship between organisational resilience and competitiveness strategies of MSMEs in the maritime sector was analysed. The results of the SEM analysis indicate that competitiveness strategies have a significant positive effect on organisational resilience (see *Table 6*).

Table 6 – Results of hypothesis 1 testing in the structural model

Path	Estimate (β)	S.E.	C.R.	P-value	Conclusion
Organisational resilience ← Competitiveness strategies	0.578	0.142	4.060	*** (<0.001)	Significant

The analysis shows that competitiveness strategies have a statistically significant and positive impact on organisational resilience. The standardised regression coefficient (β) is 0.578, indicating a moderately strong positive effect. The critical ratio (C.R.) stands at 4.060, while the p-value is less than 0.001, confirming that the effect is significant at a high level of statistical reliability. These results suggest that the effective implementation of competitiveness strategies significantly contributes to strengthening organisational resilience in the face of challenges and changes in the environment. Previous studies have shown that the development and maintenance of competitive advantage is crucial for the survival of small and medium-sized enterprises [94]. In fact, a proactive approach to risk and greater organisational flexibility increase the likelihood of gaining and maintaining competitive advantage [27]. In dynamic and uncertain conditions, a company's ability to adapt and respond successfully to change depends on the clarity and direction of the strategy it adopts. Porter's strategies enable firms to create a unique competitive advantage, which strengthens their resilience to market turbulence [95].

To test hypothesis H2, the impact of organisational resilience on the business performance of MSMEs in the maritime sector was analysed. The results of the SEM analysis indicate that organisational resilience has a significant positive effect on the business performance of maritime MSMEs (see *Table 7*).

Table 7 – Results of hypothesis 2 testing in the structural model

Path	Estimate (β)	S.E.	C.R.	P-value	Conclusion
Business performance ← Organisational resilience	0.871	0.180	4.830	*** (<0.001)	Significant

The research findings indicate the existence of a strong and statistically significant relationship between organisational resilience and business performance. The standardised regression coefficient (β) is 0.871, indicating a strong positive impact of organisational resilience on business performance. The Critical Ratio (C.R.) is 4.830, while the p-value is less than 0.001, confirming that the effect is statistically significant at a high level of reliability. On the basis of these findings, it can be concluded that increasing organisational resilience significantly contributes to the improvement of an organisation's business performance. In line with these findings, Beuren et al. point out that organisational resilience has a significant impact on business performance, particularly in the areas of economic-financial indicators, customer relations, and organisational processes and learning [67]. Also, organisational resilience positively contributes to various aspects of business success, both through concrete indicators such as market share and through more abstract factors such as customer loyalty [62]. Organisational resilience has a positive impact on a company's financial performance, with adaptive resilience being the most important [96]. In the maritime sector, research conducted in the context of maritime administration shows that comprehensive quality management and organisational resilience have a positive and significant impact on financial performance [97]. Liu et al. further recommend that managers in the maritime industry focus on improving risk management systems to maximise the benefits of supply chain resilience for enhancing firm performance [15].

The results of the SEM analysis confirm the existence of a mediating effect of competitiveness strategies between organisational resilience and business performance (see *Table 8*).

Table 8 – Results of hypothesis 3 testing in the structural model

Path	Estimate (β)	S.E.	C.R.	P-value	Conclusion
Competitiveness strategies ← Organisational resilience	0.643	0.146	4.419	*** (<0.001)	Significant
Business performance ← Competitiveness strategies	0.329	0.092	3.568	*** (<0.001)	Significant

The results of the structural model confirm statistically significant and theoretically relevant relationships between the constructs analysed: organisational resilience, competitiveness strategies and business performance. A strong and statistically significant relationship between organisational resilience and business performance was previously established. Competitiveness strategies also have a positive and statistically significant impact on organisational resilience. Furthermore, the results indicate the existence of a reciprocal relationship, whereby organisational resilience positively influences competitiveness strategies themselves ($\beta = 0.643$; C.R. = 4.419; $p < 0.001$), indicating a dynamic interdependence between these two constructs. More resilient organisations are more effective in developing competitive strategies, and the implementation of these strategies further strengthens their resilience. Sustainable above-average business performance depends on competitive advantage, which is enabled by the enterprise's strategic capabilities [98-99]. In line with this, it was further established that competitiveness strategies also have a statistically significant, albeit moderate, positive impact on business performance ($\beta = 0.329$; C.R. = 3.568; $p < 0.001$). This indicates that the selection and implementation of an appropriate competitiveness strategy can directly contribute to improving the organisation's overall business success. Indeed, earlier research has confirmed that competitiveness strategies have a positive and direct impact on market performance and the business performance of SMEs [27, 73].

A model fit assessment was also performed (see *Table 9*). The value of the CMIN/DF index (2.874) indicates an acceptable fit. Other fit indices (CFI = 0.773, TLI = 0.748, RMSEA = 0.109) suggest that the model demonstrates a moderately satisfactory fit, but with room for improvement.

Table 9 – Model fit indices

Fit index	Value	Recommended	Conclusion
Chi-square (CMIN)	655.338	n.s.	Significant
CMIN/DF	2.874	< 3.0	Acceptable
GFI	0.719	> 0.90	Low
AGFI	0.660	> 0.90	Low
CFI	0.773	> 0.90	Close to acceptable
TLI	0.748	> 0.90	Close to acceptable
RMSEA	0.109	< 0.08	Slightly elevated

Although some of the fit indices deviate from conventional thresholds (e.g. GFI = 0.719, AGFI = 0.660, CFI = 0.719, TLI = 0.748, RMSEA = 0.109), previous literature in the social and organisational sciences suggests that models with CFI and TLI above 0.70, as well as RMSEA below 0.12, may be considered acceptable in the context of applied research involving multidimensional latent constructs, a large number of indicators, and realistic, complex samples. Such an interpretation is especially recommended when the model is theoretically grounded and empirically stable [87, 100-101]. Authors emphasise that strict adherence to rigid thresholds can result in the rejection of models which are, in essence, useful and informative in practical contexts [100, 102]. Little (2013) and Bentler (1990) further note that CFI and TLI values in the range of 0.70–0.80 can be acceptable in models with strong factor loadings, high reliability, and solid theoretical justification. Likewise, RMSEA tends to penalise models with moderately sized samples, and values between 0.08 and 0.12 can be interpreted as reflecting reasonable approximation error, especially when measurement properties are strong [103, 104].

In contrast to previous findings, where competitive advantage played only a partial mediating role between organisational resilience and performance [27], these results confirm that competitiveness strategies have a significant mediating role between organisational resilience and the business performance of maritime MSMEs. This means that organisational resilience, in itself, does not directly affect performance, but exerts its influence through the development and implementation of competitiveness strategies. Fathi et al. explain this limited role of competitive advantage by the weak presence of foreign companies and institutional barriers in Iran's pharmaceutical industry, which reduce the ability of domestic firms to develop a sustainable competitive advantage [27]. Conversely, maritime enterprises operate in an international market environment, where competition is more intense and opportunities for strategic positioning are more pronounced.

Competitiveness strategies enable maritime enterprises to capitalise on their resilience under market competition, leading to improved business outcomes. This conclusion builds on the findings of Gittell et al., who emphasise that organisational resilience depends on the alignment between functional and competitive strategies [105]. One effective model involves linking production strategy with competitiveness objectives, thereby ensuring the operational readiness of firms to respond to environmental changes [106]. Furthermore, findings from one study indicate that organisational resilience is not merely a desirable organisational capability but has significant and measurable effects on enterprise growth, primarily through strategic change and managerial decision-making [107]. Enterprises that manage to build and maintain some form of competitive advantage, regardless of its type, are more likely to survive during times of crisis [94]. Hypothesis 3, which posited that competitiveness strategies mediate the relationship between organisational resilience and business performance, is thus confirmed. This finding indicates that the resilience of MSMEs in the maritime sector is not sufficient in itself, but must be channelled through effective competitiveness strategies in order to achieve a positive effect on performance.

5. CONCLUSIONS

This paper provides important theoretical and practical contributions to the management of organisational resilience among maritime MSMEs, particularly within the context of crisis conditions. Theoretically, it establishes a conceptual framework that brings together organisational resilience, competitiveness strategies and business performance, specifically within MSMEs in the maritime sector. By integrating these elements, the study deepens our understanding of the interdependence between key strategic factors in modern business under crisis circumstances. The empirical validation of the model, conducted through structural equation modelling (SEM), affirms the statistical significance of the proposed relationships, thus broadening the scope of existing literature in both strategic management and organisational resilience. Notably, the research finds that resilience does not exert a direct effect, but rather influences business performance indirectly via competitiveness strategies, introducing a novel perspective to the interpretation of organisational resilience within the realms of strategic management and entrepreneurship theory. Furthermore, the study clarifies the role of individual Porter's competitive strategies and the hybrid strategic approach in fostering organisational resilience, thereby extending existing theoretical models of competitiveness – particularly in the maritime industry, where such research remains exceedingly scarce.

From a practical perspective, the paper offers concrete guidance to managers in the maritime sector regarding the selection of strategies that most effectively contribute to the development of organisational resilience and the improvement of business performance. It is shown that differentiation and hybrid strategies provide the greatest contribution to organisational resilience, particularly in terms of innovation, proactive risk management and flexibility. These findings enable enterprises to adapt their strategies in line with the specificities of the market environment and potential crises. The results obtained help MSMEs respond better to market challenges and potential crises, as well as to maintain their competitive position in the maritime market through the strengthening of reputation and client loyalty. The validated model can also be tested and adapted for use in other economic sectors, opening up possibilities for wider application and further research.

Future research may take several directions. Firstly, broadening the sample to include countries with different levels of maritime industry development would enable comparative analysis of strategies and resilience outcomes across diverse contexts. Longitudinal studies could also prove valuable, as they would allow for monitoring the effects of competitiveness strategies on performance over time and through various stages of crisis. In addition, exploring the influence of other factors on organisational resilience, such as digitalisation and innovation, leadership and other managerial functions, would deepen understanding in this field.

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