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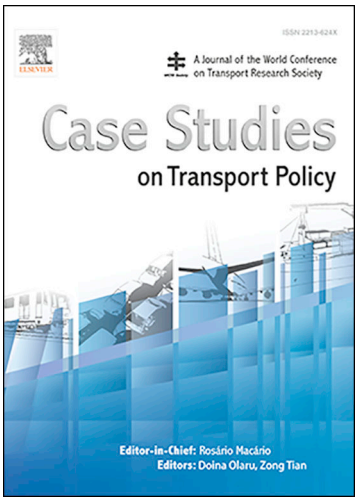

Navigating through rough seas: Maritime insiders' reflections on an unprecedented experience

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Navigating through rough seas: Maritime insiders' reflections on an unprecedented experience

Abstract

The main objective of this study is to contribute empirically and conceptually to the organisational resilience literature while also addressing an important research gap. By focusing on two key stakeholder groups in the maritime industry, port cities and maritime companies, the study examines a) the impacts caused by COVID-19, b) key factors in building resilience, and c) strategies enhancing organisational resilience. Data gathered through semi-structured, in-depth interviews with 22 port city and shipping company managers/directors operating in Vietnam reveal that, while COVID-19 seriously threatened the industry's overall organisational existence, most participants (73%) recognised increases in revenue/demand. Ten key dimensions emerging from the findings highlight factors assisting firms to adapt or remain competitive after COVID-19, including the organisation-owned traits and the forward-thinking/ agile methodologies. A developed conceptual framework deepens the understanding of confronting an unprecedented scenario in the maritime industry and emphasises various theoretical and practical implications.

Keywords: COVID-19; organisational resilience; port cities; shipping companies; Vietnam.

1 Introduction

1.1 Port cities, shipping companies, and COVID-19

Port cities and shipping companies make substantial contributions (Akhavan, 2020) that boost commerce across markets, making crucial impacts within the services industry. Thus, port cities represent nodes of international commerce, contributing to channelling the movements and flow of cargo and migration (Kokot, 2008). Furthermore, port cities are considered places that anticipate ensuing globalisation; for instance, their focus on trade has contributed to their capacity to become economically, institutionally, and environmentally resilient (Hein & Schubert, 2021).

Ocean shipping is "the most global of industries" (Doumbia-Henry, 2020, p. 280); in fact, the largest share of global trade volumes uses shipping as a transportation mode (Li et al., 2015). The continuous growth of seaborne trade worldwide (Lam & Yap, 2019) rests on the reliable, effective, and efficient nature of shipping as a transportation tool (Doumbia-Henry, 2020).

As with other service-oriented industries, port cities and shipping companies operate in a competitive, complex, and challenging environment (Lee et al., 2008). The disruptive nature of the COVID-19 crisis has severely affected a myriad of organisations that include the travel, logistics and maritime industries (Gu et al., 2023; Shemer et al., 2022). The massive disruption COVID-19 caused resulted in port closures, quarantine requirements, restrictions on ship crews and their repatriation, and certification issues (Doubia-Henry, 2020). Given the extreme socioeconomic importance of port cities and shipping companies, examining how both entities sought to adapt to this unprecedented phenomenon is significant. For instance, new and relevant data could be informative for industry, government, and education/research bodies in designing adaptive strategies in the advent of future major disruptions.

1.2 Research gaps and significance of the research

While the scholarly literature provides compelling arguments concerning the contribution of port cities and shipping companies, various research and knowledge gaps remain. For instance, most port-city investigations have taken a Western perspective; consequently, there is limited focus on the developing world (Akhavan, 2017).

Research gaps exist concerning the effects and strategies to address the multiple challenges posed by COVID-19. Efforts by several stakeholders, including private organisations, the department of transportation, and researchers have produced vital guidance and information to address COVID-19's consequences; nevertheless, the impact of these efforts on different transportation modes is seldom examined or compared (Dang et al., 2022). A limited number of studies have shed light on the responses of organisations, individuals, or communities to disruptions or changes, for instance, by transforming their resources into specific actions (Doern et al., 2019). Moreover, a scant body of research has investigated port resilience to disruptive forces (Loh & Thai, 2015), or assessed the volatility and uncertainty in the container shipping market and the related need for resilience (Notteboom et al., 2021).

These gaps apply in the context of Vietnam, an emerging economy that has been pursuing integration into regional and global trade (Van Thai & Grewal, 2005). Learning from Vietnam's port city and shipping company representatives is timely and significant for various reasons that have strong associations, for instance, with logistics (Lee et al., 2008), marketing, and commercial activities (Merk et al., 2011).

Vietnam is geographically placed close to one of the world's most active maritime commerce routes, connecting the Pacific and the Indian oceans (Cuong et al., 2022a). Vietnam also has a substantial coastal area, covering over one million square kilometres and stretching over 3,200 kilometres (Nguyen et al., 2020), and is supported by 286 terminals in its maritime port system (Ministry of Finance, 2021). In 2020, as much as 61 percent of Vietnam's exports and imports of goods were carried out by waterways and sea (Houselink, 2021).

During COVID-19, the Vietnamese government implemented policies to support its maritime industry (Ministry of Finance, 2021). Based upon the pre-and post-COVID-19 performance of Vietnam's seaport industry (Table 1), the shipping industry was able to avoid major damage, slightly strengthening during the period (Ministry of Transport, 2022; Vietnam Maritime Administration, 2023).

Table 1 Here

Nevertheless, Vietnam's maritime industry also experienced similar predicaments as other seaports, including shortages of port personnel, with vessels being compelled to remain idle (UNCTAD, 2022). More specifically, during the crisis, operations at Ho Chi Minh City's terminal were suspended at various points (Insurance Marine News, 2021), while congestion dealing with imported cargo increased (Vietnam Maritime Administration 2021), and 2.7 percent fewer vessels called at Vietnamese ports (UNCTAD, 2022).

1.3 The study's key objectives

The present study has two key objectives that will make empirical and conceptual contributions. First, it examines the impacts of COVID-19 from the point of view of port city and shipping company representatives in leadership positions. Learning how organisations, in this case, organisations involved in the business of trade, adapt, and become resilient in the face of unprecedented events is crucial and informative. From an organisational point of view, new data can inform managers in the development of initiatives and strategies to confront this and future major disruptions. The study, therefore, will examine the following research questions (RQs):

- RQ1: To what extent has COVID-19 disrupted the organisation's business activities?
- RQ2: What key factors have led to the organisation's resilience, particularly in the first year of COVID-19?
- RQ3: How could the organisation's main resources contribute to building further resilience post-COVID-19?

In line with recent port city (Hein and Schubert, 2021) and shipping research (Bhaskar et al., 2019), the study considers the notions of the organisational resilience literature (e.g., Vogus & Sutcliffe, 2007). A second objective of the research is to develop a deeper conceptual understanding of the three themes investigated in the RQs. To achieve this objective, the study's chosen inductive method will help reveal various associated dimensions and build a theoretical framework.

2 Literature Review

2.1 Resilience, organisational resilience in the context of ports and shipping companies

Many definitions have been proposed to explain the concept of resilience. One of these suggests that resilience is about maintaining positive adjustments under difficult conditions so that an organisation emerges from these conditions in a more resourceful and strengthened way (Vogus & Sutcliffe, 2007). Resilience is also coined as the capacity of an organisation, society, or city to recover proactively to adapt to disturbances that are perceived to fall outside the scope of expected or normal occurrences (Boin et al., 2010). In turn, organisational resilience refers to the capacity and ability of an organisation to endure unexpected discontinuities, changes, and environmental risks (De Carvalho et al., 2016), foresee potential threats, cope successfully with unexpected events, and be able to learn from these (Duchek et al., 2020). Thus, resilience is fundamental for the survival of organisations (Rai et al., 2021).

The above notions adhere to the present study's focus to build knowledge associated with a) how organisations operating in an emerging economy were affected by an unprecedented crisis, b) how they built resilience during this major crisis, and c) how they prepare to confront future major disruptions. These relevant areas also align with recent calls to improve the resilience of port cities, enhance coping capabilities, and support urban agglomerations to be better equipped to confront future external impacts (Sun et al., 2022). The three key elements associated with resilience complement previous definitions: a) anticipation, which emphasises predictability, b) avoidance, which aligns with immunity, and c) adjustment, which focuses on recovery (Rai et al., 2021).

The disruptions resulting from unexpected crises have different ramifications for port and shipping organisations, thereby testing their resilience (Notteboom et al., 2021). Indeed, seaports and the entire port ecosystem already cope with numerous issues derived from volatile conditions in the logistics, port, or shipping industries (Ngoc et al., 2022), or a highly unpredictable and dynamic demand for services (Mańkowska et al., 2021).

Within the context of port cities, a discussion by Hein and Schubert (2021) helps identify six different types of resilience, with some types intersecting or overlapping:

1) Environmental, where port cities and ports need to develop either temporary or permanent solutions to function in ways that they can address potentially devastating challenges, such as water-related disasters or their proximity to oceans/seas, or deltas (Hein & Schubert, 2021).

2) Economic, based upon the investment by many port city actors in port-related tasks can boost shipping, producing, storing, or trading (Hein & Schubert, 2021).

3) Institutional, the result of close collaboration and stable relationships among relevant governance and institutional actors representing port cities, regions, and cities stakeholder; educational institutions, appropriate legal systems, and structured leisure and recreation can also be helpful in recovering from disasters (Hein & Schubert, 2021).

4) Social, involves the inclusion of non-institutional or disadvantaged actors (Hein & Schubert, 2021).

5) Technological: given the ports' needs in road, rail, or waterway systems as means of delivering goods, technological innovations in shipping, communications, port logistics, or warehousing are required to interconnect land and sea (Hein & Schubert, 2021). This aspect is magnified by the increasing innovation initiatives taking place in the port industry, including labour-related skills, professional profiles, and new tasks (Bottalico et al., 2022).

6) Spatial: Expansive and costly port infrastructure contributes to a port's longevity; moreover, spatial resilience can extend a port city's role as a maritime expertise, logistics, or shipping centre (Hein & Schubert, 2021). However, maintaining this role can be detrimental if there is a continuation of practices that, although accepted, may no longer be aligned with unfolding views and needs that emerged during/after COVID-19 (Hein & Schubert, 2021).

2.2 Organisational resilience in the age of COVID-19 and associated frameworks

The COVID-19 crisis has elevated the importance of resilience to a new level (Hein and Schubert, 2021), that includes the testing, agility, and ingenuity of global supply chains (Cuong et al., 2022a). Furthermore, in addition to those challenges indicated previously in the shipping industry (Doubia-Henry, 2020), the ensuing uncertain and volatile markets have exacerbated trade contraction or the expiration of shipping certificates, while declining oil exploration activities have triggered the need for alternative fuel sourcing (Chua et al., 2022). Overall, COVID-19 has emphasised the need to examine resilience factors that are specific to emerging regions, in particular, as these regions play a key role in the globalisation process (Aman and Seuring, 2021). In the case of India, for instance, Narasimha et al. (2021) identify the significance of altering the cost structure or more government support as ways to enhance the resilience of seaport and maritime logistics.

Vietnam's case also reflects the magnitude of COVID-19's impacts. While Vietnam's government supported the seaport industry during COVID-19 (Ministry of Finance, 2021; Ministry of Transport, 2022), due to three consecutive outbreaks, a deep crisis affected Vietnam's transportation industry (Dang et al., 2022). Given the significant growth and significance of the shipping industry between 2010-2015, twice that of the world's average in throughout (Phan et al., 2021), and third best-connected shipping industry in Southeast Asia (Yap, 2019), the crisis slowed the growth momentum. Indeed, aside from a decrease in shipping volumes through 2021, the maritime industry had no time to recover (Dang et al., 2022). To revert some of the unfavourable situations, shipping management companies have sought to gain resilience through the implementation of ship crew change management, extending ship certificates, and capacity management, whereas, in the offshore industry, they collaborate with major oil/petrol producers (Chua et al., 2022).

Given the major disruptions following COVID-19 (Cuong et al., 2023), the development of new planning processes associated with sustainability (Cuong et al., 2022b), as well as methods, policies, or parameters associated with resilience is required (Hein & Schubert, 2021). This call is relevant as diminished operational performance, or shortage of shipping service supply caused by COVID-19 has fundamentally reshaped the maritime industry (Panahi et al., 2022).

To develop a conceptual understanding in light of COVID-19's effects, and while recognising a void in the literature focusing on ports' critical infrastructure systems, Panahi et al. (2022) propose a model of resilience assessment to be considered in this domain. This framework extends discourses of the efforts, relationships, and collaboration among stakeholders and seeks to build resilience following this unprecedented event (e.g., Dang et al., 2022; Hein & Schubert, 2021). Moreover, Panahi et al.'s (2022) model highlights the value of maintaining strategic relationships among shipping firms, terminal operators, port authorities, or logistics service providers.

In studying crisis management in the age of COVID-19, Zhang and Sun (2021) developed a framework depicting the interrelationship between organisational resilience and maritime management. First, crisis management encapsulates three stages of a crisis, namely, pre-crisis, crisis in progress, and post-COVID-19 crisis. Second, several views contend that the shipping crisis that ensued during COVID-19 did not significantly affect the global logistics supply chain (e.g., Notteboom et al., 2021; Zhang & Sun, 2021). This alleged limited impact reflects the level of organisational resilience within the shipping industry (Zhang & Sun, 2021). Nevertheless, a

recent contribution (Dirzka & Acciaro, 2022) ascertains that cargo and liner shipping did experience significant disruptions. Third, maritime management, a final component of Zhang and Sun's (2021) framework, can enhance crisis management capabilities as well as organisational resilience.

The present study will further contribute to the above line of research by investigating the impacts of COVID-19 and how organisations seek to build resilience to adapt to the impacts of this destructive event; the study's contribution will be two-fold. First, the study will build empirical understanding through the observations of port city and shipping company representatives. Second, the resulting empirical knowledge will be further dissected through the development of a framework that builds conceptual knowledge concerning the examined themes.

3 Methodology

3.1 Approaches and sampling

Figure 1 provides a visualisation of the study's methodology. The scant literature on the effects of COVID-19 on different stakeholders within the maritime industry in Vietnam led to the consideration of an exploratory and qualitative approach. The main objective of exploratory research is to gather new insights, knowledge, meaning, and understanding, where the researcher explores a population, variable, or phenomenon of interest (Brink, 1998). Exploratory research is also defined in terms of building useful knowledge in a new area (Beall, 2002). Qualitative research concerns a process "of naturalistic inquiry that seeks in-depth understanding of social phenomena within their natural setting or context" (Klenke, 2016, p. 6). Thus, given the worldview about knowledge that qualitative data seeks to convey, quantification in qualitative studies is problematic; nevertheless, in qualitative inquiry, researchers "are required to think through the appropriateness of numbers reflexively" (Monreouxe and Rees, 2020, p. 186). In this context, Figures 2-4 provide the frequency of responses to the key themes under inquiry.

Figure 1 Here

Furthermore, the study's unit of analysis, which refers to the entity, what or who is under study (Schwester, 2015), is denoted by representatives of port cities and shipping companies. Gathering the views of these individuals was perceived to be directly aligned with the research as their experience and knowledge professionals could produce insights that would enhance the quality of the study.

The chosen exploratory and qualitative approaches, together with the unit of analysis are also associated with a purposeful sampling technique and a general inductive approach. Patton (2002) explains that qualitative inquiry usually emphasises depth and draws on relatively small samples selected purposefully. Moreover, central to purposeful sampling is the selection of information-rich cases, from which researchers can learn about issues of crucial importance to the study; importantly, as opposed to empirical generalisations, purposeful sampling can yield in-depth understanding (Patton, 2002).

To purposefully select potential participants, several criteria were proposed:

- Work experience in the maritime industry, for instance, in shipping or in a port city: at least five years. This number of years was perceived as substantial in acquiring beyond basic knowledge of the industry.
- Currency of knowledge, expertise, and experience: by participants currently working in the maritime industry, they would be exposed to new knowledge, trends, and events.
- Position/role: all participants have a leadership position (e.g., directors/vice-directors/managers), suggesting more in-depth knowledge of their industry.

Thomas (2006) posits that a general inductive approach is an efficient way of analysing data and summarises by the following steps:

1) Condensing varied and extensive raw data into a summarised format,

2) Establishing linkages between the summary findings and the study's research objectives; here, it is important to ensure that these linkages are defensible and transparent;

3) Develop a theory or model that illustrates the processes or experiences that emerge in the data (Thomas, 2006).

3.2 The questionnaire tool, the interviews, and data saturation

The questionnaire for this study showcased two sections. Section one sought to learn about the demographic features of participants (e.g., experience, gender) and their organisations (domestic/international focus, size). Section two gathered participants' observations associated with the RQs; these questions were verbalised as follows:

- To what degree has COVID-19 disrupted your organisation's business activities?
- What key factors have contributed to your organisation's resilience, especially in the first year of COVID-19?
- How could your organisation's main resources contribute to building further resilience post-COVID-19? Could you please provide specific illustrations concerning the above questions?

The content of these questions is aligned with recent investigations conducted through interviews among maritime industry and supply chain stakeholders (e.g., Alamoush et al., 2022; Aman and Seuring, 2021, Chua et al., 2022). Given the numerous challenges faced by participants' companies/entities, the above research themes did not include any complementing questions eliciting financial records of participants' respective entities/companies. The decision to protect stakeholder investment and financial integrity was paramount. In addition, examining these details was beyond the study's scope.

Once university ethics clearance was received, during July of 2022, prospective participants were identified through desktop searches, including social media (e.g., LinkedIn) and websites of port cities and shipping companies. Initially, as many as 23 prospective 'information-rich' cases (Patton, 2002) were found through desktop searches; these individuals were contacted, presented the purposes and outcomes of the research, and invited to partake in the research through a semi-structured interview; 18 of these individuals accepted the invitation.

Given the challenges of travelling to some of the participants' locations, ten interviews were carried out online (e.g., using Microsoft Teams), and eight were face-to-face. Similar to previous business research (e.g., Paasi et al., 2010), these interviews lasted on average 1.5 hours and were audio-recorded with the agreement of participants. In four cases, the interviewees provided the names and details of other individuals; this type of referral and networking provided a snowballing sampling collection (Parker et al., 2020), and produced four additional positive responses in face-to-face mode. Hence, in all, 22 individuals took part in this study; the interviews took place between July and September of 2022.

By the 20th interview, it was noticed that similar themes emerged, an indication of data saturation (Francis et al., 2010), prompting the research team to conclude the data collection process upon the 22nd interview. The recorded interviews were transcribed and translated into English by two members of the research team; in addition, the interviews were reviewed by a panel of expert researchers that collaborated in the iterative translation process (Douglas & Craig, 2007).

3.3 Data analysis

In the process of inductive concept development, Gioia (2021) recommends "to foreground the informants' sensemaking about their experience" (p. 22). Enhancing qualitative rigour begins with the organising of the data into first-order (informant-centred) data (Gioia, 2021; Gioia et al., 2012) and second-order (researcher-centric) categories; this step facilitates their assembling "into a more structured form" (Gioia et al., 2012, p. 20). Tandem testifying the voice of both informant and researcher can afford a more rigorous illustration of their linkages and insights that represent the "hallmark of high-quality qualitative research" (Gioia et al., 2012, p. 18), and is followed by the development of dimensions, thus, resulting in the data structure (Gioia, 2021; Gioia et al., 2012). This process is also illustrated in Figures 2-4.

Trustworthiness in qualitative research

This study subscribes to principles of trustworthiness in qualitative research. Shenton (2004), for instance, highlighting four key criteria set forth by Guba (1981) as a means to pursue trustworthiness:

1) *Credibility* can be addressed in various ways, including by adopting reputable research methods (Shenton, 2004). This element is illustrated in this study through the adoption of an inductive approach (Thomas, 2006), purposeful sampling (Patton, 2002), and a data structure template (Gioia, 2021; Gioia et al., 2012).

2) *Transferability* can be illustrated by a) presenting background data that would help establish the context of the study, and b) describing in detail the phenomenon under enquiry, thus,

allowing for future comparisons (Shenton, 2004). Both aspects were addressed in the present study, including but not limited to proposing several RQs.

3) *Dependability* entails presenting comprehensive methodological descriptions so that the research can be replicated (Shenton, 2004); again, the way in which the present research's methodological description is developed and presented enables future replicability.

4) Confirmability: This criterium could be fulfilled by data triangulation, for instance, using a wide range of informants, gathering/viewing documents as source material, or on-site observations (Shenton, 2004). This study not only used individual interviews that helped verify different viewpoints, but, whenever possible, gathered documents (e.g., visiting the organisation's website).

3.4 Descriptive data

Table 2 illustrates that five participants had between 6 and 10 years of experience in the maritime industry, and the large majority (17) more than a decade. Nine of the participants held a director role, while 13 were managers in various departments (sales, operations, human resources). Overwhelmingly (20) participants were male. Twelve of the organisations employed over 100 staff and 10 below that number; the smallest organisation employed between five and nine staff. Nineteen of the organisations were involved in international business (e.g., exports). Finally, while the location of the participating organisations was diverse, 12 are located in the port of Hai Phong. In the next sections, abbreviations will be used to differentiate the comments of shipping company and port representatives (e.g., P1, P2, see Table 2).

Table 2 Here

4 Results

4.1 How COVID-19 disrupted the organisations' business activities

Participants' verbatim comments echoed the disruptions that COVID-19 caused (Figure 2). At an organisational level, all participants verbalised the disruptions that were identified at an organisational level, for instance, managing human resources, with the new regime preventing many employees from working on-site. The change in shipping schedules, the overcrowding of some ports, or the lack of on-site inspections due to safety measures further affected organisations. Issues were also identified in new restrictions of supply and demand, breakdowns, and the need to restructure the organisation's workforce. Furthermore, because of employees' severe mobility restrictions, staff shortages and work-load excesses, together with government's requirements and cost increases, organisations faced additional disruptions that, in some cases, led to a decrease in service quality and ensuing client dissatisfaction. To some extent, these findings mirror those revealed in recent research (Chua et al., 2022), where impacts were felt in the areas of port employees, crew changes, hinterland connections, or distribution/warehousing activities. The following verbatim comments provide clear illustrations of the hurdles that needed to be overcome during COVID-19:

> P3: Profits decreased because expenses during the COVID-19 period were almost double

or triple than normal. The company could not directly supervise its employees.

P9: Shipping times could not be maintained because ships were held at docks; there were limited sources of crew members and sources of goods. Many employees in the port were unable to travel, thus affecting the working activities of the ship…

Figure 2 Here

Nevertheless, despite the effects of COVID-19, P9 also perceived significant benefits for the maritime industry. Indeed, for the majority of participants, COVID-19 also represented an opportunity: *"Between 2019-2022, the company's profits have consistently been above 8-9 billion [United States] dollars [each year]..."* P5 considered 2021 to be *"the year of the boom"*, noting that *"ocean freight rates have increased while fuel prices are still low… shipping enterprises are making profits, more than enough to compensate for 2020."* Similarly, P15 alluded: "*The last two years [2021-2022] can be called two golden years of shipping… Demand is high, but supply is low, causing freight rates to increase (some routes have experienced a 10-fold increase)."*

4.2 Factors contributing to the organisation's resilience

Asked about the factors that contributed the most to their organisation's resilience, the unexpected financial gains arising from the crisis were also viewed as a timing element associated with luck/chance (Figure 3). Nevertheless, in most cases, it was a combination of factors that enabled adaptability, with agility at organisational level being predominantly highlighted. P18, for instance, reflected:

The first factor is to adjust the production model. The port adjusted the shift schedules of the main and the backup [auxiliary] production forces (e.g., towage, cargo handling, and warehousing services) to ensure uninterrupted operations. Secondly, the port management engaged more with employees during this difficult period; if businesses face difficulties, so do employees. Thirdly, the port began to minimise the stages and processes related to direct contact and switched to electronic or digital signature methods.

Regarding this last point, Chua et al. (2022) recommended an increase in research and investment in digitalisation and automation, for the maritime industry to increase resilience, efficiency, and productivity. In addition, the strategic relevance of the organisation's human resources initiatives was underscored by its contribution to the alleviation of COVID-19's impacts (P22):

While the company did well due to high shipment revenue, it struggled with its human resource management, how to always have enough minimum human resources (qualitatively/quantitatively) to operate… staffing strategies, including pay rises, were put in place to maintain crew numbers and motivate them.

Figure 3 Here

The organisation's maximisation of its inner strengths such as its ability to develop ideas and plans and operationalise them in a very volatile situation was a significant adaptive factor, as was internal support from staff and from government institutions:

> P12: To be successful in this difficult period, a shipping line has to identify diverse shipping routes and have a wide range of customers... Whichever route has higher freight rates, my company would increase the ships operating on that route to quickly reap the benefits… as opposed to just surviving, it is an opportunity to break through.

> P16: Government policies were timely and flexible; guidelines on the health sector were issued quickly to ensure smooth operation in the port area. While delays occurred waiting for instructions, government responses to implement and ensure compliance were fast.

To some extent, P12's points resonate with those of Chua et al. (2022), in that the maritime industry could consider mitigation strategies that include increased collaboration among shipping companies to maximise space utilisation. Nevertheless, for P12, this process appeared to be initiated and led entirely by the organisation, with potential prospects of achieving economies of scope. While not specifically focusing on Vietnam's context, Notteboom et al. (2021) conclude that ports, shipping lines, and terminal operators have exhibited intensified levels of resilience due to lessons learned from the global financial crisis. These points are further reinforced by other comments that equally recognise the importance of strategies to adapt and change in the face of a destructive event:

> P8: Our business model has changed a lot… During the Covid-19 epidemic, we upgraded the technical condition of our ships. When there was a shortage of goods, we placed the ships in the dock to upgrade and install more equipment in order to make our vessels qualified to operate in foreign markets. At that time, the global shipping market was lack of supply because of the congestion of ports, so freight rates also grew… Now, almost all processes are converted to an online system.

> P11: Our firm was previously stagnant, but after that [COVID-19] we learned to solve problems in a short time… our information technology department and the sales department came up with a lot of initiatives. They developed software and services to help increase customer service and limit time-consuming steps.

4.3 How the organisation's main resources can contribute to further resilience

Extending from the analysis of RQ2, participants' reflections on how their organisation could elevate and strengthen their resilience levels and be better equipped to react or face an extreme situation provide key insights (Figure 4). Most responses highlighted the need for a combination of resources and capabilities that are simultaneous and complementing, where cost reduction should be implemented while pursuing improvements in service quality, achieving stronger diversification, and incorporating new technologies. For example, echoing other participants'

views (e.g., P11, P16), P6 stressed the need to apply more information technology to reduce costs, increase service options at the port, improve service quality, and overall strengthen the port-customer relationship. Consequently, P6 advocated for more investments in infrastructure due to a very dynamic business environment:

> Today, ports' managers are focused on having the most reasonable operating costs to ensure competition. Vietnam's ports, like many of the world's ports, are in constant competition. That is why we need to ensure that, to remain competitive and ensure future profits, the cost factor is crucial.

Figure 4 Here

The re-evaluation of human resource practices was an additional important step in building resilience and working towards remaining competitive in the aftermath of COVID-19 (P1): *"The most important is the human factor. Good, motivated employees go to work to manage the system. Thus, we need to take more care of members of staff who are stressed out about salary, family, etc."* In addition, over half of the participants perceived the need to maintain currency and reinvest returns. As P13's comment demonstrates, these aspects are strategically critical in extending the positive effects resulting from COVID-19 (increased demand and revenues):

> P13: This time is quite sensitive… Many businesses have paid off their debts and are preparing for shipbuilding/ buying new ships to be ready for the post-COVID-19 period, coinciding with their accumulated resources… Businesses have to consider the investment carefully, avoiding investments at the near-peak stage.

These findings empirically support some of the points that contribute to recent conceptual discussions on resilience in the service industry in the age of COVID-19. Here, Huang and Jahromi (2021) propose five different strategies: business model transformation, innovation, supply chain optimisation, market orientation, and strategic corporate reorganisation. These strategies are partly emergent in the above analysis. In addition, and partly in agreement with Hein and Schubert (2021), Huang and Jahromi (2021) suggest four resources that are similarly associated with this study's findings and are "prerequisites for adopting the resilience-building strategies" (p. 138): technology, finance, society, and human capital.

5 Discussion

Aligned with the adopted inductive analysis (Thomas, 2006) and data structure template (Gioia et al., 2012) that are illustrated in the above results, this study proposes a theoretical framework to further the knowledge and understanding of how port cities and shipping companies navigate an extreme crisis (Figure 5). First, four distinctive dimensions are identified through participants' perceptions of the impacts of COVID-19. Whereas the first (threats to organisational existence) prompt to reflect upon basic or more immediate needs after the unprecedented event. Here, building awareness of fluidity in changes occurring externally (e.g., government policies, market dynamics) and internally (e.g., production, supplier/employee relations and well-being) can be crucial in building resilience in a timely fashion.

The need to build bonds with other organisations in order to navigate the crisis collaboratively rather than doing it alone is also an emergent element, which resonates with recent research (Fobbe & Hilletofth, 2021). Another important finding is the potentially beneficial side of an unprecedented crisis, where the market mechanics can be extremely favourable to an organisation. In this case, a lifeline presents itself through chance/luck, and the organisation needs to capitalise on these circumstances to build different forms of resilience, in particular economic resilience (Hein & Schubert, 2021), as costs or future investment in infrastructure and other needs would require substantial capital.

Figure 5 Here

Second, the organisation-owned traits (e.g., agility and rapid adaptive steps, maximising organisational strengths and entrepreneurial skills, managerial leadership, and vision) together with complementing tools in the form of human resource strategies and technological uptake represent key factors enabling the participating organisations to become resilient. This dimension also suggests the extent to which an organisation can 'control its own destiny', notably, developing inner competencies, where knowledge management, training, and selective talent recruitment are fundamental in building future resilience and competitiveness. These findings also reinforce the notion that, facing unprecedented challenges, organisations resort to innovative responses (Al-Omoush et al., 2022). Furthermore, the stakeholder-based reliance dimension points to the investment in relationships, both at an internal (employee) and external level (suppliers, government, other organisations), while the 'maximising serendipity' dimension suggests that, despite the gravity of a situation, preparedness and competencies are vital in maximising favourable uncontrollable scenarios.

Third, and extending from the factors enabling organisations to become resilient (organisation-owned traits), the forward-thinking/agile dimension further highlights the value of pursuing the entrepreneurial path in order to maintain or gain in competitiveness; moreover, market uncertainties can encourage entrepreneurship (Liu et al., 2020). Alongside this aspect that requires financial investments in recruiting, upgrading infrastructure, or training and becoming more involved in the usage of technology, the external focus dimension also points to the imperative need to prioritise and commit to improving clients'/customers' experiences, and building relationships with one's closest stakeholders. In turn, these two dimensions are strongly supported by financial management wisdom, where the organisation needs to assume that the 'golden years' (P15) are only a fleeting event that will need to be maximised and utilised to build future strengths.

6 Conclusions

This study achieved various aims. First, by using an inductive approach (Thomas, 2006), and a data structure template (Gioia et al., 2012) based on interviews conducted with 22 professionals in the maritime industry, the study contributes to discourses of organisational resilience among port cities and shipping companies, with critical value for organisations involved in global trade. Moreover, by examining a) how COVID-19 affected port cities and shipping companies operating in Vietnam, b) factors leading to organisations' resilience, and c) key resources

contributing to fostering further resilience the study's findings highlight key dimensions and aspects with practical and conceptual value. For instance, while COVID-19 undoubtedly led to massive disruptions, most of the participating entities were able to maximise unexpected lucrative opportunities stemming from the crisis. The importance of organisation-owned traits, including exploiting inner strengths (e.g., the organisation's ability to develop ideas and plans) was perceived as crucial in building resilience, while taking the initiative by enhancing service quality or revisiting human resource practices are contributing factors in remaining resilient. The study's overall findings help narrow extant research gaps recognised in the contemporary port city, transport, or entrepreneurship literature (e.g., Akhavan, 2017; Dang et al., 2022; Doern et al., 2019; Loh & Thai, 2015; Notteboom et al., 2021). This study builds upon this literature to inform researchers and practitioners of future unprecedented events.

6.1 Theoretical implications

The findings, analysis, and associated dimensions suggest the value of developing frameworks to understand firm resilience in the maritime industry. For instance, the model presented by Hein and Schubert (2021) underscores economic, social, technological, institutional, and spatial dimensions. As illustrated in Figures 2-4, the content of many participants' comments strongly alludes to these dimensions.

Nevertheless, despite these important alignments, this study's analysis sets itself apart from the extant literature in various ways, and, accordingly, presents various theoretical implications. Regarding the perceived impacts of the crisis (RQ1), one point of differentiation rests on the 'favourable collateral effects dimension', which identifies two fundamental scenarios or landscapes. First, the dimension highlights the unexpected effects of chance or luck, when the COVID-19 crisis presented the maritime industry with highly incomparable lucrative opportunities. This dimension also underscores the strategic importance of acting swiftly and entrepreneurially to reap benefits in times of extreme uncertainty and the collapse of markets, industries, and economies. Second, the dimension pinpoints the need for organisations to build upon unique favourable collateral effects, strengthening their infrastructure in anticipation of a return to 'business as usual,' where existing challenges might prevent organisations from obtaining substantial financial returns.

Two implications emerge from the analysis of RQ2, one depicted by the organisation-owned traits, which explains the various 'natural' competencies organisations possess, and that represent an invaluable resource to prepare for future crises. Nevertheless, as in the case of RQ1, maximising serendipity again denotes a situation where the organisation is presented with a highly unexpected situation caused by a destructive event, with implications for its bottom line, and, by extension, its future. Similarly, regarding RQ3, the forward-thinking/agile and financial management wisdom have important implications, in enabling the organisation to become more self-reliant in developing its own competencies, skills, and knowledge, with the external focus dimension providing a valuable and complementing competitive element.

Overall, Figure 5 provides conceptual guidance concerning the different alternatives and paths that organisations' management need to consider or choose; this framework, therefore, can illuminate critical aspects when organisations are facing an unprecedented scenario.

6.2 Practical implications

The study's analysis also emphasises various practical implications. Concerning the first area under examination (RQ1), in view of the unpredictability, fluidity, and changing nature of events following an extreme crisis, there is a much stronger need to learn and gain awareness about the most immediate effects and ways to minimize the most pressing issues within an organisation. COVID-19 caught numerous organisations by surprise and taught them many lessons (e.g., de Waal et al., 2021). Thus, while the results highlight the importance of organisation-owned traits (Figure 3), a much higher level of involvement in scouring the environment. For instance, as Panahi et al. (2022) suggest, in cases of potentially highly damaging events, enhancing collaborations could help organisations diminish their dependence and vulnerability. As a practical illustration, P21 referred to the change in organisational mindset, where increased flexibility allowed the strengthening of collaboration with other organisations as a means to minimise COVID-19's impacts. These points further highlight that organisations are nowadays compelled to develop a stronger learning culture, thus, increasing their self-reliance, without ignoring the role of external support in complementing and reinforcing efforts to become more resilient.

The emerging dimensions associated with RQ3 also reveal the importance of a forward-thinking and agile organisational culture, striving for improvements in service/product delivery, and in possessing financial management wisdom, whereby a more in-depth understanding of cost management and maximisation/utilisation of resources could help the organisation in times of severe crisis. P17, for instance, acknowledged the speedy adjustments carried out by his company's board of directors, in approaching shipping lines to increase ship capacity.

The implications of RQ3's developed dimensions are strongly related to the organisation's resources, investing in training new members of staff to make a substantial initial impact in view of the potentially fluid initial stages of an extreme crisis. Training existing members of staff is equally crucial, in providing additional support in learning or becoming more proficient in the completion of tasks, particularly, and as mentioned by participants, those involving technological tools and processes (e.g., digitalisation). This implication is associated with P5's comments, in that his organisation needed to step up and continuously engage in training, recruiting, and also motivating existing staff through higher benefits. Finally, there are clear implications for educational institutions in preparing future graduates to also gain awareness and knowledge to become fast learners, fast and resolute forward-thinkers, and wise in financial management, again, in anticipation of an organisational career. While proper collaboration between businesses and universities is still an issue (Seturidze & Topuria, 2021), the gravity of the impacts of COVID-19 should help reinforce the need for enhancing current and developing future collaborative efforts.

6.3 Limitations and Future Research

The study presents several limitations with opportunities to be addressed in future studies. First, while significant efforts were made to recruit numerous port city and shipping company exports, the number of participants is still limited. Future research could not only seek a higher number of participants but also more diversity in the group of respondents, including clients and suppliers of port cities and shipping companies. Moreover, given that the present study was limited to the

cases of 22 individuals and their organisations, there are opportunities for future research to develop a stronger quantitative focus, thus, presenting more quantifiable findings. Second, the study was completed within three months; future research could consider a longitudinal approach, where interviews occur at different times throughout the year, which could help enhance the data or allow for comparisons in the content.

Third, the study was conducted in Vietnam only; researchers could therefore consider widening the geographic/cultural scope to include participants from other emerging economies or from both developed and emerging economies, which again, could enable comparisons and opportunities to gather more in-depth insights. Fourth, while the participants provided rich comments, specific cases or examples, including approximate figures of affected vessels or employees, or quantifying losses were not presented. Potentially, future studies could elicit more specific information on an unprecedented crisis's impacts. Finally, the framework (Figure 5) is only applicable in the context of the present study; future investigations could ascertain its value or incorporate other elements to add further rigour to increase the knowledge and understanding of organisational resilience in the face of an extreme crisis.

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Figure 1: The study's methodology: A visualisation

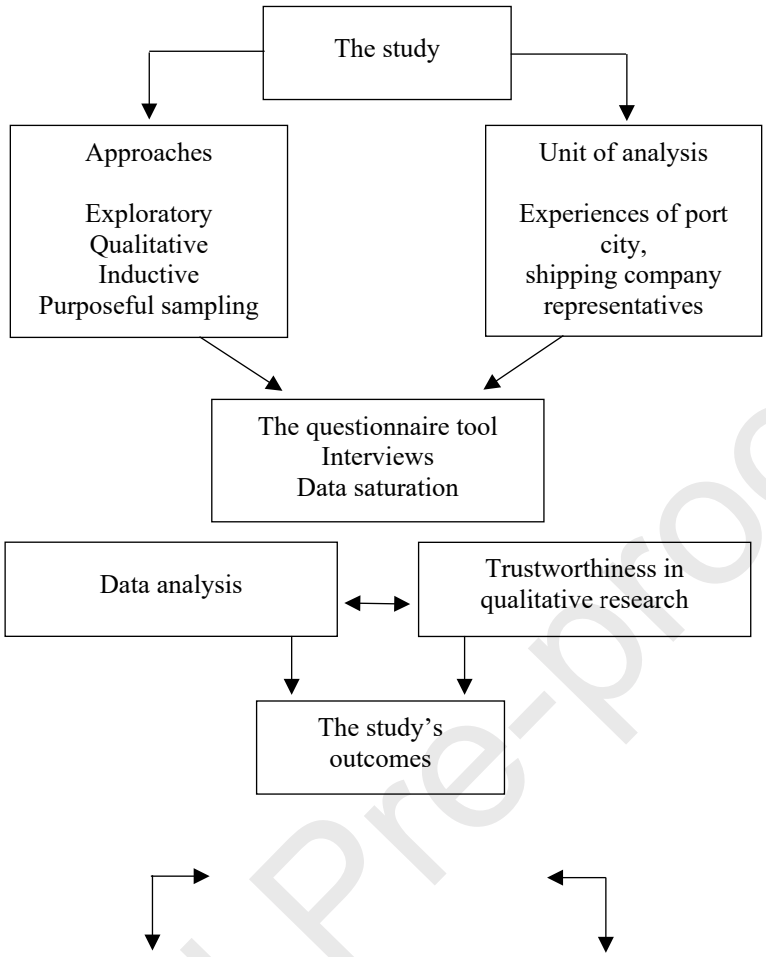
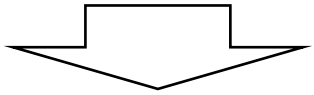


Figure 2: Participants' perceived impacts of COVID-19

Emerging themes	**n= 22**	%
Disruptions (e.g., at an organisational level, port congestions/delays, unstable maritime schedules, lack of on-site inspection)	22	100
Sudden supply/demand changes in international trade, supply-chain breakdowns, a restructured labour market	21	95
Staff shortages, limited mobility, work overloads, health-related concerns, assisting staff to work remotely, managing internal COVID-19 protocols	20	91
An increase in requirements to address new regulations/policies at company, government, or international level	20	91
More need for innovation/technology uptake, including increased use of online communication, GPS, distance inspection, new segmentation needs	18	82
Cost increases (e.g., quarantine, transportation, maintenance), short-term revenue losses (e.g., lower turnover from shipping, increased input prices)	17	77
Increased revenues, substantial/rapid growth of business/trade activities/outputs	16	73
More government support (e.g., tax reductions/delays, more flexibility to operate)	6	27
Stronger relationships with clients and staff, more care/empathy; more collegiality with other organisations	5	23
Decreased service quality/performance, more client dissatisfaction	5	23



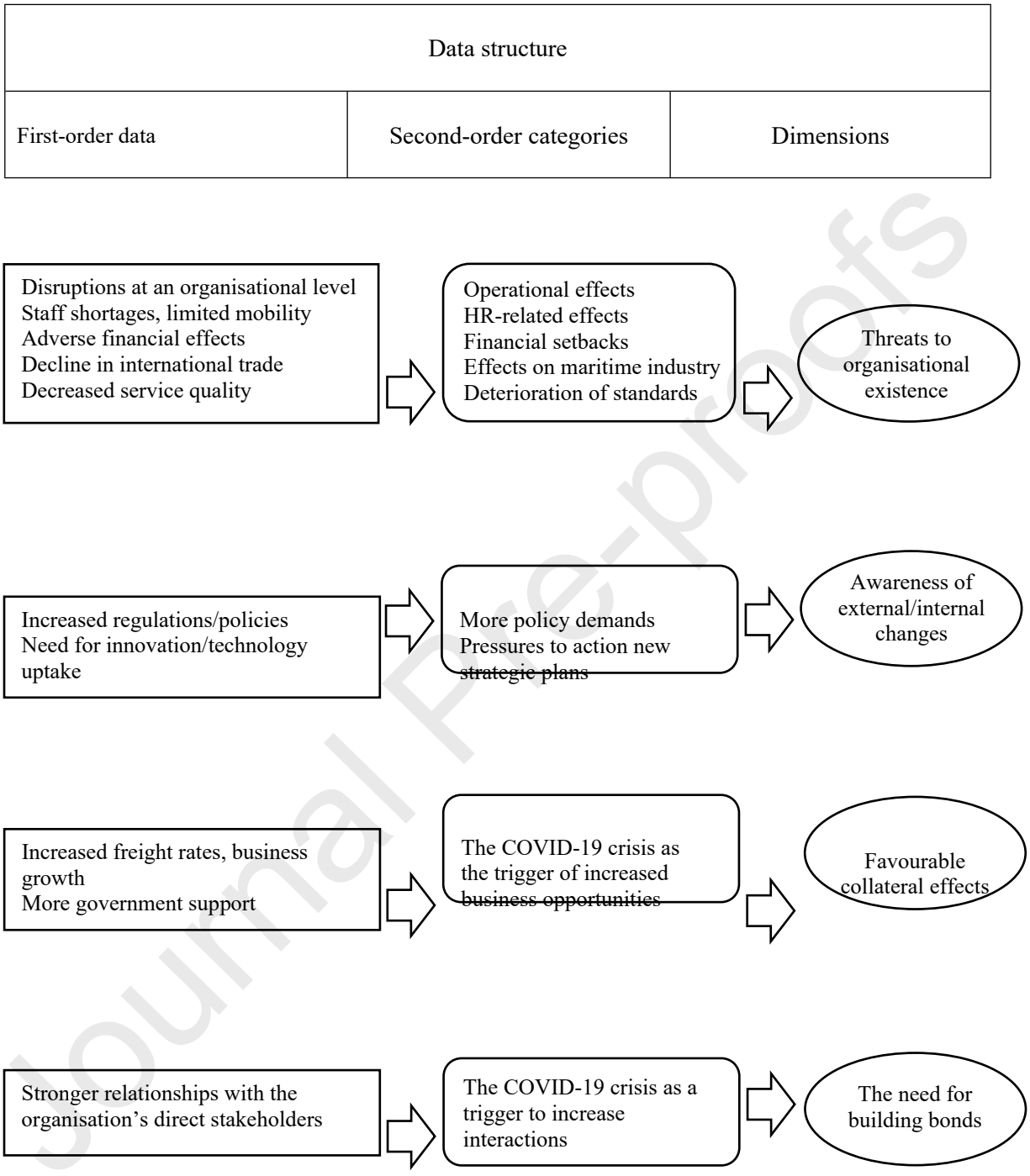
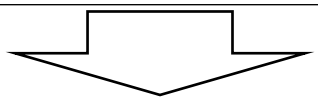


Figure 3: Key factors that have helped companies become resilient

Emerging themes	n= 22	%
Agility in adapting to market changes (e.g., issuing new policies quickly, actioning new ideas, changing production model)	15	75
Human resource strategies (e.g., staff scheduling, staff motivation, salary increase, contract extension, flexible working mode)	14	70
Internal/external support (e.g., collaboration from staff/partner/clients, flexibility in regulations, government's open policies, rescue flights for crew)	14	70
Exploiting inner strengths (e.g., high service quality, value-adding, working culture, diverse shipping routes)	13	65
Use of technology to enhance processes (e.g., iShip, ePort, eService, online platforms)	13	65
Timing/chance/luck (e.g., high/increased demand, traffic, freight rate, revenue)	8	40
Leadership/vision (e.g., preparation, scenario planning to respond to COVID-19's impacts for both fleet and back office)	7	35
Being more entrepreneurial (e.g., risk-taking, choosing a new/challenging route)	6	30



Data structure		
First-order data	Second-order categories	Dimensions

Agility/adaptation
Exploiting inner strengths
Leadership/vision
Being entrepreneurial

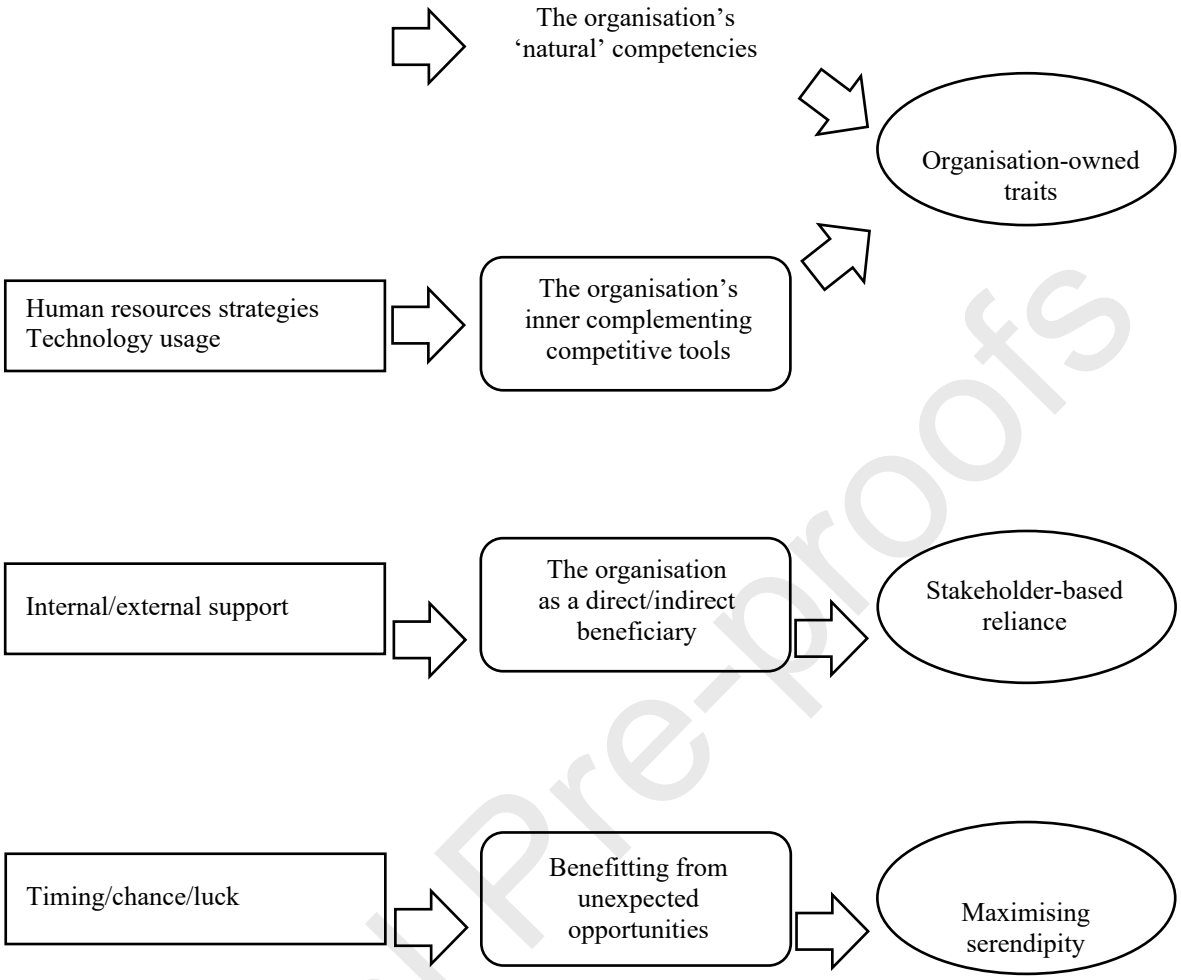
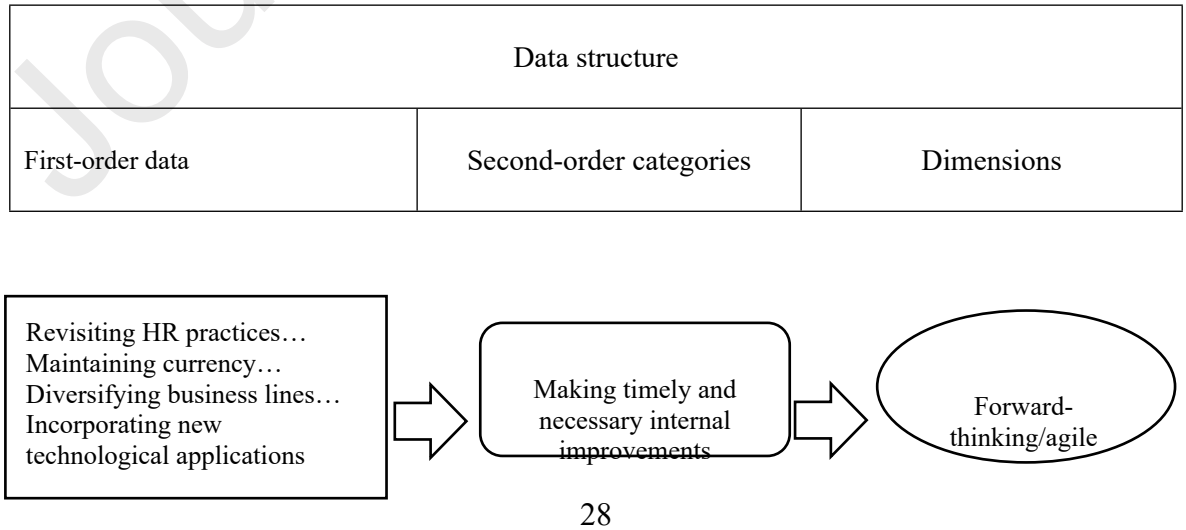


Figure 4: Perceived key strategies to remain resilient post COVID-19

Emerging themes	n= 22	**%**

Enhancing service quality, productivity, and convenience for clients (e.g., to preserve brand reputation, and positive word of mouth)	19	86
Re-evaluating human resource (HR) practices to retain staff (e.g., supporting/training staff through the uptake of new technologies, improving the quality of the working environment)	17	77
Maintaining currency of latest events to take actions accordingly (e.g., backup plans, a reserve of funds in case of future crises)	14	64
Reinvesting returns into assets/facilities (e.g., buying modern ships, upgrades to meet international standards, ships maintenance)	13	59
Improving relationships with stakeholders (e.g., customs and government agencies, competitors, partners in different countries...)	11	50
Diversifying business lines (e.g., longer shipping routes, combining domestic and international shipment)	9	41
Reducing operation costs, offering competitive prices	9	41
Incorporating new technological applications (e.g., to communicate with consumers, to build big data, to build management systems)	7	32



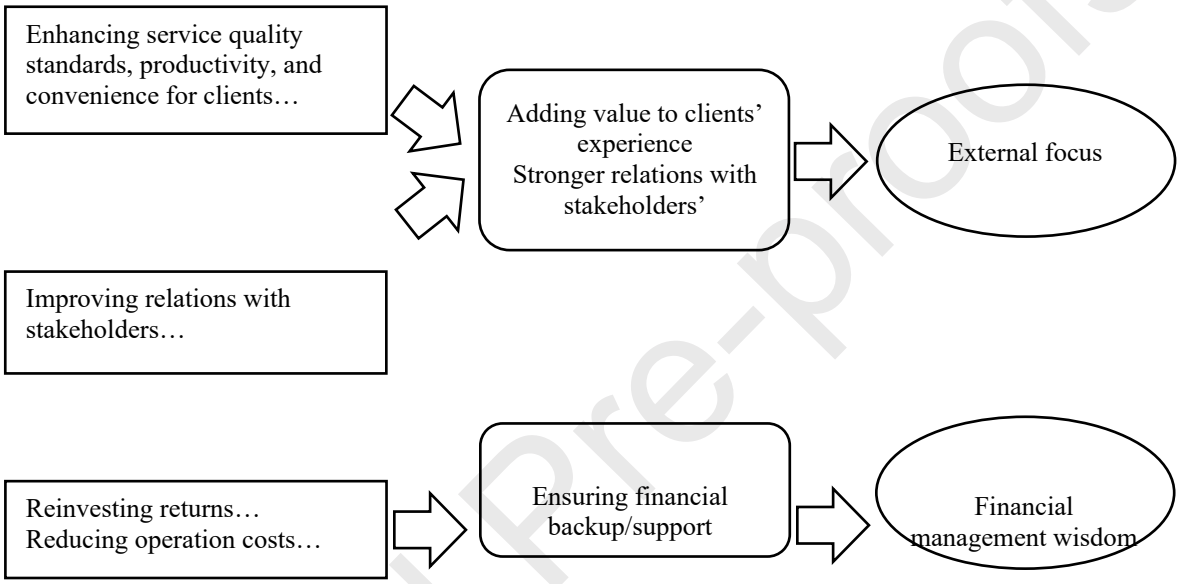
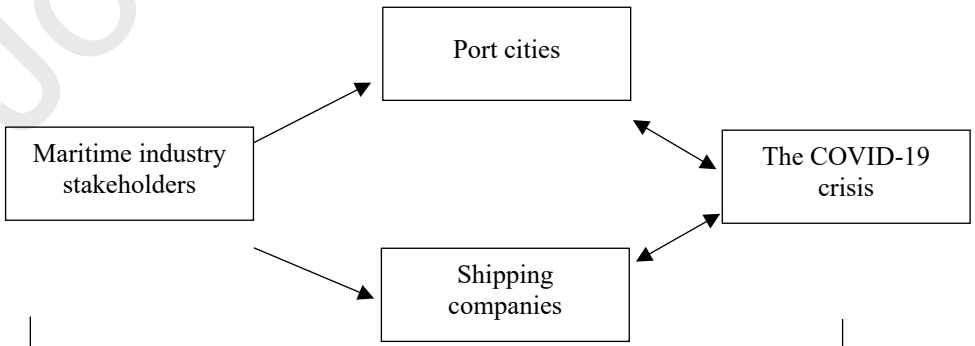
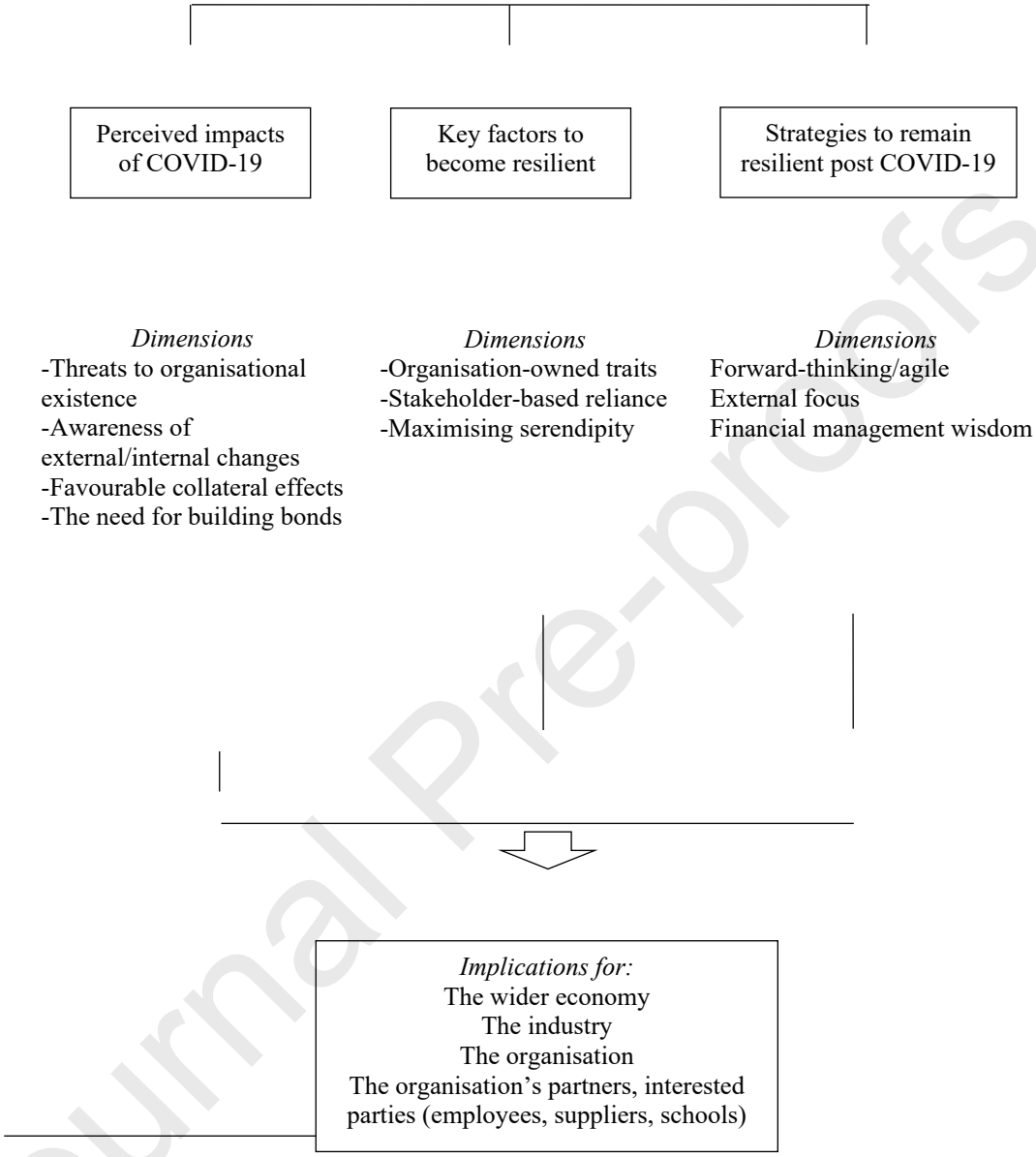


Figure 5: Resilience in the context of Vietnam's port cities and shipping companies





Navigating through rough seas: Maritime insiders' reflections on an unprecedented experience

Highlights

- Examines resilience to COVID-19 from two relevant groups in the maritime industry
- Improves the understanding of how these groups manage unprecedented disruptions
- Develops a conceptual framework to illuminate resilience in the COVID-19 era
- Addresses extant research gaps
- Focuses on the emerging economy of Vietnam

Table 1: Vietnam's seaport throughput figures between 2016 and 2022 (in 000 tons)

Year	Export	Import	Domestic	Total
2016	111,535	143,937	160,902	416,374

2017	127,523	153,963	175,132	456,618
2018	142,793	174,189	212,323	529,305
2019	159,864	204,712	298,081	662,657
2020	175,815	224,600	286,668	687,083
2021	184,474	213,941	302,894	701,309
2022	179,072	209,259	342,793	731,124

Source: Vietnam Maritime Administration, 2023

Table 2: Demographic information - Participants and their organisations

P *	**Group ****	**Years of experience**	**Role**	**Gender**	**Size (in full time employees)**	**International maritime activities**	**Location *****
P1	S1	16-20	Manager	Male	5-9	Yes	HP
P2	S2	6-10	Manager	Male	10-20	Yes	NT
P3	S3	21+	Director	Female	100+	Yes	Hanoi
P4	S4	11-15	Manager	Male	21-49	Yes	HP
P5	S5	21+	Director	Male	100+	Yes	Hanoi

P6	S6	6-10	Manager	Male	100+	Yes	Hanoi
P7	S7	21+	Director	Male	100+	Yes	HP
P8	S8	11-15	Manager	Male	100+	Yes	HP
P9	S9	21+	Director	Male	100+	Yes	HP
P10	S10	6-10	Director	Male	100+	Yes	HP
P11	S11	21+	Director	Male	50-100	Yes	HCM
P12	S12	6-10	Manager	Female	100+	Yes	HP
P13	S13	6-10	Manager	Male	50-100	No	HCM
P14	S14	16-20	Manager	Male	21-49	Yes	HP
P15	S15	21+	Manager	Male	100+	Yes	Hanoi
P16	P1	16-20	Manager	Male	50-100	Yes	HP
P17	P2	11-15	Manager	Male	50-100	No	HCM
P18	P3	21+	Manager	Male	100+	Yes	HP
P19	P4	11-15	Director	Male	100+	Yes	HP
P20	P5	16-20	Manager	Male	21-49	No	BT
P21	P6	16-20	Director	Male	50-100	Yes	NT
P22	P7	16-20	Director	Male	100+	Yes	HP

* P: Participant; ** Group: S= shipping, P= Port representative.

*** BT: Binh Thuan; HCM: Ho Chi Minh City; HP: Hai Phong; NT: Nha Trang

Navigating through rough seas: Maritime insiders' reflections on an unprecedented experience.

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