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The role of shipping companies' organizational culture and cultural intelligence when selecting manning agencies

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Abstract

This study has two primary objectives. The first is to examine the influence of both organizational culture and organizational cultural intelligence on the selection of manning agencies. The second is to study the role of company size in relation to the above. Data were collected via questionnaire surveys conducted with Greek shipping companies that own or manage vessels and were analyzed using exploratory and confirmatory factor analyses and Baron and Kenny mediation testing. The findings revealed that organizational culture influences the way companies select partners, while the mediating role of organizational cultural intelligence and the moderating role of the firm's size have been highlighted, especially for small- and medium-sized companies. Although the relevant literature on the role of organizational culture and selection criteria is rich, studies examining their interrelationships, as well as the role of cultural intelligence at the organizational level, are scarce. Therefore, this study aims to fill this gap in the literature and empirically address the need to look at the interrelationships among the theoretical constructs under examination.

Keywords Organizational culture · Organizational cultural intelligence · Maritime industry · Manning agencies

1 Introduction

The shipping (or maritime) industry, similar to other sectors, faces a complex, unpredictable, and multicultural business environment. In their quest to overcome these ambiguities, shipping companies interact and collaborate with partners and clients (Besson 2018). In this respect, it is a common practice to outsource some of their

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activities. For shipping companies, the most popular outsourcing practice is that of crew management, provided by recruitment agencies (manning agencies). [1] When outsourcing though, companies should find partners that meet their requirements. This selection process relies upon some criteria that every company sets based upon their needs, expectations, and organizational characteristics.

An essential factor dictating the decision to outsource is organizational culture (OC) (Murphy et al. 2019). Although a standard definition for organizational culture does not exist, most scholars consent that organizational culture is a "general pattern of mindsets, beliefs, and values that members of the organization share in common, and which shape the behaviors, practices, and other artifacts of the organization, which are easily observable" (Schein 1996, p. 236). Organizational culture facilitates companies in developing capabilities to maintain a competitive advantage, achieve maximum performance, and manage change in their external environment (MacDonald et al. 2019; Elgamal 2018; Rhee et al. 2018).

One such capability is cultural intelligence that helps companies assess, comprehend, and manage their culturally diverse environment (Kubicek et al. 2017; Balogh et al. 2011). Cultural intelligence is defined as "a capability, which helps individuals to function effectively in culturally diverse environments" (Earley 2002, p. 274). Shipping companies interact with employees, clients, and partners beyond national boards and form relationships that generate several benefits (Casidy and Nyadzayo 2019). This multicultural environment creates the need for effective management of people with different cultures, lifestyles, and languages. Managing this diverse workforce can confer a competitive advantage on companies in human resource management (Progoulaki and Theotokas 2010). According to Ang et al. (2007), being culturally intelligent enhances intercultural interactions and decision-making. For example, in the shipping industry, crews' composition, provided by manning agencies, is mainly heterogeneous, consisting of seafarers from different countries and cultures. Thus, the selection of manning agencies and the development of good cooperation with them should be of primary importance and should receive great attention (Mitroussi and Notteboom 2015).

Nevertheless, one should take into account that organizations do not all operate similarly. Differences in organization type, specialization, and size require different approaches. Shipping companies operate in different markets, such as dry, liquid, and liner. According to the market they serve, such companies' management is based on the practices appropriate to their circumstances. Firm size is a significant organizational characteristic that shapes the functioning of the companies and, thus, managerial decisions (Josefy et al. 2015).

Although culture in the shipping sector has been investigated, most of the studies only partially address the issue or focus on safety culture but overlook corporate culture's role and its configuration (Yang and Lirn 2017; Lu and Lin 2014; Fei 2011). The examination of organizational culture, especially in the shipping sector, remains of paramount importance as research focusing on it and its dimensions is limited (Shin and Shin 2020; Karakasnaki et al. 2019; Tuan 2013). Also, the concept of

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[1] Maritime Labor Convection (2006, p. 3) as amended defines manning agencies as "any person, company, institution, agency or other organization, in the public or the private sector, which is engaged in recruiting seafarers on behalf of shipowners or placing seafarers with the shipowner."

multiculturalism has been significantly recognized in the shipping industry (Gausdal and Makarova 2017; Theotokas and Progoulaki 2007). Nevertheless, the capability of organizational cultural intelligence to provide shipping companies with the adaptability and flexibility to efficiently manage this diversity (Ng et al. 2012) has not been addressed previously in the shipping sector.

Organizational culture influences companies' choices and decisions (Xi et al. 2019). Cultural intelligence is a factor that promotes active thinking, which, in turn, facilitates appropriate decision-making leading to the achievement of desired results (Murphy et al. 2019; Gonçalves et al. 2016; Lisak and Erez 2015). This research aims to fill this gap by investigating the significance of organizational culture in manning agency selection, the role of cultural intelligence in corporate culture and selection criteria, and the moderating impact of shipping companies' size in the above relationships.

In view of the above, this research attempts to answer the following questions: what is the role of organizational culture in partner selection criteria? Are there differences in the selection of criteria based on the companies' type of organizational culture? Is cultural intelligence a supportive factor in selecting criteria based on corporate culture? Do the above relationships vary depending on the size of the shipping companies?

Based on these questions, this paper will offer the following contributions. First, it outlines the role of OC in the selection process of manning agencies. Second, it analyzes a novel solution for dealing with the challenges of a multicultural environment through the lens of organizational cultural intelligence. Finally, this study investigates differences among shipping companies of different sizes.

The paper is organized as follows: Section 2 presents a literature review of the relevant concepts. Section 3 depicts the research methodology. Section 4 presents the results and discussion. Finally, Section 5 offers conclusions, managerial implications, and the study's limitations.

2 Theoretical background and hypothesis formation

2.1 Organizational culture

Organizational culture is recognized as the core of every organization, as it influences every aspect of working life (Alvesson 1985). It dictates an organization's way of doing things. It forms an organization's workforce's behaviors and attitudes by disseminating common values and practices from senior management (Schein 2010). Studies exploring organizational culture have proposed a different set of cultural dimensions, depending on each study's aim (for example, Porcu et al. 2020 and Gu et al. 2014). However, the most commonly used typology is that of the group, developmental, hierarchical, and rational types of culture (Nazarian et al. 2017; Willar et al. 2016; Gambi et al. 2015; Sugita and Takahashi 2015; Carlos Pinho et al. 2014; Prajogo and Mc Dermott 2005).

The current research adopts the competing value framework to investigate organizational culture, as it distinguishes the four types of culture (hierarchical, group, developmental, and rational) between the structure (stability–flexibility) and focus (internal–external) of businesses (Quinn and Rohrbaugh 1981). More specifically, group culture has an internal focus and emphasizes flexibility and change.

Organizations characterized by a group culture tend to promote participation, teamwork, and cohesiveness. The hierarchical type of culture also has an internal orientation but focuses on stability. Control, order, rules, coordination, and uniformity are characteristics of the hierarchical culture. Developmental or rational culture describes the external focus of organizations. Change, adaptability, and risk-taking characterize organizations with a more developmental culture, while success, competitiveness, productivity, and achievement denote organizations' rational culture (Cho et al. 2013; Gimenez-Espin et al. 2013; Denison and Spreitzer 1991). This study utilized this method because it has been tested and applied in numerous studies covering various academic disciplines (Oh and Han 2020; Shin and Shin 2020; Tran 2020; Chen et al. 2018; Ogbeibu et al. 2018; Hartnell et al. 2011).

In general, organizational culture has been found to influence an organization's the effectiveness, commitment, long-lasting relations, and strategy implementation (Pantouvakis and Karakasnaki 2018), behavior and communication (Gabel-Shemueli et al. 2019; Progoulaki and Theotokas 2016), and managers' and employees' choices and decisions (Xi et al. 2019; Bravo et al. 2016). Regarding the latter, companies make decisions primarily based on maintaining or developing their competitive advantage and developing their skills and knowledge. Organizational culture dictates companies' actions towards collective decisions in a collaboration (Murphy et al. 2019), which is an essential factor in a partnership's success.

In the shipping industry, some studies recognize the role of organizational culture. For example, Tuan (2013) highlighted the importance of organizational culture in developing behaviors that lead to corporate benefits. He specifically argued that companies that foster and promote clan, market, and adhocracy cultures allow employees and, more specifically, department managers to develop behaviors that provide the flexibility, efficiency, and innovation, and, therefore, change that organizations need in order to respond to the requirements of the environment. Karakasnaki et al. (2019) examined the influence of organizational culture on the dimension of quality at different levels of competitive intensity using a sample of 680 companies operating in the shipping industry. They indicate that service quality dimensions are significantly impacted by innovation and community types of culture, while under conditions of competitive intensity by bureaucratic and innovation types of culture. Shin and Shin (2020) investigated organizational culture's role in understanding and using new technologies in shipping, stipulating that developmental or rational culture were the most efficient at adapting to and incorporating new technologies.

As OC shapes attitudes and behaviors, it guides decision-making processes (Bruni-Bossio 2018; Hartnell et al. 2011; Hassan et al. 2011). For instance, organizational culture is acknowledged as an essential factor in business partners' selection process (Gattringer et al. 2017). Despite this, although organizational culture influences many critical organizational outcomes and practices, empirical data about this and, more specifically, on the relationship between OC and the selection decision process are scarce in the shipping industry.

2.1.1 Selection criteria

Academia has shown great interest in the way companies select business partners in various sectors, for instance, in manufacturing, consulting, and transportation (Oeser

2020; Paul et al. 2020; Van Rossem 2021; Tavasszy et al. 2020; Narkhede et al. 2017). Selecting business partners is not an easy task. However, it is considered a critical factor for companies that want to expand their operations either nationally or internationally or outsource specific organizational activities (Petricevic and Verbeke 2019; Torabi et al. 2015).

According to the literature, companies use different criteria to select partners. The selection of partners is made according to the companies' needs (Zimmer et al. 2016) to create a competitive advantage and achieve organizational goals (Roy et al. 2020). There are different typologies of selection criteria (Abidi et al. 2019; Liou 2012). However, the most common typology distinguishes between task-related criteria (such as market knowledge and technical know-how) and partner-related criteria (such as trust, culture) (Geringer 1991).

In the shipping industry, studies examining selection criteria focus on ports, lubricants, and stores, and third-party ship management (Othman et al. 2020; Lin et al. 2019; Seo et al. 2018). Most research focuses on the so-called traditional criteria, namely, cost, quality, and services (Aguezzoul 2014). Given that the nature of the shipping industry creates the need for collaborations and contacts with individuals and companies around the world, additional criteria emerge as essential for the selection of partners, including reputation, experience, nationality, language, education, specialization, flexibility, trust, skills, and other organizational characteristics (Fan et al. 2017; Borch and Solesvik, 2016; Asuquo et al. 2014; Progoulaki and Roe 2011; Bulut et al. 2010; Mitroussi 2004; Panayides and Cullinane 2002).

Shipping companies aim to develop long-term relationships with their collaborators, enhancing their advantage (Lin et al. 2021; Kim et al. 2020). Collaborations with manning agencies are a typical process as many shipping companies outsource crew management activity (McVeigh and MacLachlan 2019). As the human factor is a critical factor for shipping companies' smooth and efficient operation (IMO 2003), manning agencies' purpose is to find, manage, train, place, and support seafarers. Although studies examining selection criteria for manning agencies are scarce (Progoulaki and Theotokas 2007; Papademetriou et al. 2005) and need further investigation, based on the existing literature, the criteria for selecting shipping partners can be classified into five broad categories: cost, brand name/reputation, crew-related factors, company characteristics, and quality.

2.1.2 The link between organizational culture and selection criteria

Each organization's culture shapes senior management action and, consequently, determines business strategy and decision-making (O'Reilly et al. 2014). Such decisions are, for example, the choice of employees and business partners for organizations. However, to reach a choice, managers must take into account many factors (Solesvik and Westhead 2010). Studies have demonstrated that decisions, behavior, and management practices result from OC (Cameron and Quinn 2011).

Research has highlighted organizational culture's role in the selection process (Khan et al. 2018). For example, some companies tend to hire employees who match their cultural style (Barrick and Parks-Leduc 2019). There are also cases of prospective employees who tailor their profiles to better suit the target company's culture (Roulin and Krings 2020).

Organizational culture defines the way companies operate, and senior management is responsible for diffusing the values, beliefs, and attitudes of a company's culture (Schein 2010). It is considered reasonable to select executives and employees who resonate with their work environment (Cable and Graham 2000). The compatibility of a company's culture with that of their partner's is a desirable goal and is considered an essential factor for a partnership's success (Manotungvorapun and Gerdsri 2016; Leischnig et al. 2014).

Although researchers argue that companies need to consider the culture of selecting personnel or partners (Khan et al. 2018; Gattringer et al. 2017; Mitroussi 2003), we find that researchers trying to address this issue treat organizational culture as a selection criterion. However, the role of the selecting company's organizational culture on their selection criteria remains unexplored. There is no quantitative research on the relationship between OC and selection criteria to the best of our knowledge. This study tries to fill this gap, arguing that different types of organizational culture in shipping companies (different decision-making processes) can lead to different criteria for selecting business partners. Therefore, the following hypothesis is formulated:

> H1: Shipping companies use different criteria for manning agencies' selection based on their organizational culture.

2.2 The role of organizational cultural intelligence

Firms operating in the global environment, such as shipping companies, need to understand the importance of adaptation when operating in foreign countries and trading with suppliers from different countries. These companies interact with clients and partners on a global scale every day, creating relationships based on trust and commitment. In their pursuit of retaining or gaining a competitive advantage, firms must cooperate with others: firms alone, with only their own resources, cannot reach their goals (Eloranta and Turunen 2015).

Cooperation between firms and their people is not an easy task, especially when interacting with different cultures. The increase of employee immigration, the rise of multinational corporations, and the subsequent attention on cross-cultural management, as well as workforce mobility, have justified the appearance of the concept of cultural intelligence (CQ) (Crowne 2008). The emergence and exploration of the concept of cultural intelligence is a relatively recent venture. Studies have linked it to many organizational and management outcomes (Ang et al. 2007; Chao et al. 2016; Chua et al. 2012; Rockstuhl et al. 2011; Imai and Gelfand 2010; Oolders et al. 2008).

Cultural intelligence is also linked with organizational culture. According to Balogh et al. (2011), changes in a company's OC are associated with the characteristics of people who constitute an organization. The results of his study revealed that people prefer different types of OC according to their degree of CQ. Kubicek et al. (2017) supported the hypothesis that CQ is positively related to OC, and that this relationship is mediated by cross-cultural role conflict, ambiguity, and overload. Gabel-Shemueli et al. (2019) found that OC has a significant positive impact on the relationship between CQ and engagement. They suggested that OC sets the appropriate conditions for the CQ to be developed, leading to employee engagement.

Considering the multicultural environment in which organizations operate, particularly in the shipping industry, it is for the benefit of companies that senior management fosters a culture embracing diversity and develops capabilities which lead to successful decisions (Ang and Inkpen 2008), as, for example, the selection of recruitment agencies as business partners. It has also been argued that cultural intelligence is vital in selecting employees and candidates to fill positions in companies located in another country (Lee et al. 2019). With this ability, companies can evaluate employees' intentions and their broader attitude regarding their work environment. In this way, cultural intelligence helps develop the strategy to achieve the organization's goals (Remhof et al. 2014). Therefore, companies can treat cultural intelligence as a useful tool for employee selection as they can understand from the outset a candidate's ability to adapt to the operational corporate environment (Jyoti and Kour 2017).

Few studies, however, have scrutinized cultural intelligence at a higher level, that is, of the organization itself (Triandis 2006; Moon 2010). Organizational cultural intelligence (OCQ) can be defined as "an organization's capability to function effectively in culturally diverse environments. Organizational CQ will facilitate effective management of cultural diversity within the organization as well as cross-cultural environments in which the organization engages" (Lima et al. 2016, p. 13).

Ang and Inkpen (2008) conducted a study and found that culturally intelligent organizations make better decisions. They claimed that an organization's CQ facilitates its decision-making process (such as the process of offshore outsourcing). The culturally intelligent organization can understand and evaluate the international business context, and its related culture becomes imperative when managing an organization that operates globally. Consequently, it is proposed that CQ influences strategic choices and decision-making: more specifically, it influences executives' decisions on international investment and the selection of alliance partners (Mannor 2008). Nevertheless, studies have pointed out the need to examine further the role of OCQ and the factors that affect the selection process (Yitmen 2013; Moon 2010; Zutshi and Tan 2009; Triandis 2006).

According to the above, we can draw the following conclusions. According to the literature, cultural intelligence impacts many organizational outcomes, such as decision-making (Keung and Rockinson-Szapkiw 2013; Ang et al. 2007). Decision-making includes the choice to select candidates for international assignments. Studies suggest that cultural intelligence is a useful tool for selecting candidates (Lee et al. 2019; Jyoti and Kour 2017; Sharma and Hussain 2017; Rose et al. 2010), while others argue that it as a critical criterion for selecting candidates (Ali et al. 2019). Nevertheless, the exploration of cultural intelligence and its potential at the organizational level is limited (Charoensukmongkol 2016; Ang and Inkpen 2008).

The present study argues that cultural intelligence in shipping companies facilitates the organizational culture in the effective management of practices and conditions that require essential choices, such as selecting partners. This argument is based on the positive effect that cultural intelligence has on multicultural interactions and Ott's and Michailova's statement Ott and Michailova (2018) that "additional examinations using moderation and mediation are needed to understand the complex role of CQ more generally" (p. 110).

Thus, it is suggested that:

H2: Shipping companies' organizational cultural intelligence mediates the relationship between organizational culture and selecting manning agencies.

2.3 The role of firm size

Firm size in general has been found to impact senior management decisions (Vaccaro et al. 2012), firm profitability (Doğan 2013), market orientation (Pantouvakis et al. 2017), export performance (Majocchi et al. 2005), and cross-border mergers and acquisitions (Li et al. 2018). Researchers have also shown that firm size is associated with OC (Oney-Yazıcı et al. 2007; Gray et al. 2003) and CQ (Charoensukmongkol 2016).

In shipping, company size plays a significant role with various organizational results. However, empirical data in this area are limited. Audia and Greve (2006) and Greve (2011) examined the role of size in the relationship between performance and risk-taking behavior in the shipbuilding sector. According to their results, small companies take a defensive stance when performance declines, while large companies either take more risk or remain neutral. Pantouvakis et al. (2017) examined the market-orientation efficiency of different-sized companies. They concluded that an inverted-U moderation of firm size best explains the differences in market-orientation efficiency between small, medium, and large-sized companies. Lun et al. (2010) investigated the role of firm size on the vertical expansion of liner shipping companies. They concluded that larger firms could acquire and operate the vessels then outsource the management of the ships. Nevertheless, considering the above research, it is commonly assumed in the shipping industry that size influences a company's decision-making.

In addition, most studies examine the moderating effect of firm size, as it is assumed that the different sizes of firms can lead to organizations having different outcomes (Bashir and Verma 2019). Research into the association between company size, organizational culture, and cultural intelligence in the context of shipping, to the best of authors knowledge, does not exist. Based on these and suggestions for further examination of the role of firm size (Josefy et al. 2015; Das and He 2006), and given that firm size influences senior management decisions and that OC and OCQ influence decision-making, it is hypothesized that:

H3: Shipping company size moderates the relationship between organizational culture and cultural intelligence in the selection of business partners.

3 Research methodology

3.1 Measurement instruments

The scale items used to measure the examined constructs of OC and OCQ were based on existing studies (Shin and Shin 2020; Lima et al. 2016; Gambi et al. 2015). The selected measurement instruments have been used in the service sector; hence, they are generally well-suited for use in this study, which focuses on the shipping industry. However, some of the constructs are new to the context of maritime firms, and

additional refinement of the scale items was found to be necessary. Respondents were asked to evaluate from "not at all" to "absolutely" (on a seven-point Likert-type scale) how much various factors affect their company's choice to collaborate (or, if needed, to cooperate) with an external partner (for example, a manning agency).

OC was assessed using a shortened version, a 20-item scale, of the dimensions of the competing value framework instrument of organizational culture used by Gambi et al. (2015). The instrument consists of four cultural profiles: hierarchical, group, rational, and developmental. Each dimension is composed of five items.

OCQ was measured using a 20-item scale that integrates five factors: leadership behavior, adaptability, training, intentionality, and inclusion (Lima et al. 2016). It is considered the first attempt to establish an instrument with which to measure organizational cultural intelligence. Leadership behavior and adaptability consisted of four items each, training consisted of five items, and intentionality and inclusion consisted of three items each.

Since there are no commonly accepted criteria that companies use in order to select external partners, this study referred to the general literature on partner selection. The criteria that were used to provide items for examination encompass a wide range of categories—for example, reputation, cost, and quality—which have also been pointed out as important dimensions in the selection process by the companies that participated in the questionnaire's pilot phase.

According to the literature, an organization's size can be measured in several ways, but the most common method is by number of employees (Massaro et al. 2016). However, a shipping industry company's size can also be measured either by the number of vessels a company owns (Theotokas and Progoulaki 2007) or subjectively, following a manager's or expert's opinions, as their perception can provide a more accurate description of their company (Pantouvakis and Vlachos 2020; Pantouvakis et al. 2017).

In this study, firm size was classified into three categories: small, medium, and large/ very large companies, based on previous shipping industry studies that also used this classification (Pantouvakis and Vlachos 2020; Pantouvakis et al. 2017).

Table 1 below summarizes the constructs under examination and the hypotheses.

3.2 Research design

A self-administered questionnaire was used to collect data on organization members' perceptions of the constructs of OC, OCQ, and selection criteria. The unit of analysis in this study was the organization, for each organization has a unique set of cultural, relational, and managerial characteristics. Thus, we addressed companies' senior management, as they represent their organizations in every business transaction and, additionally, are indicative of the organization's effective functioning because they play an important role in decision-making (Yamak et al. 2014; Hambrick and Mason 1984).

The measurement instruments (based on pretested and pre-validated instruments as already discussed) were further validated in a pilot study where ten maritime executives who were asked to review the questionnaire for readability, ambiguity, and completeness. The companies were randomly selected, and the questionnaire, originally developed in English, was translated into Greek and back-translated into English by two

Table 1 Summary of the constructs under examination and the hypotheses

Construct/hypothesis	Defined/suggested by	Measurement instrument/suggestion
Organizational culture (OC)	Schein (1996), Cameron and Quinn (2011)	2- item scale as per Gambi et al. (2015)
Organizational Cultural intelligence (OCQ)	Ang and Inkpen (2008), Triandis (2006), Moon (2010), Lima et al. (2016)	20-item scale as per Lima et al. (2016)
Selection criteria (SC)	Solesvik and Westhead (2010), Wetzstein et al. (2019)	Adaptation from Solesvik and Westhead (2010), Aguezzoul (2014), Panayides and Cullinane (2002)
OC ≥ SC	Gattringer et al. (2017)	Need of investigation of company's culture on business partner selection
OC ≥ OCQ ≥ SC	Yitmen (2013), Zutshi and Tan (2009)	Need for further research on OCQ, especially on cultural fit, trust, relationships; Factors such as corporate culture, management structure, influence partners' selection
Size	Josefy et al. (2015), Das and He (2006)	Reviewed studies on firm size and suggest more studies on the role of firm size; Examined how entrepreneurial firms select firms to form alliances and suggest to examine the role of firm size on partner selection criteria

native speakers to avoid any linguistic issues and ensure the clarity and comprehensibility of the questions.

Following the pilot phase, market professionals made suggestions and recommendations to the wordings and expressions, and those that were suitable and supported by the majority were incorporated into the questionnaire. Upon completion of the adaptation process, another back-and-forth translation to and from English was performed by two professors (one of whom was a native speaker) and two bilingual market professionals, who opted to participate in the process so as to avoid any misinterpretations or misunderstandings.

For this study, from a list of approximately 1000 Greek companies who owned or managed vessels operating in Piraeus, Greece, a representative set of 445 were approached. Companies' executives were first contacted via telephone and email to request their participation. For those who agreed to participate, trained interviewers were sent to their premises to ensure that the questionnaire was completed properly. A total of 246 usable questionnaires were collected. The response rate (51.8%) was considered more than sufficient, as well as adequately representative of the total population, given the secretive nature of the shipping industry, the length of the questionnaire, and the high status of the respondents. All assurances for total confidentiality and anonymity were provided to the respondents in writing.

Respondents mainly included shipping companies' crew and operations managers, as shown from the following analysis: crew managers (58.13%), operations managers (13.01%), DPA (6.10%), general managers (4.88%), and executives in other positions (17.89%). Of the 246 respondents, 188 were male and 58 female. Half of the companies operated in the dry bulk sector, 13.01% in liquid bulk, 3.66% in the containership industry, and 33.33% in a combination of sectors.

3.3 Data analysis

For the analysis of the gathered data, the statistical packages of SPSS 25 and AMOS were used. The SPSS statistical package was used due to its popularity in academic and business circles, as it allows a wide range of analyses. Exploratory factor analysis (EFA) was employed on selection criteria, via SPSS 25, in order to validate the scale of

Table 2 Constructs resulting from CFA

Model fit	Organizational culture	Organizational cultural intelligence	Selection criteria
Cronbach's alpha	0.840	0.900	0.906
Chi-square	110.625	297.732	315.166
p.	.000	.000	.000
Chi-square/df	1.875	2.461	2.033
GFI	.936	.880	.889
AGFI	.901	.831	.849
NFI	.881	.869	.870
CFI	.939	.916	.928
RMSEA	.060	.077	.065

the items, which formed the factors that would best represent our data. Since there is no commonly accepted measurement instrument for selection criteria, a usual way to reveal the structure and dimensions of a construct (such as selection criteria) is EFA (Hair et al. 2010). Only items with factor loadings over 0.50 were included. Subsequently, confirmatory factor analysis (CFA) was conducted using AMOS to confirm the resulting structure further. CFA was also used for the OC and OCQ constructs. These constructs (OC and OCQ) are based on existing theories and have been tested and validated in different contexts as measurement instruments. Thus, according to Hair et al. (2010), CFA was an acceptable way to test their operationalization. Table 2 provides the results from the CFA.

Cronbach's alpha was applied to test the reliability of the data. The alpha values were 0.906 for selection criteria, 0.840 for OC, and 0.903 for OCQ. To test the impact and significant relationship of our independent variable to the dependent variable (selection criteria), we ran multiple regression analyses using SPSS 25. Multicollinearity was also examined through tolerance and VIF indices (Midi et al. 2010). In our study, there was no evidence of multicollinearity since the VIF indices were below the value of ten.

4 Results

4.1 Test of hypothesis 1

Following the general literature on criteria for partner selection and outsourcing (Aguezzoul 2014; Solesvik and Westhead 2010), selection criteria were grouped into five broad categories: cost/budget, brand name/reputation, crew characteristics, company characteristics, and quality. Since there is no commonly used method for examining specific selection criteria of business partners from companies, an EFA was first conducted with Varimax rotation in order to test the factorial structures of our construct selection criteria.

According to the EFA results, the quality dimension of the selection construct was revealed to be important, and consisted of seven items. Crew, brand name/reputation, and company characteristics of the selection construct were explained through five, eight, and two items, respectively. However, according to the loadings of the items, the factors were renamed for ease of understanding. Thus, the EFA results furnished the factor of crew characteristics with three items, and recruitment with two items, corresponding to the crew dimension of the selection construct. Reputation had four items, recommendation had two, and personal relationships had two as well, corresponding to the brand name/reputation dimension of the selection construct. Finally, two items corresponded to the company characteristic dimension of the selection construct.

To further validate the structure emanating from the EFA, CFA was conducted, the results of which confirmed the structure for selection criteria, providing six selection criteria that shipping companies use when selecting a business partner. Quality consisted of seven items, examples of which are the quality and the characteristics of the recommended crew, the manning agency's overall performance according to our company's expectations, and the accuracy of service, was provided. Reputation consisted of four items, examples of which are the reputation of the manning agency

in the market, and the reputation and characteristics of the director/owner of the manning agency. Crew characteristics consisted of three items, such as the timespan (in years) the crew worked for reliable companies. Recruitment, recommendation, and crew management consisted of two items each. Examples of these items are the capability of manning agency to suggest the recruitment of totally new crew nationalities for ratings, the recommendations for the manning agency from friends/acquaintances, and the web monitoring capability of crew data amendments. However, following the CFA output, one factor—personal relationships—was eliminated from our further analysis due to insignificant loadings. The model indicated a good fit (chi-square 315.166, $p < 0.000$, chi-square/df 2.033, GFI 0.889, AGFI 0.849, NFI 0.870, CFI 0.928, RMSEA 0.065). Based on the above, the criteria that shipping companies use to select manning agencies are quality, reputation, recruitment, recommendation, crew management, and crew characteristics.

Regression analysis was employed in order to investigate the relationships between organizational culture and selection criteria (Table 3). For regression analysis, the summated scales of the constructs were used based on their structure.

A simple linear regression was carried out to test whether OC had an impact on selection criteria. The results indicate that the model explained 29.5% of the variance.

According to the above results, OC has a positive and significant impact on selection criteria ($b = 0.546$, $p < 0.000$). These results support our hypothesis that shipping companies' different core values, beliefs, behaviors, and practices affect the criteria used to select the manning agencies they partner with.

To further examine the impact of organizational culture types on selection criteria, we conducted a regression analysis. According to the results below, one can notice that all the organizational culture types have a significant and positive impact on partners' selection criteria (Fig. 1). Organizational culture dimensions contribute almost equally to the selection process, although the significance of every type of culture is different. Hierarchical and rational organizational culture dimensions have the strongest impact ($b = 0.213$, sig. 0.001 and $b = 0.205$, sig. 0.005, respectively).

To examine the relationship between the different types of culture and selection criteria highlighted by the present study, we performed additional tests (see Table 4).

The results, based on the above table, are as follows: companies with a hierarchical culture emphasized the criteria of quality, reputation, characteristics, and crew management. Companies that have a group culture chose their partners based on quality. Companies with a rational culture also chose the criteria of reputation, characteristics, and management of the crews. At the same time, the development type culture chose partners based on reputation and crew management.

Table 3 Regression analysis organizational culture—selection criteria

Independent variable: organizational culture	Adj R^2	Dependent variable
.546 (sig. .000)	.295	Selection criteria

Fig. 1 Impact of organizational culture dimensions on selection criteria

4.2 Test of hypothesis 2

To test hypothesis 2, regression analysis was implemented to investigate whether OCQ mediates the relationship between OC and selection criteria, following Barron and Kenny (1986). These steps are as follows: the independent variable affects the dependent, the independent variable affects the mediator, and both the independent variable and the mediator affect the dependent variable.

The results shown in Fig. 2 confirm the three conditions that must be met in order to demonstrate mediation and support our hypothesis. OC had a strong and positive effect on selection criteria ($b = 546, p < 0.000$, Adj $R^2 = 0.295$). It also had a significant effect on OCQ ($b = 0.574, p < 0.000$, Adj $R^2 = 0.327$). Finally, the mediator (OCQ) significantly influenced selection criteria ($b = 0.488, p < 0.000$, Adj $R^2 = 0.235$).

Upon examining the influence that both OC and OCQ have on selection criteria, it was revealed that OC has a less strong influence on selection criteria ($b = 0.396, p < 0.000$ and $b = 0.260, p < 0.000$, and Adj $R^2 = 0.338$, respectively). Therefore, the hypothesis that OCQ partially mediates the relationship between OC and selection criteria was supported.

Using the Barron and Kenny mediation process again in different types of culture also partially reflects the mediation. However, it is observed that the models of hierarchical and rational culture explained a more significant percentage of the variance (30.4% and 30.2%, respectively) (see Fig. 3).

Table 4 Relationship between organizational culture types and selection criteria

| OC types/ criteria	Quality Adj R^2 = .193	Reputation Adj R^2 = .236	Recruitment Adj R^2 = .015	Recommendation Adj R^2 = .022	Crew characteristics Adj R^2 = .153	Crew management Adj R^2 = .174
Hierarchical	.233 (sig. 001)**	.145 (sig. 026)*	.033 (ns. 658)	.068 (ns. 351)	.196 (sig. 004)*	.138 (sig. 042)*
Group	.156 (sig. 029)*	.114 (ns. 099)	.145 (ns. 066)	.014 (ns. 853)	.049 (ns. 498)	.040 (ns. 580)
Rational	.134 (ns. 084)	.199 (sig. 009)*	− .045 (ns. 596)	.134 (ns. 117)	.251 (sig. 002)*	.161 (sig. 041)*
Developmental	.059 (ns. 396)	.185 (sig. 007)*	.067 (ns. 386)	.015 (ns. 841)	− .012 (ns. 869)	.213 (sig. 003)*
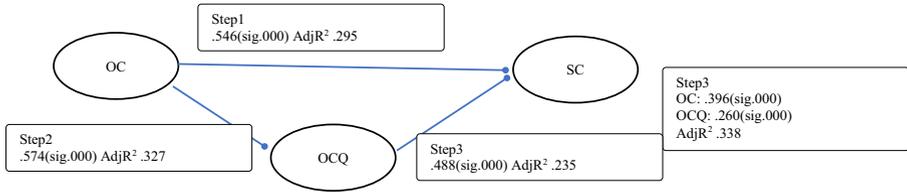
Fig. 2 Mediation model

4.3 Test of hypothesis 3

To test hypothesis 3, multiple regression analysis was used to examine the moderating role of firm size on the relationship between OCQ, OC, and selection criteria. Statistics for the categorization of firm size show that, of the 246 companies that participated in the study, 76 were considered small, 110 were medium, and 60 as large/very large.

According to the results of Fig. 4 above, OCQ facilitates the selection of a manning agency as a business partner for small and medium companies. The size of these companies may play a significant role in the pursuit of gaining a competitive advantage.
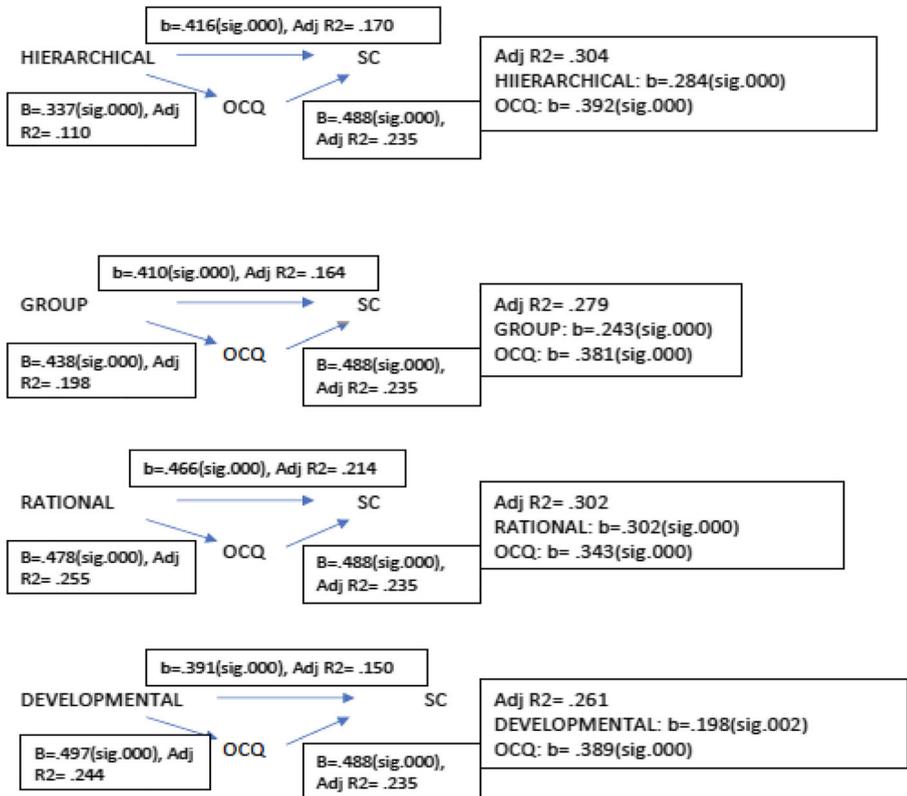

Fig. 3 Mediation model

The three steps of the mediation process in small and medium companies explicitly confirmed our model. Following the Barron and Kenny (1986), the first step for small companies presented a strong, positive relationship between OC and the criteria used for selecting a partner ($b = 599$, $p < 0.000$, Adj $R^2 = 0.350$). The relationship was also significant for medium-sized companies ($b = 0.480$, $p < 0.000$, Adj $R^2 = 0.223$).

Per the second step of the mediation process, the OC of small companies had a strong impact on the way that companies manage culturally diverse environments ($b = 0.680$, $p < 0.000$, Adj $R^2 = 0.286$). Medium-sized companies also presented a positive relationship between OC and OCQ ($b = 0.541$, $p < 0.000$, Adj $R^2 = 0.286$). The mediator (OCQ) has a significant impact on the dependent variable of selection criteria for both small- and medium-sized companies ($b = 0.559$, $p < 0.000$, Adj $R^2 = 0.303$ and $b = 0.495$, $p < 0.000$, Adj $R^2 = 0.238$, respectively).

Finally, the third step confirmed a partial mediation of OCQ on organizational culture and selection criteria for both small- and medium-sized companies. For small companies, the impact of OC and OCQ on selection criteria is significant ($b = 0.411$, $p < 0.000$ and $b = 0.310$, $p < 0.007$, respectively, with Adj $R^2 = 0.263$). For medium-sized companies, OC and
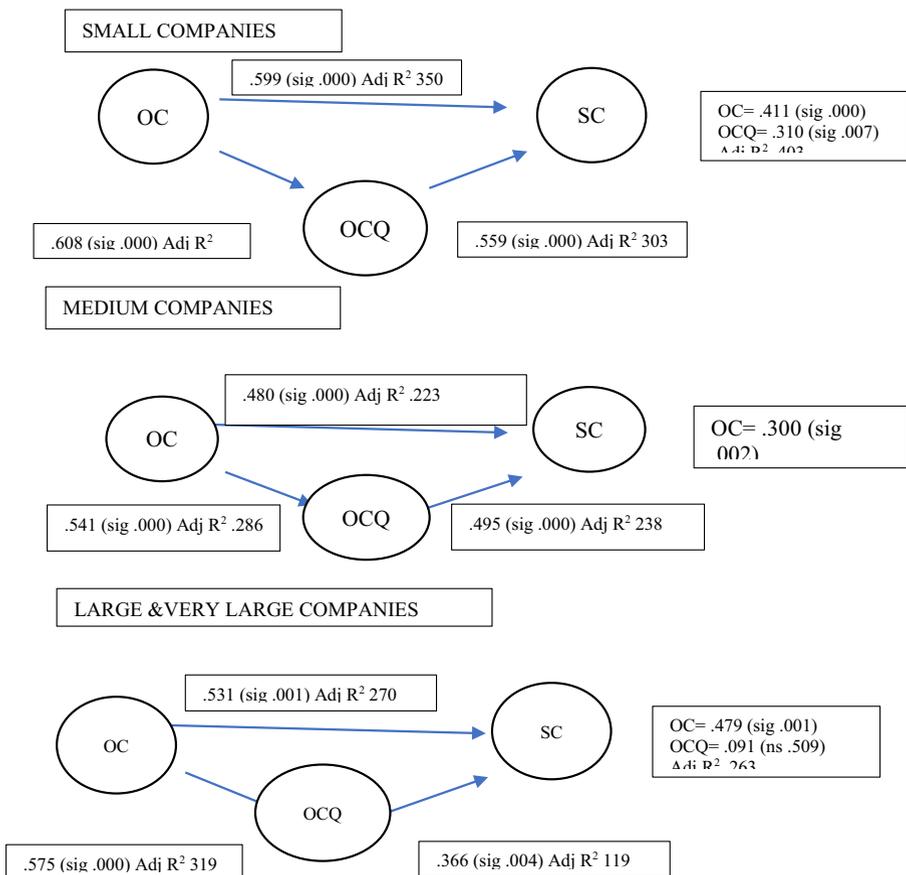

Fig. 4 Moderation model

OCQ impacted the procedure for selecting manning agencies as external partners ($b = 0.300$, $p < 0.002$ and $b = 0.333$, $p < 0.001$, respectively, with Adj $R^2 = 0.296$).

As for large/very large shipping companies, the above results showed a strong relationship between OC and selection criteria in the first step ($b = 0.532$, $p < 0.000$, Adj $R^2 = 0.270$), and OC strongly impacted the mediator ($b = 0.575$, $p < 0.000$, Adj $R^2 = 0.319$) in the second step. In addition, the mediator had a strong influence on the dependent variable ($b = 366$, $p < 0.004$, Adj $R^2 = 0.119$). However, the third step did not support mediation, as OCQ did not have a significant effect when selecting a manning agency as an external partner.

As is apparent, the model small and medium companies are confirmed. However, the results for small companies reveal a stronger relationship than for medium-sized ones. OC strongly affects selection criteria and OCQ in shipping companies of all sizes. However, some differences were observed.

Small companies need to develop skills that will help them meet the demands of the shipping industry in order to be able to grow and operate efficiently. Small shipping companies tend to outsource their crew management activity as a result of various factors, such as a lack of management knowledge and a lack of experienced staff (Theotokas and Progoulaki 2007). Therefore, the selection of manning agencies by these companies and the establishment of trusting relationships with them lies in the ability of small shipping companies to develop CQ, that is, the ability to manage the diversity in the perceptions, attitudes, and cultures of both the companies they choose as external partners and the crews they offer.

Corporate culture creates common practices and behaviors in order for employees to pursue the company's goals, which, in turn, creates the conditions for CQ to develop. Small companies in general can be characterized by innovation, change, risk, and efforts to succeed. If any of these characteristics are lacking, then, in times of crisis, they are more likely to fail. The above applies to medium-sized shipping companies too, to a lesser extent, as the above results confirm.

Conversely, for large/very large shipping companies, CQ does not seem to be helpful when it comes to selecting manning agencies. This may be for several reasons. It could be that a degree of CQ is already present, as many large and very large shipping companies have created their own pool of seafarers over the years. This would mean training personnel not only according to international standards but also according to the requirements of the company. Hence, these shipping companies are more confident about their crews' qualifications. Moreover, such employment relationships have a long-term orientation, which leads to greater commitment, loyalty, and trust (Pantouvakis and Karakasnaki 2018). The same can apply to the relationships that the shipping companies may have developed with manning agencies. To achieve this among multinational crews means that shipping companies have established practices that embrace diversity and have acquired the knowledge to manage diverse personnel. Another reason is that many of the large and very large shipping companies have set up their own crew recruitment offices, so that, most of the time, an external partner manning agent will only be selected to provide emergency cover.

5 Conclusions

The goals of the current study were twofold. The first was to examine whether OC, through OCQ, influences how manning agencies are selected as business partners. The

second was to investigate whether the above assumptions change depending on the size of the companies.

Selection criteria are essential when choosing business partners. Regarding the shipping industry, previous studies have been limited to the selection of third-party ship management, liner shipping, and lubricants and stores (Seo et al. 2018; Hsu et al. 2016). The present study provided additional knowledge about the selection processes used by shipping companies to choose recruitment agencies to be business partners. This study explored how the OC of companies impacts external partners' selection, acknowledging the importance of OC in business operations and decision-making.

OC's role was well supported in the literature because it shapes behaviors and attitudes on collaboration with partners (Murphy et al. 2019; Pantouvakis and Bouranta 2017; Ashill and Jobber 2014; O'Reilly et al. 2014; Schein 2010). Following the suggestion made by Gattringer et al. (2017) to investigate the effect of different company compositions on partner selection, this study verifies the impact of OC on business partner selection empirically in the shipping industry context.

This research shows that companies characterized by group culture place more emphasis on their partners' quality characteristics. This result is in line with previous studies supporting group culture's role on quality (Karakasnaki et al. 2019; Willar et al. 2016; Prajogo and McDermott 2011). However, shipping companies that are characterized by the hierarchical and rational types of culture emphasize criteria more. This research's findings are consistent with Besson (2018), who argued that external and internal factors, such as OC, impact the desire and motives for collaboration.

Additionally, this study found that OCQ is an essential ability and can be a decisive factor in companies' selection of business partners. Running regression analysis extracted one of the most significant findings from this study that OCQ can become an essential asset in the selection process. Additional regression analysis revealed that OCQ mediates the relationship between OC and selection criteria. The mediating effect of OCQ on this relationship is a suggested topic of further research. It improves decision-making and enhances the organizations' managerial capabilities in diverse cultural contexts (Yitmen 2013; Ang and Inkpen 2008; Ang et al. 2007).

Finally, the impact of company size was highlighted, confirming the significance of organizational characteristics in managerial decisions. This study shows that the mediation process has different results according to the size of the companies. As the importance of the impact of firm size on many organizational outcomes is generally accepted (Bashir and Verma 2019; Pantouvakis et al. 2017; Charoensukmongkol 2016; Mitroussi 2003), this study responds to the call for further examination of the role played by firm size (Josefy et al. 2015; Das and He 2006).

According to the research results, the group type of culture seems to characterize the companies independently of their size. However, there are differences in the choice of criteria based on the companies' culture and size. Small companies with a hierarchical type of culture emphasize the requirements of quality, reputation, and characteristics of the crew, while companies with a rational type of culture emphasize crew reputation and management. Medium-sized companies with a hierarchical or rational culture emphasize the criteria of reputation, manning, recommendations, crew management, and crew characteristics. Large/ very large companies with a hierarchical or group type of culture choose a partner based on crew characteristics. Large/very large companies with a rational culture type choose based on quality, while those with a developmental type choose partners based on reputation.

What stands out is that even though the respondents of the survey highlighted the group type of culture as dominant in their companies, the above results prove that companies do not have to be characterized by a single type of culture (Prajogo and McDermott 2011). Finally, cultural intelligence proves to be a facilitating factor for small- and medium-sized companies but not for large ones, regardless of their type of culture (see Appendix).

5.1 Managerial implications

This study provides useful implications for the managers and owners of shipping companies and their collaborators. This study reveals the criteria that shipping companies emphasize in selecting manning agencies based on the shipping companies' culture type. As OC is a cornerstone for the operation of businesses, employees and management should place more emphasis on understanding the OC, as it can lead to enhanced functionality and decision-making.

Managers can understand or revise the criteria by which they select partners to better adapt to their company's needs and culture. The criteria that companies use to select external partners are derived from the corporate culture that characterizes each company. Therefore, companies should pursue the way managers convey company goals, beliefs, and perceptions to their employees to improve organizational outcomes.

Given the multicultural nature of the shipping industry, organizational cultural intelligence can prove to be a useful tool in improving companies' relationships with their collaborators. The ability of shipping companies to conceptualize their partners' different perceptions and cultures, in this case the manning agencies and, therefore, individual seafarers, confers a great competitive advantage, while building strong foundations for their relationships. Additionally, culturally intelligent shipping companies can manage diversity to their advantage, interact effectively with their partners, and exploit resources while increasing their flexibility to operate in diverse environments. Consequently, concerning the relationship between shipping companies and their external partners, such as manning agencies, CQ can lead to effective communication, reduce misunderstandings, and resolve issues. Regardless of the company's size, managers need to support a continuing training system and encourage their employees to evolve by recognizing, perceiving, and understanding the diversity of their collaborators to create a positive interaction that will lead to beneficial partnerships.

5.2 Limitations and future research

Although this study provided some practical contributions, the authors believe further research needs to be done in order to support the generalizability of the results. First, this study focused on Greek shipping companies that manage or own vessels. Although the global nature of the maritime industry seems to argue for the benefit of these results, it would be useful to investigate how shipping companies operating in other countries select business partners and manage diversity. Second, the study examined differences in partner selection criteria based on companies' OC and OCQ. It would be interesting to identify other organizational characteristics (such as industry type and age) that could be used to investigate the relationship between these constructs. Finally, this study examined how shipping companies select business partners with regard to shipping companies' culture and cultural intelligence—future research could explore the perspectives of business partners.

Furthermore, future research could examine the criteria used by organizations in other sectors to select partners considering their organizational culture and cultural intelligence.

Appendix

Items used in the questionnaire (7-point Likert-type scales, 1 = never to 7 = always for organizational culture and organizational cultural intelligence, 1 = not at all to 7 = absolutely for selection criteria). All items were measured using the Likert scale

Table 5 Organizational culture

Hierarchical culture
 Formalized procedures generally govern what people do.
 We emphasize efficiency and control to reach predictable performance results.
 Reliable delivery, smooth scheduling, and low-cost production are the main focus.
 Our management style prioritizes conformity, predictability, and stability.
 Even small matters have to be referred to someone higher up for a final answer
Group culture
 The development of human resources and concern about employees are highly valued.
 Our employees are encouraged to work as a team, and exchange opinions, experiences, and ideas.
 Employees can openly discuss their opinions and ideas with someone higher up.
 Employees are encouraged to take decisions.
 Our management style is characterized by teamwork, consensus, and participation.
Rational culture
 Success is defined on the basis of winning and leading in the marketplace.
 Our reward system encourages reaching planed goals.
 We are result-oriented; people are very competitive and achievement-oriented.
 Objectives and targets are clearly defined.
 Our management style is characterized by hard driving competitiveness, high demands, and individual achievement.
Developmental culture
 We emphasize prospecting for opportunities and creating new challenges.
 We make an effort to anticipate the potential aspects of new practices and technologies.
 We are a very dynamic entrepreneurial place, which leads people to taking risks.
 Our management style is characterized by individual risk-taking, innovation, freedom, and uniqueness.
 We define success on the basis of innovation and having newest services.

Table 6 Organizational cultural intelligence

Leadership behavior

Ship's top management modifies its nonverbal behavior (e.g., gestures) when a cross-cultural interaction requires it.

Ship's top management is confident in handling the stress of working within new cultures.

Ship's top management modifies personal verbal behaviors (words, tone, and style) when a cross-cultural interaction requires it.

Ship's top management checks accuracy of cultural knowledge when interacting with people from different backgrounds.

Adaptability

Ship's top management has extensive international experience.

Ship's top management is aware of cultural differences—cultural values and religious beliefs—when interacting with people of different cultural backgrounds.

Ship's top management is confident working with people of other cultures

The organization adapts its ways of operations when operating in differing cultural environments

Training

The organization offers training to facilitate cultural learning.

The organization trains ship's top management on how to manage conflicts arising among people (crew) from different countries.

The organization engages in cross-cultural learning through consistently reviewing its process and practices in order to learn and adapt.

The organization has processes in place to facilitate cultural learning.

The organization is committed to producing top management for the ships who is bicultural or multicultural in its skill set.

Intentionality

The organization asks ship's top management for feedback after communicating with people from different cultures.

The organization intentionally monitors ship's top management interactions with people from different cultures.

The organization insists on avoiding expressions or words that can be considered offensive to people of different cultures, ethnicity, religion, gender etc.

Inclusion

The organization is inclusive. It gives equal opportunity to employees regardless of gender, ethnicity, and so on.

The organization strategically makes use of the diverse voices within the organization.

The organization understands the dynamics of diversity and inclusion.

Table 7 Selection criteria

Costs/budget

 The overall cost of service provided (commissions, crew costs etc.)

 The commission charged from the manning agency

 The total (absolute) cost of employed seafarers

 The relative cost of the service provided in relation to competition

Brand name/reputation of manning agency

 The reputation the manning agency has on the market

 The reputation and characteristics of the Director/Owner of the manning agency

 The reputation and characteristics of Directors and operators of the manning agency

 The way the manning agency presents its services (preselection/recruitment processes prior the selection of the manning agency)

 The recommendations we get for the manning agency from friends/acquaintances

 The recommendations we get for the manning agency from other market professionals

 The list of shipping companies that cooperate with the manning agency

Personal relationship with the owner of the manning agency

Crew

 Crew availability from MA in order to meet our company's usual needs

 Crew availability from MA in order to meet our company's needs in unusual or extreme cases

 The quality and the characteristics of the recommended crew

 The quality of the training of the recommended crew

 The offered crew' experience on a specific type of vessel

 The time (years) the crew works for reliable companies

 The religion of the recommended crew

 The capability of the MA to control the behavior of the crew, especially in case something goes wrong

 The common knowledge/notion on the way the recommended crew is believed to behave (e.g., drinking, shouting)

 The skills of the offered crew to handle difficult or extraordinary situations

 The crew evaluation after disembarkation

Company (characteristics)

 The size of the manning agency

 The crew is managed directly from countries of origin (e.g., Philippines)

 The quality certificates of the manning agency (MA)

 The number and types of nationalities of the seafarers provided by the manning agency (MA) (Filipinos, Ukrainian, Vietnamese)

 The management and the organization of the MA

 The specific knowledge from MA of the local markets when recruiting crew

 The skills of the crew operators

 The way the MA respond to possible problems should they appear

 The training centers provided/owned by the manning agency

 The web monitoring capability of crew data amendments

 The communication style' compatibility between the manning agency (MA) and our company

 The forming of personal relationships between the manning agency (MA) and our company

Quality

 The courtesy of the personnel of the MA

Table 7 (continued)

The capability of the MA to understand and correctly respond to our company's needs

The time required from the MA to respond to our requests

The accuracy in type of response

The trust that the MA will deliver as promised

The reliability of the services provided

The capability of the MA to handle our company's even unusual or extraordinary needs

The MA's overall performance according to our company's expectations

Table 8 Mean scores of organizational culture types per companies' size

OC	Small	Medium	Large and very large
Hierarchical	18.28	17.96	18.60
Group	25.01	24.90	25.45
Rational	17.00	16.55	17.33
Developmental	15.59	15.99	17.28

Table 9 Moderation model of the role of firm size on the relationship between types of organizational culture, organizational cultural intelligence, and selection criteria

	Small		Medium		Large and very large	
Hierarchical ≥ SC	.575 (sig. 000)	Adj R^2 .321	.307 (sig. 001)	Adj R^2 .086	.340 (sig. 008)	Adj R^2 .101
Hierarchical ≥ OCQ	.404 (sig. 000)	Adj R^2 .152	.253 (sig. 008)	Adj R^2 .055	.381 (sig. 003)	Adj R^2 .130
OCQ ≥ SC	.559 (sig. 000)	Adj R^2 .303	.495 (sig. 000)	Adj R^2 .238	.366 (sig. 004)	Adj R^2 .119
Hierarchical, OCQ ≥ SC	.417 (sig. 000)	Adj R^2 .443	.194 (sig. 024)	Adj R^2 .267	.235 (ns. 075)	Adj R^2 .153
	.391 (sig. 000)		.446 (sig. 000)		.277 (sig. 037)	
Group ≥ SC	.336 (sig. 003)	Adj R^2 .101	.458 (sig. 000)	Adj R^2 .202	.397 (sig. 002)	Adj R^2 .143
Group ≥ OCQ	.404 (sig. 000)	Adj R2 .152	.464 (sig. 000)	Adj R^2 .208	.428 (sig. 001)	Adj R^2 .169
OCQ ≥ SC	.559 (sig. 000)	Adj R^2 .303	.495 (sig. 000)	Adj R^2 .238	.366 (sig. 004)	Adj R^2 .119
Group, OCQ ≥ SC	.132 (ns. 214)	Adj R^2 .309	.290 (sig. 002)	Adj R^2 .298	.294 (sig. 028)	Adj R^2 .177
	.506 (sig. 000)		.361 (sig. 000)		.240 (ns. 071)	
Rational ≥ SC	.553 (sig. 003)	Adj R^2 .296	.408 (sig. 000)	Adj R^2 .158	.428 (sig. 001)	Adj R^2 .169
Rational ≥OCQ	.487 (sig. 000)	Adj R^2 .227	.473 (sig. 000)	Adj R^2 .217	.464 (sig. 001)	Adj R^2 .202
OCQ ≥ SC	.559 (sig. 000)	Adj R2 .303	.495 (sig. 000)	Adj R^2 .238	.366 (sig. 004)	Adj R^2 .119
Rational, OCQ ≥ SC	.367 (sig. 001)	Adj R^2 .416	.223 (sig. 018)	Adj R^2 .271	.328 (sig. 016)	Adj R^2 .191
	.380 (sig. 000)		.390 (sig. 000)		.214 (ns. 111)	
Developmental ≥ SC	.415 (sig. 000)	Adj R^2 .161	.263 (sig. 006)	Adj R^2 .060	.513 (sig. 000)	Adj R^2 .251
Developmental ≥ OCQ	.557 (sig. 000)	Adj R^2 .301	.418 (sig. 000)	Adj R^2 .167	.546 (sig. 000)	Adj R^2 .286
OCQ ≥ SC	.559 (sig. 000)	Adj R^2 .303	.495 (sig. 000)	Adj R^2 .238	.366 (sig. 004)	Adj R^2 .119
Developmental, OCQ ≥ SC	.150 (ns. 198)	Adj R^2 .310	.067 (ns. 467)	Adj R^2 .235	.446 (sig. 002)	Adj R^2 .248
	.476 (sig. 000)		.467 (sig. 000)		.123 (ns. 367)	

Declarations

Conflict of interest   The authors declare no competing interests.

References

Abidi H, Dullaert W, De Leeuw S, Lysko D, Klumpp M (2019) Strategic partner evaluation criteria for logistics service provider networks. Int J Logist Manag 30:438–466

Aguezzoul A (2014) Third-party logistics selection problem: a literature review on criteria and methods. Omega 49:69–78

Ali I, Ali M, Leal-Rodríguez AL, Albort-Morant G (2019) The role of knowledge spillovers and cultural intelligence in enhancing expatriate employees' individual and team creativity. J Bus Res 101:561–573

Ang S, Inkpen AC (2008) Cultural intelligence and offshore outsourcing success: a framework of firm-level intercultural capability. Decis Sci 39(3):337–358

Ang S, Van Dyne L, Koh C, Ng KY, Templer KJ, Tay C, Chandrasekar NA (2007) Cultural intelligence: its measurement and effects on cultural judgment and decision-making, cultural adaptation and task performance. Manag Organ Rev 3(3):335–371

Ashill NJ, Jobber D (2014) The effects of the external environment on marketing decision-maker uncertainty. J Mark Manag 30(3-4):268–294

Asuquo M, Coward I, Yang Z (2014) Modeling selection of third party ship management services. Case Stud Transp Policy 2(1):28–35

Audia PG, Greve HR (2006) Less likely to fail: low performance, firm size, and factory expansion in the shipbuilding industry. Manag Sci 52(1):83–94

Alvesson M (1985) On focus in cultural studies of organizations. Scandinavian Journal of Management Studies 2:105–120

Balogh A, Gaál Z, Szabó L (2011) Relationship between organizational culture and cultural intelligence. Management & Marketing Challenges for the Knowledge 6(1):95

Barrick MR, Parks-Leduc L (2019) Selection for fit. Annu Rev Organ Psych Organ Behav 6:171–193

Barron R, Kenny D (1986) The moderator-mediator distinction in social psychology: conceptual, strategic and statistical considerations. J Pers Soc Psychol 51:1171–1182

Bashir M, Verma R (2019) Internal factors and consequences of business model innovation. Manag Decis 57(1):262–290

Besson E (2018) Service business markets: relationship development in the maritime industry. J Bus Bus Mark 25(4):273–297

Borch OJ, Solesvik MZ (2016) Partner selection versus partner attraction in R&D strategic alliances: the case of the Norwegian shipping industry. Int J Technol Mark 11(4):421–439

Bravo R, Matute J, Pina JM (2016) Corporate identity management in the banking sector: effects on employees' identification, identity attractiveness, and job satisfaction. Serv Bus 10(4):687–714

Bruni-Bossio V (2018) Corporate board decision-making: applying collective versus personal values. J Bus Strateg 39(1):15–23

Bulut E, Duru O, Yoshida S (2010) Multi-attribute decision making for crew nationality pattern selection in the shipping business: an empirical study for Turkish shipping case. The Asian Journal of Shipping and Logistics 26(1):139–152

Cable DM, Graham ME (2000) The determinants of job seekers' reputation perceptions. J Organ Behav 21(8): 929–947

Cameron KS, Quinn RE (2011) *Diagnosing and changing organizational culture: based on the competing values framework*. John Wiley and Sons

Carlos Pinho J, Paula Rodrigues A, Dibb S (2014) The role of corporate culture, market orientation and organisational commitment in organizational performance: the case of non-profit organisations. J Manag Dev 33(4):374–398

Casidy R, Nyadzayo M (2019) Drivers and outcomes of relationship quality with professional service firms: an SME owner-manager perspective. Ind Mark Manag 78:27–42

Chao M, Takeuchi R, Farh JL (2016) Enhancing cultural intelligence: the roles of implicit culture beliefs and adjustment. Pers Psychol 70(1):257–292

Charoensukmongkol P (2016) Cultural intelligence and export performance of small and medium enterprises in Thailand: mediating roles of organizational capabilities. Int Small Bus J *34*(1):105–122

Chen Z, Huang S, Liu C, Min M, Zhou L (2018) Fit between Organizational Culture and Innovation Strategy: Implications for Innovation Performance. Sustainability 10:3378

Cho I, Kim JK, Park H, Cho NM (2013) The relationship between organizational culture and service quality through organisational learning framework. Total Qual Manag Bus Excell 24(7-8):753–768

Chua RYJ, Morris MW, Mor S (2012) Collaborating across cultures: Cultural metacognition and affect-based trust in creative collaboration. Organ Behav Hum Decis Process 118:116–131

Crowne KA (2008) What leads to cultural intelligence? Business horizons 51(5):391–399

Das TK, He IY (2006) Entrepreneurial firms in search of established partners: review and recommendations. Int J Entrep Behav Res 12(3):114–143

Denison D, Spreitzer GM (1991) Organizational culture and organizational development: a competing values approach. Res Organ Chang Dev 5:1–21

Doğan M (2013) Does firm size affect the firm profitability? Evidence from Turkey. Research Journal of Finance and Accounting 4(4):53–59

Earley PC (2002) Redefining interactions across cultures and organizations: moving forward with cultural intelligence. Res Organ Behav 24:271–299

Elgamal M (2018) Dynamic organizational capabilities: the joint effect of agility, resilience and empowerment. J Hum Resour Manag 6(2):44–49

Eloranta V, Turunen T (2015) Seeking competitive advantage with service infusion: a systematic literature review. J Serv Manag 26(3):394–425

Fan L, Fei J, Schriever U, Fan S (2017) The communicative competence of Chinese seafarers and their employability in the international maritime labour market. Mar Policy 83:137–145

Fei J (2011) An empirical study of the role of information technology in effective knowledge transfer in the shipping industry. Marit Policy Manag 38(4):347–367

Gabel-Shemueli R, Westman M, Chen S, Bahamonde D (2019) Does cultural intelligence increase work engagement? The role of idiocentrism-allocentrism and organizational culture in MNCs. Cross Cultural and Strategic Management 26(1):46–66

Gambi LDN, Boer H, Gerolamo MC, Jørgensen F, Carpinetti LCR (2015) The relationship between organizational culture and quality techniques, and its impact on operational performance. Int J Oper Prod Manag 35(10):1460–1484

Gattringer R, Wiener M, Strehl F (2017) The challenge of partner selection in collaborative foresight projects. Technol Forecast Soc Chang 120:298–310

Gausdal AH, Makarova J (2017) Trust and safety onboard. WMU J Marit Aff 16(2):197–217

Geringer JM (1991) Strategic Determinants of Partner Selection Criteria in International Joint Ventures. J Int Bus Stud 22:41–62

Gimenez-Espin JA, Jiménez-Jiménez D, Martínez-Costa M (2013) Organizational culture for total quality management. Total Qual Manag Bus Excell 24(6):678–692

Gonçalves G, Reis M, Sousa C, Santos J, Orgambídez-Ramos A, Scott P (2016) Cultural intelligence and conflict management styles. Int J Organ Anal 24(4):725–742

Gray JH, Densten IL, Sarros JC (2003) Size matters: organisational culture in small, medium, and large Australian organisations. J Small Bus Entrep 17(1):31–46

Greve HR (2011) Positional rigidity: low performance and resource acquisition in large and small firms. Strateg Manag J 32(1):103–114

Gu VC, Hoffman JJ, Cao Q, Schniederjans MJ (2014) The effects of organizational culture and environmental pressures on IT project performance: a moderation perspective. Int J Proj Manag 32(7):1170–1181

Hair JF, Anderson RE, Tatham RL, Black WC (2010) Multivariate data analysis

Hambrick DC, Mason PA (1984) Upper echelons: the organization as a reflection of its top managers. Acad Manag Rev 9(2):193–206

Hartnell CA, Ou AY, Kinicki A (2011) Organizational culture and organizational effectiveness: a meta-analytic investigation of the competing values framework's theoretical suppositions. J Appl Psychol 96(4):677–694

Hassan FSU, Shah B, Zaman T, Ikramullah M, Shah IA (2011) Effect of leaders' styles of decision making on perceived organizational effectiveness: an example from Pakistan. International Journal of Business and Social Science 2(22):297–307

Hsu YC, Lu HA, Chu CW (2016) Evaluating and selecting maritime suppliers. Marit Policy Manag 43(1):39–58

Imai L, Gelfand MJ (2010) The culturally intelligent negotiator: the impact of cultural intelligence (CQ) on negotiation sequences and outcomes. Organ Behav Hum Decis Process 112(2):83–98

International Maritime Organization (IMO) (2003) Human element vision, principles and goals for the organization, A 23/Res.947

Josefy M, Kuban S, Ireland RD, Hitt MA (2015) All things great and small: organizational size, boundaries of the firm, and a changing environment. Acad Manag Ann 9(1):715–802

Jyoti J, Kour S (2017) Factors affecting cultural intelligence and its impact on job performance. Pers Rev 46(4):1–54

Karakasnaki M, Psomas E, Bouranta N (2019) The interrelationships among organizational culture and service quality under different levels of competitive intensity. Int J Qual Serv Sci 11:217–234

Keung EK, Rockinson-Szapkiw AJ (2013) The relationship between transformational leadership and cultural intelligence. J Educ Adm 51(6):836–854

Khan SA, Kusi-Sarpong S, Arhin FK, Kusi-Sarpong H (2018) Supplier sustainability performance evaluation and selection: a framework and methodology. J Clean Prod 205:964–979

Kim CS, Dinwoodie J, Roh S, (2020) Developing measurement scales of collaboration in shipping logistics. International Journal of Logistics Research and Applications, 1-17

Kubicek A, Bhanugopan R, O'Neill G (2017) How does cultural intelligence affect organisational culture: the mediating role of cross-cultural role conflict, ambiguity, and overload. The International Journal of Human Resource Management, 1-25

Lee J, Weber MR, Rivera JD (2019) A sociocultural perspective on expatriation willingness: the mediating role of cultural intelligence. J Hosp Mark Manag 28(1):124–145

Leischnig A, Geigenmueller A, Lohmann S (2014) On the role of alliance management capability, organizational compatibility, and interaction quality in interorganizational technology transfer. J Bus Res 67(6):1049–1057

Li Y, Redding KS, Xie E (2018) Organizational characteristics of cross-border mergers and acquisitions. J Organ Chang Manag 34:223–251

Lima JE, West GB, Winston BE, Wood JA (2016) Measuring organizational cultural intelligence: the development and validation of a scale. Int J Cross-cult Manag 16(1):9–31

Lin TY, Chung CC, Ho TC (2019) An evaluation of the key influencing factors for tramp shipping corporations selecting ship management companies. J Mar Sci Technol 27(2):133–143

Lin MSM, Potter A, Pettit S (2021) Relationship heterogeneity in Taiwanese maritime logistics service supply chains. An International Journal, Supply Chain Management

Liou JJH (2012) Developing an integrated model for the selection of strategic alliance partners in the airline industry. Knowl-Based Syst 28:59–67

Lisak A, Erez M (2015) Leadership emergence in multicultural teams: The power of global characteristics. J World Bus 50:3–14

Lu CS, Lin CC (2014) The effects of perceived culture difference and transformational leadership on job performance in the container shipping industry. J Mar Sci Technol 22(4):463–475

Lun V, Pang A, Panayides PM (2010) Organisational growth and firm performance in the international container shipping industry. Int J Shipp Transp Logist 2:206

MacDonald A, Clarke A, Huang L, Seitanidi M (2019) Partner strategic capabilities for capturing value from sustainability-focused multi-stakeholder partnerships. Sustainability 11(3):557

Majocchi A, Bacchiocchi E, Mayrhofer U (2005) Firm size, business experience and export intensity in SMEs: a longitudinal approach to complex relationships. Int Bus Rev 14(6):719–738

Mannor MJ (2008) Top executives and global leadership. In: Van Dyne L (ed) Handbook of cultural intelligence: theory, measurement, and applications. M.E. Sharpe, Inc., New York, pp 91–106

Manotungvorapun N, Gerdsri N (2016) Complementarity vs. compatibility: what really matters for partner selection in open innovation? International Journal of Transitions and Innovation Systems (IJTIS) 5(2):122–139

Massaro M, Handley K, Bagnoli C, Dumay J (2016) Knowledge management in small and medium enterprises: a structured literature review. J Knowl Manag 20(2):258–291

McVeigh J, MacLachlan M (2019) A silver wave? Filipino shipmates' experience of merchant seafaring. Mar Policy 99:283–297

Midi H, Sarkar SK, Rana S (2010) Collinearity diagnostics of binary logistic regression model. J Interdiscip Math 13(3):253–267

Mitroussi K (2003) The evolution of the safety culture of IMO: a case of organisational culture change. Disaster Prev Manag 12(1):16–23

Mitroussi K (2004) The ship owners' stance on third party ship management: an empirical study. Marit Policy Manag 31(1):31–45

Mitroussi K, Notteboom T (2015) Getting the work done: motivation needs and processes for seafarers and dock workers. WMU J Marit Aff 14(2):247–265

Moon T (2010) Organizational cultural intelligence: dynamic capability perspective. Group Org Manag 35(4):456–493

Murphy WH, Gölgeci I, Johnston DA (2019) Power-based behaviors between supply chain partners of diverse national and organizational cultures: the crucial role of boundary spanners' cultural intelligence. J Bus Ind Mark 35(2):204–218

Narkhede BE, Raut R, Gardas B, Luong HT, Jha M (2017) Selection and evaluation of third party logistics service provider (3PLSP) by using an interpretive ranking process (IRP). *Benchmarking: An International Journal*

Nazarian A, Atkinson P, Foroudi P (2017) Influence of national culture and balanced organizational culture on the hotel industry's performance. Int J Hosp Manag 63:22–32

Ng KY, Van Dyne L, Ang S, Ryan AM (2012) Cultural intelligence: a review, reflections, and recommendations for future research. Conducting multinational research: Applying organizational psychology in the workplace, 29-58

O'Reilly CA, Caldwell DF, Chatman JA, Doerr B (2014) The promise and problems of organizational culture: CEO personality, culture, and firm performance. Group Org Manag 39(6):595–625

Oeser G (2020) Segmenting logistics service users based on their provider selection criteria to succeed in outsourcing. Int J Retail Distrib Manag 48:963–984

Ogbeibu S, Senadjki A, Gaskin J (2018) The moderating effect of benevolence on the impact of organizational culture on employee creativity. J Bus Res 90:334–346

Oh SY, Han HS (2020) Facilitating organisational learning activities: types of organisational culture and their influence on organisational learning and performance. Knowl Manag Res Pract 18(1):1–15

Oney-Yazıcı E, Giritli H, Topcu-Oraz G, Acar E (2007) Organizational culture: the case of Turkish construction industry. Eng Constr Archit Manag 14(6):519–531

Oolders T, Chemyshenko OS, Stark S (2008) Cultural intelligence as a mediator in relationships between openness to experience and adaptive performance. Handbook on cultural intelligence: Theory, measurement and applications, 145-173

Othman MK, Rahman NSFA, Ismail A, Saharuddin AH (2020) Factors contributing to the imbalances of cargo flows in Malaysia large-scale minor ports using a fuzzy analytical hierarchy process (FAHP) approach. The Asian Journal of Shipping and Logistics (AJSL) 36(3):113–126

Ott DL, Michailova S (2018) Cultural intelligence: a review and new research avenues. Int J Manag Rev 20(1):99–119

Panayides PM, Cullinane KP (2002) The vertical disintegration of ship management: choice criteria for third party selection and evaluation. Marit Policy Manag 29(1):45–64

Pantouvakis A, Bouranta N (2017) Agility, organisational learning culture and relationship quality in the port sector. Total Qual Manag Bus Excell 28(3-4):366–378

Pantouvakis A, Karakasnaki M (2018) The role of agility and organisational learning culture in forming long lasting relations in shipping. Int J Shipp Transp Logist 10(2):160–180

Pantouvakis A, Vlachos I (2020) Talent and leadership effects on sustainable performance in the maritime industry. Transp Res Part D: Transp Environ 86:102440

Pantouvakis A, Vlachos I, Zervopoulos PD (2017) Market orientation for sustainable performance and the inverted-U moderation of firm size: evidence from the Greek shipping industry. J Clean Prod 165:705–720

Papademetriou G, Progoulaki M, Theotokas I (2005) Manning strategies in Greek-owned shipping and the role of outsourcing. *In Proceedings of 12th International Association of Maritime Economists Conference,* Cyprus

Paul A, Moktadir MA, Paul SK (2020) An innovative decision-making framework for evaluating transportation service providers based on sustainable criteria. Int J Prod Res 58(24):7334–7352

Petricevic O, Verbeke A (2019) Unbundling dynamic capabilities for inter-organizational collaboration. Cross Cultural & Strategic Management 26(3):422–448

Porcu L, del Barrio-García S, Kitchen PJ, Tourky M (2020) The antecedent role of a collaborative vs. a controlling corporate culture on firm-wide integrated marketing communication and brand performance. J Bus Res 119:435–443

Prajogo DI, McDermott CM (2005) The relationship between total quality management practices and organizational culture. Int J Oper Prod Manag 25(11):1101–1122

Prajogo DI, McDermott CM (2011) The relationship between multidimensional organizational culture and performance. Int J Oper Prod Manag 31(7):712–735

Progoulaki M, Roe M (2011) Dealing with multicultural human resources in a socially responsible manner: a focus on the maritime industry. WMU J Marit Aff 10(1):7–23

Progoulaki M, Theotokas I (2010) Human resource management and competitive advantage: an application of resource-based view in the shipping industry. Mar Policy 34(3):575–582

Progoulaki M, Theotokas I (2016) Managing culturally diverse maritime human resources as a shipping company's core competency. Marit Policy Manag 43(7):860–873

Quinn RE, Rohrbaugh J (1981) A competing values approach to organizational effectiveness. Public productivity review 5:122–140

Remhof S, Gunkel M, Schlaegel C (2014) Goodbye Germany! The influence of personality and cognitive factors on the intention to work abroad. Int J Hum Resour Manag 25(16):2319–2343

Rhee SY, Oh HJ, Yu GJ (2018) High-performance work systems and firm capabilities in Korea: a fit perspective with organizational culture. Asia Pac J Hum Resour 56(3):317–340

Rockstuhl T, Seiler S, Ang S, Van Dyne L, Annen H (2011) Beyond general intelligence (IQ) and emotional intelligence (EQ): the role of cultural intelligence (CQ) on cross-border leadership effectiveness in a globalized world. J Soc Issues 67(4):825–840

Rose RC, Ramalu SS, Uli J, Kumar N (2010) Expatriate performance in international assignments: the role of cultural intelligence as dynamic intercultural competency. Int J Bus Manag 5(8):76

Roulin N, Krings F (2020) Faking to fit in: applicants' response strategies to match organizational culture. J Appl Psychol 105(2):130–145

Roy SA, Ali SM, Kabir G, Enayet R, Suhi SA, Haque T, Hasan R (2020) A framework for sustainable supplier selection with transportation criteria. Int J Sustain Eng 13(2):77–92

Schein EH (1996) Culture: the missing concept in organization studies. Adm Sci Q 41:229–240

Schein EH (2010) *Organizational Culture and Leadership* (4th edn). John Wiley & Sons

Seo YJ, Ha MH, Yang Z, Bhattacharya S (2018) The ship management firm selection: the case of South Korea. Asian J Shipp Logist 34(3):258–268

Sharma N, Hussain D (2017) Current status and future directions for cultural intelligence. J Intercult Commun Res 46(1):96–110

Shin SH, Shin YJ (2020) The impact of organizational culture and strategy on shipping liner's awareness and utilization of the 4th IR technologies. Marit Policy Manag:1–19

Solesvik MZ, Westhead P (2010) Partner selection for strategic alliances: case study insights from the maritime industry. Ind Manag Data Syst 110(6):841–860

Sugita M, Takahashi T (2015) Influence of corporate culture on environmental management performance: an empirical study of Japanese firms. Corp Soc Responsib Environ Manag 22(3):182–192

Tavasszy L, van de Kaa G, Liu W (2020) Importance of freight mode choice criteria: an MCDA approach. Journal of Supply Chain Management Science

Theotokas I (2007) On top of world shipping: Greek shipping companies' organization and management. Res Transp Econ 21:63–93

Theotokas I, Progoulaki M (2007) Cultural diversity, manning strategies and management practices in Greek shipping. Marit Policy Manag 34(4):383–403

Torabi SA, Baghersad M, Mansouri SA (2015) Resilient supplier selection and order allocation under operational and disruption risks. Transport Res E-Log 79:22–48

Tran QH (2020) Organisational culture, leadership behaviour and job satisfaction in the Vietnam context. Int J Organ Anal 29(1):136–154

Triandis HC (2006) Cultural intelligence in organizations. Group Org Manag 31(1):20–26

Tuan LT (2013) What can corporate governance build in shipping companies? Int J Shipp Transp Logist 5(2):113–136

Vaccaro IG, Jansen JJ, Van Den Bosch FA, Volberda HW (2012) Management innovation and leadership: the moderating role of organizational size. J Manag Stud 49(1):28–51

Van Rossem ADH (2021) Assessment and selection of management consultants: A comparative cognitive study between small-and large-scale companies. J Purch Supply Manag 27(1)

Wetzstein A, Feisel E, Hartmann E, Benton WC Jr (2019) Uncovering the supplier selection knowledge structure: a systematic citation network analysis from 1991 to 2017. J Purch Supply Manag 25(4):100519

Willar D, Trigunarsyah B, Coffey V (2016) Organisational culture and quality management system implementation in Indonesian construction companies. Eng Constr Archit Manag 23:114–133

Xi M, Chen Y, Zhao S (2019) The role of employees' perceptions of HPWS in the HPWS-performance relationship: a multilevel perspective. Asia Pac J Manag:1–26

Yamak S, Nielsen S, Escribá-Esteve A (2014) The role of external environment in upper echelons theory: a review of existing literature and future research directions. Group Org Manag 39(1):69–109

Yang CS, Lirn TC (2017) Revisiting the resource-based view on logistics performance in the shipping industry. International Journal of Physical Distribution & Logistics Management, Revisiting the resource-based view on logistics performance in the shipping industry

Yitmen I (2013) Organizational cultural intelligence: a competitive capability for strategic alliances in the international construction industry. Proj Manag J 44(4):5–25

Zimmer K, Fröhling M, Schultmann F (2016) Sustainable supplier management–a review of models supporting sustainable supplier selection, monitoring and development. Int J Prod Res 54(5):1412–1442

Zutshi RK, Tan WL (2009) Impact of culture on 'partner selection criteria' in East Asian international joint ventures. Int Entrep Manag J 5(4):369–393