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Human resource management and competitive advantage: An application of resource-based view in the shipping industry

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ABSTRACT

The resource-based view (RBV) of the firm has been established as one of the main approaches to strategy formulation for the development of sustainable competitive advantage. Moreover, human resource management can be conceptualised as a source of competitiveness. This paper proposes that RBV could contribute to the confrontation of the hindrances that shipping companies face in the management of their human resources, and to the formation of sustainable competitive advantage. The paper analyses the findings of a field study, regarding the different human resource and crew management practices that are applied by Greek-owned shipping companies. Finally, based on the RBV of the firm, it proposes an integrated framework for managing human resources in the shipping industry in a way that could lead to the formation of sustainable competitive advantage.

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1. Introduction

One of the basic goals for companies operating in the shipping industry has always been the ability to produce low-cost services. The highly competitive business environment of this industry. along with the international regulations and other institutional arrangements, keeps affecting till today the companies' strategies to operational cost reduction. Considering the fact that manning expenses represent almost 50% of the operational cost [1], and that it is presumed as the most flexible cost [2], one could understand why shipping companies seek to employ low-cost seamen. Especially nowadays that the global maritime labour market offers a variety of officers and ratings, the quest for cheap labour seems to be easy—in terms of quantity, but also risky—in terms of quality. While this variety should be considered as strength seeing from a human resource management (HRM) view, in many cases in practice, it is treated more as a hindrance. Factors that contribute to it, apart from the companies' strategic approach with respect to their human resources (HR), are various structural characteristics of the shipping sector, which will be discussed later on.

This paper proposes that the resource-based view (RBV) could contribute to the confrontation of several hindrances that shipping companies face in the management of their HR, and to the formation of sustainable competitive advantage. The paper

analyses the findings of a field study, and compares the different approaches that shipping companies apply with regard to the management of their personnel. The contribution of RBV and HRM in the achievement of competitive advantage are introduced in Section 2, where references to shipping companies' HR are also made. The structural characteristics of the shipping industry and maritime labour market, are further examined in Section 3. Section 4 presents the methodology, discusses the results and gives the basic outcomes of the field survey. Section 5 proposes an integrated framework for managing HR in the shipping industry, in a way that could lead to the formation of sustainable competitive advantage. Finally, conclusions follow in Section 6.

2. Resource-based view and strategic human resource management

Resource-based view (RBV), initially introduced by Wernerfelt [3], realises the firm as a bundle of resources and capabilities that combined develop competencies. Resources and capabilities constitute the base for the formation of sustainable competitive advantage. Resources can be classified in [4]: physical capital resources (including plants, equipment, finance), organisational capital resources (e.g. organisational structure, control systems, HR systems) and human capital resources (skills, judgment and intelligence of employees). Capabilities can be defined as the skills a firm needs to take full advantage of its assets. Without such capabilities, assets are of little value. Competencies can be defined [5] as "a set of observable performance dimensions, including individual knowledge, skills, attitudes, and behaviours, as well as collective team, process, and organisational capabilities that are

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linked to high performance, and provide the organisation with sustainable competitive advantage". These competencies can be either threshold (i.e. can be acquired or imitated by competitors), or core competencies (i.e. unique competencies that cannot be obtained or copied) [6–8].

Literature on strategic HRM accentuates the importance of firms' HR, in the way that they can lead to the creation of sustainable competitive advantage [9–11]. Nowadays, people are perceived as an indispensable and inextricable part of a company; an element that requires proper management, in order to comprise a profitable investment and to offer competitive advantage. Regarding shipping, crews can contribute to cost reduction through their low level of wages, their knowledge and performance, or their commitment to the goals of the firm; all these can lead to cost savings in the ship's maintenance or reduction of ship's off hires.

RBV is based on four basic tenets, which constitute the VRIO model [12]: value (V), rareness (R), imitability (I), organisation support (O). Barney [12] considers that a company holds a competitive advantage, when it displays a competitive superiority, based on some distinctive and enviable competence or capability, which rivals cannot possess or imitate. This core competency is created by the management of HR' skills and talents, and requires time in order to be developed. Furthermore, this core competency depends greatly on the quality level of team spirit creation, reward and other HRM practices, and the firm's general strategic policies. Companies should seek for tracking and exploiting their HR' valuable and rare characteristics, and try to align the company's aims with the employee's personal needs and expectations. For example, not all seafarers hold initiative, creativity, seamanship; and even if they do, these characteristics cannot be manifested and become fully worthy, unless the working environment motivates them. Both valuable and rare characteristics contribute to short-term competitiveness, because eventually, they can be imitated by competitors. What is important for a company is to seek for developing such characteristics to its HR, which could not easily be imitated by the competitors. For example, trust, loyalty and adoption of "company's identity" by Greek seafarers have contributed to the competitiveness of Greek shipping companies [13]. Every company should develop systems that will allow "human resource characteristics to bear the fruit of their potential advantage" [10]. The existence of HRM systems makes the competitive advantage of the firm sustainable [14]. The reason can be found in the fact that, while practices are easily imitated by competitors, coherent systems are not. Consequently, the firm should invest in maintaining its structures, systems and relationships with its employees, because changes may jeopardise the feeling of employment security, endanger the people's trust and loyalty and lead to loss of the valuable and rare HR characteristics. So, sustainable competitive advantage comes out not from general skills, but from firm specific skills, not from individuals but from teams; not from single practices but from human resource systems [10]. Specific skills developed by the company's employees, are implemented in the specific context of the company and, thus, cannot be imitated or implemented in different contexts. With regard to the importance of such skills in shipping, a ship's high performance is the result of its crew performance; in turn, crew performance is the result of teamwork and not of individuals. Unified crew management systems contribute to increased crew coherence and high performance, instead of practices directed to individuals.

3. Application of resource-based view in shipping and crew management

In the shipping industry, corporate activities take place in a business-to-business level. Shipping services are produced in order to satisfy the derived demand for the transport of cargoes. Especially companies of the bulk shipping sector were traditionally the less interested in investing to advertising, marketing or any other activity that may improve the firm's image. In the application of RBV in shipping (especially bulk shipping), one should take into account certain structural characteristics of the sector, which—on the one hand, create hindrances for the adoption of the RBV, and on the other, make the adoption of RBV even more useful for creating sustainable competitive advantage. These aspects of the industry include:

- (a) Complexity: Complexity is one of the most important organisational traits as it has major effects on the behaviour of its members [15]. There are three elements of complexity that are most commonly identified, i.e. horizontal differentiation, vertical or hierarchical and spatial dispersion [15]. Shipping companies appear to have high level of complexity in all these three elements. In this context the design and implementation of organisational systems, either for the management of HR or for any other operational aspect in each one of the organisational structures is a complex task.
- (b) The need for unit cost minimisation: Bulk shipping is built around minimising of unit cost [16]. This pursuit has created patterns for the selection of competitive strategies, with that of cost leadership to prevail. Shipping companies are always searching ways for the minimisation of their unit cost in all possible areas, with the manning related cost to be one of them. In many cases, HRM function confronts certain limitations imposed by the need to minimise cost. In this way, seafarers may not be always able to bring to the surface their skills, and, concurrently, shipping companies may not be always able to take in full advantage their skills.
- (c) Formalisation: Formalisation refers to "the extent which work roles are structured in an organisation, and the activities of the employees are governed by specialised, written and enforced rules and procedures" [17]. The extent to which firm's employees adopt its organisational culture, affects the level of formalisation. Furthermore, formalisation influences the flow of the explicit and tacit knowledge in the company's internal parts. In shipping companies, formalisation is, to some extent, enforced by international rules and legislations, but is much more intense on board, where the environment is extremely dynamic and strongly affected by external factors. The frequent turnover of people and nationalities on board necessitates the existence of rules and formalised working procedures, in order to assure a high level of crew's security and effectiveness.
- (d) Investment strategies: For many companies that implement an "anticyclical investment strategy" [18] seeking to accumulate profits mainly by purchasing and selling ships, seafarers are not always considered as integral part of their structures, since they are the first that are left out. In such a case, it is not easy for the companies to design and implement coherent HRM systems. This for example, seems to be the case for several shipping companies, whose fleets are enlarged or diminished in periods of low or high freight rates, and ship prices, respectively. On the other hand, there are traditional shipping companies that have a different perspective, and seek to operate their vessels from its "birth" till scrap, that treat seafarers as a valuable resource.
- (e) Freight markets volatility: This characteristic leads to the sudden increase or decrease of the shipping companies' income and earnings. In periods of high freight rates and earnings for the companies—when the operational cost of the ship is not the decisive factor for its profitability, it is expected that shipping companies invest more in the development of their human resources. On the contrary, in periods of low freight rates—when the income is reduced and the companies are much more concentrated on the minimisation of their operational cost, the

relevant investments are in many companies abridged. However, speaking of human resources, to succeed in exploiting their potential contribution, companies need to be consistent and to convince the employees that they are long term partners.

- (f) Institutional arrangements: Institutional arrangements influence the applied crew management practices and the companies' perceptions towards HR's value; they comprise two categories. The first concern these arrangements that are imposed by the flag states, and include the imposition of minimum schemes regarding the nationality of the seafarers. This is the case for the Greek flag, whose institutional patterns intervenes and actually distorts the competitiveness of Greek seafarers in the international maritime labour market [19–20]. The second category concerns the existence of registries that do not comply with the regulations of international organisations, with regard to the seafarers' employment conditions. This leads to phenomena, such as seafarers' abandonment, salaries lower than the ILO/ITF minimum level, etc.
- (g) Global seafaring labour market: Globalisation in the maritime labour market led to the creation of a two-level market; one for the seafarers that are employed in their national fleet, and another for those that are employed on foreign—flagged ships. Every company now has the alternative to either employ the native nation of the ship owner/manager, or choose from a variety of offered foreign nations. Quantity of seamen seems not to be a problem, however, quality and the related cost still matter. Moreover, it is vital for the shipping companies to have access and gain information regarding the seafaring labour market. In this vein, independent ship management companies, crewing companies and manning agents are strengthening their position in the market.
- (h) *Cultural diversity*: Multiculturalism on board the ships is a reality for the shipping industry. Almost 65% of merchant ships are manned with crew of many nationalities [21]. Very often, shipping companies do not avoid to differentiate their HR practices and to adjust them to the perception that their management hold on the value and contribution of the nationalities that the companies employ [22]. The existence of different HR practices for the different crew nationalities, which may not be complementary, deadens the potential contribution of seafarers to the strengthening of the companies' competitive advantage.
- (i) Evolution of ship management/crewing companies/manning agents: Independent ship management and crewing companies achieve to offer competitive services through specialised knowledge and recruitment of low cost seamen from the world market. Manning agencies act as an intermediate between seafarers and shipping companies, while they seem to reduce the transaction cost and the risk for both seafarers and firms. These companies offer their services to a large number and a variety of shipping companies. Shipping companies' performance can be affected by the manpower provided by agents. Shipping companies lose the advantage of exploiting the valuable and rare characteristics of their seamen, and cannot assure that these characteristics cannot

be imitated or shared by the rest of the agents' clients. Outsourcing HR may mean for the companies that they—wholly or partly—leave the control of their people and HR practices to the manning agents.

- (j) Contract workers and crew turnover: The seafarer's occupation takes place under special conditions and employment relations, in a way that the seaman works as a free-lancer and seeks for new employment in the world market—probably and a new employer—after each of his disembarkation. Usually, the "contract" employee realises as employer the agent that intervenes to secure him employment, rather than the principal that employees him. The conditions of such a working environment eventuate in the seafarers' inability to unfold their special skills. The frequent change between sea service on board and time off duty at shore, is another important factor affecting the profile of seafaring. The profession is characterised by insecurity and difficulty in career making, even for the seamen that are members of a company's pool. Crew turnover can encumber the application of unified HRM systems, and eventually, leads to a frequent loss of resources and tacit knowledge.
- (k) Specific characteristics of seafarer's profession: Another dimension of the frequent turnover of crews on board is the instability in the seafarers' productive/working time, since when seamen are onboard, they are always stand-by, working on a "24-h base". The working and living environment on board remains the same for long periods of time, and restrained in terms of space. The high levels of formalisation in work and routine, create a confined space, also in terms of social interactions. Social isolation and discriminations become often apparent on board, since seafarers usually are not trained to handle multiculturalism. Such social and intercultural confrontations can influence negatively the team's cohesion. Under this scheme, one discovers a number of difficulties in the appropriate manning, mix of nationalities and the effective performance of crews, that only a properly organised HRM system can overpass.

4. Results from the field survey

4.1. Methodology

The current results are based on data gathered during personal interviews with crew managers and managing directors, with the use of a structured questionnaire, which examined the applied HRM practices and strategies, and the attitudes and opinions towards the competitiveness of seafarers. A combination of quantitative and qualitative data were used in the analysis. The field survey took place in Athens and Piraeus during the first half of 2007. The sample consisted of 91 Greek-owned and Greek-operated shipping companies, managing a total number of 1076 vessels. The sample was analysed and categorised using data provided by Petrofin [23] for the number of companies and Lloyd's-Fairplay [24] for the number of ships (see Table 1). The majority of the vessels flew the Greek flag

Table 1Size of companies and representative sample.

	Total no. of Greek- owned companies	No. of vessels	Small-sized c	ompanies	Medium-sized	d companies	Large-sized con	npanies
	owned companies	vesseis	1–2 vessels	1–2 vessels 3–4 vessels	5–8 vessels	9–15 vessels	16-24 vessels	25 + vessels
Field survey 2007 Petrofin 2006 Representative sample (%) Lloyds-Fairplay 2007 Representative sample (%)	91 693 13.1% n/a n/a	1076 3699 29.1%	16 288 6%	18 146 12%	15 137 11%	13 64 20%	14 30 47%	15 28 54%

Table 2 Importance and contribution of resources to the shipping companies' competitiveness, according to size of company (mean and hierarchical order)^a.

In order of 1-most crucial factor, to 4-less crucial factor (mean)	Sum of sample	Large	Medium	Small
1. Financial resources 2. Physical resources 3. Human resources 4. Organisational resources 5. Intangible resources (such as fame, brand name, etc.)	3.34 (4) 2.13 (1) 2.79 (3)	3.26 (3) 3.67 (5) 2.00 (1) 2.67 (2) 3.41 (4)	3.00 (4) 2.26 (1) 2.77 (3)	2.10 (1) 3.33 (4) 2.13 (2) 2.96 (3) 3.70 (5)

^a Large-sized > 16 vessels, Medium-sized 5–15 vessels, Small-sized 1–4 vessels

(35%), while the rest flew 17 foreign flags, such as Malta (19%) and Panama (13%). The vessels were bulk carriers (45.3%), tankers (33.3%), and containers (9.7%). The survey revealed that Greekowned shipping companies employ a variety of 34 different nationalities. The most frequently employed nationalities include Filipinos (24%), Greeks (21.6%), Ukrainians (16.8%), Romanians (8.9%) and others. The most popular crew synthesis is the one that mixes Greeks with foreigners of many nationalities, even on foreign-flagged vessels.

4.2. Results and discussion

Human resources, compared to financial, physical, organisational and intangible resources were ranked, with respect to their importance and their contribution to the companies' competitiveness, as the most important by the Greek shipping companies. However, if one focuses to the size of the companies, one can see that opinions differ. Human resources are considered as the most vital resources for large- and medium-sized shipping companies, while for companies of small size financial resources are preceded. With regards to the small firms this can be considered as expected, taking into account that one of the small firms' main weaknesses is their limited access to financial resources. As it can be seen in Table 2, the way the companies assess the importance of their financial (operation, sale and purchase, chartering policy, etc.), physical (fleet size, type, age and technology of vessels, etc.), human (skills and qualifications, number of employees, etc.), organisational (corporate culture, networks, planning and control systems, etc.) and other intangible resources (such as fame, social profile, quality of offered services), also varies according to their size. The identification of the importance of HR and their contribution to the competitiveness of the companies make apparent a more detailed examination of the way they manage these resources. In the following analysis, results related to the four basic tenets of RBV, are presented and discussed.

Previous studies concerning the Greek-owned shipping have shown that in the multicultural working environment of shipping industry, nationality of the seafarer may affect the perception of the companies' management, with regard to his/her value. Companies' representatives were asked to grade the different nationalities of the employed seafarers, in order to elaborate further this point and to find out what was the role of nationality in the seafarers' evaluation. Characteristics that were considered as crucial for the efficiency and productivity of seafarers were used for the evaluation. Not surprisingly, they do not ascribe the same value to their seamen, as different nationalities score differently. Tables 3 and 4 present that seamen of almost all nationalities scored above average, which means that companies acknowledge their valuable characteristics. The fact that they

Table 3 Evaluation of officers' characteristics (per nations^a).

Score from 0: not existent, to 4: excellent (mean)	Office	ers				
to 4. excellent (mean)	GR	FIL	RUS	POL	ROM	UKR
1 Work performance	3.84	3.45	3.4	3.3	3.38	3.52
2 Teamwork	3.53	3.46	3.07	3	3.14	3.38
3 Communication skills	3.79	3.45	3.2	3.1	3.33	3.45
4 Initiative	3.89	2.86	3	2.6	3.14	3.36
5 Training skills	3.86	3.11	3.53	3.3	3.48	3.55
6 Leadership	3.86	2.93	3.2	2.9	3.33	3.48
7 Trust	3.58	3.29	2.67	2.6	2.38	2.88
8 Manage multinationality onboard	3.67	3.19	2.62	2.7	2.86	3.16
9 Obedience to company's policies	3.75	3.46	3	3	3	3.31
and international regulations						
Total mean scores	3.8	3.2	3.1	2.9	3.1	3.3

^a GR: Greeks, FIL: Filipinos, RUS: Russians, POL: Polish, UKR: Ukrainians.

Table 4 Evaluation of ratings' characteristics (per nation^a).

	ore from 0: not existent,	Ratir	ıgs				
ιο	to 4: excellent (mean)		FIL	RUS	POL	ROM	UKR
1	Work performance	3.8	3.51	3.33	4	3.14	3.29
2	Teamwork	3.6	3.51	3.11	4	3.14	3,14
3	Communication skills	3.83	3.46	3	4	3.14	3.19
4	Initiative	3.8	2.59	3	4	3.14	3.14
5	Training skills	3.8	3.06	3,33	4	3.14	3.24
6	Leadership	3.73	2.59	3.11	4	3	3.14
7	Trust	3.6	3.27	2.89	3.5	2.29	2.62
8	Manage multinationality onboard	3.7	3.1	2.71	4	2.57	2.82
9	Obedience to company's policies and international regulations	3.77	3.48	2.89	4	2.71	2.86
То	tal Mean scores	3.7	3.2	3.0	3.9	2.9	3.0

^a GR: Greeks, FIL: Filipinos, RUS: Russians, POL: Polish, UKR: Ukrainians.

ascribe different value to employees of same specialisation and rank, confirms that nationality of the employee is a factor that may differentiate the way that it is treated by the companies.

Results show that Greeks, Ukrainians and Filipino officers are considered as officers of higher value compared to the rest nations, while in the case of ratings, Polish, Greek and Filipinos hold the highest scores. One should note that for both officers and ratings positions, Greek seafarers are valued higher, although they cost more to the companies. This is an additional evidence of the fact that shipping companies perceive that Greek seafarers' contribute to the competitiveness of the companies more than their colleagues from the low cost countries and explains why they continue to be chosen by the companies.

The second tenet of RBV is rareness of the resource. To find out whether shipping companies are aware of the rare characteristics of their employees, the interviewed managers were asked if their companies seek to find and compare relevant data for their competitors' employees. This comparisons are perceived as an informal type of benchmarking, for the needs of this survey. Table 5 presents that almost 50% of the companies did not make such comparisons. This implies that those companies have not identified what could be the rare characteristics of their human resources which may differentiate them from those of the competitors. This lack of knowledge means that they were not able to build on these characteristics and to manage them in a way that will lead to the increase of the seafarers' performance and to the ships' competitiveness. Results show that the

Table 5Conduct benchmarking, in order to examine the quality and quantity of seagoing personnel (per company size).

total (%)		(%)	(%)	(%)
52.7	wherein,	50.0	35.4	14.6
	(%)	(%) 52.7 wherein,	(%) 52.7 50.0 wherein,	(%) 50.0 35.4 wherein,

 $^{^{\}rm a}$ Large-sized $\,>$ 16 vessels, Medium-sized 5–15 vessels, Small-sized 1–4 vessels.

Table 6 Imitation of HRM practices by competitors (per company size).

Company size ^a	Large (%)	Medium (%)	Small (%)	Total (%)
YES, imitation observed among competitors	15.4	7.7	2.2	25.3
NO				74.7

 $^{^{\}rm a}$ Large-sized > 16 vessels, Medium-sized 5–15 vessels, Small-sized 1–4 vessels.

companies' fleet size plays a vital role in their effort to compare their seafarers' characteristics with those of their competitors. The companies that follow a policy of ascertaining the rareness of their HR, are mainly large- sized companies. Medium-sized companies also conduct benchmarking, while very few small-sized are interested or able to do it. This is attributed to their limited resources, not only financial, but also the specialised human resources that could undertake the task.

Shipping companies' representatives were asked to identify whether they have realised that competitors have tried to imitate the applied HRM practices. Before we proceed to the analysis of these results, it should be noted that the majority of the respondents (74.7%) admitted that there is no imitation among shipping companies (Table 6). This is so, because they consider imitation as a difficult task, due to the task environment of the shipping industry and the high spatial complexity of the shipping companies.

However, once again, representatives of large-sized companies admitted that when imitation is observed, this concerns mainly large-sized companies considered as rivals. One should also take into account the vital role that networking is playing in the fields of Greek shipping companies, noting that this is considered as one of the factors that contribute to the competitiveness of the companies in the international shipping markets [25]. The corroboration of this finding was what representatives of shipping companies stated during the survey. They admitted that many crew managers of the Piraeus and Athens-based companies keep personal amicable relations and it is a common practice to arrange informal meetings, where issues related to crew management are discussed. So, aggressive imitation is not observed; however, actual imitation not only exists, but is also promoted by the companies.

With regard to the fields of imitation, the survey revealed that large-sized companies observe imitation of the whole set of their HRM practices, and mainly of rewards system, employer–employees' relations, training and recruitment (see Table 7). Large-sized companies are able to offer higher salaries and a variety of other benefits, while they are able to create and sustain stronger relations with their personnel based on trust. Moreover, large-sized companies have the ability to undertake the cost of training

Table 7Observed imitation in HRM practices, referring to seagoing personnel (per company size).

Company size ^a /HRM practices	Large	Medium	Small
	(%)	(%)	(%)
1. HR Planning 2. Recruitment 3. Selection 4. Training 5. Appraisal 6. Rewards	19.6	0	0
	27.7	0	5.8
	21.9	0	3.5
	27.7	2.4	0
	13.8	0	0
	32.5	20.9	5.7
7. Relations between employer-employee	30.2	0	2.4

Note: Percentages refer to multiple response rates.

(even in-house), or the cost of establishing affiliated crewing companies that give them direct access to the global maritime labour market. These companies are expected to have the resources that allow them to seek for the continuous improvement of their practices. The large-sized companies that realised imitation, found out that imitation concerned almost all their HRM practices. In medium-sized companies, imitation concerned mainly their rewards' practices, while in very few small-sized companies it concerned recruitment, rewards, selection, and relations with the employees. One should note that the group of small-sized companies included companies belonging to traditional ship owning families that are known for having created long lasting relationships with their seafarers, and for implementing practices that lead to the employment of loyal seafarers. This intangible asset they possess is considered as one of the main strengths they have [26]. In this context, it is expected that these companies are considered as a benchmark with regard to specific HRM practices.

The support of the HR by the organisation is, according to RBV, the fourth tenet in the companies' effort to build a sustainable competitive advantage. Shipping companies employ two distinct groups of employees; those working in the offices ashore and those working onboard the ships. The task environment of these two groups differs substantially. One could assume that the different task environment asks for different HRM practices. This explains the fact that different departments perform the management of these two groups in the shipping companies. However, seeing from the RBV, the practices implemented by the different departments should be part of a unifying and coherent HRM system. The level of cooperation between the two departments (considering both are existed) is an evidence of the organisational support and the existence of a common, unified HRM system. Data reveal that this does not seem to be the case for the vast majority of the companies that were examined in the survey. While almost all of them (89%) operated a crew department, only 20.9% of the sample, mainly large companies, operated department for the shore based personnel. However, out of the 19 companies that operated both departments, only three stated that they share training activities.

The lack of a unified HRM system is evident from the fact that the majority of the shipping companies do not implement the same practices even in the case of seafarers. As Table 8 presents, companies offer different benefits and incentives to the seafarers, with nationality and rank to be the main factors that lead to the differentiation. The analysis revealed that large- sized companies focus more on their national officers, while medium- and small-sized companies focus on their officers, regardless nationality. In general, one can say that Greek officers enjoy more benefits, compared to their foreign colleagues. However, this is not the case

^a Large-sized > 16 vessels, Medium-sized 5–15 vessels, Small-sized 1–4 vessels

Table 8Means to retain seafarers in the company (per national group and rank).

	Officers		Ratings		Average (%)
	GR ^a (%)	FOR ^a (%)	GR (%)	FOR (%)	(10)
1. Benefits, rewards, bonus	75	60	28	46	52
2. Offer job in regular basis	62	44	62	49	54
3. Assure qualitative working life	42	33	59	38	43
4. Offer job to familiar vessels	29	21	35	21	26
Keep personal relation with seaman and his family	40	11	28	15	23
6. Others ^b	9	13	0	14	9

Note: Percentages refer to multiple response rates.

Table 9Means to retain seafarers in the company (per company size).

Company size ^a	Benefits, rewards,	regular		4. Job to familiar/' sister' vessels (%)	5. Personal relation (%)	
Large	20	32	28	15	5	5
Medium	19	12	9	7	4	4
Small	13	11	6	4	0	0

Note: Percentages refer to multiple response rates.

for the Greek ratings, who are continually substituted by low-paid foreigners (see Table 9).

It seems that shipping companies are trying to keep their most valuable resource, which they consider to be their officers (mostly Greeks, but also foreigners). Concurrently, they are trying to retain a pool of qualitative foreign ratings, in an attempt to substitute their expensive nationals. This seems to be an ample evidence of the different value that companies ascribe to the seafarers of different nationalities. The lack of unified HRM systems is also confirmed by the variety of means that companies apply to retain their seamen (Tables 10 and 11). All the above mentioned issues reveal the perception the shipping companies have, regarding their seafarers and the different value they ascribe to them. While officers are perceived as the most valuable human resource, companies do not manage issues related to their employment applying the same practices.

Barney and Wright [10] propose that one of the major implications for companies realising that HR possess the potential for being a source of sustainable competitive advantage, is to understand how the HR and HR practices of their companies are compared to those of their competitors. Benchmarking helps them to make such comparisons. The survey showed that only 51.6% of the companies conducted this kind of comparisons (see Table 12), mainly concerning large-sized companies. This low percentage is a further evidence of the fact that a great percentage of the companies do not systematically try to exploit the potential contribution of their seafarers for the creation of sustainable competitive advantage.

In Section 3, cultural diversity was analysed as one of the hindrances for the application of RBV by the shipping companies HRM strategies. To explore this point, shipping companies' representatives were asked whether their companies apply

Table 10Adopt a policy of offering benefits, bonus and rewards (per company size, national group and rank).

Company size	Greek Officers Ratings (%) (%)		Foreigner	Foreigners		
			Officers (%)	Ratings (%)	(%)	
Large (16+vessels)	34.4	21.9	21.2	19.1	24.2	
Medium (5-15 vessels)	31.1	15.6	29.4	19.1	23.8	
Small (1–4 vessels)	24.6	9.4	21.2	18	18.3	
YES, offer benefits	90.2	46.9	71.8	56.2	66.3	
NO	9.8	53.1	28.2	43.8	33.7	
Total	100	100	100	100	100	

Table 11Offered benefits and incentives (per national group and rank).

	Officers		Ratin	ıgs	Average - (%)
	GR ^a (%)	FOR ^a (%)	GR (%)	FOR (%)	- (%)
1. Performance bonus	43	38	7	19	27
2. Seniority bonus	45	26	7	17	24
3. Pension plan	7	3	3	1	4
4. Free or subsidised training	27	14	0	4	11
5. Stand-by wage	43	14	0	7	16
6. Support to seafarers' families (e.g. gifts)	43	10	14	10	19
7. Re-joining bonus	55	57	0	30	36
8. Extra bonuses (e.g. hull cleaning, paintings)	0	0	3	13	4
9. Others ^b	21	15	3	12	13

^a 'GR': Greeks, 'FOR': foreigners.

Table 12Conduct benchmarking among competitors, in order to examine the best HRM and crew management practices (per company size).

Company's size ^a	In total (%)		Large (%)	Medium (%)	Small (%)
YES, conduct best HRM practices benchmarking	51.6	wherein,	53.2	31.9	14.9
NO	48.4				

 $^{^{\}rm a}$ Large-sized > 16 vessels, Medium-sized 5–15 vessels, Small-sized 1–4 vessels.

practices which aim to eliminate the disadvantages that multiculturalism may bring to the crew. It was considered that such a practice would be the training of seafarers to the issues of cultural awareness and cultural diversity management. Their answers reveal the different approach the shipping companies adopt on the issue and the different value they ascribe to their employees. Although possession of skills related to cultural diversity management is a precondition for the improvement of the working conditions and the effectiveness of the crew, training of seafarers on the development of those skills was offered by a small percentage of the companies. More importantly, the training was not offered to all seafarers, but mainly to Greek officers. Results show that some kind of informal training is offered to Greek officers by the 6.5% (2.6% large companies, 3% medium- and 0.9% small-sized companies) of the companies' sample, wherein 25.8% applied to the Greek officers, 0% to Greek ratings, 3.5% to foreign

a 'GR': Greeks, 'FOR': foreigners.

^b 'Others' include: rotation, family insurance, interest free loans, etc.

 $^{^{\}rm a}$ Large-sized $\,>\!16$ vessels, Medium-sized 5–15 vessels, Small-sized 1–4 vessels.

^b 'Others' include: offering interest-free loans, bonus for successful audits, loyalty bonus, internal promotions, provident fund, prizes and various training awards and honours bonuses.

officers, 2.2% to foreign ratings and 1.1% to the shore-based personnel.

Results from the field survey revealed that in most of the Greek- owned shipping companies, a set of separate and unlike crew management practices is adopted, instead of a unique and integrated HRM system. It seems that the last criterion of VRIO. that of organisational support remains a challenge for most shipping companies. While it is clear that the factors analysed in section three partially extenuate the limited focus of the shipping companies on the potential contribution of their HR, it is also clear that this limited focus is one of the weak points of the shipping industry. It is an evidence of the limited value that the majority of the shipping companies ascribe to the seafarers and one of the reasons behind the limited ability of the industry to retain its HR and to recruit young qualified employees willing to have a career at sea. Adoption of the RBV for the management of HR offers an alternative that contribute to confront these problems at company level.

5. Managing human resources in shipping: an integrated framework

The preceding analysis brings to fore the role of HR in the strategic direction of the shipping firms. Strategy formation and implementation cannot be separated from the way people are managed [27]. Thus, the integration of HRM to the companies' strategic management process is a precondition for companies' sustainable competitiveness. RBV provides the framework for this integration. Grant [28] proposes a five-step framework for analysing resources and capabilities, which leads to the strategy selection. Using a similar approach, an integrated framework for the management of shipping companies HR is proposed Fig. 1). This approach is based on theoretical advances and contributions of the strategic HRM field. Moreover, it uses as a base, the analysis of shipping industry's structural characteristics that impose hindrances to the companies' effort to built their competitiveness on human resources. Those characteristics that have been analysed in Section 3, create the need for the companies to develop HRM as a dynamic capability; the last, according to Teece et al. [29], is the "ability to integrate, build and reconfigure internal and external competences in order to address rapidly changing environments". In this context, dynamic capabilities are considered as "the organisational and strategic routines, by which firms achieve new resource configurations" [30]. Helfat and Peteraf [31] mention that "dynamic capabilities involve adaptation and change, because they build, integrate or reconfigure other resources and capabilities". For the highly complex shipping companies that employ a diverse workforce with high turnover, the capability to integrate or reconfigure the HR is the essence of their ability to gain sustainable competitive advantage.

The first step of the framework includes the identification of the company's HR. Here, an appraisal of the company's employees is conducted, which tries to identify their composition, competencies and culture, all considered as crucial elements for the performance of the company. Obviously, such an appraisal is quite important for shipping companies that employ a diverse workforce. The second step includes the detailed appraisal of the company's HR practices. The company will try to realise the "internal fit" [32], which means that the company will examine whether the implemented practices are consisted, complement and support each other, or work against one another. At this point, the company should work towards two directions.

The first is to realise whether the existent HR and the implemented practices interact in the way that the VRIO model proposes. Thus, company's effort is to appraise whether its employees add value and possess characteristics that make them a rare and inimitable resource. Such an appraisal is not an easy task for a company that recruits workforce from the global maritime labour market and face high employee turnover which, in addition, performs this function through agents. It is this hindrance, however, that makes the appraisal imperative. The element that transforms the temporary competitive advantage gained by the valued, rare and inimitable human resources to a sustained one, is the support by the organisational systems of the company. The organisation support of the human resources is the only factor that can contribute to an above normal performance of the company. Here comes as an input the appraisal of the company's HR practices. Taking into consideration the evaluation according to VRIO, the company realises the adjustments that are needed to the HRM practices, in order to exploit the capabilities of its employees.

The second direction is related to the need of the company to manage its intellectual capital in a way that helps the creation of competencies. The relative role of knowledge assets and dynamic capabilities, as mentioned by Teece [33], has already been highlighted in the shipping field [19,22]. The company develops core competencies as it combines the stock of knowledge and the flow of this knowledge [11]. The stock of knowledge consists of its human, social and organisational capital, while the flow of knowledge is related to its creation, transfer and integration. Thus, HR practices should be readjusted to impact the intellectual capital of the company.

The next step includes the identification of the existed and the creation of new HR core competencies, the foundation of the company's ability to increase competitiveness through its HR. This process is depended on the company's dynamic capability to integrate and reconfigure HR. This capability allows the company to forecast or even to foster changes in the market, and to work for the development of new resources and competencies. Through the feedback process of the framework, the company can identify and fill the resources' and competencies' gaps. The company's HR strategy should include a process of integration, reconfiguration, gain and release of resources. In this way, the obsolete resources and capabilities will be released, while new-potential corecompetencies will be encouraged. This "renewal" process through the detection of possible lack or obsolescence of resources and capabilities operates as a feedback to the system and predicates

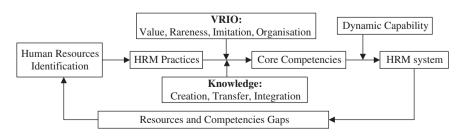


Fig. 1. Proposed integrated framework.

the competitive character of the company's strategy. The identification of the missing and useless resources and capabilities ensures the renewal in advantages, the company's innovation, and the continuity of the company's competitive market position. For this, a company should not only strive to achieve competitive advantages, but also to broaden, strengthen them and to constantly plan and develop new advantages, for the seek of a long-term competitive position in the market.

All the previous steps end to the development of the company's HRM system. Instead of single HR practices, the company adopts an integrated HRM system. Single human resource management practices are easy to imitate, so they can only provide a short-term competitive advantage. On the contrary, an integrated HRM system is secured from competitors' copy attempts, because it is included in the broader strategic framework and enterprise plan; the last is difficult for the rivals to identify and copy.

6. Conclusions

While the popular strategic choice regarding manning, based on the employment of low-cost seafarers, has been proved to lead to cost reduction and competitiveness in the short-run, it has also risked the shipping companies' competitiveness in the long term. The constant hunting of the cheapest labour proves to be gainful, especially nowadays that the global maritime labour market offers a great variety in terms of quality and quantity. In this context, there appear to be shipping companies that do not consider seafarers as HR that contribute to their competitiveness, but as a complement to the technical system that one names "vessel" [34]. Literature in Strategy and HRM have extensively emphasised on the role of HR in the companies' effort to gain competitiveness. RBV is one of the most important contributions towards this direction, which, although widely deployed by scholars and practitioners in several sectors, has only recently been examined in the context of HRM in shipping industry.

RBV emphasises on the strategic role of HR, and the contribution of an HRM system to the company's competitiveness. Various structural characteristics of the shipping industry impose hindrances to the application of RBV, the same characteristics that make it imperative. Under RBV, the seagoing and shorebased personnel are perceived as a strategic resource that can create value for the shipping companies and contribute to their long-term competitiveness. One should focus on the criterion of "organisational support", which enhances the need to avoid imitability by rivals, through exploiting the corporate culture and philosophy. It is vital for every shipping company to develop such organisational schemes and sets, that will exploit, support and replenish the resources. In this vein, resources' high value, rareness and inimitability will be internally retained. Organisational support through integrated systems is extremely important, since single practices are often incomplete, and are easy to imitate by the firm's competitors, as the field survey revealed.

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