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Adding some context to port marketing: Exploring the content and measurement of market orientation in the port industry

Evangelos Kounoupas[a], Angeliki Pardali[b],

[a]PhD Candidate PortLab – Laboratory of Port Economics & Management,
Scholar of Propondis Foundation
Department of Maritime Studies, University of Piraeus
21, Lambraki Av., Piraeus, 185 32,
Tel. 210 414 2591, email: ekounoupas@yahoo.gr

[b] Professor Director of PortLab – Laboratory of Port Economics & Management,
Department of Maritime Studies, University of Piraeus
21, Lambraki Av., Piraeus, 185 32,
Tel. 210 414 2574, email: apardali@unipi.gr , portlab@unipi.gr

Abstract

Understanding and responding to customer needs is the essence of the marketing concept and as such it has been discussed in various fields of business and economic literature. Port economics and management literature has thoroughly investigated areas such as port efficiency and effectiveness, understanding and overcoming competitive pressures and identifying the sources of potential sustainable competitive advantage. In line with this discussion, albeit with a significant time delay, port economics and management literature has also proposed the use of marketing strategies as a strategic tool towards achieving port competitiveness. Applying the marketing philosophy in the port context has been often proposed as a tool towards addressing the above challenges; however there is limited research on that field. This paper attempts to provide a solid theoretical background to the notion, the need and the applicability of the marketing concept in the container port industry. It investigates the preconditions under which port marketing strategies are designed and formulated, by measuring the level of market orientation of ports and terminals based on primary data collected from port executives around the world. Statistical analysis indicates that when production of port services is combined with the regulatory role of a Port Authority, market orientation is comparatively higher.

JEL Classification: M 390, R 400
Key words: Market Orientation, market intelligence, port performance, mediating and moderating variables

1. The Port environment

Globalisation, liberalization of global trade, technological advancements in ship design, terminal superstructure and infrastructure, information technology systems, vertical and horizontal integration strategies by port operators and shipping companies, the rise of independent 3rd or 4th part Logistics providers have all changed the scene in the port industry (Stutchey, 1991, Heaver, 1993, Midoro and Pitto, 2000, Notteboom, 2004, Midoro et al., 2005, Pardali and Stathopoulou, 2005, Notteboom, 2006, Poulsen, 2007, Heaver, 2010, Panayides and Wiedmer, 2011, Wang et al., 2013, Pardali and Kounoupas 2014, 2014). Societal developments such as the importance of being green, the changing government–industrial relations and the need for transparency also influence the setting (Slack, 2010).

As ports are now pawns in a global trade game (Winkelmans, 2003), success or failure of port strategies depends on not only their own competencies and performance, but on a complex set of external factors (Pardali and Stathopoulou, 2005). Ports in essence act as intermediate stages of the supply chains which serve the needs of the end-up consumer (Cahoon and Notteboom, 2008). These chains refer to a complex network of inter-related organizations engaged in value adding activities producing products and services to the benefit of that consumer. Emphasis is now shifting from terminal effectiveness and efficiency, productivity and individual port costs, to customer total cost within a competitive environment (Chlomoudis and Pallis, 1999), benefits sought and overall time efficiency (Magala, 2007).

Within this context the key market players in the market are transforming. Port Authorities gradually move from producing port services towards a cluster building and governing, regulating and policy making framework, which may also expand into enhancing the overall competitiveness and strategic focus of the port and the coordination of port service production, as this is undertaken by specialized local or global Port Operators (Van Hooydonk, 2002, Lamonarca & Papa, 2005, Verhoeven, 2009, Van den Berg and De Langen, 2011). Port and Terminal Operators are also changing (Notteboom and Rodrigue, 2010, De Langen and Chouly, 2009, Tovar et al. ,2015). The focus of port operators can vary from totally sea-front focused to integrated logistics service providers or a mixed focus, creating competitive overlaps between inland and seaport terminals (Rodrigue and Notteboom, 2010). Port Customers' profile is evolving as well: Horizontal Integration of Shipping companies (Poulsen, 2007, Panayides and Wiedmer, 2011) and 3rd Part Logistics Providers (Vitsounis, 2010) in the form of mergers or strategic alliances (Lu et al., 2006, Panayides, 2007, Yang et al., 2011, Song and Lee, 2012), strengthen their bargaining position. Vertical integration strategies by shipping companies on the other hand allow them to extend their control over the supply chain (Van der Voorde and Vanelslander, 2008, Vitsounis, 2010, Rodrigue et al., 2011, Lam et al., 2012).

At the same time, given that port competition develops on the level of global logistic chains, port clientele is broadened to include importers and exporters of goods, transport operators which will select the ports that provide superior access to markets in a faster and more cost-effective way (Pagliari, 2005). Port customers are seeking to minimise the total cost of transport within the frame of door-to-door philosophy, which increases the pressure on port operations. Shipping lines, Shipping agents, Stevedoring Companies/Port Operators, Hinterland Transport modes, Cargo Owners, 3rd/4th Party Logistics Providers, Regulating Authorities, companies of the

Seaport cluster, competing and cooperating port networks become the new players in the container market.

The above signify that the nature of the Port product is evolving: Pardali and Stathopoulou (2005) argue that since a port is the link between sea and land transportation and the terminal is the fundamental production unit, port product refers to the cargo handling within the port area, being the sum of the existing terminal outputs. This product is offered to the port customer assorted with a set of complementary products which can be orientated towards the water front and/or to the land side and finally enriched by a set of Seaport Cluster Product(s), (Cuadrado et al., 2004). Shippers will choose the port (and related services) that offer acceptable value "on a sustainable basis in an end-to-end logistics pathway". These strategic options are to a large extent dependent on the intervention of regional, national or international governing authorities which configure the long-term goals and the context within which port and transport systems function. It is the interaction of all the above players that finally configures the operational framework of port enterprises and the outcome of their activities will eventually create the overall value proposition for the port user (Robinson, 2002).

As an industrial market, the Port market is characterized by technological complexity, oligopsony, customers' participation into service production and constant restructuring of the size, strategies and bargaining power of port users. Advances in ship size and to the volume of cargo transhipped on the one hand call for extensive and expensive investments in infrastructure and superstructure (Cahoon and Notteboom, 2008, Wiegmans et al., 2008), while on the other hand increase the pressure of keeping the pace for various satellite or feeder ports (Parola and Musso, 2007). Following up customer requirements for constant investment and infrastructure / superstructure upgrades leads to long term commitment of financial resources with high opportunity cost, and the need for payback of invested capital while also form the economic and operational limits within which parties involved can draft and implement their competitive strategies especially in the case of concession agreements (Pallis et al., 2008, Van den Berg and De Langen, 2014). Although these strategic plans are designed by Port Authorities and governing bodies, their outcome depends upon and at the same time constraints their future implementation by Port Operators (Pardali and Kounoupas, 2014). Investing based on the principle "build it and they will come" can prove to be risky and lead to misallocation of social wealth. Therefore, the design and implementation of these plans should be oriented towards the economic and competitive forces that shape the port market, in other words, port strategies should be based on a thorough marketing assessment of actual market and customer needs.

Despite, however, the wealth of studies in most industries and markets as well as the fact that the need for "Port Marketing" is often mentioned in port-related literature there are actually few cases where the meaning and implications of adopting marketing strategies in the industry it is actually examined in detail (ibid). The purpose of this paper thus is to provide a greater insight on the meaning and implementation of marketing philosophy in the port industry context, based on the assessment of port managers from ports and terminals around the world. To proceed in this, we need to operationalise the marketing concept in a set of measurable variables.

2. Marketing and Market Orientation in the Port Industry context

Pardali and Kounoupas (2014) present a review of references on marketing nature, value and application to the port industry. During the 80's these references mainly rest in reproducing consumer marketing principles, worded in a port-related terminology. The most detailed contribution is from Cahoon (2004) who distinguished four main elements in port marketing, namely promotion, community liaison, trade development and CRM, while also stressing the significance of customer retention and propose Customer Relations techniques as a major strategic tool. Cahoon (2004) also explored the concept of Market orientation in the case of Australian seaports while Cahoon and Hecker (2005) suggested the use of services marketing strategies to assist in overcoming competitive pressures in the port market. Pardali and Kounoupas (2007) examined the container port industry from a marketing perspective, proposing three different levels of marketing strategy application in the port market (Governance, Port Authority and Terminal Operator level), while Pardali *et al.* (2009) examine the internal marketing concept in the industry within the context of Piraeus Port Pantouvakis *et al.* (2010) examine the port environment from a marketing perspective and propose a model for alternative strategies (profit maximization and revenue maximization) and the factors that influence the application of these two strategies in the port industry. Hints on the function of marketing as a filed on which strategic cooperation can evolve among port operators are mentioned by Dong-Wook Song and Eon-Seong (2012). Cheraghi et al. (2012) investigated the effect of marketing strategy on port selection by customers (shipping lines), Chiang and Hwang (2010) consider marketing as an innovative characteristic that can have a direct impact on port competitiveness.

One of the reasons that may explain the lack of wealth into strategic marketing research in the port industry context is the very broad and abstract nature of the marketing concept which as Hooley et al. (1990) argue "is all about satisfying customer needs in a profitable way for the enterprise". However, this theoretical concept will only remain a philosophical quest unless it is transformed to structured tactics. This led marketing theorists into developing a more concrete concept, named "market orientation" (Harrison-Walker, 2001). Considered to be a form of strategic marketing, market orientation sets the tone and determines the basic approach for making marketing strategies (Altinay, 2010). As Deng and Dart (1994) summarise, this entails adopting the proper strategies that will generate the necessary intelligence for current and future customer needs as well as the competitive policies required to meet these needs, together with the diffusion of this intelligence throughout the organisation leading to a well organized planning and implementation of the proper responses to market challenges. The two dominant approaches to market orientation come from Kohli and Jaworksi (1990, 1993) and Narver and Slatter (1990). The former, define Market Orientation as "the organisation-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments and organisation-wide responsiveness to it". Narver and Slatter (1990) consider it an element inherent to the organizational culture defining it as: "the organisation culture that most effectively and efficiently creates the necessary behaviours for the creation of superior value for buyers and, thus, continuous superior performance for the business". Market intelligence goes beyond current needs to include an analysis of how these might be affected government regulation, technology, competitors, and other environmental forces. Intelligence dissemination pertains to the communication of information to all departments and

individuals so that it can be transformed to responsiveness, or the set of actions taken in towards the customer, in response to the intelligence.

These concepts have been extensively explored with regards to their content and application in different settings and environments (Ruekert, 1992, Day, 1994, Deshpandé and Farley, 1998, Kohli and Jaworksi, 1990, 1993, Narver et al., 1990, 1994, 1998, Langerak, 1997, Wrenn, 1997, Avlonitis and Gounaris, 1999, Van Raaij , 2001). Literature has explored the antecedents to Market orientation (Harris, 2001, Van Egeren and O'Connor, 1998, Matsuno et al., 2002, Qu et al., 2005, Kirca et al., 2005) as well as it connection to business performance (Jaworski and Kohli, 1993, Pelham and Wilson, 1996, Selnes et al., 1996, Langerak, 1997, Avlonitis and Gounaris, 1997, Caruana et al., 1998, Rodriguez and Pinho, 2010, Akimova, 2000, Tukamuhabwa et al., 2011), with most papers showing a positive connection (Kohli and Jaworski, 1990, Narver and Slater, 1990, Pelham and Wilson, 1996, Jaworski and Kohli, 1996, Deshpande and Farley, 1998, Slater and Narver, 2000, Matsuno and Mentzer, 2000). Market Orientation theory provides an operationalised tool to investigate whether the actual preconditions to the implementation of marketing concepts exist. In other words, in evaluating whether the marketing philosophy is implemented in the port industry, we need to measure the extent of market orientation of port enterprises, using the appropriate measuring scale. The differences in the conceptual definition of Market Orientation are reflected to the instruments developed for its measurement with the majority of research adopting either the MKTOR scale by Narver and Slatter or the MARKOR scale developed by Kohli and Jaworski. Both theses scales have been criticized (Siguaw and Diamantopoulos, 1995, Langerak, 1997, Oczkowski and Farrell, 1998) for their conceptual development, their usefulness and construct validity. Matsuno and Mentzer (2000) and Matsuno et al. (2005) have proposed an Extended Market Orientation (EMO) scale, which builds on Kohli and Jaworski's scale by adding items that refer to other factors that influence the market such as socio-economic and conditions and regulatory bodies interference. Having already presented the importance of these factors in drafting and implementing port strategies, this research has adopted the EMO scale to measure the degree of Market Orientation of Port Enterprises.

Market Orientation literature (Jaworski and Kohli, 1993, Harris, 2001), suggests that market orientation is stronger where top management places greater emphasis in listening to customer needs, organizational departments are in constant communication and where management evaluation and rewards are in line with goal achievement and less developed in organisations that have greater interdepartmental conflict and centralised decision-making processes (Kirca et al., 2005, Van Egeren and O'Connor, 1998). The greater the number of departments involved, the more difficult it may be for organizations to communicate information and respond quickly. Qu et al. (2005) found a significantly positive relationship among market orientation and the existence of a Marketing department with strong financial support and resources. Moreover, similar research on the airport industry by Advani (1998), Pagliari (2005) and Halpern (2005, 2007) suggest that airports that are independently-owned may have more decentralised and faster decision-making processes than those that are regionally-owned or nationally-owned. Similarly, managers in independently-owned airports are more likely to have extremely focused objectives and their performance is likely to be highly scrutinised by local stakeholders or shareholders, while for nationally-owned airports, objectives for managers are likely to be vaguely defined and susceptible to changes in political agendas (ibid). These elements suggest that independently owned airport companies are likely to be more market-orientated

than their regionally-owned or nationally-owned counterparties whose vaguely defined objectives and political agendas may impede market orientation culture.

3. Research Questions, Research Design and Participants Profile.

Based on the preceding discussion, the following set of research questions was formulated:

H1: Private port enterprises will have, on average, a higher degree of Market Orientation
H2: Port Operators will have, on average, a higher degree of Market Orientation
H3: Port Enterprises focusing on Traditional port services will have, on average, a higher degree of Market Orientation than Logistics-orientated ones.

Further to the above, in an effort to add more context to the concept of marketing in the port industry, participants were asked to fill an open question regarding what they think that port marketing is all about. Testing the above hypotheses is based on measuring Market Orientation Scores using the EMO scale and then comparing mean scores between the various independent groups of participants (T-test for 2 groups and ANOVA test is for more than 2 groups – Dafermos, 2005, Field, 2010:325) assuming normality in data distribution for each group. If the normality assumption is violated then the non parametric Mann - Whitney and Kruskal - Wallis tests are used for two or more than two groups respectively.

Configuring the population of the research was based on data from last available Containerization International Yearbooks (2011 & 2012), cross-checked with websites and any other available resource. Only Port Authorities and Operators within Ports handling a minimum traffic of 100,000 teus p.a. were selected, resulting in a list of 415 potential participants. A pilot study with 4 Port Directors/Representatives and 4 academics was initiated to polish the questionnaire and clear potential obscure issues. Most questions were measured on a 5-point Likert /Liker type scale with 5 always showing the strongest positive value. Questionnaires were written in English and the printed version was designed as a coloured booklet sent together with a prepaid reply envelope. Moreover, mixed research design was used (Dillman et al., 2009) by means of an on-line questionnaire in order to increase response rate (Knapp and Kirk, 2003). Respondents were free to select their most convenient form of reply. In total 61 questionnaires were received while 6 were dropped as not properly filled, resulting in 55 usable answers or a response rate of 13.25%, which is acceptable given the similar results in port-related surveys based on primary data collection (questionnaires - interviews) .

With regards to Organisational Role, these were identified as Pure Port Authorities (25,5%), Pure Terminal Operators (49.1%) and Organisations acting both as Port Authority and Terminal Operators. In terms of Ownership, 33% of the responding organisations were private and 67% where identified as public companies. The geographic distribution of participants and their size in terms of TEUs the particular port/terminal handled over the last year resembles the distribution of population in matters of size and geographic origin.

4. Construction and Measurement of Variables

4.1 Investigation of Business focus

Respondents were asked to express their agreement/disagreement (on a 5-point Likert scale) with 7 statements answering the question *"our strategies are mainly focused on"*. Table 1 summarises the results showing that the main target is Global (Liner) Shipping companies, followed in importance by Regional Shipping companies, Shipping Agents, 3rd Party Logistics providers and Hinterland Transport Operators. With regards to commercial companies operation into the port, 48% of respondents hold a negative and 17% a neutral opinion.

Table 1: Business Focus of Port Enterprises

	Mean	Mode	St. Dev	Skeweness	Curtosis
Global Shipping Line Operators	4.27	5	.930	-1.375	2.011
Peripheral/Regional Shipping Operators	4.00	4	1.041	-1.271	1.470
Shipping Agents	3.63	4	1.123	-.985	.523
Port Operators / Stevedoring Companies	3.71	5	1.377	-.766	-.759
3rd / 4th Party Logistics Providers (3Pls – 4Pls)	3.31	4	1.140	-.465	-.539
Commercial Companies operating in the port	2.85	2	1.304	.241	-1.114
Hinterland Transportation operators	3.20	4	1.241	-.201	-.931

Testing the reliability of the above scale through Cronbach's α coefficient gives a value of 0,736 which a=is acceptable. To see whether these factors can be converge to latent constructs, we applied Factor analysis after ensuring that the necessary tests on the data set were positive (KMO test: .670, Bartlett's test: 123.64, $p<0.001$), the above statements were examined through factor analysis in order to check for latent variables. Varimax Factor Analysis with Kaiser Normalisation revealed that above items converge to 2 factors which explain 65.12% of the variance.

Table 2. Rotated Component Matrix[a]

		Component	
		1	2
L3	Commercial Companies operating in the port	,836	
L1	Port Operators / Stevedoring Companies	,762	
L2	3rd / 4th Party Logistics Providers (3Pls – 4Pls)	,734	
L4	Hinterland Transportation operators	,660	
S3	Shipping Agents		,781
S2	Peripheral/Regional Shipping Operators		,775
S1	Global Shipping Line Operators		,698
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			

These factors were named a) Focus on the Sea-front (questions S1, S2, S3) and b) Focus on the inland front and Logistics (questions L1, L2, L3, L4). Respondents generally agree on showing a greater orientation towards the sea front (mean 3,96) and tend to be neutral towards Logistics service orientation (mean 3,61).

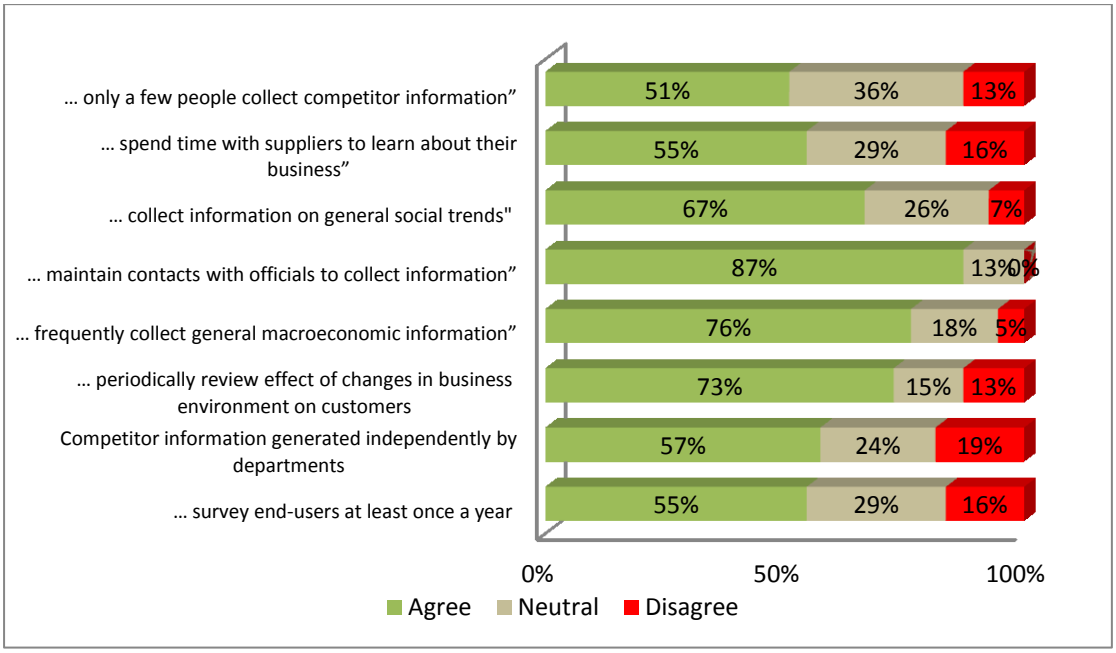
Table 3. Business focus scores

		Focus on Inland front and Logistics	Focus on the Sea front
N	Valid	55	55
	Missing	0	0
Mean		3,1614	3,9640
Mode		3,3333	4,0000
Median		3,00[a]	4,00
St. Deviation		,99127	,76045

5. Investigation of Market Orientation in the Port Industry

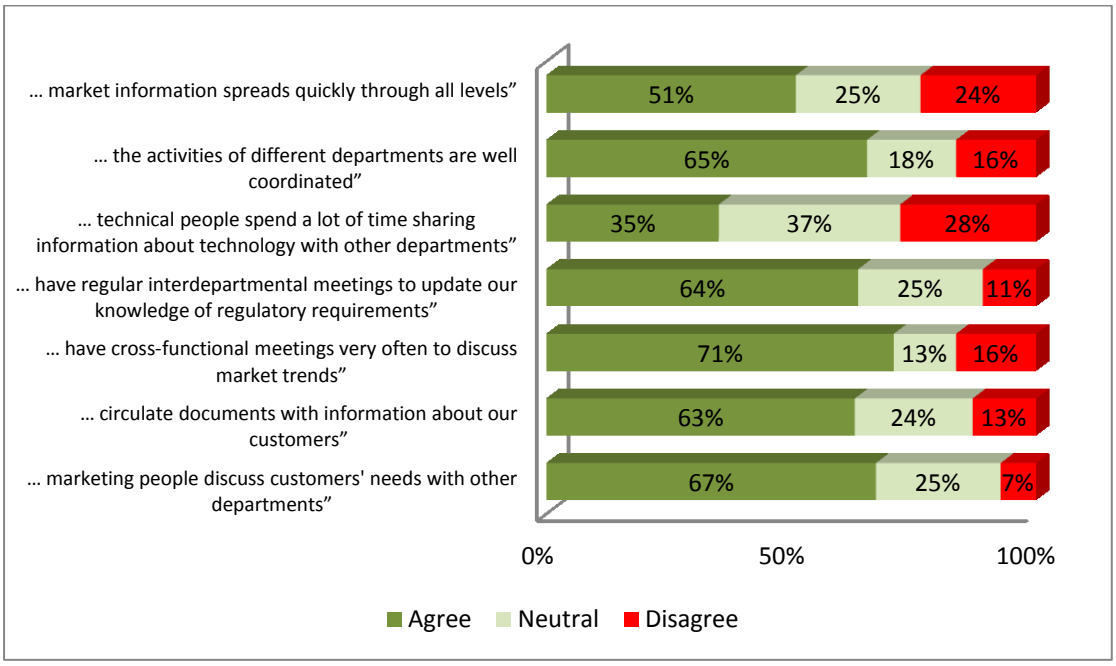
This section presents the distribution of answers regarding the elements that constitute market orientation, using the scale developed by Matsuno and Mentzer (2000). The initial presentation of findings follows authors' original measurement scale; however his is followed by a refining of the measuring instrument through Factor Analysis. All items are coded on a 5-point LIkert Scale (Strongly Agree – Strongly Disagree) with a neutral point and 5 indicating the highest level of agreement. When the scale is refined, questions with a negative content are reversely coded as literature suggests. Figure 1 summarises positive, neutral and negative replies.

Figure 1. Market intelligence generation



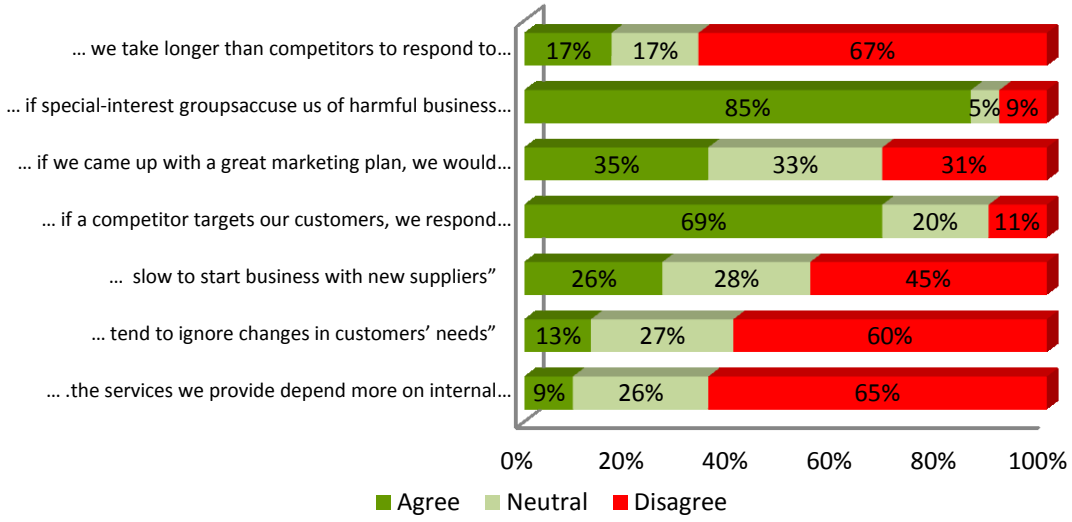
The above illustrate that on average, port enterprises have a strong interest in connections with public or state institutions which will allow them to select and evaluate macro-economic information on the overlying social and economic trends that shape their environment. A lower degree of agreement relates to direct customer and supplier research, for which information is collected from a small number of employees which usually belong to different departments. Figure 2 show that participants tend to agree stronger on diffusing gathered information through organized inter-departmental meetings, devoted mainly to the development in regulating authorities, market trends and customer needs, and to a lesser extent on technological advancements. Half of the respondents state that information spreads fast enough mainly through internal memos and reports.

Figure 2. Dissemination of Market Intelligence within the Port Enterprise



With regards the responsiveness to market intelligence, respondents on average, consider that they react directly to aggressive competitor moves or any other special interest group (etc environmental or political groups), they offer services based on assessment of market needs and overall adopt a neutral position with regards to delays in enforcing marketing plans, as illustrated in Figure 3.

Figure 3. Response to Market Intelligence



To assess the overall market orientation 4 new variables where constructed by averaging responses to subsections and to the overall scale. Variable IG_Score refers to the degree of collecting data from and for the market; ID_Score to the degree of information diffusion within the port enterprise, IR_Score the degree of responsiveness to market intelligence and finally, MO_score measures the overall degree of Market Orientation). As indicated in the below table, participants have a moderately positive to neutral perception of their market orientation (average score 3,416) though the standard deviation is relatively low (0,3705). A slightly more positive perception refers to the sub-measures of seeking information and information diffusion, while on the contrary, respondents are neutral with a tendency to disagree to the statements referring to responsiveness to market intelligence gathered.

	IG_Score	ID_Score	IR_Score	MO_Score
Mean	3,6932	3,5355	2,9771	3,4163
Mode	3,75[a]	3,86	2,86	3,36[a]
St. Deviation	,48162	,61178	,43471	,37056

Cronbach's α has a value of 0,769 which is deemed sufficient. However, given the characteristics of the port industry, the items constituting the Matsuno and Mentzer (2000, 2004) scale were re-examined after Factor Analysis was applied.

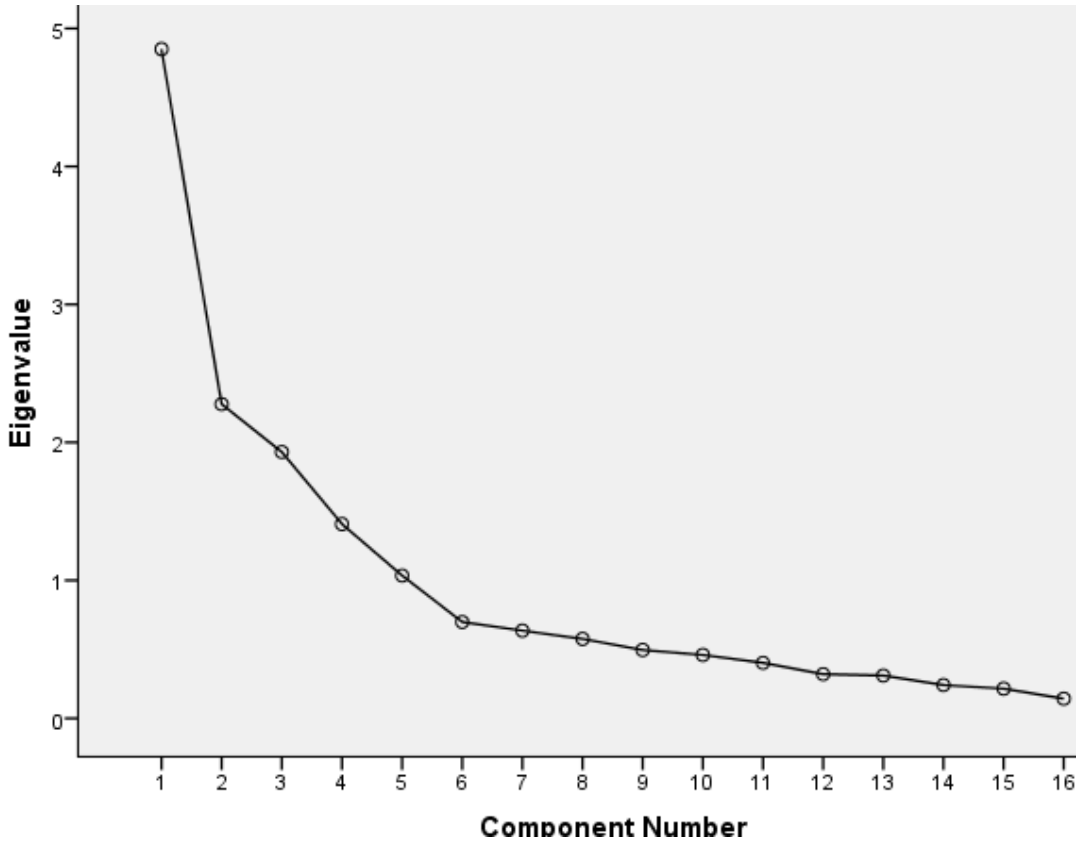
6. Factor Analysis and presentation of new scale

KMO test and Bartllet's sphericity tests were applied to examine the appropriateness of the data which was confirmed (KMO test 0.611> 0.6, Bartlet's test sig. <0.01). After Factor Analysis was applied, 7 factors were identified, explaining 71,58% of variance. However, decisions on factor extraction cannot be based solely on statistical background since the items loading on each factor have to demonstrate an internal cohesiveness and ease of interpretation. Therefore, as Field (2009, p. 651) suggests, the Anti-Image Correlation Matrix was examined, and the items (questions) referring to the points along the diagonal with values lower than 0.5 were removed.

According to Stevens (2002) the loading of each component was set to 0.5. This process led to deleting questions 1,2,8,15,20 and 22, followed by repetition of Factor Analysis where improvement of data fitting is apparent (KMO test: 0.722, Bartlett's test is statistically significant, $p<0.001$).

Factor Analysis now leads to the extraction of 5 factors explaining 71,88% of variance as can be seen at the below table and Scree Plot:

Figure 4. Scree Plot



By examining the Rotated Component Matrix we can now proceed in distinguishing 5 factors which can be named as follows:

- Factor 1: Diffusion of market intelligence in the company (5 questions, α: 0,833)
- Factor 2: Macro-environment intelligence generation (3 questions, α: 0,798)
- Factor 3: Inertia to market Intelligence (3 questions, α: 0,718)
- Factor 4: Response to market intelligence (2 questions)
- Factor 5. Intelligence generation regarding Customers and Suppliers (2 questions)

Table 4. Anti-image Correlation

	MO1	MO2	MO3	MO4	MO5	MO6	MO7	MO8	MO9	MO10	MO11	MO12	MO13	MO14	MO15	MO16	MO17	MO18	MO19	MO20	MO21	MO22
MO1	,472[a]	.330	-.454	.144	.008	.014	-.483	.228	.018	.074	.155	-.371	.069	-.054	.280	-.125	.137	.073	-.167	.337	.312	-.223
MO2	.330	,400[a]	-.189	.288	-.238	-.263	-.409	-.133	.001	.186	-.315	-.188	.184	-.009	.424	-.208	.223	.165	-.237	.149	.166	-.468
MO3	-.454	-.189	,806[a]	-.155	-.095	-.040	.252	-.052	.092	-.153	-.245	.100	-.113	.030	-.034	.061	.089	-.102	-.201	-.058	-.144	.144
MO4	.144	.288	-.155	,609[a]	-.268	-.429	-.126	-.025	.029	-.211	.140	-.204	.039	-.398	.434	.078	-.034	-.113	-.015	.229	.217	-.238
MO5	.008	-.238	-.095	-.268	,676[a]	-.344	.202	-.050	-.285	.069	.212	-.051	-.106	.056	-.116	.098	-.160	-.103	.138	-.129	-.022	.268
MO6	.014	-.263	-.040	-.429	-.344	,647[a]	-.173	.108	.029	.109	-.023	.023	-.040	.311	-.424	-.157	.185	.133	.095	.109	-.131	.157
MO7	-.483	-.409	.252	-.126	.202	-.173	,526[a]	-.041	-.171	-.355	-.040	.347	-.048	.074	-.056	.065	.046	-.090	-.081	-.371	-.214	.050
MO8	.228	-.133	-.052	-.025	-.050	.108	-.041	,449[a]	.217	-.259	.109	-.129	.202	.026	.133	-.089	-.076	.225	-.236	.257	.080	-.096
MO9	.018	.001	.092	.029	-.285	.029	-.171	.217	,789[a]	-.393	-.127	-.186	.030	-.191	.008	-.026	-.057	.014	-.091	.160	.275	.030
MO10	.074	.186	-.153	-.211	.069	.109	-.355	-.259	-.393	,608[a]	-.132	.129	-.015	.127	-.179	-.157	.145	-.049	.182	-.118	-.190	.039
MO11	.155	-.315	-.245	.140	.212	-.023	-.040	.109	-.127	-.132	,726[a]	-.333	-.222	-.237	.141	.157	-.232	-.100	.163	.218	.011	.139
MO12	-.371	-.188	.100	-.204	-.051	.023	.347	-.129	-.186	.129	-.333	,691[a]	-.159	-.126	-.241	.113	-.050	-.184	.118	-.448	-.189	.092
MO13	.069	.184	-.113	.039	-.106	-.040	-.048	.202	.030	-.015	-.222	-.159	,761[a]	-.045	-.043	-.160	.111	.276	-.399	.101	.111	-.387
MO14	-.054	-.009	.030	-.398	.056	.311	.074	.026	-.191	.127	-.237	-.126	-.045	,760[a]	-.247	-.115	.352	.193	-.209	-.023	-.337	-.097
MO15	.280	.424	-.034	.434	-.116	-.424	-.056	.133	.008	-.179	.141	-.241	-.043	-.247	,446[a]	-.199	.098	.097	-.237	.273	.065	-.353
MO16	-.125	-.208	.061	.078	.098	-.157	.065	-.089	-.026	-.157	.157	.113	-.160	-.115	-.199	,562[a]	-.564	-.429	.037	-.142	.110	.028
MO17	.137	.223	.089	-.034	-.160	.185	.046	-.076	-.057	.145	-.232	-.050	.111	.352	.098	-.564	,586[a]	.067	-.257	.087	-.103	-.239
MO18	.073	.165	-.102	-.113	-.103	.133	-.090	.225	.014	-.049	-.100	-.184	.276	.193	.097	-.429	.067	,507[a]	-.220	.166	.037	-.308
MO19	-.167	-.237	-.201	-.015	.138	.095	-.081	-.236	-.091	.182	.163	.118	-.399	-.209	-.237	.037	-.257	-.220	,616[a]	-.165	-.331	.525
MO20	.337	.149	-.058	.229	-.129	.109	-.371	.257	.160	-.118	.218	-.448	.101	-.023	.273	-.142	.087	.166	-.165	,211[a]	.116	-.222
MO21	.312	.166	-.144	.217	-.022	-.131	-.214	.080	.275	-.190	.011	-.189	.111	-.337	.065	.110	-.103	.037	-.331	.116	,649[a]	-.033
MO22	-.223	-.468	.144	-.238	.268	.157	.050	-.096	.030	.039	.139	.092	-.387	-.097	-.353	.028	-.239	-.308	.525	-.222	-.033	,363[a]

Table 5. Rotated Component Matrix

Rotated Component Matrix[a]					
	Component				
	1	2	3	4	5
MO12.we have regular interdepartmental meetings to update our knowledge of regulatory requirements	,832				
MO11.we have cross-functional meetings very often to discuss market trends	,798				
MO14.the activities of different departments are well coordinated	,698				
MO13.technical people spend a lot of time sharing information about technology with other departments	,604				
MO9.marketing people discuss customers' future needs with other departments	,546				
MO3.we periodically review the likely effect of changes in our business environment on our customers					
MO5.we maintain contacts with officials of government/regulatory bodies in order to collect and evaluate relevant information		,893			
MO6.we collect information on general social trends that might affect us		,862			
MO4.we frequently collect general macroeconomic information		,704			
MO16.the services we provide depend more on internal politics than real market needs			,890		
MO17. for one reason or another, we tend to ignore changes in customers' needs			,804		
MO18.we are slow to start business with new suppliers even though we think they are better than existing one			,734		
MO19.if a major competitor launches a campaign targeting our customers, we would respond immediately				,844	
MO21.if special-interest groups (e.g. local authority, environmental groups), were to accuse us of harmful business practices, we would respond immediately				,813	
MO7.we spend time with our suppliers to learn more about their business					,846
MO10.we periodically circulate documents (reports, newsletters) that provide information about our customers					,840
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 6 iterations.					

Although as a general principle theory suggests at least 3 questions per factor, Costello and Osborne (2005) argue that this can be ignored if the rest of conditions are met and there is a logical correlation between the questions constituting each factor. Further to that, 6 new variables were constructed (MICRO_IG, MACRO_IG, IntDiss, IntInertia, IntResp and MARKOR_NEW) by averaging responses of questions loading to each factor. Table 13 presents the descriptive statistics of the new variables:

Table 6. Descriptive statistics of recoded variables

		Micro Environment Intelligence Generation	Macro Environment Intelligence Generation	Market Intelligence Dissemination	Market Intelligence Inertia	Response to Market Intelligence	Market Orientation New Scale
N	Valid	55	55	55	55	55	55
	Missing	0	0	0	0	0	0
Mean		3,5909	3,9788	3,5355	2,5212	3,9182	3,4658
Mode		4,00	4,33	4,00	2,33	4,00	3,40[a]
Std. Deviation		,87184	,63994	,69673	,69319	,80372	,39217
a. Multiple modes exist. The smallest value is shown							

The new scale suggests a relatively higher Market orientation of participants (Mean 3,4658 as opposed to 3,416). Similarly, Macro intelligence generation is actively supported (mean 3,978, St. Deviation 0,639), Customer intelligence generation is positively perceived (mean 3,590, St. Deviation 0,871), together with intelligence dissemination (mean 3,535, St. Deviation 0,696), with participants being positive with regards to responsiveness and rejecting inertia to messages from the marketplace.

7. The effect of Ownership, Business Scope and Business focus on Seaport Market Orientation

After recoding of the above variables, we test for the effect of Ownership (public or private), strategic and Organisation role (Port Authority, Port Operator or Mixed), the type of traffic targeted (domestic or transshipment cargo) and Business focus (towards the Sea front or Logistics Services). The Kolmogorov - Smirnoff test reveals that data is not normally distributed ($p < 0.05$) for all variables except Market Intelligence Dissemination ($p: 0.2 > 0.05$), therefore the Mann - Whitney test is used which suggests that statistically significant difference between Public and Private Port Enterprises exist only in the case of Micro Environment Intelligence Generation and Responsiveness to Intelligence gathered.

Table 7. Mann - Whitney test for Port Ownership

Test Statistics[a]						
	Micro Environment Intelligence Generation	Macro Environment Intelligence Generation	Market Intelligence Dissemination	Market Intelligence Inertia	Response to Market Intelligence	Market Orientation New Scale
Mann-Whitney U	199,500	311,500	319,500	270,500	166,500	321,000
Wilcoxon W	370,500	482,500	490,500	441,500	832,500	987,000
Z	-2,335	-,233	-,083	-,999	-3,000	-,055
Asymp. Sig. (2-tailed)	,020	,816	,934	,318	,003	,956

a. Grouping Variable: Organisation ownership status 2

Perhaps surprisingly, it appears that Public Port Enterprises have a statistically greater degree of gathering information regarding the micro economic environment ($U=199.500$, $z=-2.335$, $p<0.05$, $r=-0.310$), while private entities show a greater sense of responding to the information gathered ($U = 166.500$, $z= -3.0$, $p<0.01$, $r=-0.40$).

8. Testing for the effect of Organisational Role on Port Market Orientation

Following the previous methodology, we test whether there is a difference in Market Orientation score between Port Authorities, Port Operators or mixed roles (Port Authority that also acts as a Port Operator). Normality tests indicate that the variables Information Diffusion and Overall Market orientation are normally distributed ($p>0.05$). ANOVA descriptives show that Port Enterprises combining the role of Port Authority and Port Operator demonstrate a higher score of Market Intelligence dissemination and Market Orientation than the other groups.

Table 8. ANOVA Test for Business Scope

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Market Intelligence Dissemination	Port Operator	27	3,4315	,70481	,13564	3,1527	3,7103	1,40	4,60
	Port Authority & Port Operator	14	3,7000	,62634	,16740	3,3384	4,0616	2,40	4,80
	Port Auhtority	14	3,5714	,75999	,20312	3,1326	4,0102	2,00	4,80
	Total	55	3,5355	,69673	,09395	3,3471	3,7238	1,40	4,80
Market Orientation	Port Operator	27	3,4129	,37483	,07214	3,2646	3,5612	2,27	4,13
	Port Authority & Port Operator	14	3,5381	,37482	,10017	3,3217	3,7545	2,87	4,07
	Port Auhtority	14	3,4956	,45273	,12100	3,2342	3,7570	2,60	4,33
	Total	55	3,4658	,39217	,05288	3,3598	3,5718	2,27	4,33

The Levene's Test has a p-value 0,148> 0,05 for information dissemination and 0.206 > 0.05 for Market Orientation therefore ANOVA test results are reliable and suggest that there is a statistically significant difference in mean scores of Information Dissemination (p=0.005) and non significant for Market Orientation (p>0.05). For the rest f the variables the non-parametric Kruskal Wallis test is used which suggest that there is no statistical difference between the groups (p>0.05 for all variables).

Finally, to test if the focus of Port Enterprises in directing their services mainly towards the sea front (Global and Peripheral Shipping Lines and their Agents) or towards Logistics Services (Inland transporters and 3rd party Logistics providers)affects the level their of Market Orientation, a new dichotomous variable was created (Service_focus) taking the value of 0 if the score of variable Seafront_ServiceFocus is greater than the score of the variable Logistics_Servicefocus, and the value 1 for the opposite. Overall Market Orientation is normally distributed (p>0.05) hence means will be compared by T-test, while for all other variables the Mann-Whitney test is used. The T-test shows no statistical significance (p= 0.685>0.005). Therefore the hypothesis that Market Orientation is affected by business focus is thus rejected. The same results apply for the other sub-variables as the Mann Whitney tests have p-value from 0.548 to 0.737 > 0.05. Therefore hypothesis H3 is totally rejected.

9. Discussion

The research shows that the main type of customers targeted by Port Enterprises around the world is Global Liner Shipping Companies, followed in terms of importance, by -Peripheral Shipping Lines, Shipping Agents, 3rd Partly logistics Providers and Inland Carriers. Respondents adopt a rather negative position (48% negative and 17% neutral) with regards to servicing companies operating within the port or the port cluster. After applying Factor Analysis and testing for scale reliability, two basic forms of business focus were identified, with participants tending to show a higher orientation towards the (traditional) Sea front (mean score 3,96) and tend to be neutral towards Logistics Service (mean score 3,61). The particular finding is important, as most research on the topic stresses the need of providing logistics services or becoming part of integrated logistics networks, as a source of competitive advantage in today's Port Industry (Bichou and Grey, 2004, Notteboom and Rodrigue, 2005, Notteboom, 2008, Ferrari et al., 2008, Petit and Beresford, 2009). One could observe there that current practice in the port industry does not coincide to academic suggestions.

A similar finding lies in when respondents were asked to identify the most important element of Port marketing. Although academic research has somehow been left behind in the area of port marketing, the actual industry is moving ahead, employing text-book marketing strategies previously developed in other disciplines (Pardali and Kounoupas, 2014). This was also verified in the present research where most respondents converged into stressing the importance of marketing to areas such as market research, customer relationship building and management, pricing and promotion of port services, public relations, and all the activities required to achieve customer satisfaction. However, some quotations went deeper into the strategic meaning and the key importance of port marketing. One of the respondents stressed that the most important element of port marketing is: *"to add value to the port community in a sustainable way: For cargo shippers (industrial and retail) established close to the port, supply chain management solutions for shipping companies by offering efficient services that can be effectively incorporated in customers operations. And for people leaving nearby the port, a smooth management of port processes"* marketing is comprehended as means to *"covering shipping companies and terminal operator needs", or more specifically as means to "identify, confront and finally profitably meeting customer needs"*. Another respondent stressed as most important element *"the understanding of possibilities, weaknesses and alternatives available to customers and competitors",* as well as *"the understanding and facilitation of supply chain functions"*. Others noted the importance of marketing in *"affecting customer perception on the advantages of a port and achieving customer loyalty"*, or "*maintaining relationships and constant communication with customers with regards to the competitiveness of the port and of the customers themselves"*. Within the same spirit another respondent notes *"the design and sales of supply chains creation of a value position to customers for transporting cargo through the port… while attracting cargoes can also derive through networking and direct contact with customers". O*thers stress the need for "fostering good relationships with Public Authorities", "respond to extreme and crucial situations", "full customer support", and "improving port service quality".

With regards to the overall Market Orientation of Port Enterprises measured using the Matsuno and Mentzer (2004) EMO scale, the exploratory factor analysis led to the identification of 5 (rather than 3) underlying factors which were tested for their

validity and reliability. The results showed that port enterprises distinguish between two separate forms of market intelligence: information regarding customers, suppliers and competition and information regarding macro-economic and regulatory environment. It is worth mentioning that only 55% of port enterprises have a structured research procedure regarding its clientele, and about half of respondents collect information for competitors, a finding similar to Cahoon's (2004). On the contrary, collecting data and information for regulatory issues and macro- economic developments is a priority for 84% and 72% of respondents respectively. This can be interpreted as a token of dependence of the port sector from statutory and regulatory authorities, which refers to the traditional Keynesian model of port governance (Pardali 2005).

Factor analysis indicated that the factor "response to market intelligence" is divided into two variables, a negative one (named "market intelligence inertia") and a positive one "response to market intelligence". Port managers tend to agree that their inertia score is relatively low (mean 2,5) while their response much higher (mean 3,92). The particular finding contradicts Cahoon (2004) finding where response to market intelligence for Australian ports had the lowest scoring (mean 2,13), a phenomenon attributed by the author to their dependence and flexibility confinement by state or other regulatory authorities. The overall scores of participants to the present study, with regards to their level of market orientation demonstrates a score ranging from 2,27 to 4.33. In an effort to interpret this rather wide range, we tested whether a set of factors analysed by port economics and management literature have any effect on the level of market orientation. Although the Market Orientation concept has not been tested (except for Cahoon's PhD thesis) in the Port Industry, other research (Advani, 1998, Pagliari, 2005 and Halpern, 2005), in the airport industry have indicated the importance of factors such as ownership (public, private, mixed, regional). This research demonstrated that for Market Orientation and its sub-factors there are no statistically significant differences between private and public port enterprises ($p<0.05$). Such differences though exist on Micro-economic environment intelligence generation and on positive Response to Market Intelligence ($p>0.05$). Surprisingly, it is Public Port Enterprises that have a statistically significant greater level of Collecting information for the immediate market environment in which they operate in, ($U=199.500$, $z=-2.335$, $p<0.05$, $r=-0.310$), however, it is Private Port Enterprises that actually demonstrate a higher level ($U = 166.500$, $z= -3.0$, $p<0.01$, $r=-0.40$) of utilization of the gathered intelligence by crafting and delivering the appropriate response to the information collected. In the same spirit, testing for the effect of the Institutional role of Port Enterprises on their level of Market Orientation revealed interesting results. We observed that Port Enterprises that act on a dual role of Producing port services (as Port Operators) and at the same time acting as a regulating - institutional agent (Port Authority), demonstrate statistically significant higher levels of Market Orientation that Port Enterprises solely confirming to one of the above two roles.

Interpreting the above is not easy as no such clear distinction appears in prior research. We can argue though, that port enterprises with a dual role and accordingly de facto broader interests (towards their customers and the societal or political factors shaping the region within which they operate), are more motivated to collect, circulate and finally respond to a wide spectrum of market intelligence than single - role port enterprises. Cano et al. (2004) seem to adopt a similar logic in their research of Spanish and Global container terminals. In this context, as Stathopoulou (2012) suggests, the port is required to operate as a competitive node in the transport chain

(the focus being on the Port Operator level) while at the same time needs to manage and build relationships within a complicated and evolving external environment (local, regional, national or international), with the focus now being on the Port Authority level.

In the context of the Port Industry, the potential differences in strategic expectations of the port community members in conjunction with their deep interdependence and interaction may affect the level as well as the direction of each member's market orientation. Conflicting goals and strategies between Port Operators in the same port or the inability of a Port Authority to act towards synergies' creation and combination of competing operators targets under its own broader marketing strategy will have a negative impact on securing market orientation for the port. Dependence on political directives and local interests although in theory does not obstruct collecting, diffusing and responding to information from the market place; it does not however facilitate the focus of port management and its orientation towards actual market needs. Therefore, clear lines of communication, clear setting of priorities and an effort to synthesize individual port community member is a pre-requisite for market orientation on the port level.

The investigation of the effect of business focus on traditional services (towards the seafront) or logistics services, on the level of market orientation suggests that logistics focused port enterprises demonstrate higher levels of market orientation. Although the difference is not statistically significant ($p<0.05$) to refer to the general port population, within the context of the present study it appears that logistics focused port enterprises are in closer touch with market needs. Focusing on logistics services extends the traditional services offered to ships and shipping companies, thus expanding the nature of the port product and market, allowing for differentiation and new sources for competitive advantage. This finding is compatible with research in other fields as presented by Matsuno and Mentzer (2000), Harris (2001), Kim (2003), Cadogan et al. (2003), and the recent works of Sørensen (2009), Bodlaj and Rojsek (2010), O' Cass and Weerawardena (2010), Kumar et al. (2011), Zebal and Goodwin (2011). Clearly though, focusing on logistics services is not a strategy that can be adopted by all port enterprises as there can be specific geographical (location, insularity) or infrastructure reasons (existence of connections to other transport modes) that may or may not allow such strategies.

10. Conclusion and suggestion for future research.

The above analysis has postulated that there is more into port marketing than current research has so far presented. The application of the marketing concept appears to be close to the heart of strategic port management. Market orientation provides a useful path towards operationalising the marketing concept. At the same time, exploring the level of Port Market orientation according to different grouping variables (ownership, business focus and institutional role) signifies that one should not adopt stereotypes in judging port management. Port enterprises in general appear to have medium to moderately high levels of market orientation, which means that the supply side of the industry is anything but indifferent to market requirements. The fact that mixed institutional role port enterprises (i.e. Port Authorities also engaged in producing port services) demonstrate higher levels of market orientation than pure Port Authorities or Pure Terminal Operators, shows that port management should look both at optimising port production as well as maintaining a broader port community

or cluster governing role. Obviously the current research only examines the effect of institutional or internal strategic decisions on the level of market orientation and does not examine the effect of external factors such as the forces of the competitive environment within which ports operate. Moreover, this research does not investigate the Consequences of Market Orientation on to the business performance of the port enterprise. Additionally, examining Market orientation provides an understanding of the factors that facilitate or incommode transforming market intelligence to marketing tactics; it does not though reveal what these tactics are in detail and how do these reach the port customer. Therefore, adopting a market oriented culture and business behaviour also needs to be examined under the positive or negative effect on port performance under the mediating role of port marketing tactics.

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