

Is the Use of Green Certification Strategic or Not?

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ABSTRACT: Differentiation strategies are the most preferred strategies when it comes to surviving in a highly competitive environment. And the debate as to whether using sustainability for strategic positioning, e.g. differentiation, is still a hot topic in literature. To that end, we investigated if green certification of 17 Turkish ports have been used with similar purpose. In this context, this study aims to find out whether the certification attempts of "green ports" in ports that are strategic nodes of global supply chains are strategically justified or just an action to catch up with other competitors. Drawing on qualitative analyses, a green port corpus content has been prepared. This corpus is comprised of 17 green certificated port CEOs' interviews and their website contents. The results indicate that the Turkish ports generally carry out practices that follow the trends in the world, but they mostly implement them to imitate rather than being strategic.

1 INTRODUCTION

It is a fact accepted by all industrial and academic societies that change in production, transportation, and communication technologies are shaping the face of the global competitive environment. However, the academic studies on which strategy style is preferred by the companies in this competitive environment are usually those studies conducted on the manufacturing companies (Fynes et al., 2005; Collins et al., 1998; Ketokivi and Schroeder, 2004). Many valuable ideas at the national, regional, and international levels regarding cost leadership and differentiation strategies shape the current theory. However, the recent frequent occurrence of serious environmental events and the increasing environmental sensitivity in the eyes of customers force companies to insert environmental elements among the key determinants of their business strategies to maintain their current position in the market. Moreover, the term "green" has reached an international scope by exceeding

customers' sensitivity to this issue. In this context, Kyoto Protocol, Paris Climate Agreement, and EU green agreement texts are prominent treaties and also have international sanctions. Therefore, the impact on the environment has become an important strategic element to be considered by business leaders. Nowadays, we see that these elements, commonly referred to as "green", are used as part of differentiation strategies, and the certificates obtained are used to create a barrier to entry for the industry. In particular, ports, which create great economic value as strategic nodes of global supply chains and have a negative perception of pollution due to their direct contact with the world's oceans, are forced to face "green" certification processes due to increasing environmental sensitivity and customer demands. Subsequently, they use the obtained certificates to gain a competitive advantage. It is surprising to see that several studies have been conducted on the environmental impact assessment of ports (Chang and Wang, 2012; Ross and Kliemann, 2017; Lam and

Notteboom, 2014), but few studies have been conducted on the strategic context of these.

While ports, according to the İMEAK DTO, the industry's umbrella organization, are one of the most critical elements of the global maritime industry, which has a growth of \$450-500 billion in financial terms, and are facilities that have strategic importance to global supply chains, where 85-87% of all commercial products circulating in global trade stop. When the topic is evaluated considering our country surrounded by seas from three sides, we see that 70% of our borders are on the sea, 50% of our population lives by the sea, and our maritime industry has a size of over \$17.5 billion (Hürriyet, 2019). Therefore, research on the maritime industry, which has such economic value, is expected to help fill the gaps in the literature regarding management and strategy research and the industry's approach to competitiveness. Most importantly, we also tried to find an answer within the Turkish context for the ongoing debate as to whether sustainability could be used strategically with regards to ports.

In this context, the purpose of this study is to find out whether ports that have obtained green port certificates by different accredited institutions are implementing this initiative in line with their strategies or due to institutional isomorphism by imitating their competitors' initiatives. To achieve this purpose, the rhetoric of the senior executives, the strategic elements on the corporate websites, and the social media accounts of the 17 port companies in Turkey that have received green port certificates were studied using the content analysis technique to answer the research question.

The rest of this study consists of the theoretical framework, research hypotheses/assumptions, research framework, results, and the result and discussion sections.

2 THEORETICAL FRAMEWORK

2.1 *Theoretical isomorphism and Signal Theory*

The question of how new organizational styles emerge is one that theoretical writing tries to answer the most (Puranam et al., 2014; Rao and Kenney, 2008: 352). However, originally, the emergence of theoretical writing is based on the question of why organizations are similar to each other (Sargut and Özen, 2007). In this context, the simulation effects of organizational domains have a special significance. The term organizational domain defines a unit of analysis that considers organizations with similar areas of activity and an awareness that they are in a joint effort, together with the other organizations with which their relationships have meaning (Scott, 2001: 83-84). This concept can be compared to the term 'industry' in its everyday usage. One of the basic propositions of the theoretical approach is that organizations working in the same field become more similar over time in terms of "culture, structure, and output(s)" (DiMaggio and Powell, 1983: 147; Radaelli, 2000; Frumkin and Galaskiewicz; 2004; Beckert, 2010). However, empirical research does not look for similarity along with organizational methods or

different qualities, but on a structural element or application. (Hambrick vd., 2005: 317). Certification preferences of management systems have also been argued in the work on quality management systems and adaptation due to industrial pressure has been explained by the purchase of a new theoretical theory (Heras-Saizarbitoria vd., 2010; Mangiarotti and Riillo, 2013). On the other hand, in the work on the source-based approach, it was pointed out that certifications can be considered as strategic resources and that they are rare and difficult to imitate (Mangiarotti and Riillo, 2013). By redesigning the inner processes to obtain a certificate and not only by asking for them, but the evaluation regarding the element of quality can also be considered as correct.

The second basic theory of our work, signal theory, deals with the fact that two sides (organization or person) do not have enough data and in the case of information asymmetry, they send some signals to create an environment for the other side to understand or to attract their attention (Connelly vd., 2011). Signal theory is increasingly used in papers on management (Ehrhart and Ziegert, 2005; Gunther and Nerkar, 2004; Zhang and Wiersema, 2009). There are many kinds of research in disciplines such as strategic management, entrepreneurship, and human resource management that use this theory as a basis. (Basdeo vd., 2006; Higgins and Gulati, 2006). The use of signaling theory to position the certifications of the environment for the corporate image is not a new phenomenon (Heras-Saizarbitoria et al., 2020). In this paper, it is assumed that ports that have received environmental certifications, as suggested by signaling theory, indirectly share their strategic positioning with the public. To do so, port companies will constantly refer to Green Port and sustainability through their communication channels and their management and will try to attract the public's attention by mentioning these issues in every interview they give.

2.2 *Sustainability*

The term "sustainability", which is commonly used according to the 1987 Commission Report from United Nations entitled "Our Common Future", is defined as the ability to meet the needs of the future while meeting the needs of the present (Daly, 1996: 1). According to this description, sustainability is a path of progress that increases social and economic development with a source-based view. It requires a more equitable distribution of wealth among nations and internationally than at present and aims to eradicate poverty by keeping options open for the future (Brundtland, 1987).

In light of the studies and arguments currently found in the literature, the concept of sustainability can be unified under three terms; environmental, social, and economic sustainability, and only if these three components are maintained can sustainability be realized (Elkington, 1998; Zadek et al., 2001: 9). The concept of sustainable business has become a popular research topic in recent years and the number of studies conducted on this topic has increased. Similarly, due to environmental pressures or due to laws and regulations enacted by governments for

global linkages, companies have started to take more precautions and are investing more and more in this topic. For instance, APH -WPSP Port Economic Effect Barometer Report (Port Strategy Report, 2020) despite the economic crisis near the COVID - 19 pandemic 45% of the ports that participated in the survey stated that they will continue with their investment plans for pick ability as planned earlier.

Operations see sustainability as part of their strategic planning and are looking for ways to gain a competitive advantage by seeking new opportunities in this direction (Parida and Wincen, 2019). Trends from the business world can also contribute in this direction, such as digitalization, circular economy, servitization(Parida and Wincen, 2019). With the circular economy, the use of materials in production that has a higher potential of economic recyclability and the legal incentives; with servitization instead of providing new products try to find solutions through the provision of service and finally with quality digitization from products to service at all stages sensors, constant connection, the convenience of analysis lowering the diminution rate is enabled (Parida and Wincen, 2019). Banking, which is a completely different industry, has similar efforts. In a 2018 research by ING (ING Sustainability and Finance Study, 2018), sustainability efforts are mentioned to be an important strategy in finance and all other sub-industries related to it. According to this, institutions with sustainability can benefit from an increase in approval, lower costs, familiarity with the business, compliance with laws, ability to access cheap resources, tax benefits, and attracting young talent who have just entered the business world. three pressure elements are mentioned as effective in why institutions are taking sustainability more and more seriously. Even though this is a study of the textile industry (Peters and Simaens (2020)), these three dimensions can be listed as follows: Corporate (standards and regulations, customer awareness, competitive advantage, public pressure), Organizational (as a strategic tool for business and corporate reputation), and Individual (upper management preferences and personal choices).

In this concept, the maritime industry has started to make a shift towards sustainability in the last year. This is primarily about reducing costs and protecting the environment, thereby enhancing corporate image as well as meeting the demands of customers, the main shareholders (Teerawattana and Yang, 2019). in this context, both national and international comparative indicators have been developed for green port transformation and certifications are beginning to be distributed.

As discussed in detail above, scholars claim that responding to sustainability challenges contributes to competition and could even determine the survival of organizations (Lubin and Esty, 2010). Although most executives are aware of the importance of sustainability, the lack of a solid roadmap (strategic vision) and disorganized initiatives obscure the least benefit from these efforts. With the rise of corporate sustainability as a mega trend and one of the most polluting activities, ports have started to transform themselves into green businesses. The concept of

green ports falling under the purview of green business is explained in the next section.

2.3 Conceptualization of "Green Port"

The term "green port" was coined in the literature as a joint research effort between academia and industry from the perspective of sustainability concerning the maritime industry (Pavlic et al., 2014). Lawer et al. (2019) argue that this concept is not new and it has existed in the relevant literature since the early 1990s. They further add that the term addresses environmental issues such as water quality, dredging, and noise, and indicates proactive initiatives by ports in their voluntary fight against negative environmental externalities. In the intervening years, the concept was expanded to incorporate social considerations that seek economic growth with environmental harmony; thus, it has since become synonymous with sustainable ports. Later, the definition was expanded to include other issues such as air quality, climate, and environmental protection.

3 METHODOLOGY

3.1 Scope of the Research

On December 16, 2014, the protocol signed between the Ministry of Transport, Maritime Affairs and Communications, the General Directorate of Maritime Trade (GDMT), and Turkish Standards Institute (TSI) initiated the "Green Port/ Eco Port" project (UTIKAD,2014). Under the project, the main objectives are set as "port facilities that have an effective, comprehensive and coordinated approach and implement technical and administrative arrangements that reduce the environmental impact of port operations"(TURKLİM,2013). For this purpose, TS EN ISO 9001- Quality Management System, TS EN ISO 14001- Environmental Management System, TS 18001- Work Health and Safety Management System conditions must be complied with within the project, in addition to some other industry standard necessities (UDHB, 2015). According to the Ministry, 17 Turkish ports have green port certification and all these ports were included in the analysis.

3.2 Research Design

The design of the research is based on content analysis, one of the quantitative research methods. For this, the analysis conducted by researchers is used along with the automatic content analysis method proposed in the literature (Kunz, 2019). Below are the words used in content analysis within the concepts addressed in line with the purpose of the research. These words are compiled from the literature on sustainability and strategic management.

Strategy (Cost Leadership /differentiation): strategy, tactics, target, competitiveness, cost, efficiency, waste, price, capacity, control, level, process, inventory, standard, time, economic, bargain, differentiation, new, quantity, creative, different,

R&D, development, promotion, leading, innovation, value, variety, brand, design

Sustainability: Sustainability, Environment, Environmentally Friendly, Environmental, Green, Eco, Ecology, Ecologic, Energy, Emission, Carbon, Clean, Recycling, Pollution, Polluting, Waste, Discharge, Separator, Leakage, Decontamination, Exhaust, Fossil Fuels, Fuel, Alternative, Filter, Dangerous, Risk, Safety, Footprint, Struggle, Friendly, Nature, Natural, ISO 9001, ISO 14001, OHSAS 18001, Integrated, Analysis, Quality, CO₂, Climate, Greenhouse Gas, Gas, Trash, Sun, Sound.

In addition to the strategic elements such as vision, mission, and goals of the official websites of 17 Green Port certified ports analyzed by the researchers, speeches, statements, and interviews of senior port managers and their posts on social media were also compiled as a dataset and used as secondary data in our research. In the analysis, 12,474 words were included as data. Basic content analysis was conducted using the QDA Miner Lite program. Interpretive and extrinsic perspectives were used to process the findings obtained from the analyzed dataset.

4 RESULTS

Lexical bundles were created by combining the most frequently used words, the words derived by evaluating where they were used, and the synonyms, according to the result of the reference analysis of the data obtained from the study group consisting of 17 ports. In Table 1, according to the results of frequency analysis, we can see 30 (thirty) terms that were frequently used in our database. These terms, which constitute 17.20% of our database, support the credibility of our research due to the coverage of the theory and terms of our research area.

The fact that the terms closely related to the concept of sustainability, such as clean, recycle, climate, fight, friend, alternative, filter, separator, and

clay, and the terms closely related to strategies, such as strategy, tactics, competitors, simple, process, stock, inventory, waste, price, design, R&D, innovation, promotion, advertising, and qualification, were not mentioned in any speech by port managers is a surprising discovery.

According to the first assumption of our study the (1) vision, (2) mission, (3), goals and values in the official websites of ports that obtained the "green port" certificate with strategic or sustainability reasonings have been examined. Their level of transparency regarding their CO₂ absorption has also been researched (4). Obtained data can be seen in Attachment 1 and it has been detected that only one port has shown great performance, five ports have shown average performance and the remaining has shown poor and extremely poor performances and did not meet up to our expectations.

The second assumption assumes that port establishments that will begin their promotion activities in this scope (1) will place a copy of the certificate or a link to the certificate on their websites and (2) in addition to announcing that they succeeded to obtain the certificate will also (3) use multiple publishing channels to make announcements and give information. Along with this (4) expectations regarding management giving an interview on various media channels have also been researched. As it can be seen on the table in Attachment 1, four ports performed poorly or very poorly, and 8 ports have performed very well by actualizing the applications we provided in detail in our assumptions.

The third assumption, in this context it is to research how many of the 22 notions previously assumed to take place in the interviews of port managements have been used. In this assumption our data has been scaled as 0-1 very poorly 2-4 poorly, 5-7 average, 8-10 well, 11 and above very well. According to our findings, nine ports have provided signs on sustainability that were poor and extremely poor. Thus, five ports have provided well and very well indications, one port being very well.

Table 1. Frequency Analysis Findings

Line	Notion	Nu.	Ratio (%)	Line	Notion	Nu.	Ratio (%)
1	Port/Sub-port	506	4,06	16	World	47	0,38
2	Container/TEU	125	1,00	17	Delivery/Transportation and Logistics	47	0,38
3	Turkey/Turkish	125	1,00	18	Safety/Health/ISG	44	0,35
4	Environment	113	0,91	19	Capacity	41	0,33
5	Ship/Cruise	110	0,88	20	Commerce/Import/Export	41	0,33
6	Green	94	0,75	21	International/Global	37	0,30
7	Marmara/Ege/Karadeniz /Bölge/Tekirdağ/İstanbul/ Ambarlı/Kuşadası	72	0,58	22	Transfer/Handling	36	0,29
8	RTG/Gantry/Crane	62	0,50	23	Eco/Ecologic	35	0,28
9	Work/ Will work/Are working on	62	0,50	24	Occupancy/Operation	35	0,28
10	ISO/TSE/OHSAS/ Quality	59	0,47	25	Fuel/Diesel/LNG/	34	0,27
11	Europe/Africa/America/India	57	0,46	26	Electric	33	0,26
12	Management	54	0,43	27	Emission/Gas/Carbon/Carbondioxide	32	0,26
13	Maritime/Seamanship/Seaway	52	0,42	28	Company/Firm/Holding	32	0,26
14	Service	49	0,39	29	System	32	0,26
15	Project	48	0,38	30	Station/Dock	31	0,25

The fourth assumption, in this context nineteen different words and/or notions that are related to strategy have been avoided by port managements in their interviews. In this assumption, the findings have been scaled in the frame of what is given in Assumption 3. According to our findings, twelve port managements have provided poor or extremely poor indications. Thus, three ports have provided well and very well indications, one being very well.

5 RESULTS AND DISCUSSION

The truth is that ports are trading businesses and are not disposed to spend currency unless it is essential; so, it is necessary to know the limitations as well as strategic policy and operational scripts. Ports nowadays play a larger role than simply handling shipment on the pier. The resources of their rivalry and the extent of their effect continue across the maritime and also depth into the hinterland. Ports' operational and management strategies are intertwined with stakeholders on several scales and in many globes, from regional to worldwide.

In an industry like the port industry, which is highly competitive worldwide (Notteboom and Yap, 2012), scientific research done on corporate strategies tends to be more focused on efficiency and profit. The public gaining more awareness on long term harms of over- competitiveness (Yap, Lam and Notteboom, 2006) as it triggered strategic changes in many other industries have also made it compulsory for the port industry to advance their corporate strategies regarding differentiation.

The high cost being a certificated green port brings to ports (TURKLİM, 2013) and how it forces strategic organizational change supports the belief that obtaining the green port certificate requires strategic thinking. Therefore, attempting an investment and change that has this high cost, just because of a concern of legitimacy, because it will be aimless and vain, may not be useful concerning the middle and long-term competitiveness. Because green port certification requires company revision along the process (primarily vision, mission, and values, it is very important for aims, goals, main strategies, and co-operations to be harmonious in this context. In the literature of the strategic field, it is important for sustainability to be taken into consideration concerning company strategy (Wang and Ghose, 2011; Morrison vd., 2011; Garza, 2013; Lemus-Aguilar vd., 2019). In this research in the same direction, the necessity of green port certificate being taken into consideration along with strategic management point of view is accentuated, and this research aims to contribute to the field where little research has been done.

Establishments that aim to be a green port or have just applied, because of the research lacked a strategic point of view while starting the process, during and after the process should position themselves in correlation with their strategic purpose and targets, and in this context, it is inevitable for them to implement promotion strategies and make the

necessary changes in their organizational structures and business processes.

Qualitative works done with this purpose show that the Turkish maritime industry follows the global trends but tends to mostly imitate them. And try to be a "green port" for keeping their place in the industry and continuance concerns rather than a strategic point of view.

5.1 Implications for Practitioners

To yield financial gains in long term by transforming into a green port, it is imperative to implement a holistic strategy based on well-planned and well-prepared programs. For becoming a green port, Lam and Lee (2019) propose three bottom lines that a port should manage and balance; these are economic prosperity, social wellbeing, and environmental quality. If strategic efforts will not fit with green policies, all the attempts may go in vain.

5.2 Limitations and Further Research

It may be claimed that the samples are enough for qualitative work. But it is evaluated that a study done using secondary data and constructed interview technique could be stronger. In this context for further research, a project work that includes interviews is being planned. Furthermore, in contacts done with the ministry, it has been found out that other ports have applied for green port certification and have begun their work in the matter. These establishments joining the research can

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