

# Organisational Effectiveness and Its Implications for Seaports

Shadi Alghaffari, Hong-Oanh Nguyen, Peggy Chen, Hossein Enshaei

**Abstract**—The main purpose of this study was to explore the role of organisational effectiveness (OE) in seaports. OE is an important managerial concept, one that is necessary for leaders and directors in any organisation to understand the output of their work. OE has been applied in many organisations; however, it is a vital concept in the port business. This paper examines various approaches and applications of the OE concept to business management, and describes benefits that are important and applicable to seaport management. This research reviews and classifies articles published in relevant journals and books between 1950 and 2016; from the general literature on OE to the narrower field of OE in seaports. Based on the extensive literature review, this study identifies and discusses several issues relevant to both practices and theories of this concept. The review concludes by presenting a gap in the literature, as it found only a limited amount of research that endeavours to clarify OE in the seaport sector. As a result of this gap, seaports suffer from a lack of empirical study and are largely neglected in this subject area. The implementation of OE in this research has led to the maritime sector interfacing with different disciplines in order to acquire the advantage of enhancing managerial knowledge and competing successfully in the international marketplace.

**Keywords**—Maritime, organisational effectiveness, seaport management.

## I. INTRODUCTION

FOR more than 30 years, management researchers have identified OE as one of the most crucial topics in organisation studies. Even contemporary theorists and practitioners apply its basic questions through a variety of orientations to many types of organisations. Nearly as many theoretical approaches exist as interests in effectiveness. Those who have examined the breadth of studies and theories, moreover, have typically described the field as full of controversy, confusion, and ambiguity [1]. OE is one of the key issues in the organisation management subject and it has been one of the most widely researched topics since the early development of organisational theory [2].

Despite today's increasing competition in global ports, shipping and logistics, OE remains a relatively vital concept in seaport management. Especially, there has only been a limited amount of research that endeavours to clarify the effectiveness of port organisation [3]-[5]. OE has both an internal and external focus and can cover critical issues in port management such as port operations, human resources, marketing, information technology and the relationship between the port and its environment. Numerous studies in the

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port literature are based on the operational perspective and dealing with efficiency and productivity measures such as land, cranes, labour and berth. However, seaports have many other vital aspects to their organisation [6]. Efficiency in port measurement has been widely discussed over the last two decades but not from an effectiveness point of view [4].

## II. DEFINITIONS OF OE

Different authors have proposed various definitions of organisation effectiveness, but there is no single or generally accepted definition. Historically researchers have had considerable difficulty in trying to come to an understanding on what this concept means. The concept of OE in management can simply be defined as the effectiveness of the organisation as determined by its ability to achieve its objectives and intended outcomes [7]. OE has both an internal and external focus and can cover critical issues in port management such as port operations, human resources, marketing, information technology and the relationship between the port and its environment. Numerous studies in the port literature are based on the operational perspective and dealing with efficiency and productivity measures such as land, cranes, labour and berth. However, seaports have many other vital aspects to their organisation [6]. Efficiency in port measurement has been widely discussed over the last two decades, but not from an effectiveness point of view [4].

## III. LITERATURE REVIEWS

### A. Application of OE to Different Sectors

The study of OE has a long and notable history. As a result, many different approaches to organisation effectiveness research have been developed over the years. The OE concept is important to the management of companies in many industries, such as medical, education, banking, financial services, hotel, sport and restaurants. OE is a popular topic in management, research projects and reflects the ability for a deeper study of OE. At the same time, this concept has mostly escaped the attention of the seaport sector.

### B. OE and Seaports

As mentioned earlier, the concept of OE can be applied to any organisation or company operating in various sectors, and the maritime industry is no exception. The need to achieve OE has become increasingly important to seaports operating in a competitive global market. However, the absence of a universally agreed understanding of OE has continued to incapacitate the ability of ports' managers in their management. Moreover, there are only a few studies on the

applications of OE in the seaports sector [5]. As shown in Sayareh [8], there has been no framework of the effectiveness of seaport organisations, and no empirical study has been conducted on the OE of seaport organisations. Sayareh [8] suggested that the seaport sector is in need of a multiple-constituency framework for OE to improving performance and quality of output.

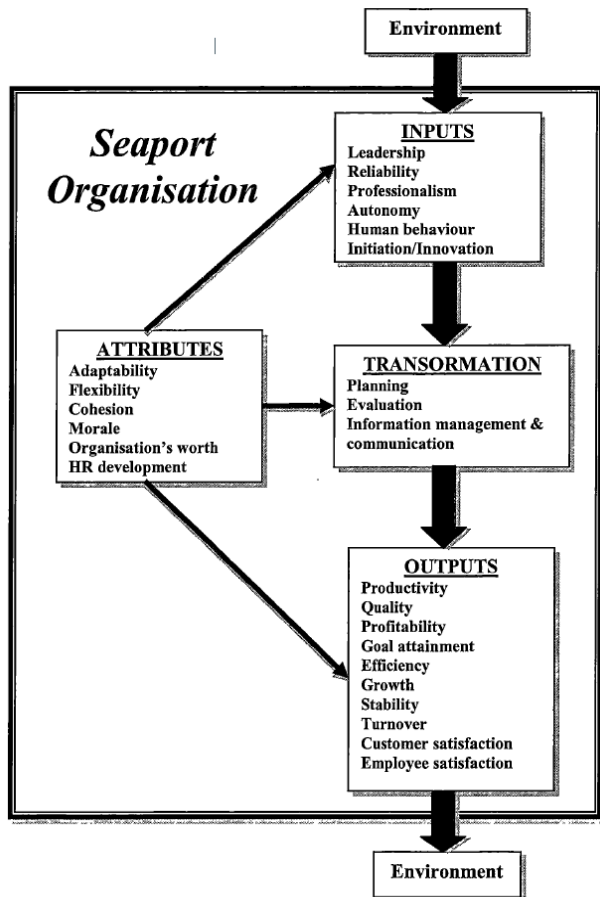


Fig. 1 Framework for seaport [8]

Sayareh [8], and Cetin and Cerit [6], concurred that port businesses are becoming sophisticated on a global scale due to rising competition. The enhanced competition emanates from a slightly weakened global economy in the 2008 global crisis, which has subsequently forced businesses to realign their operations to gain maximum utility from their resources. In turn, ports have felt the heat that customers demand OE to help them improve the efficiency in their supply chains. Sayareh [8], and Cetin and Cerit [6], agreed that any port that fails to address its OE evaluation framework will lose out on clients as they lose their competitive advantage. As a result, they also developed frameworks that seek to help ports' managers in evaluating organisations. In their different crafted frameworks, Sayareh [8], and Cetin and Cerit [6], agreed that the systems approach suits ports' organisational arrangement, which includes several influential factors such as global trade, supply chain adjustments, innovative technology and dynamics in maritime transport. They also observe that OE

has an internal and external preview, which makes it necessary for port managers to cultivate a close relationship with their environment. Moreover, only a multi-dimensional approach would help develop an acceptable OE implement given the complexity of port operations.

Sayareh [8] laid the foundation for the framework by cautioning port managers against assuming that Key Performances Indicators (KPIs) represent an ideal measure of OE. Based on a review of the 49 studies on OE, Sayareh [8] identified 78 criteria for OE, which are then further analysed and categorised into 28 underlying determinants of OE for port organisations.

Sayareh [8] believed that the framework presents a unique proposition that would help managers to improve the ports' efficiency by focusing on improvement of OE.

Comparably, Cetin and Cerit [6] adopted a similar research methodology underpinned by the General System's theory with a critical emphasis on subsystems. The authors insist on the importance of distinguishing between organisational efficiency and effectiveness with the former as an economic indicator, whereas the latter refers to a goal attainment index. Their study employed a two-round Delphi method involving a survey of nine experts from port business and operation in Turkey. The questionnaire used in first round of survey includes 33 statements developed from perceived 11 subsystems of a port. Cetin and Cerit [6] used the Average Percentage of Majority Opinion (APMO) that was marked at 89% to establish consensus. Remarkably, 17 out of 33 statements had attained the consensus cut-off, which allows for the inclusion of 24 statements for the second-round survey based on the 16 statements that failed to garner a consensus. Replies from the first round of the Delphi panel were shared with all experts to help build a consensus. However, in the second round; only five statements met the APMO cut-off rate with six more attaining the 80% mark. Their analysis results indicate that OE in ports can be measured using productivity, quality of service, customers' satisfaction, and quality of human resource, efficiency, adaptability and communication and information management [6]. Fig. 2 presents Cetin and Cerit's framework including the main criteria used in their OE evaluation.

Brooks, Schellinck and Pallis [9] seek to determine how port managers should allocate resources to improve OE. However, the exercise is based on a strict evaluation criterion to ensure that chosen attributes are an accurate representation of port users' satisfaction. Besides, the questionnaires focusing on performance and importance are administered separately to avoid the multicollinearity that would lead to spurious results. In their study, Brooks, Schellinck and Pallis [9] applied the Multiple Regression (MR) method to eliminate constructs that are weakly correlated with the level of performance registered in ports. Subsequently, their analysis used Normalized Pairwise Estimation (NPE) as an efficient measure of correlation between various attributes and customer satisfaction. Their findings suggest that 'fulfilment of special requests' has the highest correlation with the overall level of "effectiveness in service delivery", as well as "satisfaction."

The recorded correlation figures are 0.287 for the former and 0.280 for the latter, respectively. The findings inform port managers on the importance of adequately taking care of special requests placed by port users given it is a crucial contributor to overall OE. In essence, OE leads to customer

satisfaction that leads to loyalty. Enhanced customer loyalty yields financial stability given the consistent revenue generation through optimally utilizing the available resources. Ineffective ports are likely to records increased instance of low traffic, which is uneconomical given the invested resources.

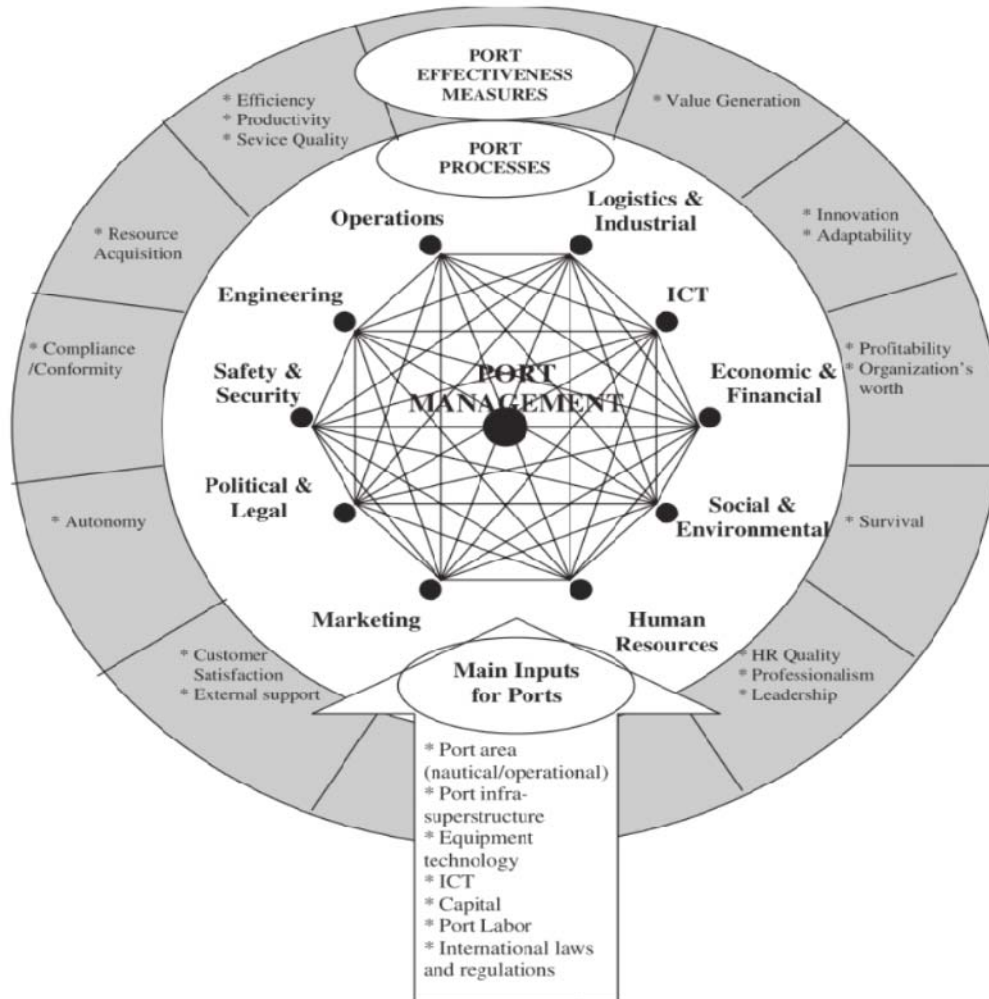


Fig. 2 Framework of OE at a Seaport Systems approach [6]

Notably, Schellinck and Brooks [4] reckon that port managers have continually ignored OE by overtly focusing on efficiency enhancing practices. The practices include benchmarking missions to establish their peers' traffic handle per meter quay and berth occupancy. However, Schellinck and Brooks [9] opined that port managers should shift their attention to improving OE that helps boosts operations and facilitates long range planning. Schellinck and Brooks [9] cited Porter [10] who posited that managers should focus on establishing differentiating aspects in their services, given a market can only have one cost leader. In the wake of the 2008 global financial crisis, port operators have continually succeeded in lowering their cost of operation, thus reducing the likelihood of rivals winning clientele due to lower service charges. The decline is attributable to tightening credit availability in the money markets forcing organisations to

restructure their business models to minimise cost. As a result, this has turned the battle for customer loyalty to organisations' ability to attain highest levels of effectiveness.

Brooks and Schellinck [11] illustrated that organisations' managers, for instance, port managers adopt best practices that promote overall effectiveness; the identification of the critical KPIs concerning effectiveness in service-oriented organisations is likely to yield enhanced customer satisfaction. The improved satisfaction creates a loyal customer base that aids in raising an organisation financial stability. Sayareh [12] observed that minimal research has gone into establishing how OE can be accurately measured; however, they note that extant literature has laid out a framework for determining the KPIs leaving researchers with a task to develop an acceptable metric. Schellinck and Brooks [13] observed that researchers have sought to establish a precise tool to measure OE in ports,

but they have challenged the creation of a generally acceptable tool for measurement of seaport organisations. The inability is attributable to the conflicting results that developed implements have yielded in the past, resulting in confusion to targeted port managers [6]. Notably, this has cast doubt on the face of port managers on the validity of the prospects to measure OE as a concept. Researchers have advanced studies focusing on coming up with suitable implements to measure OE in ports. Amongst the important tools that have been developed in the recent past include the SEAPORT (Seaport Effectiveness Assessment for PORT managers) instrument, Importance-Performance criteria and normalised pairwise estimation [4].

Cetin and Cerit [6] argued that a well-developed OE measurement framework should focus on the realisation of the pre-set goals, enhancing resourcefulness, improving customer satisfaction and internal operations. The authors opine that OE manifests in an organisation ability to demonstrate flexibility and adaptability, which are critical elements in improving customer satisfaction. The improvement of clients' satisfaction requires a multifactor stakeholder analysis that stretches beyond a generalisation and goes to specifics by breaking the port users into three distinct categories.

According to Brooks, Schellinck and Pallis [9], the three user groups are categorised into ocean carriers, cargo interest, which includes their agents, and the service supplier to first two groups. Under the cargo interest, this encompasses entities that buy transport services for their goods that are either owned by exporter or importers. The ocean carriers are shipping lines that seek docking services across the various ports. The shipping lines provide ports with business that encompasses the bulk handling of cargo. In essence, ports that can attract larger ships enjoy a higher level of revenue generation compared to their peers. The final category consists of those parties that form part of the supply chain including warehousing and logistics companies. The breakdown gives an incisive look into the various stakeholders that a port manager should seek to win their support by implementing the right practices that promote effectiveness. Importantly, it worth considering that research geared towards improving effectiveness should address each group separately, given the use and difference performance indicators to measure a port's effectiveness. Thus, port managers should influence cargo interests to obtain information and improve the overall effectiveness.

Brooks, Schellinck and Pallis [9] showed that port management has been left behind in measuring OE compared to their peers in the landing services in the air transport industry. The authors cite that airports have embraced monitoring the quality of their service monitoring practices as catalysts to improve OE. Each member airport to the agreement receives a quarterly report on Global Airport Monitor and the Airport Service Quality [9]. Consequentially, this has seen players seek to improve customer satisfaction through addressing key areas of concern. It would be interesting to have the same system replicated in port management, in the same way that shipping companies that

have extended significant collective power through building larger ships to respond cargo demands [6]. Potentially, this may help struggling ports that despite attaining pre-set efficiency metrics, continue to struggle in achieving a significant customer base.

#### IV. RESEARCH GAP

The current researchers provide extensive studies on the concept of OE in general, with a deeper focus on the seaport sector as a key to developing the efficiency of the port organisation. A large extent of academic research is focused mostly on the operational performance measures of a port [5]. Moreover, based on the previous review of the literature, the majority of the related studies are neglecting the OE in seaport sector. The concept in the seaport sector represents a gap in the current literature, as it remains a topic that has not been adequately explored. Therefore, there is a considerable need for theoretical and empirical studies. Several uncovered points and related knowledge gaps including the following:

There is a lack of a holistic view on the OE of seaports. The comprehensive approach is a manner in which a seaport business looks at its overall OE to determine patterns and develop efficient ways of conducting the seaport business. This study sheds light on other OE dimensions such employees, customers, financial, learning and growth, the market, as well as governance which gain more importance in this study to achieve the desired outcomes and a competitive advantage. Moreover, it includes other key drivers of OE such as seaport environment that should be considered. Some issues that impact the seaport sector such as the economy, competition, and other regulations will be explored with the aim of implementing better OE. Thus, there is a need for implementing a holistic view to OE in seaports will provide a clear image and opportunities for development.

Another aspect is that some of the OE criteria used in the management of the seaport does not reflect the true nature of the industry today. The seaport business has observed a very rapid change in technology in the recent past, which has resulted in the need for the industry to implement a shift in the techniques that are fundamental to achieving effectiveness in seaport management. The study not only focuses on the criteria used in the past, but also on the new criteria that have become more popular for effective management in the seaport sector. One of the major points of concern in this research, is that the criteria chosen in the management of the seaport business should be able to be tested and measured

#### V. CONCLUSION

This study declares several important managerial implications, especially for research and development OE criteria that recurrently struggle to improve. Leaders and managers may want to assess the degree of improvement in their organisation to develop the effectiveness of their organisation and seek to attain a higher level of OE to improve output. Seaport organisations need to deliberate on and

familiarise themselves with OE as a main prerequisite, so that they can adapt and manage their business effectively.

It seeks to offer broad-based measures of OE based on the above review of literature and draw the implications to the management of seaports.

The current study presents a review of existing OE approaches. At the same time, identify the key factors of OE in seaports by listing a group of OE criteria in selecting the right criteria to fulfil the seaport framework.

The topic requires further research that provides a critical analysis of the concept. Moreover, organisations need to deliberate on and familiarise themselves with OE as a main prerequisite, so that they can adapt and manage their business effectively. Port businesses have focused more on the traditional aspects such as efficiency, productivity and monitoring the terminals performance using different methods of measurement and evaluation. However, this is no longer enough to ensure success and makes it difficult for such organisations to survive in overall performance. The evaluation of OE, which improves and value adds to port management and business, can no longer be ignored.

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