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Application of organizational life cycle theory for port reform initiatives in Taiwan

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ABSTRACT

Global container port authorities worldwide are competing increasingly to improve the throughput of containers, and to enhance performance improvement, which has resulted in port reform since the 1980s to gain a competitive advantage. Because port reforms in various countries have unique motivations, incentives, and goals, no consensus has been reached regarding the relationship between port governance and related performance. Therefore, various port authorities may adopt diverse models according to their respective operating conditions and constraints. To avoid the indecisive argument of effectiveness when conducting port reform, it may be sound practice to conduct situational analysis by introducing organizational life cycle theory to present the negative factors of a "declining" organization that must urgently be reconstructed and introduced to new revitalization measures. The port reform case in Taiwan demonstrates that organizational life cycle analysis can be employed as an alternative approach to gaining a thorough understanding of the importance of this reform in relation to port personnel.

1. Introduction

The shipping industry is a crucial sector of the world economy. Over 90% of international trading goods worldwide are transported by ships. Sea transportation is vital to Taiwan because it is a small island located on the western Pacific Rim. Because of joint efforts from the government and businesses over the past 50 years, Taiwan is regarded as a country with a well-developed shipping industry and port authority. The three largest liner shipping container carriers are based in Taipei: Evergreen Marine Corporation, Yang Ming Marine Transport Corporation, and Wan Hai Line. Numerous bulk carriers also provide tramp services (Chiu, 2007). The total number of ships controlled by Taiwanese companies comprised more than 32.9 million deadweight tons (DWT) in 2011, accounting for 2.6% of total global ship tonnage. Moreover, Taiwan has the 10th largest controlled fleet in the world, with 87.5% of ships being the so-called flag-of-convenience (FOC) ships (UNCTAD, 2011, p. 43).

Taiwan currently has four international commercial ports (i.e., Keelung, with Taipei and Suao subsidiary ports; Taichung; Kaohsiung; and Hualien) and two international industrial ports (i.e., Mailiao and Hoping). Between 1995 and 1999, the port of Kaohsiung was ranked the third largest container throughput port worldwide. Because of the rapid changes in the business environment, Kaohsiung's position as the number three container port was overtaken in 2000 by the port of Busan in South Korea. Since that time, Kaohsiung's ranking in the world container port traffic league dropped to Number 14 worldwide in 2013. To enhance internal port competitiveness, the Taiwan government initiated reform programs, including the "liberalization and privatization" of port service in 1989, to improve its deteriorating position. However, port performance and cargo volume in Taiwan has not increased, despite these efforts (Chen, 2009; Chiu & Lin, 2006).

Improving the performance of governmental organizations has been a crucial challenge, and has captured the attention and interest of researchers. The use of information and communication technology to improve bureaucratic inefficiencies and to push for organizational changes within the government has been advocated in recent years (Reddick, 2011). Furthermore, introducing emerging information technologies, such as business process reengineering, customer relationship management (CRM), and outsourcing to facilitate the transformational change of public agencies and to enable them to implement radical improvement (Cordella & Willcocks, 2010; Reddick, 2011; Weerakkody, Janssen, & Dwivedi, 2011) are also promising trends. In Taiwan, port authorities have enjoyed a short period of business prosperity after the implementation of dockworker privatization and the lease of container terminals to individual carriers in 1998. However, because of the inherent organizational weakness of the government, the inability to respond in a timely manner to the changing needs of the industry, and the failure to tailor the provided customized services to individual clients have caused port competitiveness in Taiwan to deteriorate in

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the twenty-first century. Thus, organizational change is imperative for port authorities in Taiwan to improve the recent decline in business.

The primary purpose of this paper is to examine new programs for changing the governance of port management and operational systems in Taiwan. Following the introduction, Section 2 introduces a literature review on both port reform and organizational change. Section 3 presents a discussion on research methodology, and Section 4 provides the case background information and the previous port reform. Section 5 details the results of this empirical case study. Finally, Section 6 offers concluding remarks regarding the future implications of this study.

2. Literature review

2.1. Port reform

According to Alderton (2005), port ownership or administration has been one of the most debatable topics related to port efficiency since the 1980s. No definite answer seems to be available as to what type of port management system (state-owned versus privately controlled) would best enable a port to provide the most efficient services. However, numerous people have been in favor of changing the port administration system to improve the resulting port operations. Specifically, the popular action to launch a privatization of port services worldwide began in the 1980s. Inspired by the U.K. government's port privatization program that was completed in the late 1980s, many countries launched their own port reform programs (Tull & Reveley, 2008). The driving forces of port reform may include (a) the globalization of trade; (b) a new public management philosophy; (c) technological innovation (i.e., vessel, cargo tracking, or management information systems); and (d) new government opportunities (i.e., processes and strategies; Brooks & Cullinane, 2007). To address the changing market environment, modern container ports aiming to capture and maintain crucial footloose clients on a sustainable basis must provide integrated package services characterized by a high level of reliability and flexibility, responsiveness to the market, and the meeting of such nonmarket conditions as maintaining transparency within efficient governance structures. Moreover, containerization- and intermodality-revolutionized modern shipping as well as growing hinterland transportation suggest a definite need to reassess the role and functions of container ports (Notteboom, 2007).

Cass (1998) indicated the purpose of privatizing ports to include the following two items: (a) to obtain open market finance on favorable terms; and (b) to promote operational efficiency and healthy competition. Tull and Reveley (2008) provided several arguments to justify the need for privatization: (a) expansive and inefficient ports constrain trade; (b) the required efficiency and skillsets of the private sector should be introduced into ports; (c) privatization reduces demands on the public budget; (d) it reduces expenditures on port labor by removing state-supported subsidies from port operations; and (e) it helps meet other objectives, such as increasing revenue and encouraging shared ownership among the public, especially in the United Kingdom.

Numerous methods for conducting port reform exist. Brooks and Cullinane (2007) used the phrase “port reform” to indicate the restructuring of port governance as a part of a government's devolution program. Devolution, according to Rodal and Mulder (1993), is defined as “the transfer of functions or responsibility from the delivery of programs and services from the federal government to another entity”; privatization is the most extreme form of devolution (Brooks & Cullinane, 2007). Devolution may also include “control, consultation, and/or partnership.” Tull and Reveley (2008) indicated that the three primary types of port reform are “commercialization, corporatization, and privatization.” However, numerous other methods can also be used to conduct port privatization, including liberalization, the sale of assets, concessions (BOT or leases), joint ventures, and management or technical contracts (Cass, 1998).

The objectives of port reform are cost reduction (and in most cases, also the reduction of port charges) and service improvement. Song (2008) concluded that a privately owned enterprise was not necessarily superior to other public options in performance or efficiency. Such factors as the competitive environment, regulatory policy, and organizational restructuring may be more essential determinants of economic performance than ownership. Saundry and Turnbull (1997) indicated that the promises of increasing competition, greater capital investment, and improved commercial efficiency had not materialized in U.K. ports following privatization. Therefore, models for port governance and management are required to respond to new technologies associated with larger ships, the increasing integration of the international supply chain, competition for growing transshipment trade, and broader national economic growth and reform objectives (Affleck, 2008).

Employing the case study methodology has been common when exploring the question of port governance reform. Notable examples include the following studies. Pallis (2007) examined port governance in Greece, and discovered that in the early postreform years, the absence of a matching configuration of the three key variables of port governance (i.e., environment, strategy, and structure) contributed to the difficulties that Greek ports experienced when attempting to promote healthy growth through enhanced competition. Baird and Valentine (2007) conducted a comprehensive study on port privatization in the United Kingdom to manage problems such as the sale of former state-owned ports, the various methods of disposal, the associated liberalization of dockworking, and the legislative framework. Wang and Slack (2004) investigated the regional governance of port development challenges in China by conducting a case study on the establishment and operation of the Yangtze River Delta International Shipping Center (which was later referred to as the Shanghai International Shipping Center). In that same study, they also suggested a framework for port governance analysis, which included the examination of internal and external domains for endorsing future research applications. By investigating the governance reforms of three ports, those in Busan (South Korea), Rotterdam (the Netherlands), and Piraeus (Greece), Ng and Pallis (2010) discovered that path-dependent decisions largely preserve the institutional characteristics of the local and national systems, which may result in implementation asymmetries when various countries seek a generic governance solution toward corporatization. Moreover, Notteboom, De Langen, and Jacobs (2013) applied path dependence theory to examine port governance reforms, and the case studies of Rotterdam and Antwerp serve as an illustrative example.

Facing the difficulty of assessing the performance of various port governance models, Brooks and Pallis (2008) developed a conceptual framework to be used for comprehensive port evaluations and for adjusting existing governance models. A dynamic process model linking governance and performance was proposed, requiring two stages of data input (i.e., governance decisions and a governance model) and final outputs, including efficiency (i.e., internal performance) and effectiveness (i.e., external performance). The information required in the first stage included port policy, model selection (e.g., ownership, objectives, and management), model adjustment, and decisions made by the government and relevant policy actors; the data input for the second stage included the governance decisions made by the port authority regarding its structure of internal systems and processes, as well as the operational firm's strategy. Table 1 lists in summary form the crucial conceptual developments on port reform, and the lessons learned from extant literature. Because of the various types of problems faced by various port authorities, diverse methods and management alternatives have been adopted in various countries.

2.2. Organizational change

Port reforms are frequently related to the organizational change of port authorities. According to Burke (2002), organizations change regularly; however, the change is usually unplanned and gradual. Therefore, planned organizational change is unusual, and intentional radical change is rare. Because of the general disadvantages inherited from

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