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Core Competences of River Ports: Case Study of Pearl River Delta *

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ABSTRACT

With the sound development of ASEAN, more and more attention is paid to hub ports that support cargo and information flows in this marine region. However there are few studies on river and feeder ports. To fill this gap, this study takes a river port as an example to illustrate how to utilize the Balanced Scorecard for evaluating the Core Competences of river and feeder ports. Core competences are helpful for terminal operators when focusing on core strategies, core business and core products / services development for resource limitation. The business pattern which regards core competences as a foundation is beneficial for terminal operators to achieve sustainable competitive advantages. A questionnaire survey has been conducted. The Cronbach alpha method confirms testing reliability of the questionnaire. Study results reveal that two core competences are "capabilities of valuing employee and organization improvement" and "national and municipal government support" for a river port.

1. Introduction

In the past several years, there have been around five Chinese ports in the world's top ten ports in terms of TEUs. Shanghai and Qingdao are located in central and north China respectively, and Hong Kong, Shenzhen and Guangzhou are located in south China around the Pearl River Delta (PRD). The PRD consists of 9 cities, namely Guangzhou, Shenzhen, Foshan, Zhuhai, Jiangmen, Zhongshan, Dongguan, Huizhou and Zhaoqing. In 2011, the PRD accounted for 9.2% of China's GDP with an average growth of 9.9%, and the PRD contributed 26.7% of China's

total exports at the same time.

From the geographic view, the PRD is the alluvial river delta of the Xi Jiang (literally, west river), Bei Jiang (literally, north river) and Dong Jiang (literally, east river) flowing into the South China Sea. This flat land occupies an 80,000 km2 land area. On the other hand, the PRD mentioned in this study refers to the concept of the PRD Special Economic Zone which was formally proposed in October, 1994. Since the 1980s, this special economic zone has developed extremely fast relying on the advantages of national policies and regional conditions (Table 1).

Table 1
Economic distribution 2011 of the PRD

Cities	Land Area (sq.km)	Population (million)	GDP (billion RMB)	GDP Growth (%)
Guangzhou	7,434	12.8	1242.3	11.3
Shenzhen	1,953	10.5	1150.6	10.0
Zhuhai	1,688	1.6	140.5	11.3
Foshan	3,848	7.2	621.0	11.4
Huizhou	11,158	4.6	209.3	14.6
Dongguan	2,465	8.3	473.5	8.0
Zhongshan	1,800	3.1	219.3	13.1
Jiangmen	9,541	4.5	183.1	13.0
Zhaoqing	14,856	3.9	132.4	14.7

Source: Guangdong Statistical Yearbook 2012

The "*Outline of the Plan for the Reform and Development of the Pearl River Delta*" (2009) which will be called "*Outline*" in the following was issued by Chinese National Development and Reform Commission in January 2009. The "*Outline*" stated that, with the cooperation between Guangdong province, Hong Kong and Macao, the PRD will be constructed to be one of the most powerful and competitive mega metropolitan regions in the world by 2020, and the citizen income level would be doubled compared to that in 2012. Meantime, the "*Outline*" underlined the transportation network development including railways, highways, waterways and airlines which aimed to make the PRD as the most convenient, efficient, safe and open logistics centre. The "*Outline*" also repeated the importance of integrating and improving Guangdong province and Hong Kong ports facilities effectively by cooperation.

The sound development of the PRD has attracted much attention from the public. There is more and more research about Hong Kong, Shenzhen and Guangzhou ports which are the hub ports in the PRD in recent decades. Some discussed the cooperation among them (Wang and Slack, 2000); some talked about the fierce competition among them (Wang and Olivier, 2007). However, within this hub-and-spoke model, the importance of feeder ports is often neglected. The river port in this study – Zhaoqing New Port (ZNP) is one of them. Most of the feeder ports in the PRD are small river ports, and so they are not equipped and operated as effectively as Hong Kong port; they do not receive as much attention from the national or local government as Shenzhen port and they are not as important as the capital of Guangdong Province – Guangzhou port. However, the feeder port development has a direct impact on the whole supply chain including the gateways, because they are the strong supports to hub ports by aggregating and repacking inland cargo. Simultaneously, these feeder ports provide financial income and job opportunities to municipal government and the region's citizens.
The findings of this study will draw more attention from the public on small river ports. This is because their development is also worthy of studying in order to enhance the entire hub-and-spoke network.

Meantime, the conclusion will be useful and practical to the improvement of river and feeder ports.

2. Literature Review

The Balanced Scorecard (BSC) was first conceived by Kaplan and Norton in 1990 with the aim of transforming an organization's mission into actions. It is an effective tool to translate intangible strategies into tangible measures by continuous communication between different departments and employees (Kaplan and Norton, 1996). Nowadays, it is widely used in various industries and is not just limited to being a strategies management instrument. According to a study which surveyed executives around the world in 2010, 47% of 11,163 respondents said that they used the BSC as management tool and the satisfaction rate could almost reach 4.0 on a scale of 1 to 5 (Rigby and Bilodeau, 2013). It is clear that the BSC is one of the most popular management instruments. Simultaneously, the usage rate is predicted to keep increasing. Punniyamoorthy and Murali (2008) stated "*the Balanced Scorecard has grown out itself from being just a strategic initiative to its present form of a performance management system.*"

Vasilakis (2008) presented a new concept for "*relative balanced measurement of Trainee's Work Unit (TWU) of Public Services Centres*" by modifying the BSC. The BSC on four organizational performance factors was used to examine the effects of establishing integrated management systems in Ports and Shipping Organizations (Habibollah et al., 2011). Ding (2009) evaluated the Key Capabilities and Core Competences of Port Keelung with the aid of the BSC.

Even though the BSC has been applied widely, there are few related studies on river/feeder ports. To fill this gap, this study takes ZNP as an example to illustrate how to utilize the BSC to evaluate the Core Competences of river/feeder ports.

"*The Core Competence of the corporation*" theory was first proposed by Prahalad and Hamel (1990). Hafeez et al. (2002) defined Core Competences as the "*crown jewels of a company and should be carefully nurtured and developed.*" Ding (2009) indicated that how to evaluate Key Capabilities and obtain Core Competences of a port authority is a critical issue to discuss because of the hyper-competitive environment. Facing the fierce ports competition as explained case by case in Cullinane et al. (2007), "*the real sources of advantage are to be found in management's ability to consolidate corporate wide technologies and production skills into competences that empower individual businesses to adapt quickly to changing opportunities*"(Prahalad and Hamel, 1990).

Hafeez et al. (2002) used a conceptual framework to identify the Core Competences of a U.K. manufacturing company. Building on Hafeez et al. (2002), Ding (2009) took the Port of Keelung as a case study to evaluate the Key Capabilities and Core Competences of seaports. Nevertheless, there is no empirical research to examine the Core Competences of a river/feeder port. It is highly desirable to conduct a survey to test Key Capabilities and Core Competences of river/feeder ports.

Hence this study seeks to answer two research questions:

Q1: Does a river/feeder port have Core Competences?

Port industry is facing greater challenges and risks than ever before. If river/feeder ports do not have Core Competences, they may be lost themselves in this fierce competition. Core Competences may help terminal operators to determine future structures or make business