An Investigation into critical challenges for multinational third-party logistics providers operating in China

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ABSTRACT

The entry of the multinational third-party logistics (MN3PL) service providers in China has a far-reaching impact on the development of the Chinese logistics industry. However, while delivering services, MN3PLs experience several challenges which are crucial to identify and address for further improvement of their service delivery. This study aims to identify and prioritise these challenges for strategic importance of MN3PLs operating in China. Through an extensive literature review of 3PL research fourteen challenges for MN3PLs are identified and a theoretical underpinning relative to these challenges is provided. The analytic hierarchy process (AHP) approach is employed to assess the criticality of challenges. Five executives from five large MN3PLs are invited to participate in this study. Results indicate that the most critical challenges confronted by the MN3PLs are guanxi, government regulations, price pressure, and transportation cost. To remain competitive MN3PLs must build guanxi networks with key stakeholders and minimize cost of delivery.

1. Introduction

The economic growth of China has averaged over 9.50% between 1989 and 2016 (Trading-Economics, 2017). The transportation and logistics industry in China has also witnessed rapid growth over the same period (Hensher, Zhang, & Rose, 2015; KPMG, 2016). Realising that an efficient logistics system is of paramount importance for further economic growth and modernisation of the country, the Chinese Government has designated logistics as a strategic industry (PRC, 2016; Sohal & Rahman, 2013) and systematically investing in the development and improvement of logistics infrastructure during the implementation of the country’s 13th Five-Year Plan (2016–2020) (Jiang, 2016; Mahpula, Yang, Kurban, & Witlox, 2013; Mingjun, 2016).

In the current business context China relies more on domestic consumption for economic growth which is likely to further stimulate the demand for logistics and transportation services in the country (Hensher et al., 2015). Since the introduction of third party logistics (3PL) services in the mid-1990s and particularly after China joined the World Trade Organization (WTO) in late 2001, the 3PL industry has developed rapidly (Chin, Bae, & Kim, 2007; Chu, 2012; Sha & Guan, 2009). The total value of demand for logistics increased from RMB 59.6 trillion (US$ 9.6 trillion) in 2006 to approximately RMB 120 trillion in 2016 (US$ 20 trillion) (Research & Markets, 2017), representing an average annual growth of 9.5% during this period. Recent growth of the Chinese e-commerce industry (Jiao, 2014) (estimated market size of e-commerce in 2019 is US$1.97 trillion (eMarketer, 2016)) is expected to further drive the growth of the Chinese 3PL industry (Jiao, 2014; JOC, 2014).

Based on the structure, ownership and area of operations, 3PL service providers in China can be classified into four types of firms (Mahpula et al., 2013; Sha & Guan, 2009). Type I firms are large state-owned logistics firms. Type II firms are privately owned Chinese logistics providers, which emerged from the mid 1990’s onwards to adapt to market growth. Type III firms are logistics divisions of manufacturers, primarily to provide services to internal customers. Lastly, type IV firms are categorised as multinational 3PL (MN3PL) service providers. This study deals with the challenges encountered by MN3PL service providers in their operations in China.

The entry of MN3PLs in China has had a demonstrably far-reaching influence on the Chinese logistics industry and they remained as the main service providers for the Chinese export-oriented logistics market (Mahpula et al., 2013). MN3PLs have introduced advanced logistics concepts, superior technologies, sector specific knowledge and experience, and new management systems into the Chinese market which enabled local businesses to access not only full logistics services but also modern logistics concepts (Liu, So, Choy, & Lau, 2008; Millar, 2014).

In a recent review of research on Chinese logistics industry, Liu (2014) concludes that only a small proportion of studies focus on 3PL...
firms and majoritiy of these studies lack theoretical foundation. This review also finds that little research has been conducted in the context of MN3PL service providers and no research investigated the challenges faced by MN3PLs operating in China. Given the importance of MN3PLs, this study addresses this critical gap in the literature. In particular, this study contributes in two ways in extending the Chinese 3PL research. First, it develops a conceptual model to study the challenges faced by MN3PLs which is supported by three theories such as transaction cost economics (TCE), resource-based theory (RBT), and neo-institutional theory (NIT). Second, it identifies the critical challenges and challenge-categories which could be used to develop strategies for delivering more efficient and effective logistics solutions by MN3PLs operating in China.

The rest of this paper is organized as follows. Section 2 provides theoretical underpinnings to study the challenges experienced by MN3PLs. Section 3 provides a review of literature and identifies fourteen challenges under four challenge-categories. Section 4 discusses the research methodology employed in this study. The analysis and findings are given in Section 5. A discussion of the findings is provided in Section 6 and the paper concludes with a summary in Section 7.

2. Theoretical underpinnings of the challenges

This section provides a brief discussion on socio-economic theories which are used to support issues and value adding roles of 3PL and identifies appropriate theories to explain challenges faced by MN3PLs operating in China.

Literature suggests that a single theory is not adequate to sufficiently explain research enquires of various issues relating to 3PL. For example, Halldorsson, Kotzab, Mikkola, and Skjøtt-Larsen (2007) suggest theories including principal-agent theory (PAT), transaction cost economics (TCE), network theory (NT), and resource-based theory (RBT) to explain 3PL activities in supply chains. Similarly, to describe the role of 3PLs in logistics value addition network, Zacharia, Sanders, and Nix (2011) suggest applying TCE, RBT, and NT. A more recent study by Liu (2014) finds that theoretically grounded 3PL research in China is limited. Moreover, in studies where theory is applied, it relies on a sole theory to explain a particular phenomenon. Given the contextual complexity in China, use of multiple theoretical grounding is helpful to gain a broader understanding of the activities of MN3PLs (Liu, 2014). We consider three theories such as TCE, RBT, and neo-institutional theory (NIT) as theoretical underpinnings of our research. Through an extensive literature review this study identifies fourteen challenges for MN3PLs and groups them into four challenge-categories such as financial, information technology, human resources, and business landscape. An overview of the theoretical framework and relevant challenge-categories and challenges are shown in Table 1. A detailed description of the challenges is provided in Section 3. In the following sub-sections we briefly discuss each of these theories and discuss the rationale for their application in the context of challenges faced by MN3PLs operating in China.

2.1. Transaction cost economics (TCE)

The theory of TCE provides a strong foundation to analyse logistics outsourcing decisions (Andersson, 1997; Skjøtt-Larsen, 2000) which states that a firm organizes its inter-organizational activities to minimize its production costs within the firm and minimizes transaction costs within the market (Williamson, 1985). Here the underlying principle is that outsourcing activities to 3PL service providers will occur when there is an opportunity to reduce transaction costs. Studies suggest that outsourcing logistics functions typically reduces transaction costs that include order consolidation, centralized order processing, efficient use of assets, and consolidation of overhead by a third-party (Rahman & Wu, 2011; Zacharia et al., 2011). It is patent that the relationship between an outsourcing firm (buyer) and a 3PL service provider (seller) will incur transaction costs, however, co-operation, teamwork and the timely sharing of information among firms (buyer-seller) in a supply chain relationship can reduce transaction costs (Cao & Zhang, 2011; Hobbs, 1996).

2.2. Resource based theory (RBT)

RBT theory is widely used to explain firm's internal process of managing resources for sustainable supply chains (Gold, Seuring, & Beske, 2010; Touboul & Walker, 2015). The term 'resource' refers to both tangible and intangible assets. The classical view of RBT suggests that a firm must secure an efficient bundle and flow of the right type of resources from its environment to survive and improve its operational performance (Barney, 2001; Olavarrieta & Ellinger, 1997; Rungtusanatham, Salvador, Forza, & Choi, 2003) which in turn can provide a competitive advantage to the firm (Rumelt, 1987; Wernerfelt, 1995).

2.3. Neo-Institutional theory (NIT)

NIT provides a theoretical lens which can be used to identify and examine influences that promote survival and legitimacy of organizational practices such as culture, social environment, regulation, tradition and history, as well as economic incentives (Baumol, Litan, & Schramm, 2007; Hirsch, 1975). This theory suggests three institutional pillars which are regulative, normative, and cultural-cognitive pillar (DiMaggio & Powell, 1988). Regulative pillar includes regulatory structures, government agencies, laws and courts, professions, interest groups and mobilized public opinion. Normative pillar consists of values, norms and rules promulgated by trade and professional associations, whereas, cultural pillar is a cognitive conception of institution, and stresses the central role played by the ‘socially mediated construction of a common framework of meaning’ (Scott, 2001, p. 58). Typically, 3PL service providers operate in a business environment where they constantly encounter regulatory pressures.

3. Challenges for MN3PL service providers

As mentioned in the Introduction section, one of the four types of 3PL firms operating in China is MN3PL firms. Through an extensive literature review of both Western and Chinese 3PL research we identify fourteen challenges for MN3PL service providers operating in China. These challenges are then grouped into four higher-level challenge-categories such as financial, technological, human resource, and business landscape. A hierarchical structured conceptual model of the problem incorporating the challenge-categories and challenges is shown in Fig. 2.

3.1. Financial challenge-category

Financial related challenges considered in this study are price pressure, high transport cost, and financial stability. Being a resource, financial capability can provide competitive advantage, and is one of the important factors in building inter-firm partnerships and strategic alliances (Kash, Spaulding, Gamm, & Johnson, 2014). Each of these challenges is discussed below.

3.1.1. Price pressure

Since 3PL customers are price sensitive, they constantly put a strong emphasis on price when evaluating the logistics service outsourcing decisions (Tian, Ellinger, & Chen, 2010). To succeed in such a price sensitive environment, 3PL providers need to improve their capabilities and offer services at lower costs (Selviaridis & Spring, 2007; Zacharia et al., 2011). The challenge is that 3PL providers need to be cost conscious to achieve higher margins and to prevent themselves from being priced out of the market due to increased local labour costs, fuel costs,
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