



## The impact of third-party logistics providers' capabilities on exporters' performance

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### ABSTRACT

Third-party logistics (3PL) services have experienced unprecedented growth. However, we are not aware of any study that explores the relationships among logistics outsourcing, competitive advantage, and business performance. We study the mediating role of logistics outsourcing as a strategy to develop firms' capabilities in the strategy–performance relationship. Drawing on the resource-based view (RBV) of the firm, we develop a research model grounded in the outsourcing–competitive advantage–performance paradigm. We apply structural equation modeling to empirically test the model using data collected from 150 exporters in Hong Kong and the Pearl River Delta region of China. The results show that there are positive relationships among exporters' strategic orientation towards third-party logistics (3PL) providers, 3PL providers' basic and augmented capabilities, exporters' competitive advantage, and exporters' export performance. We also find that 3PL providers' augmented capabilities and exporters' competitive advantage are strong mediators, supporting the theorized model underpinned by RBV.

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### 1. Introduction

A third-party relationship is a relationship between a firm and a third party, which, compared with basic services, offers more customized offerings and a broader number of service functions. It is a long-term and mutually beneficial relationship (Africk and Calkins, 1994). With burgeoning global trade, fierce competition, higher customer expectations, and ever-expanding supply chains around the world, third-party logistics (3PL) providers play an increasingly important role in the prevailing dynamic and volatile environment (Hsiao et al., 2010; Murphy and Daley, 2001).

Driven by globalization and information technology advances, 3PL services have experienced unprecedented growth. According to Koh and Tan (2005), the annual growth in this sector in China has been 25% on average, leading both the U.S. (10–15% annual 3PL growth) and the rest of the world (5–10%). To seamlessly integrate geographically dispersed production systems, shippers' dependency on 3PL providers to provide customized information technology such as radio frequency identification (RFID) will grow (Chen et al., 2010; Koh and Tan, 2005; Yang et al., 2009). Sinkovics

and Roath (2004) suggest that it is a potential area to study in operations management (OM). Christopher (2005) remarks that logistics is quite clearly recognized as a major strategic variable.

The recent trend of focusing on core competence has also contributed to the popularity of logistics outsourcing. Firms rely on outside logistics specialists to deliver goods to customers so that they can focus on their own core businesses. They can create competitive advantage by forming long-term relationships with 3PL providers (Coates and McDermott, 2002; Lambert et al., 1999; Yeung, 2008). In the logistics service industry, 3PL providers add value to users by improving operations efficiency and/or sharing resources and information (Berglund et al., 1999). Acting on the information provided by users, 3PL providers can not only reduce users' inventory and stockout costs, but can also help users better navigate through the web of government regulations and obtain customs clearance to avoid unnecessary delay (Selnes and Sallis, 2003). Therefore, logistics outsourcing could bring a handsome payoff and become a part of corporate strategy (Sahay and Mohan, 2006).

Despite the well-documented benefits of forming long-term relationships with 3PL providers, we should not assume that the benefits of supply chain collaboration are always positive. Prior studies have reported that many 3PL providers fail to deliver the expected cost reduction or meet the increasing demand for a broader range of logistics services and advanced information technology (e.g., Wong and Karia, 2009), while many 3PL users

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are uncertain about the service levels and have unrealistic expectations (Lambert et al., 1999). Many 3PL relationships fail due to a lack of shared/clear goals, communication, top management support, strategic direction, and mutual benefits (Lambert et al., 1999). Fifty-five percent of the 3PL relationships are terminated after three to five years (Gulisano, 1997; Sahay and Mohan, 2006). These conflicting findings show that the management of 3PL relationships should receive greater attention for efficient supply chain management. Moreover, sixty-nine percent of 3PL studies have no theoretical foundation (Selviaridis and Spring, 2007). Therefore, the logistics service industry needs “theories and solutions to achieve sustainable competitive advantages” (Wong and Karia, 2009).

However, we are not aware of any study that has yet explored the relationships among logistics outsourcing, competitive advantage, and business performance (Bustinza et al., 2010). This study extends the existing literature by studying the implications for export performance of an exporter that is strategically oriented towards its 3PL providers through the theoretical lens of the resource-based view (RBV) of the firm. To the best of our knowledge, this is the first study to fill this gap. Within OM, this study answers the calls by researchers to offer a better understanding of why firms differ in performance (McIvor, 2009; Sinkovics and Roath, 2004; Vivek et al., 2008). Specifically, we seek to address the following research questions: (1) Are there any relationships among exporters' strategic orientation towards 3PL providers, 3PL providers' capabilities, exporters' competitive advantage, and exporters' export performance? (2) Do 3PL providers' capabilities and exporters' competitive advantage mediate the relationship between exporters' strategic orientation towards 3PL providers and exporters' export performance? We develop a research model grounded in the outsourcing-competitive advantage-performance paradigm of Bustinza et al. (2010) and test the model by applying structural equation modeling (SEM) to empirical data collected from a survey of 150 export firms in Hong Kong and the Pearl River Delta (PRD) region of China.

The rest of the paper is organized as follows: in Section 2 we provide the research background, review the literature, and develop the research hypotheses. In Section 3 we introduce the research methodology, describe the data collection method, and discuss the development of the measurement scales. Then we present an analysis of the results in Section 4. In Section 5 we discuss the research findings and their implications, conclude the paper, and suggest topics for future research.

## 2. Theoretical background and hypothesis development

### 2.1. Theoretical background

The traditional buyer–supplier relationship has four common characteristics. First, the buyer focuses on low price. Second, the buyer maintains multiple sources so as to create keen competition among suppliers. Third, the relationship is short-term oriented. Finally, the customized effort is low (Jackson, 1985). Little customization and the adversarial nature in this type of relationship undoubtedly reduces supply chain responsiveness to a dynamic market environment. The new paradigm – strategic alliance or partnership – is more effective for firms in the time-sensitive manufacturing industry than the traditional buyer–supplier relationship (Dyer, 1996). A partnership is defined as “a tailored business relationship based upon mutual trust, openness, shared risk, and shared reward that yield a competitive advantage, resulting in business performance greater than would be achieved by the firms individually” (Lambert et al., 1999). To better satisfy shippers' needs, 3PL providers should perform

logistics services in a better, faster, and cheaper manner for the exporters (cf. Krakovics et al., 2008) by synchronizing the logistics activities globally with the support of various information technologies. Forming strategic alliance with 3PL provider is one of the most effective business strategies for organizations in China to achieve cost-effective performance and long-term success (Chen et al., 2010). However, the literature on strategic alliance in the PRD region is inadequate (Lo and Yeung, 2004).

For activities for which a firm has no resource or no capability to deploy the resource, they should be contracted out so that the firm can (1) avoid investing heavily in assets and new capabilities (Persson and Virum, 2001), (2) focus on core competences and acquire complementary capabilities from external providers (Sink and Langley, 1997), and (3) exploit extra business opportunities and counter threats in the volatile business environment (Bagchi and Virum, 1996). Therefore, firms in strategic alliances are more likely to outperform firms subscribing to the traditional arms-length approach (Dyer, 1996).

The competitive advantage of a firm is usually attributed to the firm's strategies or process capabilities (e.g., Porter, 1985). Penrose (1959) suggests that resources can also be one of the explanatory factors for the competitive advantage of a firm if the firm can exploit valuable resources. Barney (1991) puts forward two assumptions: (1) resources (and capabilities) are heterogeneously distributed among firms and (2) resources are imperfectly mobile, so allowing for differences in firm resource endowments to both exist and persist over time.

In addition, Barney (1991) posits that resources have four characteristics. First, resources should be considered as valuable as they can exploit opportunities and/or neutralize external threats. Second, resources should be inimitable and non-substitutable. This is because high degrees of tacitness, complexity, or specificity will produce a high degree of ambiguity. Ambiguity about the sources of competitive advantage causes other firms to costly imitate or to replace the resource owners. Finally, resources should be rare. A firm can achieve better business performance in the short-term if it can acquire valuable and rare resources. To sustain better performance in the long run, firms must exploit resources effectively (Penrose, 1959; Wong and Karia, 2009).

Bustinza et al. (2010) indicate that outsourcing encourages the development of resources that enable the achievement of a sustainable competitive advantage, which, in turn, leads to superior firm performance. Mahoney and Pandian (1992) assert that a firm can achieve an advantage not only because it acquires resources, but also because it can make better use of its acquired resources. To understand better the link between resource acquisition and exploitation, Teece et al. (1997) introduce the concept of dynamic capability, which is the ability to integrate, build, and reconfigure internal and external competences to thrive in a volatile business environment. Sirmon et al. (2007) further suggest dynamic capability as comprehensive processes “in structuring a firm's resources portfolio, bundling resources to create capabilities, and leveraging those capabilities to realize a competitive advantage”.

Wong and Karia (2009) consider RBV appropriate for explaining competitive advantage in the 3PL service industry because resources are distributed heterogeneously across different 3PL providers, freight operators, forwarders, and 3PL users. These resources are “sticky” and cannot be transferred from 3PL providers to others without cost. They identify five types of resources, namely physical, human, information, knowledge, and relational resources, on which competitive advantage is based.

Physical and human resources are tangible resources. Physical resources include logistics hubs, warehouses, and material handling devices. They are valuable in creating network coverage, maintaining control of the logistics activities, and improving the

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