

Third-Party Logistics Providers as Supply Chain Orchestrators: An Evaluation in Hong Kong

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STATEMENT OF ORIGINALITY

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. When deposited in the University Library, I give consent to this copy of my thesis being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

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SYNOPSIS

The purpose of this document is to present the findings of a Doctor of Business Administration research project. The primary objectives of the project was to (1) *assess*, and *evaluate* the extent of logistics functions outsourced to Third Party Logistics Providers (3PLs) by large manufacturing, retailing and distribution organisations in Hong Kong, (2) *assess*, and *evaluate* the *depth*, *scope*, and *degree of criticality* of the services provided by 3PLs to their large customers in Hong Kong; and as a result, (3) *assess* the extent to which 3PLs in Hong Kong can be said to be undertaking strategic coordination or ‘orchestration’ of their customers’ supply chains, in other words to examine the extent to which Hong Kong 3PLs ‘orchestrate’ supply chains on behalf of their large customer organisations as a part of their logistics outsourcing strategy, and the extent to which 3PLs facilitate supply chain management best practices.

Data sources included responses to semi-structured face-to-face in-depth interviews, and secondary sources of data such as published literature on supply chain orchestration (Zacharia et al., 2011). The method used to conduct this research project was first a literature review which was then followed by semi-structured face-to-face in-depth interviews with senior executives of Third-Party Logistics (3PL) providers in Hong Kong. Data collected and analysed are primarily qualitative from undertaking a comprehensive literature review and semi-structured face-to-face in-depth interviews of medium and large Third-Party Logistics (3PL) providers and their major customers in Hong Kong.

Our research findings were: (i) the existing 3PL service providers are incapable of becoming supply chain orchestrators to manage the whole supply chain relationship for

their customers end to end at the moment in Hong Kong and (ii) the demand for appointing supply chain orchestrators is relatively low.

ABSTRACT

Keywords: *3PL; 4PL; Supply Chain Management; Outsourcing; Hong Kong; Orchestrator*

Logistics outsourcing studies have been undertaken for many years (Lieb & Randall, 1996). Logistics outsourcing is not merely a means of cost saving but is a strategic tool for creating competitive advantage as inappropriate outsourcing decisions can lead to a variety of problems. However, most of the published literature is in English, and undertaken in the western context, particularly the U.S. and in Western Europe. As such, not much is known about outsourcing practices in Asia, in a rapidly emerging China and particularly in the context of Hong Kong.

Hence, this study focuses on the Hong Kong Special Administrative Region of the People's Republic of China (SARPRC). The project *assesses*, and *evaluates* (1) the extent of supply chain management and logistics functions outsourced to 3PLs by large manufacturing, retailing and distribution organisations in the SARPRC (2) the extent/scope, *strategicity*, and *criticality* of the services provided by 3PLs to their customers in Hong Kong; and (3) the extent to which 3PLs in Hong Kong can be said to undertake strategic coordination or 'orchestration' of their customers' supply chains and as a result facilitate supply chain management (SCM) best practice on behalf of their customers. Strategic coordination or 'orchestration' is defined in this thesis as a company taking over administrative and coordinative responsibilities for the activities of managing, coordinating and focusing the value-creating network within the supply chain (Christopher 2005). In addition, orchestration is critical for an efficient supply chain (Hacki & Lighton, 2001; Lee,

2005) due to supply chain orchestrators being able to take an organization's performance to an advanced level. The supply chain orchestrator is just like a group leader who leads a group of individual musicians that work closely and well co-ordinately together to make the entire supply chain have more flexibility, agility and real options in effective, efficient and professional ways (Lyer & Zelikovsky, 2011). Furthermore, Zacharia et al., (2011) argued in their seminal article that 3PLs have evolved into significant leadership roles serving as a unique "orchestrator" within the supply chain to help facilitate supply chain management best practices.

Thus, the findings of this research project can be a useful starting point for managers to (1) recognize the potential contribution of 3PL firms and (2) take advantage of opportunities to address the need for increased competitive advantage by business organizations. While this is not a theory development project, the findings and contribution of this doctoral research project can also be a useful starting point for strategy and logistics scholars in (1) understanding the extent of network orchestration in the context of Hong Kong 3PLs as distinct from Western contexts, (2) understanding the extent of emergence, and level of empirical support that is available to justify and support the theory of supply chain network orchestration and supply chain network leadership as a pivot for supply chain success (Zacharia et al., 2011; Fung et al., 2009; Dhanaraj & Parkhe, 2006; Bitran et al., 2006) and (3) the project also contributes to a deeper and more enhanced scholarly understanding of the emerging phenomenon of supply chain network orchestration as first highlighted by Zacharia et al., (2011) in their seminal article.

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LIST OF ABBREVIATIONS

3PL	Third Party Logistics Provider
4PL	Fourth Party Logistics Provider
SCM	Supply Chain Management
HK	Hong Kong
SARPRC	Special Administrative Region of the People's Republic of China
RBT	Resource-based View Theory
TCE	Transaction Cost Economics
NT	Network Theory
CLM	The Council of Logistics Management
CSCMP	The Council for Supply Chain Management Professionals
MNCs	Multinational Corporations
KPIs	Key Performance Indicators
EBSCO	EBSCOhost Online Research Databases
1PL	First Party Logistics Service Providers
2PL	Asset Based Logistics Service Providers
ITO	Information Technology Outsourcing
HAFFA	Hong Kong Association of Freight Forwarding and Logistics Ltd.
LSPs	Logistics service providers
LCL	Cargo Consolidation

CHAPTER 1

INTRODUCTION

1.0 Introduction

Chapter 1 presents the justification for undertaking this research on supply chain orchestrators. Chapter 1 also presents an overview and outline of the thesis. The study focused on exploring to what extent Hong Kong (HK) 3PLs ‘orchestrate’ supply chains and a leadership role on behalf of their large customer organizations, and to what extent they facilitate supply chain management best practice. Therefore, the knowledge acquired and disseminated from this research project may be applicable to any business organization that imports or exports goods, transports cargo/freight on board ships in a global supply chain, or is a freight forwarder, warehouse operator or third-party logistics service provider (3PL).

1.1 Importance and significance of the study

The first major rationale for undertaking this study was to make a significant contribution to the body of knowledge on logistics and supply chain management; thus, the findings of this exploratory research project can be a useful starting point for managers and logistics practitioners, helping them to (1) recognize the potential contribution of 3PL firms to the management of supply chains and (2) take advantage of opportunities to address organizational needs and requirements for increased competitive advantage.

The second major rationale for undertaking this study was to explore a new insight into the socio-economic phenomenon of orchestration. While this is not a theory-development

project, the findings of this research project can also be a useful starting point for strategy, logistics, and supply chain management scholars and practitioners in: (a) understanding the extent of network orchestration in the context of Hong Kong 3PLs and Hong Kong components of global supply chains as distinct from the management of supply chains in Western contexts; (b) shed more light on understanding the extent of empirical support that is available to support and justify the emerging theory of 3PL strategic orchestration and coordination of the supply chains of their customers as a pivot for supply chain success and competitive advantage (Fung et al., 2009; Bitran et al., 2006; Dhanaraj & Parkhe, 2006) as well as (c) contribute to our scholarly understanding of network orchestration.

1.2 Motivation for the research

There are two factors that motivated me to undertake this research. First, this research project aimed to explore the emerging role of supply chain network orchestration in the context of Hong Kong. This kind of academic research study is very rarely found in academic databases as most of the published literature is in English and undertaken in the Western context, particularly the U.S. and Western Europe. As such, not much is known about outsourcing practices in Asia, in a rapidly emerging China and particularly in the context of Hong Kong (Hong et al., 2004; Lau & Zhang, 2006).

Second, the research findings enable an objective comparison of Hong Kong to the Western context of supply chain management, 3PL services and outsourcing where similar research has been conducted. This project can provide an opportunity to understand more the logistics outsourcing development in the Hong Kong context compared with Western context and the role of 3PLs' evolution in Asia. Finally, a review of the relevant theories

on logistics outsourcing (3PL), logistics-related competitive strategy and supply chain orchestration is presented in the literature review in Chapter 2.

1.3 Thesis goals, objectives, methods and findings

The major thesis goal was to explore the emerging role of supply chain network orchestration in the context of Hong Kong. Thus, the specific research objectives of the project were to:

- (1) *Assess and evaluate* the extent of logistics functions outsourced to Third-Party Logistics Providers (3PLs) by large manufacturing, retailing and distribution organisations;
- (2) *Assess and evaluate* the *depth, scope, and degree of the criticality* of the services provided by 3PLs to their large customers in Hong Kong; and as a result;
- (3) *Assess* the extent to which 3PLs in Hong Kong can be said to be undertaking strategic coordination or ‘orchestration’ of their customers’ supply chains. The key research questions in this study included:

- (1) What are the logistics functions outsourced to 3PLs in Hong Kong?
- (2) What is the scope and criticality of the services provided by 3PLs to their customers in Hong Kong?
- (3) To what extent have 3PLs become supply chain ‘orchestrators’ in Hong Kong?

The method used to undertake this research was (a) a comprehensive review of the literature on logistics outsourcing (3PL) as competitive strategy and supply chain orchestration (b) semi-structured face-to-face in-depth interviews of an expert sampling under purposive sampling frame of senior 3PL managers and (c) semi-structured face-to-face in-depth interviews of an expert sampling under purposive sampling frame of managers of the customer organisations that outsource their logistics systems and processes to 3PLs in Hong Kong.

The findings of the study, first, extend and deepen the theoretical and empirical understanding of the role of 3PLs in logistics strategy in Hong Kong and the practical scope, extent and depth of supply chain orchestration in the context of Hong Kong.

Second, the findings enable an objective comparison of Hong Kong to the USA context of logistics outsourcing and supply chain orchestration where similar conceptual research has been conducted (e.g. Zacharia et al., 2011). Third, the empirical findings also verify (1) the extent of the occurrence of supply chain orchestration in Hong Kong, (2) the scope, strategicity and criticality of 3PL services provided by Hong Kong 3PLs to their customers and the extent of services received by 3PL customer firms, Fourth, the study provides a clearer understanding of the extent of empirical support for existing theoretical claims about the extent and criticality of supply chain orchestration for supply chain success as argued by Zacharia et al., (2011). Fifth, the findings from the study inform the future development of a more realistic empirical model of supply chain orchestration in Hong Kong and in the literature on logistics outsourcing (3PL). This model will assist scholars to consider factors that are unique to the Hong Kong context, and different from Western contexts.

1.4 Thesis outline

The thesis is structured as follows:

Chapter 1 describes the focus of the research and the motivation and need for undertaking such research. Chapter 1 also highlights the aims and goals of the research and the overarching research question — investigating the extent to which 3PLs have become supply chain ‘orchestrators’ in the context of Hong Kong.

Chapter 2 provides a review of the academic literature on logistics outsourcing (3PLs) and supply chain orchestration and the models that have been published on the subject matter (Zacharia et al., 2011). Chapter 2 also provides an overall discussion of three relevant social science theories: transaction cost theory (TCE) (Coase, 1937; Williamson, 1975, 1985; Walker, 1988), resource-based view theory (RBT) (Penrose, 1959; Lippman & Rumelt, 1982; Wernerfelt, 1984; Barney, 1986, 1991), and network theory (NT) (Ellram & Cooper, 1990; Turnbull et al., 1996). Chapter 2 also highlights and demonstrates the research gaps within these studies and literature as well as highlighting the research aims and research question; it concludes with a summary of the literature review.

Chapter 3 discusses the methodology and research design implemented, and the rationale for the choice of methodology utilized. Chapter 3 also discusses quantitative and qualitative approaches to strategy, SCM, 3PL and logistics outsourcing research as well as empirical data collection processes and procedures using semi-structured face-to-face in-depth interviews and how the data were analysed. Chapter 4 provides a discussion and interpretation of the results arising from the analysis of the literature and the empirical interview data.

Chapter 5 discusses the results and findings emanating from the analysis of data. Chapter 5 also summarises and makes recommendations about the extent of 3PL and supply chain orchestration in Hong Kong. Chapter 5 concludes with a discussion of the limitations of the research and provides suggestions for future research.

1.5 Summary and conclusion

Chapter 1 presents the project objectives of the research as well as the academic motivation for undertaking research in supply chain orchestration. Chapter 1 also presents an overview of the thesis, its goals, objectives, methods and findings as well as its overall structure and outline.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

Chapter 2 comprises a comprehensive review of academic literature on logistics outsourcing often referred to as Third-Party Logistics Providers (3PL) and their role as supply chain orchestrators. Chapter 2 also comprises the discussion and identification of resulting research gaps, identification of variables from the literature, and emerging research questions that will be assessed empirically. The primary aims of chapter 2 were to (a) demonstrate a clear understanding of the literature and relevant theories, concepts, models and ideas related to 3PLs and their emerging role as supply chain orchestrators (Zacharia et al., 2011); (b) clarify definitions and terminology as they arise; and (c) identify an important research issue and specific research questions that can be feasibly addressed.

Chapter 2 is structured into five sections. Section 2.1 begins with a rationale for selecting and reviewing relevant supply chain-related articles with a description of the strategy used to select the articles. Section 2.2 synthesises, reviews, and summarises the academic theories of logistics outsourcing (3PL) and its relationship to supply chain management (SCM) and supply chain orchestration (e.g. Razzaque & Sheng, 1998; Maltz & Ellram, 1997; Knemeyer et al., 2003). Section 2.3 reviews and summarises the academic literature on supply chain orchestration. Section 2.4 discusses aims and questions, emerging research gaps, and identifies important variables from the literature to be empirically assessed in the research. Section 2.5 summarises the chapter.

This chapter follows the structural suggestions of Rudestam & Newton (2007). The rationale for the adopted chapter structure is that this structural rationale is able to facilitate effective communication in terms of the line of reasoning and logic of the literature review. As a result the chapter content is able to enable the literature review to unfold logically and sequentially. In delimiting the literature review, the review focuses on academic literature published in leading logistics and supply chain management books and journals. Section 2.4 discusses the aims, questions, and emerging research gaps, and identifies important variables from the literature to be empirically assessed in the research. Section 2.5 summarises the chapter.

2.1 Strategy used to select the articles reviewed and rationale

Research on logistics outsourcing also known commonly as Third-Party Logistics Providers (3PL) is voluminous and published over several decades (Marasco, 2008). Hence, it was necessary to systematically review and select articles that only directly relate to the research aims, questions, and focus of this research. Non-academic publications and conference papers were excluded from the literature searched, reviewed and analysed according to guidelines of content analysis. The research method used to select the relevant academic publications needed to be conducted in two major steps (Marasco, 2008), the first being to define the procedures and sources for the articles to be searched, and the second to define the categories to be used in the classification of the collected articles (Seuring et al., 2005). As a result, the researcher decided to synthesize, review, and summarise the academic literature on:

- (1) Logistics outsourcing (3PLs);
- (2) Supply chain management (SCM);

(3) Supply chain orchestration, often referred to as Fourth-Party Logistics Providers (4PLs).

Search strategy and keywords

The search strategy involved the identification and selection of five relevant keywords: “logistics”, “logistics outsourcing”, “3PL”, “4PL”, “supply chain orchestration”. The rationale for the keywords was that they were closely aligned with the focus of the research and associated research questions. The keywords identified articles that were focused on the subject matter under this research project’s investigation. A further rationale for selecting these keywords was that they were the same keywords often used by authors in many published refereed journal articles on outsourcing, supply chain management and logistics.

Also, the keywords selected included some compound words and sentences to enable increased precision in the search for relevant journal articles. Keywords also included words that are often used interchangeably such as “outsourcing”, “Third-Party Logistics Providers”, “3PL services” and so forth. Hence, this increased the likelihood that these keywords would be able to capture most or all relevant logistics and supply chain-related articles in the databases searched. Overall, the selection strategy for the keywords appeared to ensure the maximum capture across the range of relevant logistics and supply chain-related literature.

Each of these keywords was inserted into databases such as (1) Google scholar search engine (2) Business Source Premier, (3) EBSCOhost Online Research Databases (EBSCO), and (4) the University of Newcastle’s online eJournals and eBooks databases. Each of the

keywords was searched in the abstracts, titles, and bodies of texts of refereed journal articles published in English from 1990 to 2016.

The English language literature on 3PL topics is quite mature, and often relates to issues, such as 3PL contracting (Harrington, 1999; Sinkovics & Roath, 2004; Selviaridis, 2012), content design (Lin & Zhou, 2009), outsourcing structure (Boguslauskas & Kvedaraviciene, 2008; Hui et al., 2008), and evaluation methods for the assessment of outsourcing (Currie, 2003). Overall, there is a range of perspectives on logistics outsourcing. However, no attempt has been made to present all that has ever been established by research as that is beyond the scope of this research.

2.2 Supply chain management, logistics outsourcing (3PL) and orchestration

The focus on supply chain management (SCM) is forcing firms to focus on their competitive strategies and many firms are using supply chain management as a means of dealing with competition (Mentzer et al., 2001; Ross, 2013). There is a range of definitions and conceptualisations of SCM in the extant literature; therefore, there is a range of perspectives on the concept (Burgess et al., 2006; Daugherty, 2011; Giunipero et al., 2008). Stock et al. (2010) identified 166 unique definitions of SCM to illustrate the diversity of supply chain management definitions. However, Stock et al. (2010) usefully distilled the 166 conceptualisations and definitions into three main themes associated with the supply chain and supply chain management as a philosophy:

1. Supply chain management processes and activities;
2. Supply chain management participants and constituents; and

3. Supply chain management benefits and rewards.

The Council for Supply Chain Management Professionals (CSCMP) is the largest association of supply chain management professionals, consultants, managers and researchers in the world. The Council for Supply Chain Management Professionals seems to agree completely with these three crucial themes and core supply chain management concepts as argued by Stock et al. (2010). With roughly all the Fortune 500 multinational corporations (MNCs) as members, the Council for Supply Chain Management Professionals is well-resourced, the biggest, and most influential professional association of supply chain managers and logisticians in the world. Moreover, the Council for Supply Chain Management Professionals proposed its own definition of supply chain management which adopts the three core supply chain management themes that Stock et al. (2010) distilled above, and in turn, the Council for Supply Chain Management Professionals' definition of supply chain management appears to have been adopted the world over. The Council for Supply Chain Management Professionals defines supply chain management as follows:

Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. The CLM definition also includes co-ordination and collaboration with channel partners which can be suppliers, intermediaries, third party service providers and customers, thereby, integrating supply and demand management within and across companies (<http://clm1.org/website/AboutCLM/Definitions/Definitions.asp> 7/12/15).

Members of the International Centre for Competitive Excellence in 1994 (p.6) defined supply chain management as:

The business processes integration from end-user through original suppliers that provides information, products and services that add value for customers ultimately.

Logistics management, a smaller activity or function within supply chain management has been defined by the Council for Supply Chain Management Professionals as:

that part of supply chain management that plans, implements and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customer requirements (<http://clm1.org/website/AboutCLM/Definitions/Definitions.asp> 7/12/15).

These definitions are quite commonly used by supply chain management practitioners, scholars and others often because of: (1) the influential and sheer size of the practitioner associations; (2) the practitioner and scholarly consensus about the centrality and importance of these three core themes to supply chain management implementation; and (3) the size and number of academic supply chain management research projects and consultancies being undertaken by the association in collaboration with, and funded by, the big Fortune 500 multinational corporations (MNCs).

On the other hand, there are other supply chain management definitions where Peck (2006) defined SCM simply as the mechanisms by which the services and goods we use are delivered to us. They are complex systems of interacting networks in terms of multi-level complex, comprise the flows of materials, information, goods and money which pass within, and between organisations linked by a range of intangible and tangible facilitators such as relationships, processes, activities and information systems (Peck, 2006).

Practically, supply chain management are also linked by distribution networks, communication infrastructure and physical transport (Peck, 2005; Christopher, 2000). The definitions focus in common on: (1) the flow of information from and to the customers; (2) the management of intangible and tangible facilitators such as information systems, activities, processes and relationships — a concept that extends from the supplier to the ultimate customers; and (3) the flow of goods and services to customers. These intangible and tangible facilitators are often referred to in the literature as ‘connections’, ‘connectors’ and ‘links’ (for example, Chen et al., 2009). Overall, there seems a consensus amongst the supply chain management scholars that supply chain management encompasses organisations or systems of organisations and their suppliers and customers,

and material flows and information between organisations and their suppliers and customers (Handfield & Nichols, 2002; Peck, 2006; Childerhouse et al., 2011).

For the purpose of this research, the definition of supply chain management proposed by both the Council for Supply Chain Management Professionals (CSCMP) and the International Centre for Competitive Excellence is adopted. Supply chain management encompasses both the “planning and management of all business activities involved in procurement and sourcing, conversion, and all logistics management related activities” as well as the “integration of business processes from end-user through original suppliers”. The combination is stating that a supply chain management comprises an integration of the business processes; moreover, the supply chain also comprises a set of three or more entities (individuals or organisations) directly involved in: (1) the upstream procurement and sourcing activities from vendors (2) ‘conversion’ in a focal organisation and (3) downstream logistics and transportation management activities as well as the flows of products, finances, services and/or information from the source to the customers and back; all of these are linked by a range of intangible and tangible ‘links’, ‘connections’, ‘connectors’ and ‘facilitators’ (Christopher, 2000; Peck, 2005, 2006; Chen et al., 2009a).

Implicit within the definition of supply chain management is the requirement for firms to communicate, coordinate and collaborate with other firms within the supply chain (Simatupang et al., 2002). Supply chain partners must for instance share information (Spekman et al., 1998), reduce inventory (Simchi-Levi et al., 2012), and invest in new connective technology (Neeley, 2006). Firms also need to utilize supply chain management best practices to outcompete their rivals and master uncertainty in the face of challenging customers.

2.2.1 Logistics outsourcing (3PL) and orchestration

In order to remain competitive and deliver superior value to customers, firms are increasingly creating efficiencies in all business processes, focusing on core competencies, and outsourcing functions that can be performed more efficiently by third parties (Christopher, 1998; Lambert et al., 1999). Hence, firms use supply chain management as a means of competitive strategy, and an increasing number of companies across a range of industrial sectors use 3PL for the management of all or part of their logistics operations (e.g. Lieb & Bentz, 2004, 2005; Lieb & Miller, 2002; Lieb & Randall, 1999).

Logistics management has been identified as a primary function that can enable firms to cut costs and improve responsiveness through outsourcing (Christopher, 2005). Therefore, there has been a high demand for outsourcing of logistics services/functions to third parties and a concurrent proliferation in the number of 3PLs that provide such services over the past decade (Lewis & Talalayevsky, 2000; Maltz & Ellram, 2000; Mahnke et al., 2005; Sanders et al., 2007).

Outsourcing in general is defined as the strategic procurement of services or products from sources that are external to the organisation (Neale, 1995). Initially, these services/products are handled by in-house staff and resources but now some or all are out-sourced to outside specialist service providers who possess the latest skills, technology, brand loyalty, employ the best practices and attain economies of scale by undertaking the same type of work for a number of clients. In general, outsourcing may be described as “formally handing over the planning, management and operation of certain organization functions to an outside independent third party service providers” (Neale, 1995).

Outsourcing involves working closely with the third party by transferring and sharing management control with decision-making of a business function to outside specialist service providers, which involves a higher degree of two-way information exchange, coordination and trust between both parties (Hertz & Alfredsson, 2003).

2.2.2 Definition of 3PL (logistics outsourcing)

Like the definition of supply chain management, there is no single consistent definition of the concept of logistics outsourcing to 3PL providers and many definitions and interpretations of 3PL can be found in the literature (e.g. Skjoett-Larsen, 2000; Halldórsson, & Skjøtt-Larsen, 2004). The field is not always consistent. Sometimes, 3PL is used as a label for traditional “arm’s length” sourcing of transportation and/or warehousing (Marasco, 2008). In other cases, the term 3PL is used to describe outsourcing of a more complex character that can encompass the entire logistics process and even the supply chain process (e.g. Zacharia et al., 2011).

Thus, the term 3PL has been defined and used by scholars in both a narrow and a broad sense (Knemeyer & Murphy 2005; Ojala, 2003). Some illustrative definitions include those by Lieb (1992:29): ‘3PL involves: “the use of external companies to perform logistics functions that have traditionally been performed within an organization. The functions performed by the third party can encompass the entire logistics process or selected activities within that process”.’ Similarly, Coyle et al., (2003, p. 425) argued that 3PL involves an external organisation: “that performs all or part of a company’s logistics functions”. Hence, these “broad” definitions seem to suggest that 3PL includes any form of outsourcing of logistics activities that was performed “in-house”.

On the other hand, “narrower” definitions link the 3PL concept to some unique functional and/or inter-organisational characteristics of the logistics outsourcing relationship. Indeed, some scholars emphasise the supply of management support in addition to operational activities by providers and the duration of the relationship. For example, Berglund et al. (1999 p. 59) defined 3PL as “activities carried out by a logistics service provider on behalf of a shipper and consisting of at least management and execution of transportation and warehousing”.

Also, other activities may be included such as information-related activities such as tracking and tracing, value-added activities such as secondary assembly, inventory management, installation of products, and even supply chain management (Berglund et al., 1999). Furthermore, a contract is required to contain management, design or analytical activities, and the length of the co-operation between shipper and provider to be at least one year to differentiate 3PL from traditional “arm’s length” sourcing of transportation and/or warehousing. To further differentiate between broad and narrow definitions, Murphy and Poist (1998, p. 26) emphasised (1) the duration and win – win nature of the relationship along with (2) the customisation and broader range of logistics services in the arrangement.

Murphy and Poist (1998, p. 26) defined 3PL as follows: 3PL involves the relationships between shipper and third party that compared with basic services, encompasses a broader number of service functions, has more customised offerings, and is characterised by more mutual and longer-term beneficial relationships. By such narrower definitions, 3PLs seem to be distinguished from the “traditional” outsourcing of logistics functions on a transaction-by-transaction basis.

For instance, these features include a long-term duration, the provision of a broad range of services as well as joint efforts to develop cooperation, a fair sharing of risks and benefits, the customisation of the logistics solution, and suggest that third-party logistics (3PLs) incorporate strategic and not just tactical dimensions (Skjoett-Larsen, 2000). A sort of conciliation between the alternative narrower and broader views of 3PLs can be found in the definition offered by Bask (2001, p. 474), which describes 3PLs as “relationships between interfaces in the supply chains and third-party logistics providers, where logistics services are offered, from basic to customized ones, in a shorter or longer term relationship, with the aim of effectiveness and efficiency”. This definition is adopted in this thesis because it points out the essence of the 3PL concept as involving business-to-business relationships where third parties fulfil the logistics requirements of their clients in the supply chain (Morasco, 2008; Berglund, 2000). Nevertheless, we recognise the full range of these relationships as regards scope, content and duration.

While Bask (2001) conceives third-party logistics (3PLs) as a set of three dyadic relationships linking service provider, importer and exporter in a supply chain, such triadic form of relationship cannot always be considered the commonest or normal case because many third-party logistics service provider relationships are limited either to the dyadic relationship between the exporter and logistics service provider or importer and logistics service provider. In fact, most research addresses the dyadic linkage between the third-party logistics service provider and either the exporter/seller or importer/buyer of the goods. Hence, in this research, the conceptualisation of third-party logistics service provider as a dyadic relationship between importers/buyers or exporters/sellers of the goods and third-party logistics service providers in a supply chain is adopted.

Logistics outsourcing through the use of 3PL providers has become a means for firms to enhance their competitive position in an increasingly global marketplace (Cooper, 1993). In fact, outsourcing in general has grown to be a multi-billion-dollar industry and one of the most rapidly growing areas in the business world (Jennings, 2006). Kotlarsky and Willcocks (2012) reveal that business process outsourcing (BPO) reached USD175 billion and global information technology outsourcing (ITO) reached USD290 billion in 2012.

2.2.3 Benefits and features of logistics outsourcing (3PL)

The benefits of logistics outsourcing using 3PL providers are well documented (see Figure 2.1). For example, firms can cut costs and maintain quality by relying more on outside specialist service providers for activities viewed as supplementary to their core business (Sinderman, 1995; Sink & Langley, 1997). Other benefits are summarised as follows: improved operational efficiency to enhance efficiency and effectiveness through logistics outsourcing; access to specialized knowledge, specialist skills, tools, technology and independent advice that the outside specialist service provider can provide (Davies, 1995); accountability – specialist 3PL providers are bound by a contract with key performance indicators (KPIs) to provide agreed levels of service, while internal departments do not always control expenditure; logistics outsourcing allows firms to refocus their resources on their core business; provides access to human talents that may not be available in-house; enables business process re-engineering; enables certain unneeded logistics assets to be sold for a cash infusion; enables the acquisition of the latest logistics technology and equipment, increases firm flexibility, adaptability and agility, and thus improves customer service levels.

The features of 3PLs, and functions performed by 3PL providers, according to some scholars may encompass a part as well as the entire supply chain management function (i.e.

“one-stop-shop”) including value-added services to the clients at low cost (e.g. Lieb & Randall, 1996). Such functions may include order picking, sorting, order processing/fulfilment, transportation, storage/retrieval management, break-bulk, load consolidation, cross-docking, pick-and-pack, track-and-trace, labelling, palletizing, etc. As a result, the opportunity for outsourcing logistics activities to third-party logistics providers is continuing to increase, which, depending on the organisation’s strategic plan, is related to staff contraction or expansion as well as the criticality or centrality of such processes to the organisation (Rao & Young, 1994).

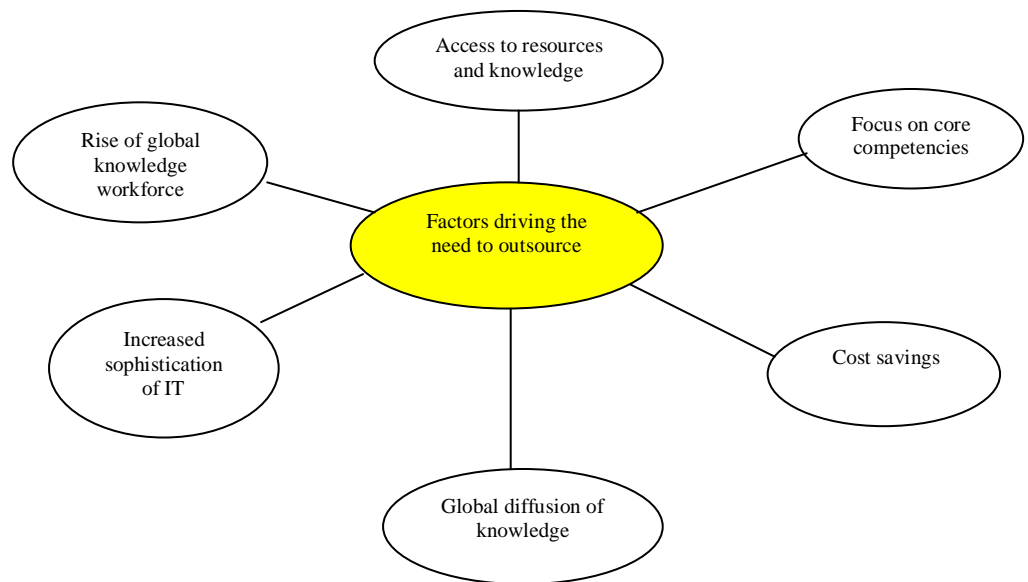


Figure 2.1 – Factors driving the need to outsource

Hence, nowadays consideration of the use of 3PL providers in one form or another is a key component of strategic logistics management in many industries (Gooley, 2002). Logistics outsourcing (3PL) and its relationship to supply chain management and orchestration of the supply chain is discussed by Knemeyer et al. (2003), Maltz & Ellram (1997) and Razzaque & Sheng (1998). Practically, one report by Eye for Transport revealed that up to 65% of North American manufacturing firms using 3PL providers surveyed perceive 3PL provider

performance as good. Another 12% claimed that the performance is higher than expected and 4% stated that performance is excellent (Eye for Transport, 2005).

2.3 Supply chain management orchestration

In recent years, the role of 3PLs seems to be evolving from the provision of traditional and straightforward logistics services to complex and one-stop-shop logistics services often known as fourth-party logistics provider (4PL); almost like the ‘conductor’ of an ‘orchestra’ (Zacharia et al., 2011). Moreover, Fantasia et al. (2010) also described that 4PLs offer specializations that extend far beyond standard 3PL responsibilities of fulfilment, warehousing or distribution activities as well as Win (2008) provided another definitions that Fourth-party logistics (4PL) has emerged as the ideal solution that allows companies around the globe and from a diverse range of industries to have a single point of accountability across both supply and demand chains.

On the other hand, Christopher (2005) defined supply chain orchestration as a 3PL takeover of management, administrative and coordinative responsibilities in the supply chain. Supply chain orchestrators undertake on behalf of the customer firm the activities of managing, coordinating and focusing the value-creating network within the supply chain. Zacharia et al., (2011) argued in their seminal article that 3PLs have evolved into significant leadership roles serving as a unique “orchestrator” within the supply chain to help facilitate supply chain management best practices.

Zacharia et al., (2011) argued that 3PLs serve as “orchestrators” within the supply chain in terms of managing key activities such as logistics activities planning, managing channel members’ relationships (p.45) and control the day-to-day logistics activities to create and

sustain competitive advantages on behalf of their clients at economic and professional levels. According to Zacharia et al., (2011), the role of 3PL providers is not merely to provide traditional transportation delivery and warehousing storage services to their customers at a competitive cost but to effectively manage all of the activities along the value chain (p.47).

Supply chain orchestration is gradually receiving academia's strong attention (Fung, et al., 2009). Moreover, orchestration is critical for an efficient supply chain (Hacki & Lighton, 2001; Lee, 2005) due to supply chain orchestrators being able to take an organisation's performance to the advanced level as supply chain orchestrator just like a group leader who leads a group of individual musicians that work closely and well co-ordinately together to make the entire supply chain have more flexibility, agility and real options in effective, efficient and professional ways.

Precisely, the analogy of a conductor and an orchestra means flexibility. The individual musicians need to have the ability to play a variety of different instruments; moreover, they expect to have the ability to adjust their playing to the needs of the group as dictated by the conductor for the purpose of demonstrating that they possess a certain degree of agility, and finally, they also need to demonstrate the ability to orchestrate the entire ensemble by possessing a tool kit of real options (Lyer & Zelikovsky, 2011).

When the concept of orchestration is applied to supply chain management, the orchestrator needs to have the ability to control the operational flows, and manage whole supply chain relationships and related activities across the supply chain, which is based on business rules and regulations for its customers on an end-to-end basis. Therefore, supply chain orchestration can be interpreted as the strategic coordination of all key functions and

activities across the supply chain. It may involve all the processes starting from “order to cash” conversion cycle, i.e. from the processing of sales orders, stocks requisition and delivery, goods storage in the warehouse, picking, packing and dispatching, through to the delivery of goods to customers and subsequently cash collection.

2.3.1 Theoretical support for orchestration

The range of services currently offered by 3PLs has broadened considerably from transportation and warehousing to more advanced supply chain solutions (Soinio et al., 2012). The role of 3PL services providers is to provide an integrated logistics solution with a diverse scope of services from traditional simple services to a wide range of logistics activities with cost-effectiveness, flexibility, high service quality and customisation, such as cross-docking, picking and packing, re-packing, cargo sorting, purchase order management, inventory control, cargo storage, order fulfilment, warehouse management, distribution management and value-added services, e.g. bar code printing and labelling, etc. In other words, the role of 3PLs has evolved into an advanced role compared with past decades. In addition, 3PLs have shifted to more strategic considerations rather than operational to become major players in the supply chain (Fulconis et al., 2006).

Logistics outsourcing is one of the crucial decisions in the organisations because logistics outsourcing is not merely a means of cost saving but in fact is a strategic tool for creating competitive advantages as inappropriate outsourcing decisions can lead to a variety of operation and hidden problems; in addition, outsourcing involves multi-party interactions and working closely together to achieve the desired objectives; therefore, there is considerable support in the social science literature for logistics outsourcing as a strategy and to develop the theoretical argument to support the role of 3PLs as the orchestrator of the

supply chain; they are resource-based view theory (RBT), transaction cost economics (TCE) and network theory (NT) (Zacharia et al., 2011).

2.3.2 Theories relevant to orchestration

(A) Resource-based view theory (RBT)

The importance of internal resources was first introduced and recognized in regard to achieving a firm's competitive position by Penrose (1959) and then taken up by Lippman (1982), Wernerfelt (1984), Rumelt and Lamb (1984), and Barney (1986, 1991) to further develop this resource-based view theory (RBT) in the field of strategic management. This classical theory is used to evaluate how individual firms differ from each other within the same industry as well as to enable firms to conceive of and implement strategies to improve their effectiveness and efficiency (Daft, 1983) in order to achieve sustainable competitive advantages and outperform competitors.

In addition, the resource-based theory has two fundamental arguments: the first is resources needs to be rare and valuable, and the second is resources are not imitable, so RBT explains how firms optimally utilize resources in terms of physical (tangible) assets such as plant and equipment as well as intangible assets such as information, human, knowledge and relational for the purpose of generating sustained competitive advantage (Barney, 1991). However, not all firms are able to achieve a desirable outcome due to the resources endowment of firms (Conner & Prahalad, 1996).

On the other hand, the common phenomenon faced by a lot of business owners and managers is resource mis-allocation and under/over-estimation of the firm's resource

capability leading to firms not outperforming others even though firms have clearly delineated business objectives and directions at the beginning.

Furthermore, competency in logistics management is important for a lot of organisations to support their day-to-day operations (Skjoett-Larsen, 1999) especially for the retailer and distributor sectors due to them requiring significant capital investment if they want to keep the fleet management function in-house. In fact, logistics outsourcing is able to access inimitable assets (Rumelt & Lamb, 1984), innovations and state-of-the-art technology (Conner, 1991) to support an organisation's core activities and even non-core activities through third-party logistics service providers as 3PLs are able to balance the organisation resource scarcity problems (Prahalad & Hamel, 1990).

Thus, resource-based view theory is a useful strategic management tool to support logistics outsourcing and the role of third-party logistics service providers to sustain superior firm performance by comprehensive step-by-step evaluation of the firm's resource situation as resource-based view theory is able to measure a firm's cost incurred to copy attributes as a source of economic rents to achieve performance excellence and competitive advantage.

Therefore, the RBT focuses on firms comprised of bundles of resources for the purpose of enhancing its competitive advantages and maximising the firm's ability to access a range of resources that are scarce, which can imply that 3PLs will offer a wider range of resources to penetrate the market share and RBT is one of the social science theories underpinning the role of 3PLs (Zacharia et al., 2011).

(B)Transaction cost economics (TCE)

Coase (1937) introduced the transaction cost theory and believed that the market uses a price mechanism as a transaction cost. Since then Williamson (1975) further developed transaction cost theory into transaction cost economics use for analysis of a wide range of strategic and organisational issues (Walker, 1988). Transaction cost economics is the central theory in the field of strategy, which emerged in the 1970s and aimed to take an economic perspective in regard to making an economic exchange as well as a firm's ownership decision on how to minimize the production and transaction costs (Williamson, 1985).

Williamson (1985) suggested three crucial variables for TCE theory: frequency of the transaction with the company, level of asset specificity for the transaction, and degree and uncertainty accompanying the transaction (Williamson, 1975). Precisely, Clemons et al. (1993) further explained that transaction cost has two major elements: coordination costs and transaction risks; moreover, there are a number of different kinds of transaction costs which include: bargaining costs, search and information costs, policing and enforcement costs. In addition, transaction cost economics is the costs associated with implementation, coordination, negotiation, adjustment, monitoring and termination exchange agreement.

On the other hand, TCE is one of the well-known and acceptable theories for logistics outsourcing decision study (Andersson, 1997). Moreover, the major reason for any organisations to consider logistics outsourcing is to achieve cost saving; the fact is that transaction costs will erode companies' profit margin if not managed well and logistics outsourcing is able to reduce the transaction costs in the supply chain, where organisations transfer the transaction costs to third-party logistics service providers in terms of order

processing costs, coordination costs, asset specificity costs, opportunity costs (transaction risk), operational risk and opportunism.

Furthermore, handling multiple suppliers simultaneously will increase the transaction costs, thus, reducing the suppliers' base and dealing with one major logistics service provider will be able to build up mutual trust and maintain a harmonious relationship with less resources required when managing multiple suppliers at the same time because communication and coordination will incur transaction costs (Standifird & Marshall, 2000). In other words, organisations can maximise the profit margin to reduce their transaction costs as much as possible by utilising an outsourcing strategy to minimise the organisation's transaction costs and transfer them to 3PLs, due to 3PLs being able to standardise the processes and optimise their resources to support their clients. This will also lead to 3PLs growing in their capability to offer a wide range of logistics services at the lowest and most competitive costs (Parashkevova, 2007).

(C)Network theory (NT)

Network theory can be explained as a field of network sciences and computer sciences deployed to examine many models of complex networks with some common features in a systematic and logical way; logistics networks are one of the application examples. Moreover, there are a number of network patterns of relationships under this theory, which include social network relationships among individuals (friendship and acquaintanceship), informal network relationships through people (employee interlock and mobility) and formal contractual relationships among organisations (strategic alliances and joint ventures). Ellram (1990) has pointed that the perspective of network theory through outsourcing strategy is able to let organisations manage multi-firms within the supply chain as a single

entity by building relationships for those firms and through network coordination in the supply chain (Ford 1997; Lambert & Cooper, 2000).

Therefore, the key assumption of network theory applied to logistics networks is that each organisation in the supply chain should work closely together in order to create synergy for organisations to exchange resources and build up relationships which is fundamental to the networks theory. The fact is that networks theory is commonly applied to 3PL service providers. The typical thing is to use it to improve the multi-client relationships for the purpose of spanning the supply chain more effectively and efficiently as a result of various collaborations that occur between 3PL service providers and their multi-clients to achieve economic motivations, and build up mutual trust and necessary power to add value to the supply chain (Uzzi, 1997; Panayides & Lun, 2009).

Thus, organisations can share and obtain certain resources to add value to the supply chain when interacting with these organisations and create collaborative relationships across the value chain (Ford, 1990); however, the network relationships need to be built in the medium to long term; otherwise, they may not be able to achieve the desired outcome (Panayides & Lun, 2009).

The role of 3PL service providers is to take over the management of logistics operations on their customer's behalf by seeking to enhance the efficiency through entire networks in terms of influencing interactions and reciprocating channel members within the supply chain. Moreover, Christopher (1998) pointed out that network theory is focused on the formation of relationships, organisation of alliances and streamlining of organisational structures to achieve competitive advantages.

In this sub-section, I have reviewed three relevant social science theories that theoretically support the role of 3PL service providers in supply chain management from the view of resource-based view theory (RBT) (Ketchen & Hult, 2007), transaction cost economics (TCE) (Schwabe, 2013) and network theory (NT) (Ellram, 1990). While each theory has its own perspective and view, each one on its own is unable to fully explain and/or influence and contribute to the current position of 3PL service providers in the supply chain. However, using the three social science theories in a complimentary fashion is sufficient to explain the current role of 3PL service providers in the supply chain (Zacharia et al., 2011).

Moreover, the role of 3PL and 4PL service providers seems to have evolved from a mere focus on cost reduction and the provision of specialist support to their customers at competitive prices to a focus on providing supply chain management best practice to support and sustain their customers, and help them to achieve their desired strategic goals. Therefore, theoretically speaking, the role of 3PLs seems to have gradually evolved from providing straightforward logistics functions to facilitating supply chain management best practice as a supply chain orchestrator that creates and sustains a competitive advantage (Zacharia et al., 2011).

2.4 Evolving role of the logistics service providers in logistics outsourcing (3PL)

The evolving role of the logistics service providers in logistics outsourcing has been characterized by an increasing degree of integration of separate tasks, in other words, logistics outsourcing from silo operations to integrated operations through different type of logistics service providers, thus, 3PL has taken on a more comprehensive strategic role

(Vaidyanathan, 2005). The below pyramid can be illustrated the role of logistics services providers in logistics outsourcing.

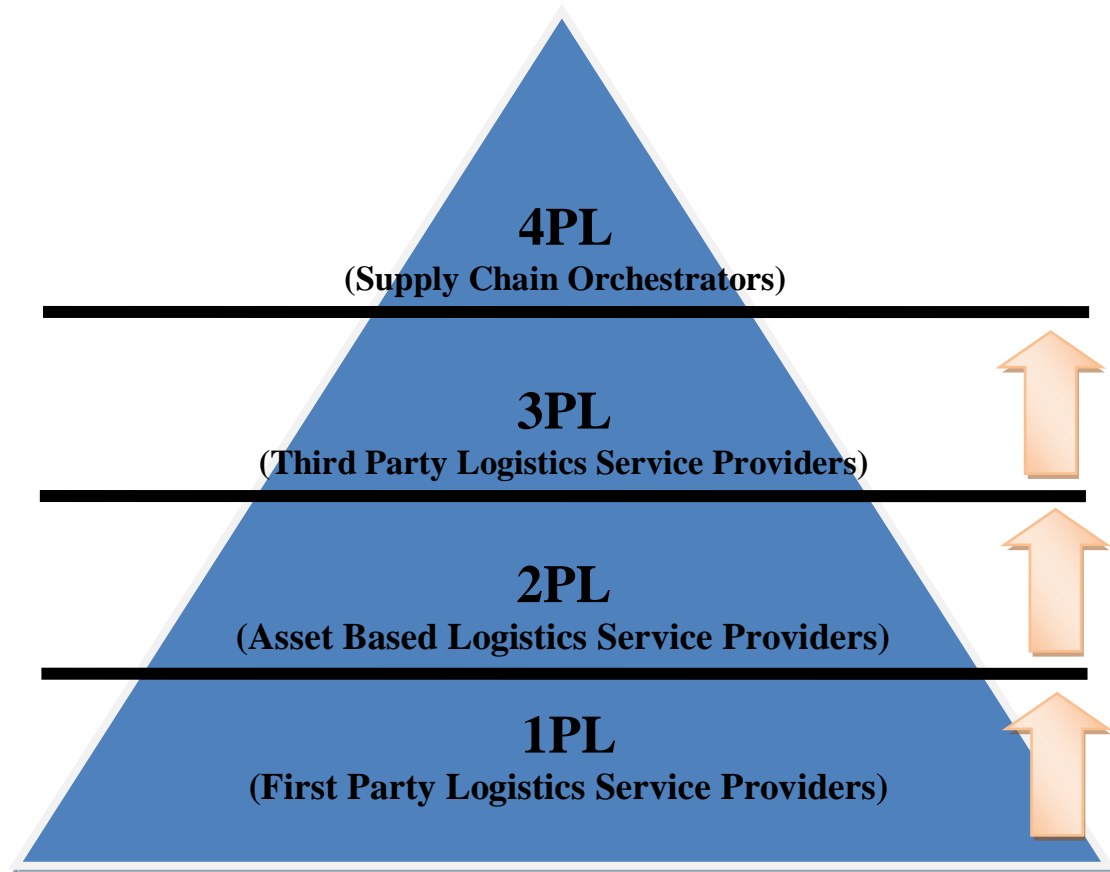


Figure 2.2 Pyramid of logistics service providers in logistics outsourcing

1PL (First Party Logistics Service Providers) can provide basic transportation service for inbound and outbound logistics activities within regional action radius. E.g. Truck Owner

2PL (Asset Based Logistics Service Providers) can provide logistics and transportation service but invest heavily in the fixed assets. E.g. Aircraft, Vessel, Trucking Fleets, etc.

3PL (Third Party Logistics Service Providers) can provide integrated logistics service on contract basis; 3PL is not invest heavily in the fixed assets, therefore, non-asset based normally.

4PL (Supply Chain Orchestrators) can provide a consultancy service for supply chain management, such as tailor-made the logistics network, manage the whole supply chain relationship and contracts other companies for certain tasks, etc.

2.5 Conceptual framework of supply chain orchestrator

The following conceptual framework explained the supply chain orchestrator's characteristics and this research project aimed to explore the emerging role of supply chain orchestration in the context of Hong Kong, therefore, the research gaps and research questions would be discussed in next session of this chapter.

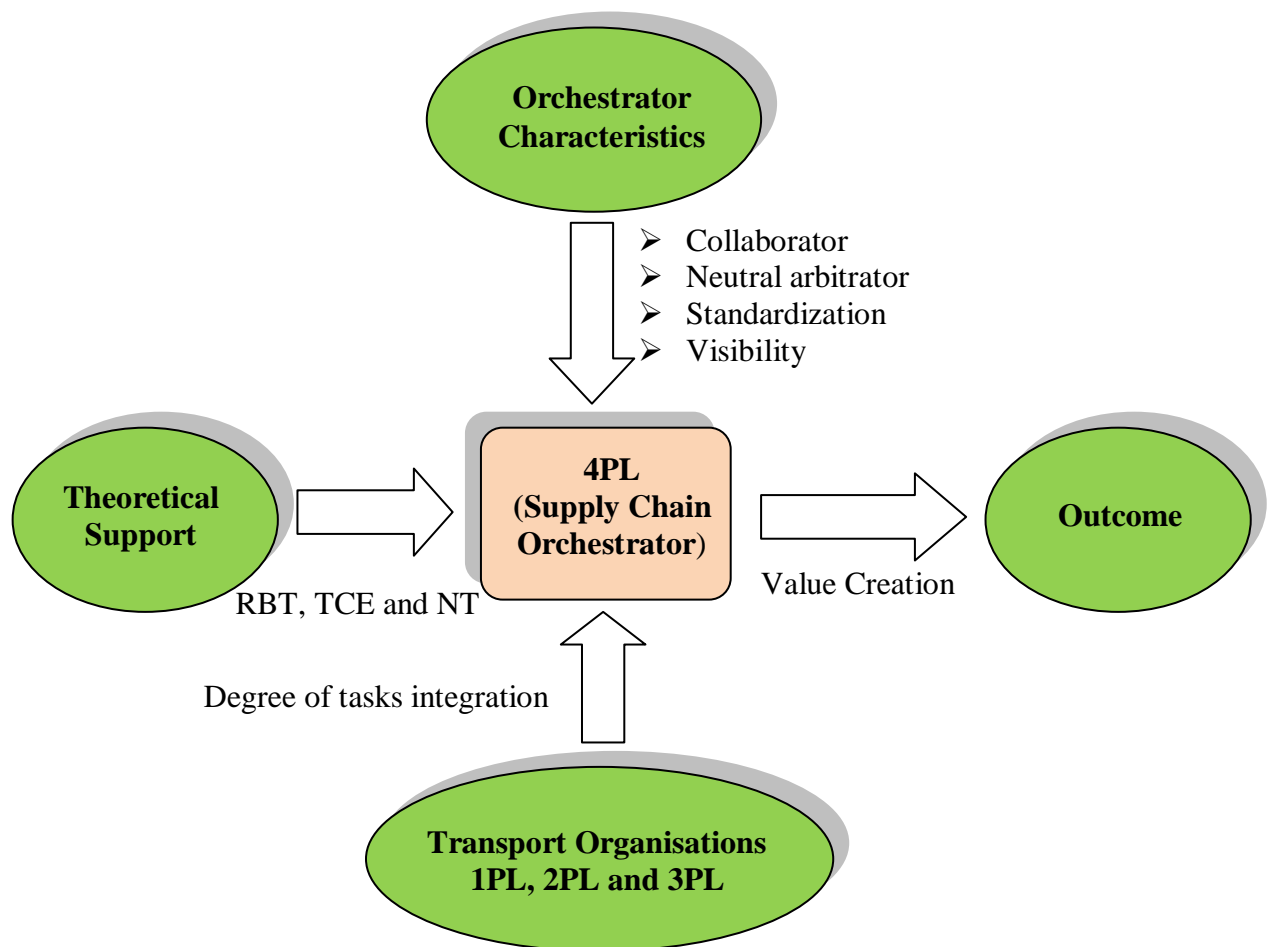


Figure 2.3 – Conceptual framework of supply chain orchestrator

1. Collaborator refers to the supply chain orchestrator needs to have the ability to manage whole supply chain relationship to facilitate and encourage collaboration among their customers.
2. Neutral arbitrator refers to the supply chain orchestrator plays a unique role to manage the whole supply chain activities in terms of tailor-made the logistics network with advocate change with neutral role to their customers.
3. Standardization refers to the supply chain orchestrator need to have the logistics system technology to provide common technology platform to standardize all the processes when they contract other companies for certain tasks to achieve processes standardization among different companies.
4. Visibility refers to the transparency to the supply chain channel members in terms of standard data, track and trace system to enable visibility.

Thus, the 4PL (Supply Chain Orchestrator) needs to possess the above characteristics to achieve value creation to their customers.

2.6 Research gaps, research aims and research questions

Hence, from the foregoing literature review and the research gaps highlighted, the primary objectives of the project were to:

- (1) *Assess and evaluate* the extent of logistics functions outsourced to Third-Party Logistics Providers (3PLs) by large manufacturing, retailing and distribution organisations;

(2) *Assess and evaluate the depth, scope, and degree of criticality* of the services provided by 3PLs to their large customers in Hong Kong; and as a result;

(3) *Assess* the extent to which 3PLs in Hong Kong can be said to be undertaking strategic coordination or ‘orchestration’ of their customers’ supply chains.

The key research question in this study is: To what extent have 3PLs become supply chain ‘orchestrators’ in Hong Kong? Overall, this research assesses and evaluates (1) the extent of network orchestration amongst Hong Kong 3PLs and (2) the scope and criticality of 3PL services provided. Precisely, the evaluation in the data for the task scope and criticality of 3PL services provided is that “Scope” can be defined as the breadth or degree of responsibility assigned to the 3PL, such as warehousing, transportation, consolidation cross docking hub, inventory control, order processing and fulfilment. “Criticality” can be defined as the importance of the outsourced functions or tasks to the firm to this project, normally refer to the critical areas of core activities to the firm such as marketing, distribution, purchasing, information systems with almost the entire supply chain. Therefore, task scope and criticality are considered simultaneously in the research questions.

The overall aim is to measure the level of empirical support for existing theory proposed by Zacharia et al., (2011) on 3PL-related strategic outsourcing and extent of network orchestration.

2.7 Summary and conclusion

This chapter reviewed the academic literature on logistics outsourcing (3PLs), supply chain management, and supply chain orchestration. Chapter 2 also discussed the conceptual framework together with identified resulting research gaps and emerging research aims, and based on the literature, identified constructs and variables to be empirically investigated in Hong Kong's 3PL setting. Moreover, chapter 2 also demonstrated an understanding of the literature, theories, concepts and ideas relating to the focus of the thesis. Finally, this chapter clarified definitions and terminology, and identified an important research issue and specific research aims as well as constructs and variables from the literature.

CHAPTER 3

METHODOLOGY

3.0 Introduction

Chapter 3 explains the research design and methodological approach implemented as well as the rationale behind the adopted approach. Chapter 3 also outlines the techniques utilised for the research based on the methodological fit with the research aims and variables identified in chapter 2 together with the data collection and analytical strategies that were used for this thesis. Furthermore, this chapter addresses issues of sample selection, ethics approval and administration of questionnaires. Thus, this chapter was structured into seven sections: Section 3.1 briefly reiterates the research questions, aims and variables to be tested; Section 3.2 discusses alternative research approaches, the selected research approach and rationale; Section 3.3 explains the approach taken as regards interview design and semi-structured face-to-face interviews; Section 3.4 explains issues of sampling, selection criteria of respondents, and conduct of interviews of executives of 3PLs in Hong Kong and their customers; Section 3.5 discusses the analytical techniques implemented in the research; Section 3.6 comprises discussions on human ethics approval for this research in terms of privacy, confidentiality, and the voluntary nature of the research and section 3.7 concludes chapter 3 with a summary.

3.1 Research aims and research questions

The research aim was of this project was to:

- (a) Assess and evaluate the extent of the functions outsourced to Third-Party Logistics Providers (3PLs);

- (b) Assess and evaluate the extent/scope, and strategicity/criticality of the services provided by 3PLs to their customers in Hong Kong; and as a result;
- (c) Assess the extent to which 3PLs in Hong Kong can be said to undertake strategic coordination of their customers' supply chains.

In other words, to what extent do Hong Kong 3PLs 'orchestrate' supply chains and undertake a leadership role on behalf of their large customer organisations, and to what extent do they facilitate supply chain management best practices through orchestration as argued by Zacharia et al., (2011)? Precisely, the term of supply chain management best practices in this project mean best-in-class business model for industry benchmark to share and compare business performance outside of the company. Thus, this project built upon the preliminary understanding of the extent of network orchestration through a focus on the unique context of Hong Kong as distinct from the management of supply chains in Western contexts. It sheds more light on understanding the extent of empirical support that is available to support and justify the emerging theory of 3PL (also known as 4PL) (Zacharia et al., 2011) strategic orchestration and coordination of the supply chains of their customers. In order to address the research aims, the research questions of this project were:

- (1) What are the logistics functions outsourced to 3PLs in Hong Kong?
- (2) What is the scope and criticality of the services provided by 3PLs to their customers in Hong Kong?
- (3) To what extent have 3PLs become supply chain 'orchestrators' in Hong Kong?

3.2 Alternative research approaches, selected research approach and rationale

According to Robson (1993) and Yin (2003), generic social science research strategies include archival analysis, histories, surveys, experiments, and case studies. However, these are not mutually exclusive as there are also several combinations, variations, and hybrids of these strategies. Each of these generic strategies also has a range of sub-sets, sub-strategies and overlaps (Robson, 1993).

A quantitative approach refers to the systematic empirical investigation of quantitative phenomena and properties as well as their relationships which tend to approximate phenomena from a large number of completed surveys or questionnaires (Larsson, 1993). This approach is used for dealing with numbers to prove a point for the purpose of enhancing decision-making power for management planning and control (Anderson et al., 2015). The quantitative approach often applies statistical, analytical and numeric techniques to recognize patterns and relationships of processes (Sekaran, 2006). The drawback of the quantitative approach is the difficulty in recognizing untouched and newly discovered phenomena such as orchestration (Anderson et al., 2015).

On the other hand, a qualitative approach aims to understand some aspect of social life phenomena. The use of a qualitative research method is appropriate to study phenomena in their natural habitat in order to obtain a holistic picture unlike quantitative research methods. Four major qualitative approaches can be used in research: (1) Phenomenology, (2) Ethnography, (3) Grounded Theory and (4) Field Research (Lewis, 2015).

Phenomenology is used to study a philosophical perspective such as sociology, psychology and social work. Ethnography is used for the study of entire cultures such as the culture of a defined group (Germain, 1993). Grounded theory is used to develop theory about phenomena of interest (Strauss, 1994). Field research is used for gathering qualitative data by going into the field to observe the ethnographic phenomenon. Nevertheless, the quality criterion to be applied to the research process in qualitative research is crucial due to inappropriate quality criteria often being applied to the qualitative research process (Morse et al., 2002; Steinke, 2004) and vice versa with the quantitative research method (Mays & Pope, 2000).

3.2.1 Selected approach and technique

After considering a range of research approaches including quantitative approaches such as a survey as well as the relevant literature, it was decided that a qualitative approach investigating the identified research objectives and research aims identified in Chapter 2 was optimal given the aims of this research. Audio recorded and transcribed face-to-face semi-structured in-depth interviews were deemed appropriate and suitable, and thus were adopted for this research (Yin, 2003). One rationale for adopting interviews is that interviews allow the respondents to reflect and reason on a variety of subjects in a different way than say a survey (Mishler, 1991; Byrne, 2004). The researcher is thus able to secure a deeper insight into how the respondents think and reflect especially in research such as this where relevant data are hard to obtain, and literature is still emergent.

Another rationale for this selection is that, given the exploratory nature of the research question, the research requires deeply rich qualitative data from the context of Hong Kong to set the stage for future quantitative work by other researchers in the area of orchestration.

Furthermore, an interpretative approach is used for understanding human experience for the purpose of achieving the exploratory research objectives in the area of undertaking an evaluation of 3PL logistics providers as supply chain orchestrators in Hong Kong. Also, Mentzer and Kahn (1995) point out that a qualitative research methodology is useful in the field of logistics, which more frequently tends to support theoretical arguments in logistics. Also, given that the area of 3PL orchestration is still emerging (Van et al., 2006; Zacharia et al., 2011), this is the first empirical work to test Zacharia et al.,’s (2011) arguments in a non-Western context, thus requiring exploratory approaches (Yin, 2003). Past empirical studies on 3PL orchestration have been conducted using qualitative approaches (Zacharia et al., 2011). Furthermore, scholars have suggested that when conducting research on logistics outsourcing, the research method should match the research aims and purpose for conducting such research (Dul & Hak, 2007). Furthermore, qualitative research, such as secondary data analysis, interviews, focus group discussions and case studies can serve diagnostic purposes (Kohlbacher, 2006).

Bergman and Coxon (2005) suggest qualitative researchers establish their epistemology beliefs and quality criteria when starting from the inception of research questions such as choice of assumptions and a meta-theory associated with a particular approach. Bergman and Coxon (2005) suggested the elaboration of a research question and data collection procedures in terms of the data obtained from the instrument, data quality, and methods used for data analysis as well as interpretation "reliability" and "validity" before conducting the research study and these issues have been addressed in the section on data/interview analysis.

Walsham (1995) and Klein and Myers (1999) argue that researchers should have a clear epistemological position when using a qualitative interpretative strategy. Klein and Myers (1999) suggest that interpretive approach if the researchers “assumed that our knowledge of reality is gained only through social constructions such a language, consciousness, shared meanings, documents, tools, and other artifacts ..., ... [and] focuses on the complexity of human sense making as the situation emerges ..., ... it attempts to understand phenomena through the meanings that people assign to them ...” (p.68). Nested within the constructivist view, this research adopts an interpretivist approach to extend the understanding of how much and how deep strategic orchestration is ongoing in Hong Kong (Walsham, 1995).

3.3 Sample, sampling and selection criteria

This research adopted a purposive sampling frame (Bryman, 2012; Yin, 2003). Primary and secondary data from a range of perspectives and sources that had maximum variation in contexts and settings were adopted in order to develop multiple perspectives (Miles and Huberman, 1994). Purposeful/purposive sampling helped us focus on selecting interviewees with multiple perspectives (Creswell, 2011; Patton, 2002). Selecting an appropriate sample is a critical step in research because the quality of the sample determines the validity, trustworthiness, and lack of bias of the results. Therefore, a primary characteristic of a good sample is the degree to which it can represent the population from which it is selected (Sekaran & Bougie, 2010).

The sample was selected from a large number of 3PLs in Hong Kong, and some of their customer organisations in Hong Kong. Among all sampling methods, we adopted the most commonly used “purposive sampling research method” in this study. Given the

exploratory nature of this study, the method used to undertake this research was semi-structured face-to-face in-depth interviews of senior managers of Third-Party Logistics Provider Companies (3PL) in Hong Kong and senior executives of the manufacturing, retailing and distribution organisations that use the services of 3PLs. The sample consisted of 16 3PLs and 10 customer companies. The 3PLs from which interviewees were drawn were in Hong Kong. They were shortlisted from the Hong Kong directory of 3PLs, transporters, and freight forwarders. Assuming an adequate sample was selected, the result of this study would be directly generalisable to all 3PLs in Hong Kong.

The main reason for selecting this Hong Kong directory as a sample was that the directory is the largest comprehensive, authoritative, repository of information on the largest local providers of 3PL and supply chain management services in Hong Kong. These selected 3PLs offer a wide range of innovative programmes and services to meet the needs of a dynamic manufacturing and business environment. Some of the samples include local branches and subsidiaries of large multinational 3PL firms.

3.3.1 Sample size

McCracken (1988) argued that the minimum number of interviews good enough for many research questions is normally eight in order to accomplish an in-depth understanding. However, the researcher adopted 26 interviewees. The notion of 'reaching data saturation' in the conduct of interviews was the rationale for adopting this number. Data saturation is a method of determining the number of qualitative interviews appropriate for the study, i.e. when various interviewees begin to repeat what has already been established

and there is no new data or facts revealed. This is the signal to stop further interviews as further interviews become redundant (Bowen, 2008).

The participants were drawn from two populations: (1) a range of customer organisations using 3PL services including large manufacturing, retailing and distribution organisations and (2) 3PLs. The following Table 3.1 shows the two groups of respondents and Figure 3.1 shows the position of respondents.

	Customer organisations	3PLs
Total number of executives contacted	31	34
Responded	10	16
Did not respond	21	18
Overall response rate%	32.25%	47.05%

Table 3.1 Sample distribution

Remarks on Table 3.1

Total 65 interview invitations sent to both customer organisations and 3PLs, customer organisation have 10 out of 31 accepted the interview invitations and 3PLs have 16 out of 34 accepted the interview invitations, the overall response rate is 40% (26 divided by 65).

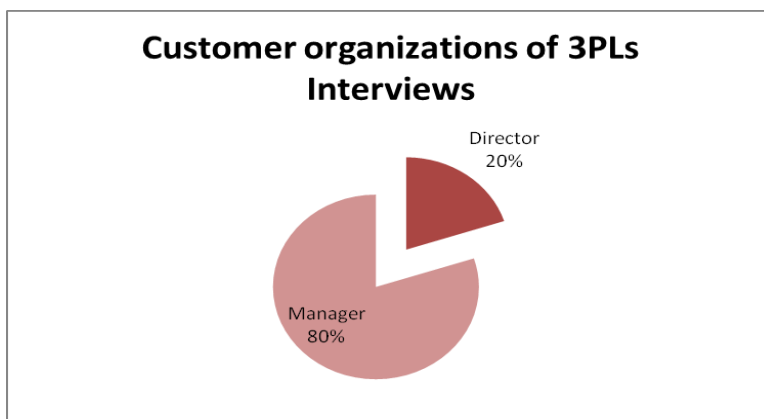


Figure 3.1 Role of respondents in customer organizations

Remarks on Figure 3.1

The total of 10 customer organisations were attended the interviews, 20% (2 out of 10) is director grade and 80% (8 out of 10) is managerial grade.

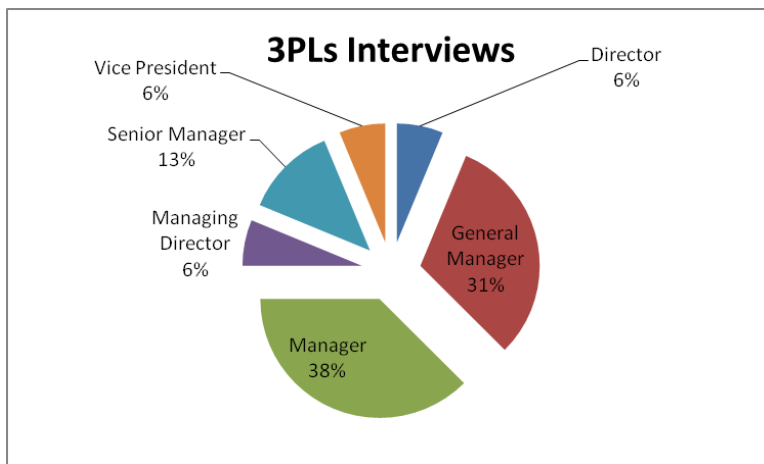


Figure 3.2 Role of respondents in 3PL organizations

Remarks on Figure 3.2

The total of 16 3PLs were attended the interviews, 6% (1 out of 16) is managing director grade, 6% (1 out of 16) is vice president grade, 6% (1 out of 16) is director grade, 31% (5 out of 16) is general manager grade, 13% (2 out of 16) is senior managerial grade and 38% (6 out of 10) is managerial grade.

Third-Party Logistics Providers (3PLs)

#	Company	Title	Type
1	AA (HK) Ltd.	Senior Sales Manager	3PL
2	BB Ltd.	Managing Director	3PL
3	CC (H.K.) Ltd.	General Manager	3PL
4	DD Ltd.	Sales Manager	3PL
5	EE Air & Ocean Hong Kong Ltd.	General Manager - Sales & Marketing	3PL
6	FF Freight Ltd	VP - Sales & Marketing	3PL
7	GG Air Forwarders (H.K.) Ltd.	Senior Manager, Sales & Marketing	3PL
8	HH Worldwide (HK) Ltd.	General Manager, Logistics Division	3PL
9	II Logistics Private Limited	General Manager	3PL
10	JJ Limited	Route Development Manager	3PL
11	KK Hong Kong	Business Development Manager	3PL
12	LL Services Hong Kong Ltd.	Regional Manager - Asia Transport Management	3PL
13	MM China Ltd.	Territory Business Development Manager South	3PL
14	NN Forwarding Limited	Director	3PL
15	OO Logistics	Head of Field Sales, Hong Kong & South China	3PL
16	PP Hong Kong Limited	General Manager South China, Macau & HK	3PL

Customer Companies

#	Company	Title	Type
1	QQ Hong Kong Limited	Material Operations Manager	User
2	RR (Far East) Limited	Supply Chain Manager	User
3	SS Hong Kong Limited	Distribution Director	User
4	TT China Gas Company Limited	Purchasing & Logistics Manager	User
5	UU Healthcare Ltd.	Supply Chain Manager	User
6	VV Tools Ltd.	ERP & Planning Manager	User
7	WW Company, Ltd.	Distribution Centre Manager	User
8	XX Intertechnology, Inc.	Senior Logistics Director	User
9	YY Convenience Stores (HK) Ltd.	Distribution Manager	User
10	ZZ Beverage and Food Hong Kong Ltd.	Customer Service and Logistics Manager	User

Table 3.2 Organizations from which respondents were drawn

3.3.2 Inclusion and exclusion criteria

The inclusion criteria included: participants should be managers or above; they should be familiar with the company's strategy and operations; participants must have worked in the company for at least two years. However, the exclusion criteria were that any participants from the selected 3PL service providers and customer organisations of a 3PL service providers, who do not meet the above criteria would be re-selected the replacement.

Overall, the above sampling strategy was designed to obtain an appropriate mix of respondents who could adequately provide a range of insights and perspectives on the customer side and 3PL sides of the interface. This criterion was to maintain a fairly balanced perspective from customers and service providers to provide a better understanding and experience of both parties in order to be able to confidently comment about the focus of the research (Patton, 2002).

3.3.2.1 Recruitment for interviews

Hong Kong Association of Freight Forwarding and Logistics Ltd. (HAFFA) was the source of recruits for this research. HAFFA represents several hundred members, and acts as an authoritative voice for the 3PL and logistics industry at official and government levels in Hong Kong. Also, HAFFA is responsible for setting industry standards and providing educational courses and business development programmes which enhance the professional levels of freight forwarders and logistics service providers (LSPs) in Hong Kong.

To ensure that responses were voluntary, private and confidential, an organisational information statement (see Appendix E) providing information about the research and inviting each 3PL company and customer company to participate in the research was

enclosed together with the organisational consent form (see Appendix D) and e-mailed to each shortlisted member company (see Appendix H). When permission was granted and organisational consent given by the 3PLs and their customer organisations, the researcher requested each participating company to nominate an appropriately knowledgeable Senior Manager for the semi-structured face-to-face in-depth interviews.

The researcher then sent an individual information sheet (see Appendix G) and individual consent form (see Appendix F) to each identified interviewee and went to conduct the interviews within the premises of each customer organisation and the premises of each 3PL in Hong Kong. A total of over 20 hours of interview audio recordings were obtained from participants from March 2016 to June 2016.

3.3.3 Interviewees

The nature of this research project was to explore the emerging but little understood theory of Third-Party Logistics Provider (3PL) as a strategic orchestrator and coordinator of the supply chains of their customer organisations in the Hong Kong Special Administrative Region of the People's Republic of China. The researcher assessed and evaluated the extent of the functions outsourced to 3PLs in Hong Kong; the extent/scope, strategicity, and criticality of the services provided by 3PLs to their customers in Hong Kong; and the extent to which 3PLs in Hong Kong can be said to undertake strategic coordination of their customers' supply chains, i.e. 'orchestrate' and facilitate supply chain management (SCM) best practices on behalf of their customers.

Therefore, two sets of face-to-face interview questions (see Appendix B) were prepared for the purpose of exploring the two major areas in terms of (1) scope and depth of services

procured from 3PLs in Hong Kong by large manufacturing, retailing and distribution organisations and (2) the scope and depth of services provided by 3PLs in Hong Kong (see Table 3.2). Target participants were divided into two groups: the first group was the senior management of 3PL service providers in Hong Kong, who are knowledgeable about their company's operations and the services they provide in strategic support, coordination and orchestration of their customers' supply chain with a view to conferring competitive advantage.

The second group was the senior management of large manufacturing, retailing and distribution organisations in Hong Kong who are knowledgeable about the role and functions of 3PLs in the management of their company's supply chain and logistics operations and strategy as well as the types of 3PL service that they procure.

<u>A. Third Party Logistics Service Providers</u>
<ul style="list-style-type: none"> • Individual managers in freight forwarding and Third-Party Logistics Service Provider Companies • Individual managers in warehousing organisations • Individual managers in shipping, airfreight and transport • Other relevant and knowledgeable logistics and supply chain management professionals • Individual managers in manufacturing organisations
<u>B. Customers of Third-Party Logistics Service Providers</u>
<ul style="list-style-type: none"> • Individual managers in manufacturing organisations • Individual managers in retail organisations • Other relevant and knowledgeable logistics and supply chain management professionals

Table 3.3. Target participant selection list

3.4 Interview design

The interview questions were based on a conceptual model of logistics outsourcing and orchestration developed from the literature on 3PL, logistics outsourcing, 4PL and supply chain orchestration (Zacharia et al., 2011). The interviews sought to elicit the opinions of senior managers of 3PLs on the *scope*, *strategicity*, and *criticality* of services offered by 3PLs in Hong Kong, in order to achieve the aims of this research. The interview guide was subdivided into categories pertaining to:

[A] The demographic category of each respondent: name, age, gender, role in their firm, and experience in their firm. In addition, such demographic questions would allow the respondents to be easily segmented and analysed.

[B] Another category of questions pertained to the firm, its size, history, structure of ownership, turnover, perception of its services (i.e. 3PL, or functional services).

[C] Another category of questions pertained to the core issues of the research.

Moreover, the interviews conducted had the following characteristics: an interview protocol (see Appendix A) was used to remind the researcher about the information that needed to be asked about to avoid missing some important questions; however, the order of questions was determined by the actual situation facing the researcher. Also, the interviews were often conversational with the interviewer paying close attention to facial gestures and body language.

Before conducting the face-to-face interviews, the researcher pre-tested draft interview guides with five persons who were knowledgeable professional colleagues in a 3PL company in Hong Kong and in a customer company in Hong Kong to enhance the validity of the interview questions and the resulting data (Miles and Huberman, 1994; Guba and Lincoln, 2001; Robson, 1993). To ensure the accuracy, reliability and validity of the interviews, the researcher reviewed the interview protocol and interview guide each time before conducting the face-to-face interviews. Moreover, audio-recording was used for each interview for the purpose of enabling the researcher to play back each interview recording to ensure no missing information hadn't been recorded in the meeting minutes and provided transcription opportunities to reduce errors in hearing and understanding the interviewees. In addition, the transcription of each interview enabled (1) the key informants to review the interview content, (2) check the accuracy and (3) increase the internal validity and trustworthiness of the semi-structured face-to-face in-depth interviews (Yin, 2003).

3.5 Interview analysis

Semi-structured face-to-face in-depth interviews using broad, open themes and several probing questions were deemed suitable for gaining direct access to the perceptions and experiences of the interviewees in the research (Corbin & Struss, 2008). We followed the guidelines and principles of Klein and Myers (1999) as shown in Table 3.4.

P1. The Principle of interaction between the researchers and the subjects
We reflected on how the research data were socially constructed through the interaction between the researchers and interviewees. We were conscious of the cultural perspectives (integrated, differentiated and fragmented) and cultural orientation (technical, practical and emancipation) when we were reflecting on the textual analysis of transcripts.
P2. The principle of the hermeneutic circle and contextualization
We analysed the interview data by interpreting the selected text, i.e. sentences and paragraphs within interview transcripts to understand human perceptions and interactions, and look for meaning embedded in the context. In this process we also looked at connections between the different analysed texts for iteration and for making more holistic meaning given the different roles of the interviewees. We also reflected on the social and historical background of the research setting in order to embed meaning in that context.
P3. The principle of abstraction and generalisation and dialogical reasoning
We conducted analysis through data interpretation by looking at subjective aspects of human understanding and social actions during post-disaster the rebuilding phase as underpinned by principle P2. Our analysis was driven by the key concepts as illustrated in the conceptual model and our research question. We also sought to identify possible contradictions or alternative directions between the theoretical preconceptions guiding the results.
P4. The Principle of multiple interpretations and suspicion
We looked for possible differences in interpretations among the participants' narratives and to identify any possible 'biases' and systematic 'distortions' in the narratives.

Table 3.4 Interview analysis framework based on Klein and Myers (1999)

Corbin and Strauss (2008) suggested that good qualitative research emanates from researchers who share the characteristics of having a humanistic bent, curiosity, creativity and imagination. However, the key characteristic that makes a good qualitative researcher is the ability to deal with risk and to manage ambiguity. Moreover, a researcher who develops trust and confidence in self as the research instrument used is generally high

quality guided by strict ethical research practices (Gajendran et al., 2011). As part of Principle 1 the researcher was conscious of his relationship with the interviewees as persons and how data were socially constructed.

The use of interview audio recordings was valuable (Johnson & Adelstein, 1991). The researcher played back each interview audio file as many times as needed. Interview audio recordings provided the researcher with transcription opportunities which reduced the risk of errors in hearing and understanding the interviewees, thus improving accuracy in analysis, validity and trustworthiness. The researcher also provided the opportunity to each interviewee to review and check the accuracy and authenticity of the interview transcripts before he undertook substantive analysis, thus, increasing the trustworthiness and internal validity of the research (Yin, 2003; Corbin & Struss 2008).

As part of Principle 2, the researcher undertook textual analysis of transcripts to understand the meaning of narratives and associated actions. The researcher then logically contextualised the data through the use of the conceptual model and research question to interpret and built analytical codes (Lewis, 1998; Miles & Huberman, 1994). The researcher performed iterative triangulation through which he employed systematic iterations between the extant literature on 3PL, orchestration as well as the interview data and intuition (Lewis, 1998).

As part of Principle 3, the researcher reduced the voluminous data from the field notes and transcripts to basic summaries by selecting and assigning phrases with descriptors (as part of coding), and eventually merged them into abstractions (Morse & Richards, 2002; Klein & Myers, 1999). The researcher took into account the need to retain context in the data

reduction exercise. Each and every theme and/or pattern was founded on multiple observations from the interviewees. The researcher's field notes, reflective remarks, and own narratives and viewpoints were used in the development of the interpretations (Bryman, 2012).

The researcher developed tables to compress, assemble, focus and organise the data in a compact way such that it conferred understanding and permitted conclusions to be drawn and verified from each table at a glance. Such tables are useful for enhancing understanding of the relationships amongst text data and reduce the chances of coming to unfounded conclusions. The analytical processes that the researcher undertook addressed the two principles of interpretive research, namely abstraction and generalization.

The researcher then sorted and sifted the data using tables to identify similar patterns of speech/text, regularities, similar phrases and themes, and common sequences. The researcher identified differences between common sequences of text. The researcher clarified these patterns, phrases and themes, differences and commonalities about the challenges in follow-up phone calls to the interviewees, and derived a basic set of generalisations (or themes) that addressed the consistencies in the data about the research questions, aims and issues using the noted techniques. Through the above processes of interpretive research, the researcher applied Principle 4, to identify multiple interpretations and any suspicious accounts (Klein & Myers, 1999).

In summary, the interview data were analysed using the interpretive case study analysis formwork (see Table 3.4) to explore, assess and evaluate the extent of the functions outsourced to 3PLs in Hong Kong; the extent/scope, strategicity, and criticality of the

services provided by 3PLs to their customers in Hong Kong; and the extent to which 3PLs in Hong Kong can be said to undertake strategic coordination of their customers' supply chains, i.e. 'orchestrate', and facilitate supply chain management (SCM) best practices on behalf of their customers.

3.6 Human ethics approval, data storage, access and disposal

The researcher obtained human ethics approval from the University of Newcastle, Australia's Human Research Ethics Committee under best practices the guidelines for research involving humans (see Appendix C).

Data will be retained by the researcher for 5 years according to the policy of the University of Newcastle, Australia. Hard copies will be kept in a safe and locked area while soft copies will be kept with securities in password locked. Access to data will only be available to the supervisor and the student researcher. Hard copies will be disposed of after 5 years upon completion of the study and all soft copy records will be deleted.

3.7 Summary and conclusion

Chapter 3 discussed the methodology, research approach and research design implemented in the research and associated justification for the adopted approach. Chapter 3 also discussed the data collection instrument (interview guide) and analytical strategy and technique utilised for the research based on the research aims. Finally, the chapter discussed issues of sample selection, ethics approval, and data handling storage and disposal, and the administration of the questionnaires.

CHAPTER 4

RESULTS

4.0 Introduction

Chapter 4 presents the results of the analysis from the semi-structured face-to-face interviews of medium and large Third-Party Logistics (3PL) providers and their major customers in Hong Kong. There were a total of 26 face-to-face interviews completed, where 16 interviews were from 3PLs and 10 interviews were from their major customers. Chapter 4 has three parts. Section 4.1 begins by introducing what Chapter 4 contains (purpose of data collection to respond to the research questions). Section 4.2 measures the reliability of the collected data. This research methodology used quotes and quotations, and the key quotes that support the interpretation of results are emboldened in the tables found in section 4.3. Section 4.3 discusses and explains the results and Section 4.4 summarises the chapter was explained the results and data.

4.1 Purpose of data collection

The major thesis goal concerned exploring the emerging role of supply chain network orchestration in the context of Hong Kong with the specific research objectives to (1) *Assess and evaluate* the extent of logistics functions outsourced to Third-Party Logistics Providers (3PLs) by large manufacturing, retailing and distribution organisations, (2) *Assess and evaluate* the *depth, scope, and degree of criticality* of the services provided by 3PLs to their large customers in Hong Kong; and as a result, (3) *Assess* the extent to which 3PLs in Hong Kong can be said to be undertaking strategic coordination or ‘orchestration’ of their customers’ supply chains. The data collected to evaluate and respond to the key research

questions in this study included: (1) What are the logistics functions outsourced to 3PLs in Hong Kong? (2) What is the scope and criticality of the services provided by 3PLs to their customers in Hong Kong? and (3) To what extent have 3PLs become supply chain ‘orchestrators’ in Hong Kong?

4.2 Measuring the reliability of the collected data

This research methodology used quotes and quotations and the key quotes that support the interpretation of the semi-structured face-to-face interview results are emboldened in the tables found in Section 4.3. In order to ensure the reliability of the collected data, all the interviewees were asked to sign the back of the information statement and consent form for the purpose of ensuring that all the interviewees understood the interview purpose and the interview format as well as the interview rules.

Moreover, the reliability and validity of measurements of these semi-structured face-to-face interviews were critical components of this research project; therefore, before conducting the semi-structured face-to-face interviews, the researcher pre-tested draft interview guides with knowledgeable professional practitioners in a 3PL company and in a customer company in Hong Kong to enhance the validity of the interview questions as well as to ensure the accuracy, reliability and validity of the interviews, and the researcher reviewed the interview protocol and interview guide each time before conducting the face-to-face interviews. Furthermore, audio-recording was used for each interview for the purpose of enabling the researcher to play back each interview recording to ensure no missing information hadn’t been recorded in the meeting minutes and provided transcription opportunities to reduce errors in hearing and understanding the interviewees. In addition, transcriptions of each interview enabled (1) the key informants to review the

interview content, (2) check the accuracy and thereby (3) increase the internal validity and trustworthiness of the semi-structured face-to-face in-depth interviews. The researcher also followed them up with phone calls to some interviewees when further explanation was needed for the purpose of providing the interviewees the opportunity to further elaborate on any thoughts that they may have had on any of the interview questions after the interview session had been concluded.

4.3 Results

In this section, the results of the semi-structured face-to-face interviews are presented on a question-by-question basis. Quotes and quotations and key quotes that support the interpretation of results are emboldened below:

Summary extracts of 3PL interviews based on interview questions

Research Question 3

Assess and evaluate the extent to which Third-Party Logistics Service Providers (3PLs) in Hong Kong undertake strategic coordination and orchestration of their customers' supply chain and facilitate supply chain management best practice.

Interview Q1

What types of logistics and supply chain management functions, roles, and services does your company provide to their customers?

AA (HK) Ltd.	Sea freight, air freight, 3PLs, warehousing, trucking and trains.
BB Ltd.	Distribution, warehousing, value-added service, hub operations and 3PLs
CC (H.K.) Ltd.	Sea freight, air freight, 3PLs, value-added service, warehousing

	and trucking.
DD Ltd.	Total logistics solution. End-to-end logistics solutions. Including air freight, ocean freight, consulting service.
EE Air & Ocean Hong Kong Ltd.	Sea freight, air freight, 3PLs, value-added service, warehousing and trucking.
FF Freight Ltd	Sea freight, air freight, 3PLs, value-added service, warehousing and trucking.
GG Air Forwarders (H.K.) Ltd.	International transportation services including air freight, sea freight, warehousing, value-added service, trucking. Also customs brokerage.
HH Worldwide (HK) Ltd.	Four main categories: warehouse management, inventory management, distribution management and value-added services.
II Logistics Private Limited	Palletisation arrangement for airfreight, ocean freight consolidation (LCL) and 3PLs (e.g. warehousing, pick and pack, value added services), which is our major 3 groups of services.
JJ Limited	Sea freight, air freight, 3PLs, warehousing and trucking.
KK Hong Kong	Freight management, PO management and warehousing.
LL Services Hong Kong Ltd.	Mainly high-tech and consumer products. Core services include warehousing, procurement, customer services or call centre, transportation management as well as supply chain solutions or models.
MM China Ltd.	Mainly air freight, ocean freight, warehousing, logistics and supply chain solutions.
NN Forwarding Limited	Mainly forwarding, CFS and value-added services.
OO Logistics	Sea freight, air freight, ground service, contract logistics, brokerage, supply chain services like consolidation and PO management, as well as 4PL.
PP Hong Kong Limited	The role as a 3PL, providing a one-stop-shop logistics solution from solution design, implementation, and monitoring the daily operations to review.

Table 4.1: Description of 3PL services provided

Remarks on Table 4.1

The interview data suggest that only conventional or traditional 3PL services are provided.

Interview Q2

How deep are these functions, roles, and services?

AA (HK) Ltd.	It depends on the customers' needs. For example, if you need us to help with loading the air cargo or devanning, yes, we can do that too.
BB Ltd.	Apart from sales and marketing operations, we cover all other logistics functions from inbound logistics to outbound, which is from the warehouse to the port, or from the port to the warehouse. We cover them all. So if we are talking about the supply chain, we are on the last-mile side.
CC (H.K.) Ltd.	It's very hard to comment on the services in terms of depth. For traditional freight to freight services, I would say it's in-depth. We cover them all. The door-to-door transportation services which we provide are good. If it's not delivering something to the North Pole, we can do it. We cover all other parts of the world.
DD Ltd.	Can be considered as in-depth but not replacing their own logistics staff.
EE Air & Ocean Hong Kong Ltd.	Depends on different customers. For those who have worked with us for a long time and we know them well, we will do what you just said.
FF Freight Ltd	If I'm rating our services, I'd say it's something like middle-range. To be honest, we can't compare ourselves with those global ones like DHL and FedEx. They have their existing... <i>we haven't developed a system which attains the 4PL level.</i>
GG Air Forwarders (H.K.) Ltd.	Of course when we start working with customers, it's our job to fulfil their basic requirements. For larger-sized or multinational accounts, we will conduct monthly or quarterly review meetings. Review their process flow and see if there is anything we can adjust to make a smoother flow. Or simulation to help keep the cost down.

HH Worldwide (HK) Ltd.	Very in-depth and strategic
II Logistics Private Limited	Subject to the customer's requirements
JJ Limited	We need to give advice to our customers and provide tailor-made services depending on the nature of their commodities.
KK Hong Kong	We are providing a total solution to our customers from their suppliers to delivery, which includes freight management, PO management and value-added services like pick-and-pack, kitting, booking, EDI and customs clearance.
LL Services Hong Kong Ltd.	Quite in-depth as our services include procurement, inventory stock take, warehousing, transportation and even solutions, which are very comprehensive.
MM China Ltd.	We provide our services based on the customers' requirements, like we try out best to use their preferred airlines or carriers. Basically we work with all major airlines and carriers. I don't really know how to describe how deep the services are.
NN Forwarding Limited	Medium
OO Logistics	Very in-depth services
PP Hong Kong Limited	Very in-depth. It's all-rounded. We cover everything.

Table 4.2 Strategic depth of 3PL services provided

Remarks on Table 4.2

The interview data suggest that only conventional or traditional 3PL services are provided. There seems to be no strategic depth or orchestration in the sense of what Zacharia et al., (2011) refer to as orchestration. While there was the occasional response that in-depth or strategic services such as orchestration are provided, further probing questions revealed that orchestration is really not occurring in the sense that Zacharia et al., (2011) claim.

Interview Q3

What types of functions, roles, and services do 3PLs in Hong Kong provide to their range of customers?

AA (HK) Ltd.	If you ask me, <i>many companies won't offer additional services</i> . For example, they only offer sea freight and air freight services...like simply delivering the goods to your door after they collect them, something like DHL and FedEx. They won't be able to offer additional services such as warehousing. Even if you are willing to pay an additional fee, they won't be able to help you take care of storage as this is not their core function. We offer a wider range of services. For example, if our warehouse runs out of space, we will help our customers tackle the situation like outsourcing it to another party. Or if our customers ask us to handle a large-sized project which requires facilities beyond our capabilities, we then work with other 3PL providers to offer solutions to our customers.
BB Ltd.	Some 3PLs offer more services than we do. For example, some of them provide forwarding services. Let me have a look...yes...mainly this one. We cover all others, just not forwarding services. They are forwarders and that belongs to 3PL, so that's why they offer forwarding services. For companies which only provide 3PL services, it's very rare for them to provide forwarding services as well.
CC (H.K.) Ltd.	There are some which offer just about the same type of services as we do. For those which offer more, the most common type is e-commerce. Many can do that - the customer's customers order online and the information directly connects to the system, and then they help with order picking.
DD Ltd.	For similar sized firms, the service range is the same for us and our competitors.
EE Air & Ocean Hong Kong Ltd.	Some 3PLs don't cover freight services, only warehousing and focus on this only. This is what I know of.
FF Freight Ltd	The biggest difference is...for now, there are some specialists in Hong

	Kong. For small- to mid-sized firms, they don't have the scale to take up big projects. Instead they go down the road of specialization. Some focus on DG goods like batteries and whatever. They have a special team and run a small warehouse to deal with this. Some focus on high-value goods. Some focus on perishable goods. Every industry has its own specialists. Their facilities need not be huge, just focusing on their area of specialization.
GG Air Forwarders (H.K.) Ltd.	Depends on the company size. Some logistics companies only have 2 to 3 staff. They kind of do 'not really legal' jobs. I can't say they are flexible because it's not how things should be done. They just want to get the customers or maintain the services so they'll do anything. So they don't really count. For those which are just about the same size as us, they offer more or less the same services like air freight, sea freight, storage and warehousing, or even systems integration with customers as now it's paperless. EDI for billing. Or data integration.
HH Worldwide (HK) Ltd.	Most of them are different from us.
II Logistics Private Limited	In general, the 3PLs in Hong Kong mainly provide warehousing services to their customers for cargo storage, which depends on their actual needs, such as some customers may request an air-conditioned warehouse and some customers may request cold facilities for frozen meats; in other words, they need to provide suitable places and environments for their customers for storage; during the storage, their customers may request some value-added services, before selling to the market or re-exporting to other countries.
JJ Limited	The 3PLs in Hong Kong have become really specific and detailed. Some, like us, may even engage in order management, which means we have to contact the manufacturer to follow up orders as well. We even do carrier management, acting as booking agents for our customers. Our weakness is a lack of warehousing facilities in Hong Kong. You know, different customers have different needs and demands, like those for retail. If we do not have a chilled warehouse,

	we cannot handle fresh or perishable goods. We need air-conditioned storage space to keep leather products as they must not get wet. For garments that cannot be folded, we need hangers and a sophisticated system to deal with them...
KK Hong Kong	Generally speaking, they offer CFS warehousing and freight management services. Contract logistics and CFS warehousing are two different things. For CFS warehousing, it's just for storage without many value-added services. And freight. This is what a typical forwarder offers. What we offer is contract logistics which include more value-added services, like PO management and kitting as I've mentioned earlier.
LL Services Hong Kong Ltd.	In my view, the others focus on warehousing and transportation services. Less on procurement and solutions.
MM China Ltd.	Many offer inventory management services while our company isn't really developing this area. Also they provide Hong Kong-Mainland China trucking services which we seldom provide.
NN Forwarding Limited	Strictly speaking, not much for Hong Kong as the core manufacturing part isn't taking place in Hong Kong. So for the value-added services I've mentioned earlier, it's mainly for Mainland China. To be honest, how many factories are here in Hong Kong? What's the volume of goods manufactured in Hong Kong? There is not much demand in the Hong Kong market. They tend to run the business the way we do. There is not much room for survival if offering forwarding services only. The direction and strategy of the company have to be the same as what I've mentioned earlier: helping the shipper or buyer solve the documentation or flow-related issues regarding import and export.
OO Logistics	It's just about the same. They cover all functions just with different strengths. And whether they can cover all geographically and also in terms of service level.
PP Hong Kong Limited	For the Hong Kong market, <i>we are offering just about the same thing</i> . The services we provide are just more professional when compared to others.

Table 4.3 The functions, roles and services of 3PL providers offered

Remarks on Table 4.3

The interview data suggest that only conventional or traditional 3PL services are provided such as warehousing, sea freight, airfreight and domestic delivery, etc. There seems to be no strategic logistics services or orchestration in the sense of what Zacharia et al., (2011) refer to as orchestration. While there was an occasional response that not quite in-depth or strategic services such as orchestration are provided, further probing questions revealed that orchestration is really not occurring in the sense that Zacharia et al., (2011) claim.

Interview Q4

How deep are these 3PL functions, roles, and services?

AA (HK) Ltd.	In general, let's say for mid- to large-sized ones, they have to take cost control into account. If you need to control cost, you can't offer that many kinds of services. <i>If you offer more services, you need more manpower who are experienced.</i>
BB Ltd.	I think for companies like us, they cannot dig any deeper. Just like what we are offering. We are the typical type of 3PLs in Hong Kong. In general...actually some may not be able to offer as much as we do. But overall they are able to do it.
CC (H.K.) Ltd.	<p>I think it's quite in-depth. As they deliver the goods into the hands of the final customers, they take care of the entire supply chain. But it's possible that <i>they can't cover the vendor management part. I guess generally the customer will handle the sourcing part themselves. Then the vendor delivers the goods. They may not help the customers with sourcing.</i> They should take charge of sourcing as well in order to provide more in-depth services. But I think they may not do it.</p> <p>For the supply chain, they cover all of the downstream <i>but may not be able to cover all of the upstream.</i> Their services cover from the goods delivered by vendors to the final customers. <i>Probably not for the</i></p>

	<i>upstream though.</i> You can go to the vendors to get the goods. But if we talk about managing the vendor and their KPIs, I'm not sure if they do that.
DD Ltd.	I don't have much idea.
EE Air & Ocean Hong Kong Ltd.	The services are very in-depth. Let's talk about Mainland China, not Hong Kong, because Hong Kong... <i>for countries with import duties, some logistics providers offer financing, customs related...especially for those transporting from Hong Kong to the Mainland. Some companies even help buy the goods.</i> Say I am a forwarder in Hong Kong, I help them buy the goods to get into Mainland China and give the goods back to them. So they don't need to worry about duties like refunds of duty paid. <i>I know this kind of service exists though it's not very common.</i>
FF Freight Ltd	I think very deep normally
GG Air Forwarders (H.K.) Ltd.	Talking about how deep - I believe one-stop-shop 3PLs can provide very in-depth services. Like warehousing and assembly.
HH Worldwide (HK) Ltd.	If we are talking about the same kinds of services, everyone is on the same strategic level. For those which are providing the same kinds of services. <i>Everyone can provide comprehensive services.</i>
II Logistics Private Limited	Of course, if they are large-scale companies, they can help their customers to manage inventory as well, not like our company, which just uses simple management (counts the pieces); they may be able to do the VMI too. Moreover, large-scale 3PLs are able to provide advanced IT systems, such as RFID and advanced bar code systems; however, even if those 3PLs have such system their customers may not need or have no demand to use it, so, case by case.
JJ Limited	Very deep and tailor-made. I know a company once specially rented two to three floors of store rooms and provided air-conditioning for a customer who requested air-conditioned storage space. Moreover, it depends on whether you would like to be a pioneer and

	<p>keep a good brand name in our customer list. If we work well with brands like Lane Crawford, Marks and Spencer, Zara, H&M, etc. people will have confidence in you. Being a service provider, we need to keep some good brand names. For example, we work with Hugo Boss and would very much like to keep it, as some customers may ask which fashion brands we are working with. For example, Kerry Logistics, which works with LV, and Cargo Service, which works with Lane Crawford, can therefore look for more customers of the big brands.</p>
KK Hong Kong	<p>Not deep at all. In general, they focus on freight management like air freight and sea freight, and that's it. And just provide storage without in-depth or value-added services.</p>
LL Services Hong Kong Ltd.	<p>Transport compliance and regulations.</p>
MM China Ltd.	<p>For the large-sized ones, they're just about the same. As far as I know, sometimes they don't really want to take care of the Hong Kong-Mainland China part. When the customers are facing customers' clearance problems, the large forwarders wouldn't help due to compliance requirements.</p> <p>But for medium- and small-sized firms, they will do it. Different companies have different ways to survive in the market.</p>
NN Forwarding Limited	<p>Medium. Just about the same. For the large-sized ones, they can take care of the supply chain.</p>
OO Logistics	<p>Just about the same as us. Some can do everything. Some focus on their specialties.</p>
PP Hong Kong Limited	<p>We are at the highest level in terms of services provided as our customers are all from first-tier brands. So it has to be the highest level. For example, for customers on the electronics side, we are serving first-tier brands like IBM and Apple. For fashion and retail sectors, we are serving LV and some other big brands. For hotels, we are serving Four Seasons Hotel. As you can see, our customers are the top ones. So</p>

	when we say we are at the highest level, we're not just talking the talk, it's proven by the businesses and customers we are handling.
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Table 4.4 Strategic depth of 3PL functions, roles and services provided

Remarks on Table 4.4

The interview data suggest that only conventional or traditional 3PL functions, roles and services are provided. There seems to be not quite deep and no strategic 3PL functions, roles and services are provided in general.

Interview Q5

How critical and strategic are the functions, roles, and services that your company provides to support the operations of your customer organisations?

AA (HK) Ltd.	<i>The first thing is whether there's a right person to talk to and if they can provide the needed information. If we go really in-depth, it's usually by request.</i> For example, if they proactively come to me for a chat, then I will discuss it with them. We seldom look into details to that extent because firstly, it depends whether the person who I am talking to is the right person. Maybe he doesn't really know much. <i>Secondly, it depends whether he is willing to disclose his company's information and structure for us to come up with solutions accordingly. It doesn't happen very often.</i>
BB Ltd.	How critical...if they are both critical and strategic. Companies recognise the importance of logistics. In the past, they thought they could just randomly pick someone to handle the logistics part. For now, they understand if the logistics part is not taken care of well, it will directly affect their businesses. So nowadays the users care about our services a lot. <i>So when selecting a service provider, they are very cautious. And they take it as a very strategic decision. If you think about it, it's not easy to take it back after it's outsourced.</i> And it's hard to switch. So when selecting a service provider, they need to be

	<p>very cautious. So it's very strategic. At the same time, they realise that other than physical store delivery, online shopping has increased in recent years. So when they are selecting a service provider, they will consider whether the provider can go the extra mile. For example, the operations of online shopping are a bit different from the logistics flow we are handling in general. So 3PLs have to adapt to the new demand. When selecting a partner, they are very cautious.</p>
CC (H.K.) Ltd.	<p>Some customers let us take charge of the entire third-party logistics part. In some cases, they don't start out with too many employees. They need help for warehouse management, order picking, and in and out. We help them to do these things systematically. We have lots of employees. There may be peak and non-peak seasons. It doesn't make sense for them to hire so many employees just for the peak season.</p>
DD Ltd.	<p>We provide consulting services - it's very strategic and not suitable for every company to use. For some they just need the goods to be delivered to a certain location. That's it. At most clearing the customs. They are not very strategic customers.</p>
EE Air & Ocean Hong Kong Ltd.	<p>Talking about strategic, or support provided to their operations, it's hard to say...from a salesperson's perspective, so when I talk to a customer, I will try to understand how their operations work. Only then can you know how to help them, like how the existing resources and systems can help them. I think we can provide different kinds of services to different customers. The question is whether they need them, or maybe they've already had them.</p>
FF Freight Ltd	<p>First of all, let me tell you the toughest part. From my personal or my team's perspective, in the last couple of years, we can't find very solid requirements for discussion. We have to come up with many options to fit in. It was very simple back in the old days. The customers used to send us an enquiry and say 'we need this and that'. We put together a proposal based on the enquiry. But now it's the other way round. Many customers don't have any idea. Or their idea is to achieve a certain goal. They can't provide much detail. Based on our facilities,</p>

	we as a 3PL provide...how should I put it, an estimation. We come up with some options and service models for the customers to consider.
GG Air Forwarders (H.K.) Ltd.	For some customers, they don't want keep too many in-house staff and may outsource the entire operations part to us. We take up that part too. What we do to support our customers...
HH Worldwide (HK) Ltd.	We are the customers' 3PL. We are their logistics division. They don't even have a shipping department. We cover that too. Customs clearance as well.
II Logistics Private Limited	In general, we can fulfil a customer's requirements normally, but in some cases, customers tell us what to do, but ultimately, we provide other methods to them to achieve savings in terms of better solutions, more effective and efficient methods to streamline their supply chain.
JJ Limited	I know that there are cases in which logistic companies, including us, will deploy one to two staff to station in the customers' company, especially those concerning order management OMS.
KK Hong Kong	Theoretically we have a team at the headquarters taking up the business solutions part. They put all our customers' data into a model, and then based on the model analyse which location is good for them to set up a hub, DC or logistics warehouse, or decide whether consolidation is needed for analysis. The solution that we provide must fit the customer's needs.
LL Services Hong Kong Ltd.	How critical...we are at the middle or lower-middle level. We help provide a lean structure so that they can focus on their core businesses. Our strategy is to act as a subject matter expert to give advice for a best-fit supply chain. Secondly, we provide a lean structure for a non-core function.
MM China Ltd.	Every year we will figure out which core areas we're going to develop and discuss the annual contracts with the airlines. It depends on the development areas for different locations.
NN Forwarding Limited	We try our best to update and follow up with the PO delivery schedule. So our customers will know what kinds of goods are ready to ship and which will be delayed, and what can be shipped in advance. The

	buyers are concerned about three things: whether the goods will be ready on time, delayed or ahead of schedule. From the buyer's perspective, the only thing they care about is when the goods can be shipped to them. If they know about all these, they can ship the ones that are behind schedule via air freight. If the goods are ready ahead of schedule, they could consolidate some items together then ship via LCL to save the shipping cost.
OO Logistics	If we're talking about the multinational companies like GM, all automotive and large-sized companies, they will see if you have the network, service and support as they have businesses all around the world. If down to China or a particular region, then there's not much difference. They will look for freight forwarders in niche markets. For Fortune 500 companies, they will really check your background and see if you have the network. It's like if you are not about the same level, don't come over.
PP Hong Kong Limited	We cover it all. Their logistics part is entirely outsourced. For the strategic functions, we provide different kinds of services globally. Say if they are using our services in Hong Kong, they may use ours in Shanghai, Malaysia, Singapore, Japan or even emerging markets like Vietnam and Bangladesh. We provide services with the same standards across all these locations. It's easy for them to compare the price too. They can easily see how much we are charging for Hong Kong, Malaysia, Thailand and China etc. It's easy for them to control the cost. Globalisation.

Table 4.5 Strategic functions, roles and services of 3PL providers offered

Remarks on Table 4.5

The interview data suggest that only conventional or traditional 3PL functions, roles and services are provided. There seems to be a low to medium range of traditional logistics services offered but not strategic enough even though some 3PLs are able to support

tailor-made services for their customers but there is no orchestration in the sense of what Zacharia et al., (2011) refer to as orchestration.

Interview Q6

Does your company manage the cross-border transportation or sourcing activities of your customers? (Give examples and specific details)

AA (HK) Ltd.	Cross-border services but without sourcing
BB Ltd.	No
CC (H.K.) Ltd.	Yes for cross-border <i>but probably not for sourcing</i> . It's their own vendors so we don't intervene in the process. As far as I know, not for sourcing.
DD Ltd.	<i>No for sourcing</i> but yes for cross-border.
EE Air & Ocean Hong Kong Ltd.	<i>Cross-border services but without sourcing</i>
FF Freight Ltd	We provide cross-border services; moreover, as a 3PL we do provide packing material sourcing services, as a basic type of service.
GG Air Forwarders (H.K.) Ltd.	Cross-border services and some packing material sourcing
HH Worldwide (HK) Ltd.	<i>No</i>
II Logistics Private Limited	If for domestic delivery in Hong Kong, yes, we do provide trucking services but if you are talking about cross-border truck services to China, <i>we don't have such services because we are very afraid of providing cross-border transportation to China, especially some customers doing automobile parts, who ask us to provide cross-border transportation to China, but we are not the experts for this industry together with some seasonal dates; when you arrange cross-border trucks to China, the China Customs may find some excuses to hold your trucks in order to get some benefits from you</i>

	<i>before releasing your trucks.</i> Moreover, there are some political reasons also; say the USA and China have arguments: once the country of origin is the USA, the China Customs may find excuses not to allow US products' entry into China; we have had some bad experiences where we have been detained for around 10 days by China Customs due to political reasons between the USA and China. After that we are very afraid to do cross-border transportation services anymore due to this not being our core function.
JJ Limited	We have offered cross-border trucks and <i>we only engage in simple sourcing such as carton boxes and label printing. We do not engage in product sourcing.</i>
KK Hong Kong	We provide cross-border transportation services <i>but very limited sourcing activities.</i> We help order things like cartons and pallets. But for more like finding suppliers, then we don't. We just provide services around the logistics and transportation area.
LL Services Hong Kong Ltd.	Yes. For cross-border transportation, we provide Hong Kong, Mainland and also international ones.
MM China Ltd.	We outsource to sub-contractors. We don't provide in-house cross-border transportation services, but we can help source...
NN Forwarding Limited	Subcontractors.
OO Logistics	Cross-border services and some packing material sourcing.
PP Hong Kong Limited	Cross-border services and some packing material sourcing.

Table 4.6 Cross-border transportation or sourcing activities of 3PL providers offered

Remarks on Table 4.6

The interview data suggest that most of the 3PLs do not offer cross-border transportation and very occasionally offer simple sourcing services such as buying packaging materials; therefore, only conventional or traditional 3PL functions, roles and services are provided.

Interview Q7

Does your company have adequate IT infrastructure, talent, and supply chain professionals to provide one-stop-shop services to your customers? (Give examples and specific details)

AA (HK) Ltd.	For our IT infrastructure, it's very simple. It's very hard for us to do any complicated functions. Moreover, we do not have enough talent. Very simple...just for supporting internal use.
BB Ltd.	For IT, we just have two staff. For a company with over 100 staff, our number of IT staff is relatively low. Even though we only have two staff, it's enough to meet our demand for now. The reason is that if we require some IT setup, we can outsource, on a project basis. So we don't need to keep that many staff in-house. The two staff mainly take care of maintenance, requirement specifications and coordination.
CC (H.K.) Ltd.	Yes, you can say that. We do that for some customers.
DD Ltd.	For now it's enough. Our IT is pretty good. For example, if a customer has to do some reporting for his boss, we can tailor-make those reports according to their requirements and needs. If we take care of the entire logistics part for them, they want to analyse this and that; then we help them do it. We issue customised reports solely for this customer.
EE Air & Ocean Hong Kong Ltd.	<p>In my view, I think we are fine. We are quite strong at IT. As far as I know, our company's investment in IT, talent, hardware and software, is pretty generous. We have a few in-house developed systems which are ready to serve the customers anytime. And also for monitoring the order. Not shipment-based but for order-based. A customer can place 20-30 orders going into the warehouse. At the same time, I can just pick order 1, 3, 5, 7, 9 and keep 2, 4, 6, 8, 10 here. Just ship the picked ones for now. We can do it online. There should be no problem.</p> <p>We used to provide our services to Sasa International's online shops, for warehousing, about 4 to 5 years ago. We can totally support them in terms of systems. New orders come in every day, we help them pick</p>

	<p>the order every day and deliver every day. If we can support such a large scale, I think we can say it's pretty good. We put our focus on a few...we have air freight and sea freight systems for track and trace. For warehousing, we have another one. We don't just use one to cater for all customers. We develop customised IT systems.</p>
FF Freight Ltd	<p>As the requirements are changing rapidly. And have become large-scale. Here is a simple example about the supply chain - I have two customers; one is Forever 21 which is a retail client. We don't cover all locations, just two of them. One is in QingDao, which is the core product centre of imitation jewellery. There are lots of suppliers. Every time when the US purchasing department places an order, the PO will go into our system through EDI. Once our systems download the PO, we will immediately follow up with the vendors. When they get back to us about the quantity and dates, there are two things: the first one is that we have pre-set a weekly consolidation of ocean freight schedule to LA. We will look at the date list this week and check on the number of suppliers and the quantity, by PO and by style number. Both parties can see this. Anytime they will provide instructions, like which ones are going by air, which ones to hold, and which ones to hold till the next consolidation. This is done by our system. Then the goods are delivered. After that there's a route back. They have one distribution centre in Hong Kong. The core ones are in Shenzhen and Shanghai. They have stores in Hong Kong. Their goods won't enter the Mainland directly apart from Shanghai. They are shipped from LA to Hong Kong and Shanghai. We cross-check based on the delivery information through EDI. The data are available for everyone to see. When the goods are ready, we have a weekly consolidation maybe via ocean to come to Hong Kong and Shanghai. According to the needs of Shenzhen and Shanghai's warehouses, we replenish the goods. Some will go to the warehouse in Shenzhen and some will supply the Hong Kong stores. These all depend on the system's data. So far two purposes are achieved. All the vendors' PO data are transparent and quickly transferred. We exchange data almost every day. For the time</p>

	<p>control side, accuracy is increased.</p> <p>The second one is Pau Yuen Sneakers Taiwan. Have you heard of it? For the sneakers you wear, it's possible that they are manufactured by Pau Yuen. They are probably the largest shoe manufacturer in Asia Pacific. The core service we provide to them is replenishment of materials. For manufacturing the shoes, they'll need leather for the vamp, laces and soles, etc. For now, they have eight factories in the southern part, also in Malaysia and Vietnam. And previously they have one in Jiujiang, North China but it has been shut down. When the leather and the other materials are ready, it's impossible for them to ship to so many different places. Sometimes they are delivered to Hong Kong or designated locations, based on their requirements made via Edi. When the PO is ready, the headquarters in ZhongShan will input some remarks in the system, like which goods are to be delivered to which place, like Vietnam or wherever. We will distribute according to their instructions. This is our function. Shipping of finished products is similarly done.</p>
GG Air Forwarders (H.K.) Ltd.	<p>For IT, I think we are good enough as every location and station has its local MIS. And we have a corporate MIS at our headquarters in Taiwan. Basically the system we are using is developed by our IT department, instead of buying software from outside. The system is linked with our air freight, sea freight and trucking. We are using the same platform. And we are using this system to do system integration with our customers. In February, we just had the annual group management meeting in Guangzhou, saying that we are going to invest more in IT in the future.</p> <p>Moreover, each product line has around 2 to 3 team members who are relatively knowledgeable about the product they're handling. For example, a station has a customer, say from the garment sector, and they don't really know what to do to fulfil the customer's requirements. Then we ask the product team to help out like putting</p>

	together a proposal according to their needs and see what kind of services we can provide. We will put together a proposal.
HH Worldwide (HK) Ltd.	Yes, it's enough. We have some in-house systems, and some purchased ones. We adapt the purchased ones to our in-house system as it's our backbone. For IT, there are a few things. For applications, we purchase them. For the IT flow, we develop it by ourselves.
II Logistics Private Limited	We outsourced our IT function to outside expertise, we provide our IT specifications, and they help us to tailor-make it to fit our business requirements.
JJ Limited	Our Company's IT support takes a leading position and we keep providing new services. For example, we provide the track and trace service for customers to check the status of the goods, which has become really common these days. We have all the documents uploaded. Recently, we have just launched a new service, which allows customers to quote the price for air freight and less container load online.
KK Hong Kong	Yes, we have enough. For IT infrastructure, there are different kinds of EDI as you just saw during the presentation and also a web-based solution for customers to check the warehouse stock. And RMS Road Management System, TMS Transportation Management System and WMS Warehouse Management System which is web-based for us to view the real-time solution. We also pull the customers' data into our system for providing analysis and professional advice, letting them know what to do at the operations level to save cost. We have enough resources to manage it.
LL Services Hong Kong Ltd.	Depends on location. In general, it's enough. We use SAP and we have different functions such as transport, service delivery, warehouse supply chain and solution design. Overall, we have talents or supply chain professionals for different functions to support.
MM China Ltd.	For talent, I think we are good. Each function has its own specialists and they join our meetings with customers. For IT, we do not allocate many resources for now. There is a track-and-trace function but the

	information is not very accurate. It is not as up to date as the courier companies.
NN Forwarding Limited	I think it was enough in the past. As it was me who handled that. They can make the booking online. Also for cargo checking.
OO Logistics	Of course we do, from EDI, reporting to the entire supply chain system. Tailor made PO management systems.
PP Hong Kong Limited	Yes. It's in-house. We cover 4PL too. The division is called GSCO which specializes in providing consulting services.

Table 4.7 IT infrastructure, talent and supply chain professionals of 3PL providers provided

Remarks on Table 4.7

The interview data suggest that most of the 3PLs have standard IT infrastructure, talent and supply chain professionals provided; therefore, only conventional or traditional 3PL functions, roles and services are provided but there is no orchestration in the sense of what Zacharia et al., (2011) refer to as orchestration.

Interview Q8

Does your company orchestrate and manage whole supply chain relationships for its customers on an end-to-end basis? (Give examples and specific details)

AA (HK) Ltd.	Like when we help our customers with cross-docking, we liaise with their suppliers as well and check the order status. Usually the customer needs to provide us with some information in advance, like the check-list of today's order, and then we follow up with the suppliers and let the customer know if there are any problems.
BB Ltd.	<i>For this, we cannot. The reason is that the whole supply chain is that...of course we can take up a bigger role sometimes but it's impossible to use the term 'orchestrate'.</i> For example, say product inventory and volume, whether it's high or low...basically inventory control is none of our business. The reason is that how much to stock is

	<p>the customer's strategy and decision, not ours. So we can't take care of this part for them. <i>Sourcing is also handled by themselves. So we can't manage their supply chain.</i> Unless for VAS, like packaging materials, for this we can. It's simpler. Because it's not their core competency or core materials. So this is okay. <i>Strictly speaking, we can't meet their needs on an end-to-end basis.</i></p> <p>Moreover, our relationship with their customers is okay as our frontline service is delivery. So the relationship between our delivery staff and their customers is relatively close. <i>But there's no 'managing' involved. Deciding how much to order, or paying by cash or cheque...it's not up to us. The decisions have been by our customers. We maintain the relationship because of the business needs. So it's impossible for us to manage the whole supply chain.</i></p>
CC (H.K.) Ltd.	<p>For managing the relationship, I can't come up with any examples. For vendors we do have. For example, some customers have many vendors and there are vendor meetings. Let's put it this way: we need to fulfil their vendors' needs. Different vendors have different needs. So we are dealing with them too.</p> <p>For their customers...relationship...for this I'm not sure. But for Apple, I think we are doing something for them - if their products are not working, they need to be sent back to the centre.</p>
DD Ltd.	<i>I don't think so.</i>
EE Air & Ocean Hong Kong Ltd.	<p><i>Very rarely.</i> If you think about this - your customer asks you to do it. You need to entertain their customers and build the relationships. Will your customer like it? This is questionable. On the other hand, say if I'm working for you, and you are in the fashion industry, I help you deliver the goods to the stores. Of course if it's your instructions for us to build the relationships with the stores, we will do it. But if it's not, and I contact the stores directly and build the relationships, you may not like it. Because it's your responsibility.</p>

	<p>But if you ask me for examples, I do have one. For Hugo Boss in Stuttgart, Germany, we help them run the warehouse. The vendors need to deliver the clothes and shoes, etc. to the warehouse. Or we collect from them because actually Hugo Boss doesn't manufacture all products on their own, some are bought. Once we have them all, we help with loading, putting on the hangers, packing and piling up pallets. When the goods arrive in Hong Kong, we help deliver to their customers like Duty Free Shop selling their suits. Or in the past, Lane Crawford and Joyce. Or some big names. Or some customers from the Mainland were getting them from Hong Kong. We need to deliver to these customers, like Lane Crawford, Joyce and Duty Free Shop. In fact, we contacted them proactively and built up a relationship for Hugo Boss's traffic to run smoother and for us to look for opportunities to further develop something else. All in all, as far as I know, this is an example I can provide you about our company. This fits your question more. Hugo Boss knows that we approach their customers. They said it's ok for everyone to build relationships.</p>
FF Freight Ltd	<p>If I'm the account manager, anything related to this customer, no matter it's about vendor, supplier or whatever parties, I will need to bear the responsibility to line up because there may be many issues in between that need to be taken care of. We want to be more flexible. We need to give feedback. Say the system or SOP is pre-set like this, there are actually many small things we can do with the vendors and suppliers to make adjustments to let the whole system flow better. This is absolutely what we are doing.</p>
GG Air Forwarders (H.K.) Ltd.	No
HH Worldwide (HK) Ltd.	<p><i>Actually this is confusing to everyone. Actually it's hard for you to get in touch with everyone in the whole supply chain. You are not looking after sourcing. You are not taking charge of procurement. You stand behind the buyer in the chain. If you say the supply chain starts from here, then you manage the whole chain but not anything</i></p>

	<p><i>before the buyer. No 3PL can be in touch with the buyer.</i> What the buyers buy has nothing to do with 3PL. Even their own logistics department wouldn't know. The designers review, they buy and inform the logistics department what and how many they have bought and ask them to help look for a warehouse and deliver. This is the case for now.</p> <p>For the whole supply chain or supply chain management, <i>the people who are talking about it are just talking about it. They actually don't know anything. You don't have a chance to get in touch with the buyer. Only after that we take over. Once a PO is placed, we are there. We start working at the point where the PO is placed. But PO doesn't mean the supply chain. The entire supply chain starts from material.</i></p> <p>It's nothing to do with us. It's not something 3PL can reach, not even in-house. The logistics part doesn't start there...from material, design to procurement, no, after buying then it's the supply chain. We are the last of the last mile. We only provide logistics services. What to do with the supply chain?</p>
II Logistics Private Limited	<p>We have one electronics industry customer; we may directly contact their end users if we have any problem in the supply chain, such as documentation problem; in other words, only in exceptional situations will we directly contact their end users.</p>
JJ Limited	<p>We do it for Adidas. Worldwide to worldwide. Say it has to transport its goods from Indonesia or other parts in Southeast Asia and worldwide, our base in Hong Kong will help manage it.</p>
KK Hong Kong	<p><i>No, I don't think so. We get involved in part of it and we are able to provide a solution. But if you are talking about orchestrating or restructuring their supply chain, I think we are not at that level yet.</i></p> <p>Technically we don't have any chance to help customers redesign their logistics structure, solution and flow yet.</p>

LL Services Hong Kong Ltd.	<i>No, we don't.</i>
MM China Ltd.	<i>No, not for now.</i>
NN Forwarding Limited	It's case by case. Some rely on us a lot. Like my answer to the previous question, we make changes in the logistics software based on their requirements. And some like to manage it on their own. For the large-sized ones, they do it themselves. For some VIP customers, they have enough resources to handle that and they just give us some comments. They prefer to handle it themselves.
OO Logistics	Of course. PriceSmart as I've mentioned earlier, which is the most extreme case. And also Microsoft. We provide vendor training, teaching them how to use the system.
PP Hong Kong Limited	End-to-end, yes. We provide door-to-door services. Some of our colleagues communicate with customers' suppliers every day.

Table 4.8 3PLs orchestrate and manage the whole supply chain relationship

Remarks on Table 4.8

The interview data suggest that only conventional or traditional 3PL services are provided but without orchestration and are not able to manage the whole supply chain relationship. There seems to be no strategic depth or orchestration in the sense of what Zacharia et al., (2011) refer to as orchestration.

Interview Q9

Do third-party logistics providers in Hong Kong orchestrate and manage whole supply chain relationships for their customers? (Give examples and specific details)

AA (HK) Ltd.	To be honest, I think there are companies <i>which can offer</i> this kind of service in the market. But I couldn't say if they are doing well or if they are detail-oriented. But for our company, we have enough experienced staff. So we can provide the right services to our
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	<p>customers and we can be more detail-oriented. That's what we can do. We can't do a lot, but if we take the job, our performance is relatively stable.</p> <p>Many of them are capable. Like I mentioned earlier, it depends on whether the mid- to large-sized ones are willing to do so. After all it is about money. But if you have lots of requirements, they may not be willing to do so if your company is not large-sized. For example, if you are McDonald's, they are willing to do anything for you. <i>It rests on who you are. For this industry, I just think that there's nothing you can't do.</i> For example, you see SF express opens stores for you to pick up goods at 10pm. They make it happen. In the past there's no home delivery. Now in every district you can pick up goods there before 10pm or at 7-eleven. It's all by demand.</p>
BB Ltd.	<p>It's the same. <i>I think for 3PL...I mean in Hong Kong, it's impossible for us to manage the whole supply chain relationship on behalf of our customers. It's not that easy. And it's not something for us to do. Our role is providing services. About managing the customer's relationships, it's the principle...the user's responsibility. Our company is not doing this.</i></p> <p>In fact, there are business terms. We can't discuss the terms as we are not their direct point of contact. How can you manage them? For example, if our customer is doing an OEM project with a factory in Mainland China, and it's a US brand, <i>do you think I can manage the supplier? No. Vice versa, if they are selling goods to a local supermarket, I can't manage the order quantity and the delivery time because these are business decisions. It's between them. We just help execute based on their decision. So we can't manage. As for the relationship, for a buying office, they contact their inventory staff but not us. They don't need to contact us. How can we manage them?</i> Let's put it this way, the relationship doesn't exist. So where does our relationship lie? We deliver the goods to their warehouse and the</p>

	relationship exists between us and their warehouse staff for that. But it's very passive.
CC (H.K.) Ltd.	I think the customers might like to look after the management part themselves. I think it's only the super big consumer goods companies that need 4PL. <i>Hong Kong doesn't have that many.</i> I don't know about overseas. Are there many able to do that globally?
DD Ltd.	I don't really know.
EE Air & Ocean Hong Kong Ltd.	No. If you are talking about managing the relationships, it's their daily job. Even for the Hugo Boss example I just gave, we don't proactively...it's not that we want to help them manage the relationship so I approach your customers. It's because we want to look for more sales opportunities and that's why I approach your customers and build a relationship. Actually there are two things. Say you ask if I'm going to manage the relationship proactively? <i>Sorry I won't be doing it.</i> The reason why I approach your customers is because I want to get more business. <i>It's not that I want to manage your relationships. If you ask me about the situation in Hong Kong, I think it's very rare.</i>
FF Freight Ltd	<i>Not many. For 4PL, I believe Hong Kong has fallen behind.</i> Just a few of them have a framework. As far as I know, UPS is an example. Even for them it's on the worldwide level instead of Hong Kong. The others can't attain the 4PL level actually, even for DHL. Of course part of them, for example the IT system, is barely able for customers to use. Take APL logistics solutions as an example, which was recently sold to KWE. Their flagship system is called "SeeChange". I know that because we used to work with them. The system basically can let the customers use it. The customers can use the system to input PO, etc. so it will help you do all the analysis like trace and track. For a 4PL which can provide comprehensive services, I believe there's not many in Hong Kong.
GG Air Forwarders	For those that I know of, so far I haven't heard that anyone is providing this kind of service. Of course there're providers doing it. Maybe

(H.K.) Ltd.	smaller-sized logistics companies will take up this kind of job.
HH Worldwide (HK) Ltd.	Li & Fung can do it. But it's not a logistics company. Your background is sourcing, buyer.
II Logistics Private Limited	<i>I believe the answer is "Yes"; for example, DKSH Hong Kong who may direct contact to the end users; however, I think DKSH Hong Kong get their customers' authority before approaching the end users.</i>
JJ Limited	When we talk about some really large 3PLs such as Schenker, Panalpina, Damco, DHL, etc., they must also have a key accounts department and similar setup...
KK Hong Kong	There are some 4PLs taking up the role of supply chain consultant. Many companies would rather keep their own logistics team. <i>Maybe it is Hong Kong's culture. For overseas countries, they may think they don't need that many in-house staff or professionals, as they can outsource such functions. On the other hand, Hong Kong has hesitations about the term 'outsource'. 4PL is possible</i> and actually 3PLs in Hong Kong are doing part of 4PLs' job. It's hard to easily distinguish between a 3PL and 4PL. Maybe a 3PL is already providing some 4PLs' services. And a 4PL may not purely be a 4PL. They may need to own certain things in order to provide 4PL services. <i>There may just be a handful of pure 4PLs in Hong Kong. They may exist but are they successful? I don't know.</i>
LL Services Hong Kong Ltd.	Absolutely for Li & Fung. Other 3PLs in Hong Kong like DSC.
MM China Ltd.	I don't really know. I guess there must be some doing it.
NN Forwarding Limited	<i>As far as I know, it doesn't happen a lot</i> because it depends on whether they have the relevant professionals and IT knowledge. It's not like you have the 3PL talent and IT then you're good to go. Communication with the IT department is important for every industry. Say you want to make a window and the IT department helps you make one. There's a lot of knowledge involved actually. Whether it's a sliding window, or if it's a horizontal or vertical sliding one. There are

	so many possibilities. If the IT requisition is not made clearly, the end product may be useless. The communication between the user and IT is very important. As I recall, DHL has written off a \$2- or \$3-million software package. They tried to develop something like a 4PL system but eventually they gave up. I think it is Euro.
OO Logistics	DGF has a global network, which may be able to do that.
PP Hong Kong Limited	Nowadays it's very hard to distinguish between 3PL and 4PL. <i>I don't think any company can just provide 4PL services and that's it. For now, 3PLs need to function like 4PLs. This is my answer to this question. I have gone through the details with you over the phone already. I think say we are a 3PL plus. We can't just provide 3PL services.</i> You must have the ability to provide solutions to survive, playing part of the roles as a consultant. As you know, consulting services is free of charge. It's very hard to charge a client for that. So a 3PL needs to first provide consulting services, then offer a solution along with the products which then you can make money out of. This is the way it's done.

Table 4.9 3PLs orchestrate and manage the whole supply chain relationship for their customers

Remarks on Table 4.9

The interview data suggest that the 3PL service providers find it difficult to orchestrate and manage the whole supply chain relationship for their customers. There seems to be no strategic relationship management or orchestration in the sense of what Zacharia et al., (2011) refer to as orchestration.

Interview Q10

Are you aware of instances where 3PLs orchestrate and manage the whole supply chain relationship for their customers end to end? (Give examples and specific details)

AA (HK) Ltd.	Yes
BB Ltd.	<p>I think the most that can be done is after the goods arrive in Hong Kong...some companies can manage any process after that. <i>But for the whole supply chain, from deciding the quantity to being produced by the factory to reaching the hands of 3PLs, no one can manage that.</i></p> <p>Why I said it can't be done...for example, <i>Li & Fung can offer 4PL services because the brand owner grants them the right and asks them to cover the manufacturing and sourcing part too. Then they can manage the whole supply chain. But for us as 3PLs, they won't delegate the upstream activities to us. They won't ask us to find an OEM. They won't do that. If it happens, I need to settle the payment. Can I finance that much? Does a company have that much capital to do that? Right? Do you have the capability to do that? No. So if you ask me under what kind of circumstances it can be done, like what I have said earlier, the brand owner needs to grant the right and outsource to a 4PL.</i></p> <p><i>A 4PL helps with sourcing. You cover everything for a package fee.</i> Say for this cup...the lid...Pacific Coffee lets me do the job. They'd say 'I don't care about the details. For all our branches in Hong Kong, we use hundreds of thousands of cups every year. I want you to help me source. I'll send you the logo. You help me do it'. I will then need to find suppliers offering the lids, cups and paper, etc. And pass them the quotation as a package price. If they are okay with the pricing...whether the whole process is efficient or not will be my responsibility. You see? They will hold me responsible for the whole thing...the quantity needed each year...you help with the sourcing, finding OEMs, handling the whole thing...logistics, warehousing and delivery. Then this is 4PL. Okay? <i>Unless they grant us the right, or else it's impossible for us to manage the whole supply chain, how can it be done?</i> If Pacific Coffee asks us to help with storage and delivery,</p>

	we can do it. I won't be managing the suppliers. If the supplier says 'No, Pacific Coffee asked us to deliver the goods to you twice a month', you have to take it. Even if the warehouse is full already, you have to take it as long as your customer asks you to. We don't have the right...
CC (H.K.) Ltd.	I think DKSH Logistics and Li & Fung.
DD Ltd.	You have to have experience of the industry. If you don't know anything, how can you manage? <i>How can you manage the other forwarders on behalf of your customer? I believe that it has to be the company's strategy to go down that road as it requires lots of talent. We don't think it is one of our core services.</i> I can't say we cannot, we can do it. We just need to reallocate some resources and we can make it happen. We have full IT capability. We have developed our own software. We have around 700-800 staff in Seattle. We can actually do anything.
EE Air & Ocean Hong Kong Ltd.	I don't think so. I really don't know any.
FF Freight Ltd	I believe in Hong Kong, even for a typical 3PL, not many are willing to cover all these areas unless it's a global one or has its own network. The reason is that for 3PL supply chain management or 4PL, <i>if you don't have your own IT system which can be managed by yourself, it's very hard for you to do so as there's no IT backup. The second criterion is that, if you don't have your own controllable network, say you need to subcontract 50% of the work, even within the network, if a customer needs to deliver to here and there and you only rely on subcontracted agents, you can't maintain the service level. This is the second point. Right? The third is that it will always involve finance issues.</i> Will the agents support that? Let's say there are 20 containers to be shipped out from Germany, you'll need a long discussion over the cost of ocean freight.
GG Air Forwarders	First of all, they need to understand the customer's industry. <i>If you source for your customers, you need to find suppliers which provide</i>

(H.K.) Ltd.	<p><i>quality goods. You should have industry knowledge, not just talking about transformer. No matter which sectors the customers lie about, they need to have in-depth industry knowledge, for example where to source a particular kind of product for their customers. You cannot just do an internet search and buy.</i> Whether or not they deliver on time is part of your responsibilities too.</p> <p>In fact, some customers take part in 4PL and have invited us for RFQ. Let's put it this way, they are our existing customers for 3PL. There are some biddings, what they call 4PL, which was to help their customers find service providers.</p>
HH Worldwide (HK) Ltd.	<p>What is end-to-end? One of the 'ends' is cotton. And it'll be affected by weather. Are you talking about that 'end'? That's at the very beginning. And for reverse logistics. How about the other end? Disposal? <i>We won't go that far. The entire supply chain is from source to disposal. And recycling is the highest level. But for 3PL, it's just that loop and that's all. And how are you going to expand? The brands and business won't tell you much. Our loop is just very short. And within the loop, there are 3PLs, freight forwarders and carriers. They are all very scattered.</i> For Hong Kong, we cover distribution, which is something different. So from end-to-end, it's actually which end to which end. I have to clarify. The source for us is when the goods arrive in Hong Kong. The most we can do is to collect the goods from the manufacturers. That's the furthest 'end' for us. Starting from the point we collect the goods from the manufacturer, we cover it all. For Crown, we cover it all but not many companies are doing that. Many just do parts of them.</p>
II Logistics Private Limited	No
JJ Limited	<p>I'm afraid that I am not able to give examples of other companies. Adidas is only one of our examples and we in fact have other key accounts like Whirlpool, which I have mentioned earlier.</p>

KK Hong Kong	<i>No</i>
LL Services Hong Kong Ltd.	I don't know about the details but I know some of the customers they're working for. Like for Li & Fung, they serve A&F and e-commerce customers. They provide pick-and-pack services and consumables like bags.
MM China Ltd.	No
NN Forwarding Limited	No
OO Logistics	DGF only.
PP Hong Kong Limited	I don't know about the others. We have a clear direction which is 3PL plus, providing solutions as well.

Table 4.10 3PLs orchestrate and manage the whole supply chain relationship for their customers end to end

Remarks on Table 4.10

The interview data suggest that the 3PL services providers find it difficult to orchestrate and manage the whole supply chain relationship for their customers end to end. There seems to be no strategic relationship management offered to their customers at the end-to-end level or orchestration in the sense of how Zacharia et al., (2011) refer to orchestration.

Interview Q11

Please differentiate the functions, roles, and services that your company provides to its customers from those of your competitors in Hong Kong.

AA (HK) Ltd.	Such as solutions like customs clearance for entering the Mainland, or big projects, or like offering diverse services in Mainland China such as Hong Kong-Mainland bonded trucks services. These are some of our strengths.
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BB Ltd.	I think our services is considered as all-rounded, compared with our...of course, the big players can offer what we offer. When compared with the smaller-sized ones, they can't cover as much as we do.
CC (H.K.) Ltd.	We are not the cheapest ones. Let's put it this way, we don't compete on price. Our selling point is our network, i.e. global coverage. Anywhere in the world that customers would like to deliver the goods to, we provide our own network. Infrastructure and IT. If the customers have room to expand, we are ready to grow with them. Unlike smaller-sized companies, if the customer's business needs to grow a lot within a short period of time, they don't need to worry about whether or not the provider can manage that as we are a big company. We can handle different models of traffic; like we have trains...we can provide different kinds of services to customers from sea freight, air freight, going to China, domestic truck, train and sea. We as a provider can offer different models and one-stop-shop services for the customers. How are we different? We value our people a lot, including our employees and our customers. As a service provider, the way you serve customers matters a lot. This is what the company believes in too. Customers always come first and is our company's philosophy. Our company will make changes to better serve customers.
DD Ltd.	Basically you can just refer to what's printed on my name card. You can just copy that. Such as, to set the standard for excellence in global logistics through total commitment with our mission to quality in people and customer service, with superior financial results. Basically services, financially very strong - basically no debts, don't need to borrow any money for running the business. So the chance for us to shut down is almost zero. Basically services, quality of people, these few things.
EE Air & Ocean Hong Kong Ltd.	I always get asked this. And we always ask the others, like the management about how we are different. I think there are a few points, like what I use to present to the customers - First of all, the organisation structure of Logwin is flat. We are able to make quick

	<p>decisions. If you have a question, need to apply for anything, or have some special requests, it doesn't take long to get approval as our organisation structure is simple. It can be really fast.</p> <p>Secondly, we are flexible as we are a mid-sized firm, unlike larger ones in which things need to go through lots of levels and processes. We are more flexible because we hope to get more business so we handle many things with flexibility. The other thing is our IT support. It's strong. I believe many companies have this. But we started it like 10 years ago by that time...we provide our services free of charge on the IT level. We put system integration with customers in the first place.</p> <p>And there are some little details I don't know if other companies will mention but as a salesperson, I will - for customers using our freighting services, it's one-to-one. Each customer has a single point of contact.</p> <p>It's not like if you have questions about air freight, please contact this person. If it's for sea freight, please contact that person. For warehousing, please contact the other one. We assign a CS staff member to each customer which makes it easier for them. This is how we are different from larger-sized companies. Small- to mid-sized ones may adopt this method. But for larger ones they may not be able to offer this. If the customer is a large-sized one, you will get a designated person. If you are just a mid-sized customer, you won't get much service using a large forwarder. Let's put it this way, Logwin is not very big, a big customer for us may be just a mid-sized one in a large forwarder's eyes. So we provide a relatively personalised service. If they switch to a larger-sized one, they'll return to us. Why they left in the first place is because of the pricing. But they expect to get the same service level as in Logwin and eventually no one cares about them. So it's possible that they will return. That makes a little difference.</p>
FF Freight Ltd	For our competitive advantages...let's talk about 3PL first. Our selling

	<p>point is our foundation, which includes the facilities, hardware, IT, in which our IT house is our corporate-owned subsidiary. In fact, 99% of their work is to support the UFL group. Another thing is that our IT house develops all of our IT products, so everything is built on the same platform. It makes data exchange easier.</p> <p>Secondly, all the products are compatible. Say I'm in Hong Kong and I receive a booking. In fact, if I make small adjustments then it can be shared with everyone around the world. This is very open and transparent. Once the booking is put up there, it's automatically run. Say when the goods are shipped out from Hong Kong, I'll type up an invoice and all documents can go to the destination's handling office by the push of one button. At the same time, the data can go into the cargo checking system to the customers or any other parties. For the freight data and amount, if I input the quotation clearly, any party, destination or origin can view the data clearly. This is the basic IT part.</p> <p>For warehousing, let's start with basics. All of them are our own properties. So we install the facilities and equipment based on the service demand and requirements along the way. We can invest. We don't need to worry about if we don't get the rental contract and we need to move out. Corresponding to the products we developed, we can install facilities which we consider useful. Say in the last couple of years, we have developed the e-commerce sector in China, B2B. In the last couple of months, we have renovated and refitted one of the warehouses, upgrading our facilities to support daily pick and pack, etc. which is good for e-commerce operations.</p> <p>The third point is very important - a simple management structure. The entire network is managed by the same corporation. We don't have that many district managers. As long as the customer makes a request or you need to get whatever resources, just directly contact and get the corporate COO or CEO to approve, then the resources will be made</p>
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	<p>available and make the process efficient.</p> <p>Now we talk about talent. Actually the staff in most stations have been around for a really long time. They are doing well in terms of cooperativeness and mobility. The last point is very important, which is finance. Like what I've mentioned earlier, I actually don't know how much we have in the bank. I just know that our physical assets keep increasing in value (like offices and warehouses) leading to our financial strength. Moreover, from time to time Standard Chartered bank asks our CFO to give them some business. No matter what you are doing today, finance plays a very important role. Simply put, you can't ask your customers to prepay for you to pay the bill. You don't know if the profit margin can help you keep going. Nowadays, finance background is important. If you get a business deal but you don't have the finance to support you, how could you make it happen?</p>
GG Air Forwarders (H.K.) Ltd.	<p>For our strengths, by market, it's Asia Pacific. Our service network in Asia Pacific is strong. For Asia Pacific, we have 120 offices. I think our IT is strong. First of all, we have our own MIS team and successful cases for system integration with customers. For customs, we have data exchange at the system level. For pricing, it's very transparent now. It's just a price war now. You know for Asia Pacific, no matter how low the fee is, someone will take the job. It is getting worse and worse now. This year is especially tough. So our competitiveness is low in terms of pricing. It's like someone is willing to do the job for free. So what is our competitive advantage? I'd say it's IT and the service coverage, as we don't just cover air and sea freight, but really provide one-stop-shop services. Like customs clearance, air freight, sea freight, storage and warehousing.</p> <p>Their strengths or our weakness is that our service network in Europe is relatively weak. And Europe is not our target market. This year the economic condition is not good, so we are not planning to expand and open new offices. For Asia Pacific, we will open five more new</p>

	<p>offices, especially in India as it is our target market. For now, we have three and we plan to open three more there. Of course other companies might have already built a very strong network in India. In what ways they're stronger...maybe in terms of products, we focus mainly on electronics products. We try to expand our coverage to garments. But say if you'd like to break into the red wine industry, when compared to other service providers, we are in a weak position because some are well developed, like Crown. They have been doing this for so many years. But we will need to start from scratch.</p>
HH Worldwide (HK) Ltd.	<p>KPI is just about picking accuracy, shrinkage rate, on-time delivery and order completeness, right? If you can attain 99.9999% then you are very good.</p>
II Logistics Private Limited	<p>I think we all are doing quite similar services, such as offering competitive prices and providing similar facilities, but our warehouse is located in a container terminal which can provide more flexibility for our customers to load and unload not like other 3PLs providers who may be located in a commercial building without sufficient loading and unloading bays, so in other words, you can arrange several trucks to our warehouse for loading and unloading simultaneously, and we have the ability to do it quickly. This is of benefit to customers' turnaround times. We have 11 loading/unloading bays there.</p>
JJ Limited	<p>First is our IT support. Second is our expertise, or the quality of our human resources. We always hire professionals of top quality.</p>
KK Hong Kong	<p>There is actually no way to differentiate yourself in this market. Every forwarder or 3PL is doing the same thing. How you can differentiate yourself depends on the relationship between you and your customers, as well as what kinds of solutions you can provide to them, not just giving your company's information to them. You have to understand your customers and provide solutions. An experienced or a good salesperson from every company is doing that - understanding the customers' operations and providing solutions. So whatever you are able to do, all other companies can do that too in this market. Say for</p>

	EDI, many companies can do it as long as they are sizable ones. So how you can differentiate yourself depends on the relationship and trust built between you and your customers.
LL Services Hong Kong Ltd.	We position ourselves as a 4PL which is a carrier or forwarder neutral party. This is one thing. Secondly, we focus more on outsourcing, the related outsourcing services like call centre and customer services hotline. As for procurement or sourcing materials, we cover lots of areas like the consumable materials used in the supply chain or materials that the customers need us to procure, such as Apple stores' t-shirts as I mentioned earlier. This is not something which is 'consumed' during the transportation process. They are not cartons, plastic or wooden pallets. We can handle this kind of non-transport or non-warehouse-related procurement. This is how we differentiate ourselves, not on the transport network but on the 4PL positioning which covers monitoring, warehousing and procurement outsourcing.
MM China Ltd.	For overseas...we have a Japan desk in Japan. We also have an e-commerce desk and a dedicated team to serve customers who have high standards.
NN Forwarding Limited	We position ourselves as neutral. That means we haven't been involved in any exclusive deals. It's like we are running a restaurant. We welcome anyone. For some other companies which want to be more focused, they sign as an exclusive agent. The other strength is like what I've mentioned earlier, in terms of IT and clients' requirements: we communicate very well and we provide quality services. When they have new requirements, we provide the value-added services at a lower cost so as to stay competitive. If you charge for each little detail, you lose this competitive edge. To a certain extent, they don't have the bargaining power in front of me. You know many customers would ask for a discount. For us it's already the market price or a little bit lower than the market. If you keep asking for a discount, I can't provide you quality services. Our competitors are not just the Hong Kong ones; there are also those in Mainland China. Their running cost may not be the same as us. And

	<p>they don't go into details like us or the scale of production is not as big in many aspects. Regarding the insurance cover for the bill of lading, we won't miss anything. The shipping company uses that insurance company and we are using the same one every year. So for the billing of lading, as far as I've heard from the banks, it's as reliable as the shipping company's ocean bill. The number of court cases which need to go to the high court level is less than three in that many years. They were peacefully settled. There have never been any negative effects.</p>
OO Logistics	<p>Our selling point is all-round services. We offer all kinds of services. We don't need to do preparation work before meeting a client. For some companies in the market, like I've mentioned earlier, they can do one thing but not the other. For us, we cover everything. This is our competitive advantage. Especially for domestic border. CEVA ground. It's not something that other competitors can provide easily. We can manage door-to-door.</p>
PP Hong Kong Limited	<p>As I've mentioned earlier, professionalism. High value. Selected customers. How we differentiate is, first of all, by professionalism. Customers know that we are professional through our processes and hardware. They know that we are worth that price. Like when you enter the Peninsular, someone will open the door for you. People will greet you in different languages. You know that the eating utensils they use to serve you are high-end ones. The customers can feel that. Our equipment is imported from Europe instead of Mainland China. Say for a refrigerator, some companies want to save cost and use the ones manufactured in Mainland China. We won't. We use those manufactured in Germany. We use Carrier and top-branded equipment. For forklift, we won't just pick a random one. All are Toyotas. For security, we won't hire ABC security company. As you can see, it's G4S. That's the differentiation. When you come in, you can feel that everything is high-end and top-branded equipment. So how could we charge a lower price? I can charge you less but absolutely not a low price. There's no room to go low. Our initial cost is higher when compared to others. Say if you are eating a sausage, it looks like a</p>

	sausage but what kind of meat is used to make it? You don't know how many different kinds of meat is mixed together to make it. We use good-quality meat and you will feel safe eating it. You know the taste and texture is different from the others. This is what we are doing. Professionalism and hardware are what we use to differentiate ourselves. High-value. Customers can sense that and they know it well.
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Table 4.11 Logistics services differentiation in the 3PLs industry

Remarks on Table 4.11

The interview data suggest that only conventional or traditional 3PL functions, roles and services are provided in the 3PLs industry in Hong Kong. There seems to not be a very big difference between the logistics services provided.

Interview Q12

How strategic are the services provided by other 3PLs to their customers (i.e. your competitors)?

AA (HK) Ltd.	In the past there were many strategies, working as partners...but nowadays it's all about cost and efficiency.
BB Ltd.	I think that's important. If our competitors can't offer the additional services that we provide as mentioned earlier, their competitiveness is lower. Then the range of customers they can reach will be narrower. They can only acquire customers who don't need this kind of service. Or they don't care as much for services like VAS, system requirements...they can only approach this kind of customer. They won't be the same as us and have a broader customer base. For example, I can approach MNCs, both large- and small-sized customers. For them, there are limitations. What are the limitations? For example, the customers are small-sized and they don't need to put together so many reports. You just help them finish the job. All that matters is a lower price. So they can serve this kind of customer. This is what 'how

	<p>strategic’ means...if they can’t provide the services I mentioned, they can only approach a narrower range of customer type. Business growth is important. If they can’t provide similar services as ours, that puts a limitation on their growth.</p>
CC (H.K.) Ltd.	<p>For something like e-commerce, not that many companies can support it. This is more unique - how to support e-commerce customers. Say for example the selling point of Kuehne + Nagel’s is their systems. The feature is visibility, breaking down into very small milestones with high accuracy. System visibility.</p>
DD Ltd.	<p>Actually every company provides so-called strategic...use strategy to run the business. It won’t be like gathering a bunch of people randomly, making some calls and then you get the business. It shouldn’t work that way. Every company has its own strategy. Our company’s strategy is relatively standalone - not making comparisons all the time. We see what a competitor is doing and then follow it. Not like that. We do what is good for us. We see what the customers’ markets need. Very rarely do we look into what our competitors are doing. We do actually - to stay competitive, you’ve got to know what your competitors are up to but this is not what we focus on.</p> <p>We only work on areas which have the demand. Say our competitors may offer some sort of services which just sound good but not profitable. Or doesn’t do any good to the company. Then we won’t be doing that. For us, it’s like when we see the demand from customers, then we will provide the corresponding services. Of course there are times when we and other forwarders come up with the same idea.</p> <p>From a customer’s perspective, you have such needs - of course you want to sell a lot of your products as you have many competitors too. Make lots of sales, deliver faster and cheaper transportation cost. Actually everything remains the same throughout all these years. This is about how we can do it better. How can we perform better in today’s global setting? This is what we need to do. The thing is how we can do</p>

	<p>better to achieve this goal - which you can't ever reach. As every time you reach it, it will move further way. It's endless.</p>
EE Air & Ocean Hong Kong Ltd.	<p>Something that we don't do but the others do... trade credit. This is the only thing I know of. Apart from the illegal things, for services the others offer but we don't...we won't just say 'no'. Of course we still pick because the manpower and warehouse space issues. There are so many projects out there in the market. We won't take up everything. We have to see if they match. Is there anything we don't provide but the others do? Is there anything that they are able to do but we don't? Yes, for this. It's about hardware. If the service provider is the property owner, then you can't really compete. That's the most obvious scenario.</p>
FF Freight Ltd	<p>Each company works in its own way. For Hong Kong, in terms of size, it goes to two extremes. The global, big companies keep investing. For the smaller-sized ones, they will keep shrinking to minimize their basic and fixed costs, like a few of the companies share one warehouse or subcontract the projects, using others' resources. The goal is to avoid fixed costs.</p>
GG Air Forwarders (H.K.) Ltd.	<p>For this question, I am sorry that I have no idea on how strategically our competitors serve their customers, but I think on they do so on a case-by-case basis.</p>
HH Worldwide (HK) Ltd.	<p>Just a few are doing what we are doing. For those companies, investment is relatively big for things like systems, infrastructure, IT, talent and uniforms. It's very hard for the small- to mid-size companies to provide the same kinds of services that we do.</p>
II Logistics Private Limited	<p>I think that with regard to hardware they may do it better than us; moreover, security is another aspect. They may have more resources for investment; can tailor-make them to fit their specific customers, like how to occupy shelving and racking... Moreover, the large-scale 3PLs can invest in their warehouses using automation, with no restriction on manpower and are able to maintain productivity, not like the SMEs 3PLs, which may not be able to automate.</p>

JJ Limited	Large companies usually have their own code of practice. They are not as flexible as SMEs. That is why SMEs can still be found in the industry.
KK Hong Kong	They provide tailor-made solutions like postponement and buy-sell. Such as for milk formulas, they don't put labels on until the goods are going to be shipped...
LL Services Hong Kong Ltd.	How strategic...like the points I've mentioned earlier with a focus on transport and warehousing services.
MM China Ltd.	The large-sized forwarders provide very similar kinds of services. For logistics, everyone is just concerned about the price. So the strategic part is all around costing. Every company is just about the same in terms of operations and customer services. That's why pricing is important.
NN Forwarding Limited	They are doing other things. For SMEs like us, it depends on what kind of customers they are serving and what their strengths are. What I've mentioned earlier is our strengths. For some, they are strong at say when the goods arrive in Hong Kong, they will use any means to 'secretly' deliver them to Mainland China, skipping the licences or permits. Some transportation companies are doing this. It is not that they are doing illegal things; it's just that they use some other channels. For example, if there are 30 cartons, they will use three companies like SF Express which provide Hong Kong-Mainland China cross-border transportation services. They move the goods bit by bit. Each time they transport two to three cartons and within a week, all the goods are delivered to a warehouse and then given back to the customer. I know some SMEs are doing this kind of thing for their customers. But we won't be doing that. We rather tell them that we would do it via some state-owned companies like Yue Hwa Chinese Products Emporium as they have all kinds of licences. Of course it would not be Yue Hwa as they won't work with us for that. It is other state-owned companies which have import licences for certain kinds of goods. It's so-called they buy from us. Let's say 1,000 or 800 and use their permit to

	transport.
OO Logistics	It shouldn't be all about the price. Our competitors have started a price war. They need to divide the services into smaller pieces to lower the price. Door-to-door is a full service. They break it up and specialize in one part only, using a low-cost strategy. But they won't be able to see the whole picture. So they can't get global customers.
PP Hong Kong Limited	Should have. Like DGF and Kerry Logistics. They are strategic.

Table 4.12 Strategic logistics services in the 3PLs industry

Remarks on Table 4.12

The interview data suggest that only conventional or traditional 3PL functions, roles and services are provided in the 3PLs industry in Hong Kong. There seems to be not high strategic of logistics services provided in the industry.

Interview Q13

Does the size/scale of third-party logistics providers in Hong Kong impact customers' decision to select a 3PL as their strategic supply chain partner? (Give examples and specific details)

AA (HK) Ltd.	That may have been true in the past...like for corporate size. <i>I think that factor doesn't really count as much now.</i> The market is very mature. Does the quality of services grow proportionately with the company size? This question remains. Let's take an example: are those large-sized fast food chains offering you healthy food? Is their quality the best? It is questionable. Hong Kong is more experienced and has a broader vision, compared with Mainland China and other South East Asia countries nearby. We take up the role of monitoring and that's what we are doing now. For example, we are doing some businesses in
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	<p>Mainland China, from the US to Mainland. <i>Why do they contact us here in Hong Kong instead of the US? Because the US doesn't understand the environment in Mainland China. And how's the demand like? The other issue is time difference.</i> When problems come up, they will ask and that will take a few days back and forth. For now, you just need to ask me. I will get my head around your questions... 'you need this and that...you should ask more as our US office won't be able to answer you'. We are like an agent managing this. The US gets back to me immediately. Of course I need to mark up and sell the goods to them, like a trading company.</p>
BB Ltd.	<p>This is absolutely true. The size and scale are determinative. Large-sized companies like to work with large-sized companies. If a large-sized company is willing to work with a small-sized 3PL company, it must see something valuable in the smaller-sized one. So as I mentioned earlier, it's all about the relationship and track record. If they think the smaller-sized company is capable and has experience serving similar types of customer, then they will have the confidence. If the smaller-sized company doesn't have much experience, then they don't have the confidence. But there's nothing to worry about for large-sized companies. Like Kerry Logistics, they're much easier to make the sale.</p>
CC (H.K.) Ltd.	<p>I think so. Large-sized customers like to work with similar-sized companies. SME customers may have concerns if your company is large - 'will you look down on us and charge us a lot?' Or will you just handle the job in a negligent manner? They will have such concerns.</p>
DD Ltd.	<p>It's just like a two-edged sword. Some will think 'you are too big and you won't treat me as a VIP' or some will think 'of course I will pick a big one. If anything happens, I can rely on you'. For this, I don't think it matters a lot. Large-sized ones have some advantages but not a lot. Usually it's about the match. Say it's a large-sized customer which has 300 plus factories and 60,000 points of sale. If the scale is that big, of course it needs a forwarder which has a wide coverage so they can reach you wherever they are. Then they really need something big.</p>

	<p>For those companies which are not too large but also not too small, they absolutely have lots of choices. If a provider is super tiny, then it will have an impact on the customer's decision. Some only offer five intra-Asia links like Taiwan, Japan, Korea, Mainland China, and air freight only, so then it will influence the decision-making. In these extreme cases, the company size will make a difference. Otherwise I think the impact is not big. It's not like the company size will help grow the business.</p>
EE Air & Ocean Hong Kong Ltd.	<p>Yes, absolutely. The size, credibility or history of a company takes time to build up. These will definitely affect the customers' decision. If I don't know about your company, and it's just a no-name one, when compared to another which is well-known and has advertisements everywhere, the customer will pick them.</p> <p>First you have to know what type of customer it is. Let's say it's mid-sized. For tiny ones, they cannot store much so of course they will pick a cheap one. The only consideration is the price. And their goods are not expensive. But for a mid-sized company to select a 3PL, they will pick one which is credible and attains a certain scale. We can always negotiate the price. But should the price be higher for the larger ones? Not necessarily. If they want to get it, they'll get it. As the 3PLs want to get this kind of customer, the price won't be high. It just depends on whether they want to get this kind of customer or not. But from the customer's perspective, it's always good if you are considered as sizable.</p>
FF Freight Ltd	Absolutely.
GG Air Forwarders (H.K.) Ltd.	Absolutely. Like what you've just said, headquarters will take a look at the company size. For large-sized companies, they will at least pick mid-sized 3PLs. Very rarely will they find tiny ones because they may not be able to cover the network needed. So it has a certain impact.
HH Worldwide	Absolutely. It's extremely important. If we are talking about the

(HK) Ltd.	<p>logistics services that we are providing, the investment for infrastructure is huge. If a company is very small in size, it cannot afford such investment. And if you don't have enough manpower...say in general a team of a few dozen people serves one customer. For small-sized companies, they don't even have a few dozen people in total. For us, we have 600 to 700 employees in Hong Kong. Right?</p> <p><i>Size means capacity. There are two key criteria for the 3PL services we are providing, capability and capacity. The two Cs. You need to have both. You can't miss any one of them. Capability includes finance.</i> Do you have the money to invest? I've just met a customer. They need a warehouse of 200,000 square feet. Investment is \$30 million. How could a small-sized company take up this project? For a warehouse of this size, you need to deploy a few dozen people there. You'll need a few dozen trucks for delivery. Small-sized companies can't do this. <i>The entry barrier is high for this industry. For the 3PL I'm talking about. Not freight forwarding because freight forwarders don't have ownership. They just buy space from airlines and sell that service to the customers. Or buy space from shipping lines and sell that service to the customers. It's just like trading. But for us, we have to provide the warehouse, manpower, trucks for delivery, a good system, and KPI to meet the SLA.</i></p>
II Logistics Private Limited	<p>Absolutely important: if the customers are also SMEs, they have no concern to partnership with SMEs' 3PLs provided that the 3PLs are able to offer very competitive prices. However, for large-scale customers, they may prefer to partner with large-scale 3PLs.</p>
JJ Limited	<p>Of course size matters. Customers that need a 3PL must have a certain scale.</p>
KK Hong Kong	<p>Absolutely. This is about economies of scale. If a company is sizable, it can utilize and mobilize its existing resources as there are different types of customers as well as <i>peak seasons</i>. Some peak seasons are at month end and some are at quarter end. It can then mobilize its resources to cater for different customers' needs. With economies of scale and also mobilization, the package they offer must be good.</p>

	<p>Moreover, it depends on what kinds of customers they are. A large-sized forwarder may not entertain a SME. And what's the extent of in-depth services that a SME needs? This is questionable. If your company only has 10 staff, I don't believe you'll need services like PO management, pick-and-pack, kitting and postponement. You'll need things like DDU and DDP, just arranging the shipment. At most buying consolidation. Every company can do that. Only if your company is sizable to have such requirements. If you have such requirements, then only the large-sized companies can provide you the services you need, and in terms of cost too.</p>
LL Services Hong Kong Ltd.	<p>Yes, especially for logistics services. The first thing is economies of scale to see if you can leverage the resources. The second thing is whether you have a broad customer base which shows how much experience you have: the experience serving different types of customers and also handling different scenarios. The third point is about the network, which is quite critical for logistics. It can't run a standalone operation in one place only. Logistics has to be end to end, from one point to another point. How many 'other' points do you have? And the network capabilities are affected by the size or sale of a 3PL or 4PL.</p>
MM China Ltd.	Yes
NN Forwarding Limited	<p>For this question, strictly speaking, <i>it depends on how big your network is in Mainland China, and moreover, whether you have enough branches or offices in Mainland China. Hong Kong is just a finance centre. You can sign all the contracts in Hong Kong but for the operations, they are all in Mainland China. The reason is that Mainland China is the world's manufacturer. People come from all over the world to buy goods. No matter how good you are doing in Hong Kong, they will ask if you have any branches in Mainland China. If you say 'no', then it just stops there.</i></p>
OO Logistics	Absolutely. Like what I've mentioned earlier. Large-sized ones have

	<p>the network, IT as well as track and trace. All included. It's scalable. They can do everything. The question is whether they are willing to do it for you. For small-sized ones, it's very limited to one to two products. And things are very manual. Say you need a POD, at CEVA; we will just sign it and upload it to the system. And you can download it yourself. It's for a hundred years like I told you before. For small-sized ones, you send it by email. The question is whether the customer will accept that.</p>
PP Hong Kong Limited	<p>Absolutely. Especially, how many warehouses do you have globally? How many locations? How many offices do you run by yourself? What is your know-how in each location. They are all relevant. This size has to be scalable for 3PLs. <i>It's a globalised market. It's not enough for one to just perform well in Hong Kong. It only makes sense if you manage to bring over your capabilities to Mainland China, Asia and even around the world. Many customers demand a rapid expansion as the market is changing every single day. Like this year something changing in the US and a few quarters later it may be changed in Russia. No one knows what will happen next. So customers are now looking for global partners.</i> It's a must. If a 3PL wants to be successful, it needs to get involved...</p> <p>We serve large-sized customers. For smaller ones, we have a team to serve them too. Things are standardized for the smaller-sized ones. They have to follow the way we work. I tell you how things are done here and what the standard price is. If you think it is okay, then we will provide our services to you. There won't be many tailor-made services though. There are two types. For large-sized customers, we are very flexible. For small-sized ones, I will provide them with the templates and you follow my standards which will definitely lead you in the right way. And this is the cost. It depends on whether you think it is worth the price or not. If not, you find other companies to do it for you. If yes, use us.</p>

Table 4.13 Determination of 3PLs scale for the selection decision in the industry

Remarks on Table 4.13

The interview data suggest that the size and scale of 3PLs is important to the customer's decision-making.

4PL development in Hong Kong

AA (HK) Ltd.	Nil
BB Ltd.	<p>For 4PLs like Li & Fung, <i>they need to take up financing as well</i>. If not, there's no reason for them to let you manage the business. You don't have a say. The person you are managing knows who their boss is. 'You are not the one who pays me. Why do you care so much?' Of course you can say 'if you don't listen to me, I will ask them not to pay you'. But in general, it depends on the level of services the user company is looking for. As far as I understand, if you are a 4PL, you need to handle the sourcing part as well.</p> <p>So if you taking up the sourcing part as well, for the costing strategy...the user will give you an all-in-one fee. You see? For example, if I say I need this cup to be ready at a certain price, I won't care about the details. You help me handle the whole thing. Basically I won't bother where they will be manufactured. I will just give you a set of specifications, for example the environmental requirements, green products, etc. I give them all to you. You help me think. I'll put it out to tender and a few of you compete...bid...okay, this is FSC (Forest Stewardship Council) authorized and certified, this and that...and the cost. I will charge you a package price from getting the products ready to delivering to your shops. Then this is 4PL, right? That's how you can manage them. But for a smaller company, you will require much more knowledge. Right? And you need to think about financing as well.</p> <p>Some companies have actually asked us to do similar things, <i>but the</i></p>

	<p><i>areas that need to be covered are way too many. It's not that easy to find a 3PL to switch and become a 4PL all of a sudden. Because the areas covered include not only local distribution but also global forwarding, multi-model transportation, trade compliance and even taxation and customs requirements of different countries. You need to know that too. So it's not easy for a 3PL to pick up this kind of knowledge within a short period of time. Though you can say that you know how to handle shipping administration, you may only know one market but not the others. Unless you are an international cargo shipping agent, it's not easy to become a 4PL.</i></p>
CC (H.K.) Ltd.	<p>I guess for 4PL, the product itself has to be really strong because it's the product which a 4PL cannot replicate. Let's take P&G's food or hygiene products as an example. The products need to meet a lot of standards and requirements. Even if I know how your products are manufactured, I can't get your business because I really don't know how to make them. The most important thing is the product itself. For other information, it's okay for others to know, like who their customers are and their selling price. I wouldn't be able to get your business anyway. The product needs to be unique for 4PL to work.</p>
DD Ltd.	<p>Nil</p>
EE Air & Ocean Hong Kong Ltd.	<p>At least they need to have very experienced staff. <i>For finance, if you are a 4PL, then you need to manage the customer's service providers too, and the turnover in between is big. For IT, the IT system needs to be strong to support the data flow.</i> Do they need a huge space? Maybe not. Because they are just doing the management part, so probably not a huge warehouse or office as their role is management. That's what I can think of.</p> <p><i>If talking about Hong Kong, I think it's not mature enough. People are not used to it. It has to be moved forward step by step. In the past, people didn't even really like 3PL. They do it on their own. But as time passed by, they saw that 3PL works and it is okay for them to outsource the warehousing part. Then it has become successful. I</i></p>

	<i>think 4PL needs some time to develop. I don't have much idea about why people are not using it. In my view, I think it will take a while for people to accept this.</i>
FF Freight Ltd	Nil
GG Air Forwarders (H.K.) Ltd.	Nil
HH Worldwide (HK) Ltd.	<p>I've never believed in this term. More than 10 years ago, we were joking like 'you don't know how to do 3PL and you don't have the money. Then you do 4PL'. They teach the others... They don't have the ability. <i>They can't handle 3PL and go to do 4PL. We found it very strange.</i> How could you teach me the way to manage my business?</p> <p><i>You can't even provide 3PL services, then you make up the 4PL name. In the past, the US had a bunch of companies developing some systems and selling to customers like SAP. That's something else. It teaches people how to implement the system and improve the supply chain. They don't have warehouses but just a system. And they call themselves 4PL. They say they would help you with 3PL and get the 3PL business by charging an introduction and implementation fee. Actually you don't know need anything.</i> If you have a good system, you can just sell it to me and I'll implement it. So this is where 4PL is coming from. I've always voted against it. I'm very opposed to this term. It's crap.</p>
II Logistics Private Limited	<p>I think <i>talent, because talent is very important.</i> As the current 3PLs' industry lacks talent, how can talent be fostered in their company to offer 4PLs services? So, I believe talent is the most important thing. Actually, are Hong Kong's existing situations not mature enough to develop 4PLs? In the market, whether have strong demand for 4PLs services? In other words, do customers have demand to appoint 4PLs to manage their supply chain? If this is not the climate for 4PLs in Hong Kong, <i>I am afraid the motivation for existing 3PLs to migrate to 4PLs is not strong enough.</i></p>
JJ Limited	<i>There should be demand for 3PL but not a lot for 4PL. Hong Kong is</i>

	<i>not mature for developing 4PL at this moment.</i>
KK Hong Kong	<p>I wouldn't say that. They just provide a little more to their customers. I don't see that any functions are performed, maybe just some KPIs and information management. <i>As a 4PL, there is lots more that you have to cover, such as checking the KPIs of different companies, conducting QBR with vendors and also sourcing. It's not just overseeing the supply chain and the KPIs. You may also need to give thought to their business model. Or if they have any new products launching, you have to think about the best way to arrange, pack and design the box. For now, I believe the 3PLs are not doing this. This is what 4PLs do, taking a consultant role. They may say 'you don't need such a big box, or else the volume will be huge'.</i> A 3PL may suggest making a bigger box as they can charge more because of the increased volume. They see things differently. Everyone just cares about themselves. 4PL will really give you advice, saying 'the box just needs three layers and the protection is strong enough', while a 3PL plus may say 'the box should be bigger and you should wrap it with bubble wrap or expanded polystyrene to give better protection' as the volume will be increased then. They give different advice. They focus on their own benefits and their goal is to make more money out of it. 4PLs really help design the logistics solution, review, plan and think strategically how things should be done. It's not popular in Hong Kong as what we do is just transportation arrangement. The advice we give is very limited. Not many companies are comfortable with outsourcing the entire logistics operations. They want someone in-house.</p>
LL Services Hong Kong Ltd.	<p>Industry or sector focused. One solution cannot fit all. There are different languages and areas of knowledge for electronics, pharmaceutical, cosmetics, food and retail. So one of the requirements is to build different sectors. The other thing is that a 4PL must have a basic network in terms of global or regional presence. It has to be region focused with a strong network to support. Like what I've just said, it must be end to end. Thirdly, a 4PL has to be strong in the areas of both transport and warehousing. That's why 3PLs and 4PLs always</p>

	<p>work together, and they can leverage the resources. <i>If someone outsources work to you, you can't just outsource it to another party. If you take up the monitoring role only, it's very hard for you to assure the quality. This is the third point. The fourth point is financing, not just lending it out but also for procurement. The cost of a supply chain is not low, like warehouse, labour, rental, lease plus freight and transport. You also need to cover procurement like consumables or other ad-hoc procurement so you have to be strong in terms of finance. And also people, knowledge and professionals.</i></p> <p>There's demand in Hong Kong but there are geographical limitations. Unlike Mainland China, Hong Kong is a very small place. Companies like SF Express and YTO Express exist because of the rise of e-commerce. And for Europe as well. Hong Kong plays a role as a transit point geographically or a free port for in- and out-bound. It just takes an hour and a half going from East to West in Hong Kong. How many domestic services can you provide here? So we have to focus more on international transport and trade. There is always demand for that. But it's not mature enough. In the last 10 to 15 years, many new models have been formed; by that I mean sales channels like e-commerce and some other ones, and trading models as well as the relationship between distributors, retailers and DCs. Hong Kong started doing this a long time ago, but from physical handling to trading solutions, and now to the new trading models and sales channels, there are still gaps in between. It's a problem. Also for IT. It is not easy for 3PLs or 4PLs. <i>There are too many 3PLs in such a small place. For those SMEs and local firms, they find partners and outsource and find partners...it is very hard to standardise the IT requirements.</i> Only the large-sized companies can do it on their own. I think there's demand but not the supply. It's not a showstopper problem, it's just that it cannot perform better. It's not like if you don't have this, you can't run the business. Say if you don't have this IT platform, you can't run the business. It's not something like this.</p>
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	Things may not match so you can only do 60% while the other 40% may not be able to be done.
MM China Ltd.	Nil
NN Forwarding Limited	<i>For SMEs, they don't have the resources.</i> It must be the international logistic companies which have the ability. For the big buyers, if they don't have a shipping department and outsource it all to a 4PL, the company has to be sizable. <i>If you shut down tomorrow, then it's really bad for us and all our orders will be in a mess. Secondly, can it be operated that smoothly? This is not on the operations level. It's about the things I mentioned earlier, the legal status. Like the bill of lading, which shipping companies or airlines use, and also the routing. They all play a part in the insurance covered. There are different kinds of protection for direct services, deferred services, different carriers and different liners. So I think that it's ideal but lots of coordination is needed among different parties. So for the development of 4PL, I think it will take 5 to 10 years to see some new things coming out.</i>
OO Logistics	The decision makers are still in Hong Kong but not the goods. They are shipped out from other countries. But many deals are still made in Hong Kong. For Asia, it's Hong Kong, Shanghai and Singapore. Singapore is facing even more challenges. South East Asia has a lack of goods now.

<p>PP Hong Kong Limited</p>	<p>Not for Hong Kong. Not standalone 4PLs. It's the other way round. A 3PL has to have the qualities of a 4PL. It wouldn't work if you can't provide something physical. Say, starting a 4PL business and the company is called XYZ Consultants 4PL, it's not sustainable. If you are lucky, you may get a few deals. Then you can't survive. There won't be much business.</p> <p>You need to have something physical. Like what I've mentioned before, you have to work together with the customers to implement the 4PL solutions. If you don't have something physical, you can't work together with the customers. Right? It's impossible for a 4PL to go to the warehouse with their customers and find another 3PL to do the work. It's a waste of time. The reason is that the 4PL's solution may not match the 3PL's synergy. If they don't match, you can't work it out. And the 3PL may not be that open and flexible to cooperate with you and implement the solution which you think is ideal. It may not work out. And there's a high chance that it will fail. I don't care if you have a strong 4PL background with all the templates, procedures and reading documents. If they don't cooperate, you're stuck in a dead-end. To me, the risk of being a 4PL is too high. As I've always said, there's a high chance that it will fail. If the failure rate is high, then the risk is high with a very low success rate. For a business with such a high risk and low success rate, what is the value of it? It's very questionable. This is about standalone 4PLs. On the other hand, a 3PL can provide something physical, and it can get involved and communicate well with the customers, and work together hand in hand. The market is always changing. First of all, I don't think a customer can tell a 4PL clearly about the assumptions and all the data...I don't believe in that. Even for a sizable company which uses systems, they can get all the system records but it doesn't mean that the data are accurate. If a 4PL doesn't have accurate data, how can they come up with a good solution? I don't understand. No matter how good your system is, how automatic everything is, it's useless.</p>
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Table 4.14 4PLs development in Hong Kong

Remarks on Table 4.14

The interview data suggest that the 4PL development in Hong Kong is not very positive, and most of the customer organisations in Hong Kong have no intention to use 4PLs. Moreover, the existing 3PL service providers are not experienced enough to provide 4PL services at this stage, so in other words, there should demand 3PL services but not 4PL services in general. In this circumstance, Hong Kong is not sufficiently mature to develop 4PL services at the moment.

4.4. The 3PLs' point of views for supply chain orchestration

In the chapter 2, number of scholars have been well defined the role and responsibility for supply chain orchestration in academia. However, the interview result reveal that some 3PLs in the logistics industry may have different understanding and interpretation of supply chain orchestration. Below table is the key summary of supply chain orchestration between academia and logistics industry.

In Academia	In Logistics Industry
Supply chain orchestration as a 3PL takeover of management, administrative and coordinative responsibilities in the supply chain. Supply chain orchestrators undertake on behalf of the customer firm the activities of managing, coordinating and focusing the value-creating network within the supply chain. (Christopher, 2005)	There are some 4PLs taking up the role of supply chain consultant. 4PL is possible and actually 3PLs are doing part of 4PLs' job. It's hard to easily distinguish between a 3PL and 4PL. Maybe a 3PL is already providing some 4PLs' services. And a 4PL may not purely be a 4PL. They may need to own certain things in order to provide 4PL services.
Managing key activities such as logistics activities planning, managing channel	Nowadays, it's very hard to distinguish between 3PL and 4PL. No any company

members' relationships and control the day-to-day logistics activities to create and sustain competitive advantages on behalf of their clients at economic and professional levels. (Zhacharia et al., 2011)	can just provide 4PL services and that's it. For now, 3PLs need to function like 4PLs.
Supply chain orchestration can be interpreted is the strategic coordination of all key functions and activities across the supply chain. It may involve all the processes starting from "order to cash" conversion cycle, i.e. from the processing of sales orders, stocks requisition and delivery, goods storage in the warehouse, picking, packing and dispatching, through to the delivery of goods to customers and subsequently cash collection. (Lyer & Zelikovsky, 2011)	For 4PLs like Li & Fung, they need to take up financing as well. It's not that easy to find a 3PL to switch and become a 4PL all of a sudden. Because the areas covered include not only local distribution but also global forwarding, multi-model transportation, trade compliance and even taxation and customs requirements of different countries. It's not easy for a 3PL to pick up this kind of knowledge within a short period of time. Though some 3PLs can say that they know how to handle shipping administration, they may only know one market but not the others. Unless they are an international cargo shipping agent, it's not easy to become a 4PL.
3PLs have evolved into significant leadership roles serving as a unique "orchestrator" within the supply chain to help facilitate supply chain management best practices. (Zhacharia et al., 2011)	Apart from the need to have very experienced staff. For finance, 4PL needs to manage the customer's service providers too, and the turnover in between is big. For IT, the IT system needs to be strong to support the data flow.
	Some 3PL not do well then go to do 4PL, they can't even provide 3PL services, then 3PL make up the 4PL name. In the past, the US had a bunch of companies developing some systems and selling to customers like

	<p>SAP. That's something else. It teaches people how to implement the system and improve the supply chain. They don't have warehouses but just a system. And they call themselves 4PL.</p>
	<p>As a 4PL, there are lots more that 3PL have to cover, such as checking the KPIs of different companies, conducting QBR with vendors and also sourcing. It's not just overseeing the supply chain and the KPIs. 3PL may also need to give thought to their business model. Or if customers have any new products launching, they have to think about the best way to arrange, pack and design the box. For now, believe the 3PLs are not doing this. This is what 4PLs do, taking a consultant role. 4PLs really need to help design the logistics solution, review, plan and think strategically how things should be done.</p>
	<p>4PL must have a basic network in terms of global or regional presence. It has to be region focused with a strong network to support. Moreover, 4PL has to be strong in the areas of both transport and warehousing. That's why 3PLs and 4PLs always work together, and they can leverage the resources. If someone outsources work to them, they can't just outsource it to another party. If they take up the monitoring role only, it's very hard for them to assure the quality. Another point is financing, not just lending it out but also for procurement. The cost of a</p>

	supply chain is not low, like warehouse, labour, rental, lease plus freight and transport. They also need to cover procurement like consumables or other ad-hoc procurement so they have to be strong in terms of finance. And also people, knowledge and professionals.
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Table 4.15 The interpretation of supply chain orchestration between academia and logistics industry.

Remark on Table 4.15

The interpretation and understanding between academia and logistics industry suggest that the term of supply chain orchestration may not be able to define clearly nowadays, the major reasons may the thought of supply chain orchestration in academia may well defined and explained perfectly but in reality, some roles and responsibilities of supply chain orchestration may not be easy to achieve in logistics industry that created the interpretation and understanding gaps.

4.5 Summary

Chapter 4 has presented the results of the analysis undertaken of the interview data to investigate the existing Third-Party Logistics Service Providers (3PLs) in Hong Kong regarding whether they are able to undertake strategic coordination and orchestration of their customers' supply chains and facilitate supply chain management best practice. More discussion is summarised in Chapter 5. Chapter 4 has also investigated what the logistics functions outsourced to 3PLs in Hong Kong are (logistics, warehousing, break-bulk, load consolidation and transportation) and the scope and criticality of the services provided by 3PLs to their customers in Hong Kong (logistics operational level but not strategic level).

CHAPTER 5

DISCUSSION, SUMMARY AND CONCLUSION

5.0 Introduction

Chapter 5 presents the project conclusions and summary of the findings of this research. Chapter 5 is structured as follows: Section 5.1 presents a summary, discusses the findings and conclusion together with constraints and barriers to the development of orchestration in Hong Kong as well as the general implications arising from the findings in Chapter 4. The initial research aims and objectives that triggered this research and how these aims and objectives have been addressed and answered are also briefly summarised. Section 5.2 discusses the research limitations; Section 5.3 presents a discussion of the resulting implications for practice; and finally, Section 5.4 concludes with a summary of the project and suggestions for future research.

5.1 Findings, summary and conclusion

5.1.1 Findings

Based on the research gaps identified in Chapter 2 under Section 2.4, this research project sought to address and explore the following research questions:

Research Question 1: What are the logistics functions outsourced to 3PLs in Hong Kong?

This question required conducting semi-structured face-to-face interviews with the senior management of large manufacturing, retailing and distribution organisations in Hong Kong who are knowledgeable about the role and functions of 3PLs in the management of their

company's supply chain and logistics operations and strategy as well as the types of 3PL service that they procure. After the data collection and subsequent analysis, most of the interviewees indicated that they procure logistics and warehousing services including airfreight, sea freight, domestic delivery, order picking, order processing, storage, break-bulk, load consolidation, pick-and-pack, and track-and-trace, etc. They have the intention to keep procuring logistics and warehousing services from the 3PL service providers for a longer period, these are common operational 3PL practices.

Research Question 2: What is the scope and criticality of the services provided by 3PLs to their customers in Hong Kong? This question required conducting semi-structured face-to-face interviews with the senior management of 3PL service providers in Hong Kong, who are knowledgeable about their company's operations and the services they provide in regard to strategic support, coordination and orchestration of their customers' supply chain with a view to conferring competitive advantage. After the data collection and subsequent analysis, most of the interviewees indicated that the scope of logistics service they provide to their customers is conventional or traditional 3PL services such as sea freight, airfreight, warehousing, trucking, trains, hub operations, value-added services, customs brokerage, inventory management, purchase order management, and cargo consolidation (LCL), etc. The criticality of the services they provide to their customers ranges from low to middle level but not strategic level due to most of their customers not being willing to disclose to and share their sensitive information with 3PLs and no intention to carry out system integration with 3PLs to enhance the visibility of shipment status in terms of shipment trace and track, purchase order management, etc.

Research Question 3: To what extent have 3PLs become supply chain ‘orchestrators’ in Hong Kong? Evidence suggests that orchestration is not occurring. After the data collection and subsequent analysis, most of the interviewees indicated that the range of services currently offered by 3PLs has broadened considerably from transportation and warehousing to more advanced supply chain solutions. However, orchestration does not seem to be happening in Hong Kong from the view of 3PLs and their customers. One of the interviewees from a 3PL stated:

On the other hand, orchestration is required to manage the whole supply chain relationship on an end-to-end basis; this may create another difficulty for 3PLs as stated:

Do you think I can manage the supplier? No. Vice versa, if they are selling goods to a local supermarket, I can't manage the order quantity and the delivery time because these are business decisions. It's between them. We just help execute based on their decision. So we can't manage. As for the relationship, for a buying office, they contact their inventory staff but not us. They don't need to contact us. How can we manage them?

Actually this is confusing to everyone. Actually it's hard for you to get in touch with everyone in the whole supply chain. You are not looking after sourcing. You are not taking charge of procurement. You stand behind the buyer in the chain. If you say the supply chain starts from here, then you manage the whole chain but not anything before the buyer. No 3PL can be in touch with the buyer.

No, I don't think so. We get involved in part of it and we are able to provide a solution. But if you are talking about orchestrating or restructuring their supply chain, I think we are not at that level yet.

I think for 3PLs...I mean in Hong Kong, it's impossible for us to manage the whole supply chain relationship on behalf of our customers. It's not that easy. And it's not something for us to do. Our role is providing services. About managing the customer's relationships, it's the principle...the user's responsibility. Our company is not doing this.

From the customer's perspective, all the interviewees reveal that they don't have the intention to rely on 3PLs to manage their whole supply chain on an end-to-end basis as they are aware that outsourcing involves working closely with the third party and

transferring and sharing management control with decision-making of a business function to outside specialist service providers, which involves a higher degree of two-way information exchange, coordination and trust between both parties; however, they have hesitation to share sensitive information and IT system integrations with their 3PLs and as a result the 3PL service providers may find it difficult to become supply chain orchestrators in Hong Kong.

5.1.2 Summary of findings

The terminology of supply chain orchestrator may be more common in the USA and Europe than Asia especially in Hong Kong. The research findings reveal that Hong Kong may have less demand for the appointment of a supply chain orchestrator to manage their whole supply chain, although most 3PL service providers reveal that the range of services currently offered by 3PLs has broadened considerably from transportation and warehousing to more advanced supply chain solutions. Moreover, the role of 3PL services provider is to provide an integrated logistics solution with a diverse scope of services from traditional simple services to a wide range of logistics activities with cost-effectiveness, flexibility, high service quality and customisation. Nevertheless, the 3PL service providers are an inability to provide 4PL service at the moment; thus, there seems to be no strategic depth or orchestration in the sense of what Zacharia et al., (2011) refer to as orchestration in Hong Kong.

5.1.3 Conclusion

In conclusion, the research findings can be synthesised as follows:

Orchestration does not seem to be happening in Hong Kong from the view of 3PLs and their customers. The fact that the current role of third-party logistics service providers do

not purely provide traditional transportation delivery and warehousing storage services to their clients at competitive cost, the role of 3PLs has evolved from providing traditional and straightforward logistics services to complex and one-stop-shop logistics services but the existing 3PL service providers are unable to become supply chain orchestrators to manage the whole supply chain relationship for their customers end to end at the moment in Hong Kong according to the semi-structured face-to-face interview findings.

Moreover, the constraints and barriers to the development of orchestration in Hong Kong include:

1. The demand for orchestration services is relatively low;
2. Customer organisations may be unwilling to share sensitive information and IT system integration with their 3PLs;
3. Some existing 3PL service providers may not have enough practical experience, IT infrastructure, talent, and supply chain professionals to provide one-stop-shop services of a supply chain orchestrator nature;
4. Inability to manage activities from multiple 3PL service providers simultaneously;
5. A supply chain orchestrator needs to understand the specific industry sector businesses in which those 3PLs intend to provide 4PL services but the existing service providers lack such practical experience and do not have the ability to manage whole supply chains from end to end;

6. The role of 4PLs needs to provide financing to their customers but most of the 3PLs may lack financing ability to support their customers, etc.

5.2 Limitations of the research

There were some limitations to this research. As for the methodology adopted in this research project, the selection of the sample only focused on Hong Kong. The study was based on respondents' experiences and perspectives in their respective organisations, and it is assumed that there was no bias in their data and answers provided in their semi-structured face-to-face interviews.

5.3 Resulting implications for practice

This study investigated the third-party logistics providers as supply chain orchestrators in Hong Kong. The role of third-party logistics service providers have already evolved from providing traditional and straightforward logistics services to complex and one-stop-shop logistics services; thus, senior executives and managers in the manufacturing, retailing and distribution organisations may need to recognise the potential contribution of logistics outsourcing and be aware that supply chain orchestrators are able to benefit their organisations.

Moreover, they should be aware of the additional roles that third-party logistics play (such as neutral arbitrator and collaborator) through logistics outsourcing which can be seen as strategic in their supply chains. Nevertheless, supply chain orchestration does not seem to be happening in Hong Kong as the existing 3PL service providers are incapable of becoming supply chain orchestrators to manage the whole supply chain relationship for

their customers end to end at the moment in Hong Kong according to the semi-structured face-to-face interview findings. This is contrary to the argument of Zacharia et al., (2011).

5.3.1 Contributions to professional practice

This thesis was made a significant contribution to the body of knowledge on supply chain management with focus on supply chain orchestration development in Hong Kong. Moreover, as the freight forwarders, 3PL firms or customer organisations managers should be aware that supply chain orchestrators is the future trend to further streamline and optimize the supply chain networks; therefore, they should actively start to consider the valuable contributions and benefits created from the supply chain orchestrators, such as standardizing data and information technology processes across the supply chain, supply chain orchestrators also enable the effective planning, improve overall performance, shipments trace and track ability to enhance visibility, improve relationship by tight collaborating with other channel members of the supply chain.

On the other hand, this thesis also provide the insights and current Hong Kong orchestration developments challenges and opportunities to the managers and senior executives from the freight forwarders and 3PL firms to self-assess their resources and company objectives in order for business transformation from 3PL players into the supply chain orchestrator. Finally, this thesis was also contributed to the customer organizations managers and senior executives who may actively to explore and engage the outsourcing strategy particularly understand the values that supply chain orchestrator can be created to their organisation (demand creation for supply chain orchestrator in Hong Kong).

5.4 Summary of the thesis and suggestions for future research

The findings of this study are that the role of 3PLs have evolved from providing traditional and straightforward logistics services to complex and one-stop-shop logistics services; however, the findings also indicate that the existing 3PL service providers are incapable of becoming supply chain orchestrators to manage the whole supply chain relationship for their customers end to end at the moment in Hong Kong and the demand for appointing supply chain orchestrators is relatively low.

The research findings suggest a number of directions for future research on this topic:

1. This research study used semi-structured face-to-face interviews with some senior management in both 3PL service providers and their customer organisations. Future research on this topic should use a large-scale survey to collect more different viewpoints from different levels not only limited to senior management in order to provide additional empirical support.
2. Future research may consider testing which type of industry is more appropriate to use 4PLs or supply chain orchestrators in their supply chain than others.
3. Future research may study what factors customer organisations will consider to appointing 4PLs or supply chain orchestrators in their supply chain.
4. Future research may further explore and evaluate any 3PL service providers that are already involved in a strategic partnership or complex partnership in Hong Kong.

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Appendix A: Interview protocol

Third-Party Logistics Providers as Supply Chain Orchestrators: An Evaluation in Hong Kong Interview Schedule version 2, 03-02-2016

Dr Richard Oloruntoba (Supervisor) NG, Tsz Kin (DBA Candidate)

Establishing rapport and briefing the interviewee

- In order to enable personal introductions and develop a congenial atmosphere, the researcher arrives *first* where the interview session will take place.
- Upon arrival at the interview venue, the researcher will personally welcome the interviewee and thank them for participating in the research project.
- Once everyone is comfortable, the researcher will thank the interviewee for attending, and then *remind* them of why the study is being undertaken.

Motivation for the study

- How the information provided will be valuable to society/participant and business
- How information provided will be used
- Why interviewee makes an appropriate participant
- The type and quality of information we anticipate interviewees will provide

Research aims and objectives

- (1) Assess and evaluate the scope and depth of the functions outsourced to Third Party Logistics Providers (3PLs) in the Hong Kong context.
- (2) Assess and evaluate how strategic and critical the functions outsourced to Third Party Logistics Providers (3PLs) in the Hong Kong context is.
- (3) Assess and evaluate the extent to which 3PLs in Hong Kong undertake strategic coordination and orchestration of their customers' supply chains and facilitate supply chain management best practices.

Where the study is being undertaken

The University of Newcastle Australia / Interviews conducted in Hong Kong

Interviewees

C. Third Party Logistics Service Providers

- Individual managers in freight forwarding and Third Party Logistics Service Provider Companies
- Individual managers in warehousing organizations
- Individual managers in shipping, airfreight and transport
- Other relevant and knowledgeable logistics and supply chain management professionals

D. Customers of Third Party Logistics Service Providers

- Individual managers in manufacturing organizations
- Individual managers in retail organizations
- Other relevant and knowledgeable logistics and supply chain management professionals

Duration, schedule and venue of face to face interviews

- Interviews are to be conducted over a 12 week period (March to June 2016).
- Interviews expected to be 60 -90 minutes long
- Interview venue and time will be mutually negotiated with each interviewee

Ethical considerations that the interviewer will be following:

1. Interviewee name, title and company will not be disclosed to any one;
2. No names will be mentioned in the study or in any publication;
3. All information given will be treated with the strictest confidentiality;
4. The interviewee will be informed that the interview will be recorded using a digital voice recorder;
5. The interviewee will be notified that they may at any time ask for the digital voice recorder to be turned off;
6. The interviewee will be informed that if they wish to stop at any stage of the interview, they may freely do so without any explanation;

7. At the end of the introductory briefing, the interviewee will be asked whether they have any questions that need clarification;
8. The researcher will explain to the interviewee that unless otherwise specified, the questions relate to their own perceptions of the scope and depth of roles and functions of third party logistics providers in the Hong Kong context; and
9. The researcher will then commence asking the questions taking breaks as required.

A. Interviewee details to be re-confirmed at interview

- Name of interviewee
- Position title
- Background education and qualification
- Length of work experience at company
- Company name
- Company sector (Shipper? Consignee? Manufacturer? Retailer? Distributor? Shipping company? Freight forwarder or 3PL?)
- Indicator of company size, turnover, number of employees and locations, valuation of physical assets of the organization, annual sales of recent years, ownership of the organization etc.

B. Scope, depth and criticality of functions of 3PLs in Hong Kong (for 3PLs)

- What types of logistics and supply chain management functions, roles, and services does your company provide to their range of customers?
- How deep are these functions, roles, and services?
- What types of functions, roles, and services do 3PLs in Hong Kong provide to their range of customers?
- How deep are these functions, roles, and services?
- How critical and strategic are the functions, roles, and services that your company provides to support the operations of your customer organizations?
- Does your company manage the cross border transportation or sourcing activities of your customers? (Give examples and specific details)
- Does your company have adequate IT infrastructure, talent, and supply chain professionals to provide one-stop-shop services to your customers? (Give examples and specific details)
- Does your company orchestrate and manage whole supply chain relationships for its customers on an end to end basis? (Give examples and specific details)

- Do third party logistics providers in Hong Kong orchestrate and manage whole supply chain relationships for their customers? (Give examples and specific details)
- Are you aware of instances where 3PLs orchestrate and manage whole supply chain relationships for their customers end to end? (Give examples and specific details)
- Please differentiate the functions, roles, and services that your company provides to its customers from those of your competitors in Hong Kong
- How strategic are the services provided by other 3PLs to their customers (i.e. your competitors)?
- Does the size/scale of third party logistics providers in Hong Kong impact customers' decision to select the 3PL as their strategic supply chain partner? (Give examples and specific details)

C. Scope, depth and criticality of services procured from 3PLs in Hong Kong (for customer organizations of 3PLs)

Your business

- How would you describe your business, its customers, and the services/products your company offers to its customers?
- What are the most important competitive attributes of your product and/or service offering to your customers?
- What are the benefits to the customer associated with the attributes of your service/product or its delivery?

Managing your logistics and supply chain systems

- Describe the operations and logistics of your company and its end to end supply chain?
- Who are your most important suppliers?
- Who are your most important warehouses, transporters, carriers, and material handlers?
- How do you coordinate / manage the physical material and information flows among these companies in your supply chain?
- Who manages / coordinates your supply chain?
- With whom does the power/leadership reside in your supply chain?

Use of 3PL providers: scope, depth and criticality

- Which roles, functions and services does your 3PL provider perform in your logistics and supply chain systems and processes? How widespread is this?

- Do you coordinate with your 3PL provider? (How do you coordinate with your 3PL provider? How often?).
- What is the level of intensity of your coordination with the 3PL that you use?
- Do you share resources such as IT systems, equipment and other assets with your 3PL provider whether provided by your company or the 3PL provider?
- Does your organization have IT systems integration with your 3PL to facilitate supply chain management in your company?
- Is there a clear supply chain leader in your supply chain? If yes, who? (Is your 3PL the supply chain leader?)
- With whom does the power/leadership reside in your supply chain?
- Who orchestrates your supply chain on your behalf? How do they orchestrate your supply chain on your behalf?
- What is the role of the supply chain leader or orchestrator in the successful (or unsuccessful functioning) of your supply chain?
- What are the inter-organisational coordinative processes for managing physical material flow in your supply chain (in-bound and outbound)?
- What are the coordination roles that the 3PL plays within your supply chain, if any?
- What are the administrative and operational benefits that your 3PL provider and/or orchestrator contribute to the success of your supply chain if any?
- How strategic and critical are these roles?

D. Closing the interview

- Greetings, gratitude and appreciation of interviewee time
- Summary of the main issues discussed and recorded
- Ask respondents if they agree to being contacted by the researcher by email/phone with possible follow up questions and to verify the transcript of the session. Respondents may also add additional insights to the interviews that may come to them after the interviews.
- Thank the respondent for his/her time, and if they have consented, remind them to contact 1 other manager or professional that meets the study's inclusion criteria, provide a copy of the Information Statement regarding the project to them and recommend that they contact the researcher.
- Ask follow up questions and probe further where appropriate and necessary.

Appendix B: Interview guide

Interview Guide

1 Scope, depth and criticality of functions of 3PLs in Hong Kong (for 3PLs)

- 1) What types of logistics and supply chain management functions, roles, and services does your company provide to their range of customers?
- 2) How deep are these functions, roles, and services?
- 3) What types of functions, roles, and services do 3PLs in Hong Kong provide to their range of customers?
- 4) How deep are these functions, roles, and services?
- 5) How critical and strategic are the functions, roles, and services that your company provides to support the operations of your customer organizations?
- 6) Does your company manage the cross border transportation or sourcing activities of your customers? (Give examples and specific details)
- 7) Does your company have adequate IT infrastructure, talent, and supply chain professionals to provide one-stop-shop services to your customers? (Give examples and specific details)
- 8) Does your company orchestrate and manage whole supply chain relationships for its customers on an end to end basis? (Give examples and specific details)
- 9) Do third party logistics providers in Hong Kong orchestrate and manage whole supply chain relationships for their customers? (Give examples and specific details)
- 10) Are you aware of instances where 3PLs orchestrate and manage whole supply chain relationships for their customers end to end? (Give examples and specific details)
- 11) Please differentiate the functions, roles, and services that your company provides to its customers from those of your competitors in Hong Kong

- 12) How strategic are the services provided by other 3PLs to their customers (i.e. your competitors)
- 13) Does the size/scale of third party logistics providers in Hong Kong impact customers' decision to select the 3PL as their strategic supply chain partner? (Give examples and specific details)

2 Scope, depth and criticality of services procured from 3PLs in Hong Kong (for customer organizations of 3PLs)

2.1 Your business

- 1) How would you describe your business, its customers, and the services/products your company offers to its customers?
- 2) What are the most important competitive attributes of your product and/or service offering to your customers?
- 3) What are the benefits to the customer associated with the attributes of your service/product or its delivery?

2.2 Managing your logistics and supply chain systems

- 1) Describe the operations and logistics of your company and its end to end supply chain?
- 2) Who are your most important suppliers?
- 3) Who are your most important warehouses, transporters, carriers, and material handlers?
- 4) How do you coordinate / manage the physical material and information flows among these companies in your supply chain?
- 5) Who manages / coordinates your supply chain?
- 6) With whom does the power/leadership reside in your supply chain?

2.3 Use of 3PL providers: scope, depth and criticality

- 1) Which roles, functions and services does your 3PL provider perform in your logistics and supply chain systems and processes? How widespread is this?

- 2) Do you coordinate with your 3PL provider? (How do you coordinate with your 3PL provider? How often?).
- 3) What is the level of intensity of your coordination with the 3PL that you use?
- 4) Do you share resources such as IT systems, equipment and other assets with your 3PL provider whether provided by your company or the 3PL provider?
- 5) Does your organization have IT systems integration with your 3PL to facilitate supply chain management in your company?
- 6) Is there a clear supply chain leader in your supply chain? If yes, who? (Is your 3PL the supply chain leader?)
- 7) With whom does the power/leadership reside in your supply chain?
- 8) Who orchestrates your supply chain on your behalf? How do they orchestrate your supply chain on your behalf?
- 9) What is the role of the supply chain leader or orchestrator in the successful (or unsuccessful functioning) of your supply chain?
- 10) What are the inter-organizational coordinative processes for managing physical material flow in your supply chain (in-bound and outbound)?
- 11) What are the coordination roles that the 3PL plays within your supply chain, if any?
- 12) What are the administrative and operational benefits that your 3PL provider and/or orchestrator contribute to the success of your supply chain if any?
- 13) How strategic and critical are these roles?

Appendix C: Human ethics approval certificate

HUMAN RESEARCH ETHICS COMMITTEE



Notification of Expedited Approval

To Chief Investigator or Project Supervisor:	Doctor Richard Oloruntoba
Cc Co-investigators / Research Students:	Mr Tsz Kin Ng
Re Protocol:	Third-Party Logistics Providers as Supply Chain Orchestrators: An Evaluation in Hong-Kong
Date:	18-Feb-2016
Reference No:	H-2015-0435
Date of Initial Approval:	18-Feb-2016

Thank you for your **Response to Conditional Approval (minor amendments)** submission to the Human Research Ethics Committee (HREC) seeking approval in relation to the above protocol.

Your submission was considered under **Expedited** review by the Ethics Administrator.

I am pleased to advise that the decision on your submission is **Approved** effective **18-Feb-2016**.

In approving this protocol, the Human Research Ethics Committee (HREC) is of the opinion that the project complies with the provisions contained in the National Statement on Ethical Conduct in Human Research, 2007, and the requirements within this University relating to human research.

Approval will remain valid subject to the submission, and satisfactory assessment, of annual progress reports. *If the approval of an External HREC has been "noted" the approval period is as determined by that HREC.*

The full Committee will be asked to ratify this decision at its next scheduled meeting. A formal *Certificate of Approval* will be available upon request. Your approval number is **H-2015-0435**.

If the research requires the use of an Information Statement, ensure this number is inserted at the relevant point in the Complaints paragraph prior to distribution to potential participants. You may then proceed with the research.

HREC approvals cannot be assigned to a new grant or award (ie those that were not identified on the application for ethics approval) without confirmation of the approval from the Human Research Ethics Officer on behalf of the HREC.

Best wishes for a successful project.

Professor Allyson Holbrook
Chair, Human Research Ethics Committee

For communications and enquiries:

Human Research Ethics Administration

Research Services

Research Integrity Unit

The Chancellery

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Callaghan NSW 2308

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Human-Ethics@newcastle.edu.au

Appendix D: Organisational consent form

Dr Richard Oloruntoba
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Phone: +612 49216813
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Organisational Consent Form for the Research Project:

Third-Party Logistics Providers as Supply Chain Orchestrators: An Evaluation in Hong Kong

Dr Richard Oloruntoba (Supervisor) NG, Tsz Kin (DBA Candidate)

Version 2

16/02/2016

We have read and we understand the Organizational Participant Information Statement.

We agree for our employee(s) to participate in the above research project and give our consent freely.

We consent to forwarding the invitation email on behalf of the research team to staff within our organisation that meet the inclusion criteria seeking their participation in a face to face interview.

We understand that the project will be conducted as described in the Organizational Information Statement, a copy of which we have retained.

We understand that our organization can withdraw from the project at any time up to the point of publication and do not have to give any reason for withdrawing.

We consent to participating in a face-to-face interview and having it digitally audio-recorded and transcribed. We understand that our organizations' information will remain confidential at all times.

We have had the opportunity to have our questions answered to our satisfaction.

We understand that quotes may be used from any interviews granted by our employees; and that participating employees will not be identified as the speaker, and details that may identify our organization will be altered to protect our organization's identity. We understand that participating employees can review quotes taken from our interviews with our employees if we desire and have the option to receive a copy of the summary of the study results.

Please tick:

We consent for our organization to participate in this research project.

Yes () No ()

We require a summary of the research results Yes () No ()

Print Name: _____

Contact details and mobile phone:

Signature: _____ Date: _____

Appendix E: Organisational participant information statement

16 Feb 2016
Dr Richard Oloruntoba
Newcastle Business School
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Social Sciences Building
The University of Newcastle
University Drive, Callaghan
NSW 2308, Australia
Phone: +612 49217114
Fax: +612 49216911
Email: Richard.Oloruntoba@newcastle.edu.au

Organisational Participant Information Statement:

Title of research project: Third-Party Logistics Providers as Supply Chain Orchestrators: An Evaluation in Hong Kong
Document version [2] dated 16/02/16

Introduction

This project evaluates the third-party logistics providers as supply chain orchestrators in Hong Kong, and it is being conducted by NG, Tsz Kin, a candidate for the award of the degree of Doctor of Business Administration in the Newcastle Business School at the University of Newcastle, Australia. The Chief Investigator is Dr Richard Oloruntoba who is supervising the student researcher.

Why is the research being done?

The purpose of the research is to

- (1) Assess and evaluate the scope and depth of the functions outsourced to Third Party Logistics Service Providers (3PLs) in the Hong Kong context.
- (2) Assess and evaluate how strategic and critical the functions outsourced to Third Party Logistics Service Providers (3PLs) in the Hong Kong context is.
- (3) Assess and evaluate the extent to which Third Party Logistics Service Providers (3PLs) in Hong Kong undertake strategic coordination and orchestration of their customers' supply chains and facilitate supply chain management best practice.

The knowledge acquired and disseminated from this DBA research project may be applicable to any business organisation that imports or exports goods, transports cargoes/freight on board ships in a global supply chain, or is a freight forwarder, warehouse operator or third party logistics service provider (3PL).

Which organisations can participate in the research being undertaken?

Two types of organisations can participate in the research: 3PL service provider; and their customer organisations.

(1) 3PL service provider

The selection criteria includes: (1) the 3PL service provider has more than 5 years business operations in Hong Kong, and (2) the potential participants are holding senior / top management positions (such as CEOs, COOs, Directors, Senior Managers, Managers) (3) have been in their positions for 2 or more years, and are knowledgeable about the 3PL's operations, services and roles in the supply chains of their customers.

and/or

(2) Customer organizations of 3PL service providers

The selection criteria includes: (1) the customer organizations of a 3PL service provider that has more than 5 years business operations in Hong Kong, and (2) potential participants within such customer organizations are holding senior / top management positions (such as CEOs, COOs, Directors, Senior Managers, Managers) (3) participating staff have been in their positions for 2 or more years, and are knowledgeable about their organisation's logistics and supply chain operations and the providers of 3rd party logistics services to their organisation.

Does your company have to take part?

Participation of your organisation in the study is completely voluntary, and your company may withdraw from the research at any point up to the point of publication.

What will your organisation do in the project?

Grant permission for the researcher(s) to undertake between 60 and 90 minutes face to face interviews with either the Chief Executive Officer (CEO), Chief Operating Officer (COO), Directors, Senior Managers, or Managers of your organisation at a mutually agreed time and place in Hong Kong.

Forward an invitation to participate email to staff members that meet the inclusion criteria on behalf of the research team. This will include the participant information statement and consent form.

During the interviews the researchers will ask the participants to discuss your organisation's experiences on the scope, depth, and criticality of the role of Third Party Logistics Service Providers (3PLs) in the management of the supply chains of their customers in Hong Kong.

For customer organisations, participants will be asked to discuss their organisation's experiences and perspectives on the scope, depth, and criticality of the role of their Third Party Logistics Service Providers (3PLs) in the management of their supply chains.

To ensure we have an accurate record of the discussion we will take notes during the interview, and the interview will be audio-digitally recorded, and transcribed by the researcher with the permission of the participants from your organisation. We will send a copy of the participant interview transcript to each participant 4 to 6 weeks after the interview for the participant to review in order to ensure accuracy, or to add further information should they wish. Participants are also asked to nominate another manager for their participation in the research.

Please sign the signature section at the end of the information statement

What are the risks and benefits of participating?

There will be no risk to your organisation in participating in this research. There is no risk of any infringement of any of the rights, the privacy, or professional reputation of any person, organisation, or institution involved in participating in the research. Also, there is no infringement, or risk of infringement of sensitive business information, trademark, and intellectual property. Hence, there are no expected risks arising from the conduct of this research. The findings of the research will be beneficial for broadening the understanding of the role of 3PLs by managers, academics, business people, policy makers, and the wider community.

What happens to the information in the project?

The information that your managers give during the interview will be kept in utmost confidence. Any information which is collected, or reported will have your organisation's name removed so your managers and your company cannot be identified. Also, the identity of your company and participating managers will remain confidential throughout the research and publication process. Records of participating organisations will be disguised as, for example, 'Organisation A', 'Interviewee B' and so forth. Data gathered from the face to face recorded interviews will be stored on the researcher's digital Dictaphone and then copied to a personal laptop computer after each face to face interview.

A backup duplicate CD-ROM will also be burned when each interview has been completed to ensure that no data is lost. All interview transcripts and subsequent transcript reviews and updates will be stored on the researcher's personal laptop computer until their return to their University office, at which time the interview transcripts will be downloaded to the researcher's university desktop computer. Access to both the researcher's personal laptop computer and university desktop computer is through a password known only to the researcher.

Sophos virus software and various firewalls are used to protect the data on the University of Newcastle network. The backup CD will be kept in the researcher's

office drawer locked away with their access key. The material on the Dictaphone and personal laptop computer will be erased after a minimum of 5 years according to University of Newcastle policy. The data gathered from both the face to face interview and reviewed transcripts will likewise be destroyed 5 years after the interviews (year 2021), in accordance with University of Newcastle policy. Findings will be written up as part of a DBA thesis, and may be submitted and published in academic journals. Within any publications no names or organisational details will be disclosed, and all recordings will be for the use of the research team only.

How will the information collected about the experiences of my organisation be used?

The interview data will be analysed in order to determine the scope, depth, and criticality of roles performed by Third Party Logistics Service Providers (3PLs) in managing their customers' supply chains, with the methodology utilised in obtaining the data included in the researcher's doctoral thesis. The results of the analysis may also be utilised in future academic journal articles which the researcher may write in order to broaden the understanding of the topic by academics, shipping companies, freight forwarders, 3PLs and other businesses, managers, and policy makers. However, individual participants will not be identified in any reports arising from the project.

It is important to note that participants will be able to review the interview recordings and/or transcripts. Participants may also request the editing or deletion of their contribution in the interview transcripts, and/or updated transcript reviews. Participants have the option of requesting a summary of the research results once analysis of data is finalized.

How to indicate interest for your organisation to participate

Please read this Organisational Information Statement and be sure you understand its contents before you consent for your organisation, and its employees to participate. If there is anything you do not understand, or you have questions, please contact the researcher (TszKin.Ng@uon.edu.au) or the Project Supervisor: Richard.Oloruntoba@newcastle.edu.au).

If you are happy for your organisation to participate in the study we will ask you, or an authorised person in your organisation to complete and sign an Organisational Consent Form. Completing this form confirms that (1) you are granting informed organisational consent for your organisation, and eligible interested employees of your organisation to participate in the research, and (2) your organisation is happy for us to audio record and transcribe the interview. Interested organisations can indicate their interest in participating by signing and returning the attached Organisational Consent Form using the reply-paid envelope provided. One of the researchers will then contact the three senior managers of your organisation to seek their own consent and subsequently to arrange a time and date convenient for them for the researchers to conduct the interview.

Complaints about this research

This project has been approved by the University's Human Research Ethics Committee Approval Number [**H-2015-0435**]. Should you have concerns about your rights as an organisational participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone +61 2 49216333, email HumanEthics@newcastle.edu.au

Name of authorised person-----

Signature -----

Date-----

Researchers' contact details:

Mr. NG Tsz Kin
Newcastle Business School
The University of Newcastle
1 University Drive, Callaghan, NSW 2308
Email: TszKin.Ng@uon.edu.au
Mobile Telephone: (852) 9450 7980

And

Dr Richard Oloruntoba
Newcastle Business School
The University of Newcastle
1 University Drive, Callaghan, NSW 2308
Email: Richard.Oloruntoba@newcastle.edu.au
Telephone: 02-49217114

Thank you for considering this invitation.

Appendix F: Participant consent form

Dr Richard Oloruntoba
Newcastle Business School
Faculty of Business and Law
Social Sciences Building
The University of Newcastle
University Drive, Callaghan
NSW 2308, Australia
Phone: +612 49216813
Fax: +612 49216911
Email: Richard.Oloruntoba@newcastle.edu.au

Consent Form for the Research Project:

Third-Party Logistics Providers as Supply Chain Orchestrators: An Evaluation in Hong Kong

Document version [3] dated 16/02/16

Dr Richard Oloruntoba (Supervisor) NG, Tsz Kin (DBA Candidate)

I have read and I understand the Participant Information Statement.

I agree to participate in the above research project and give my consent freely.

I understand that the project will be conducted as described in the Information Statement, a copy of which I have retained.

I understand that I can withdraw from the project at any time up to the point of publication and do not have to give any reason for withdrawing.

I consent to participating in a face-to-face interview and having it digitally audio-recorded. I understand that my personal information will remain confidential to the researchers.

I have had the opportunity to have my questions answered to my satisfaction.

I understand that quotes may be used from my interview; but that I or my organisation will not be identifiable as details that may identify me will be altered to protect my identity. I understand that the Researcher will himself transcribe the audio recordings and I can review my interview transcripts which will be sent by email after 4 to 6 weeks of the interview for any possible corrections in order to ensure accuracy. If I desire, I have the option of requesting and receiving a summary of the study results.

I consent to contact 1 other manager or professional that meets the inclusion criteria, provide them with a copy of the Information Statement regarding the project.

Yes () No ()

I will like to receive a summary of the research results Yes () No ()

Print Name: _____

Contact details and mobile phone:

Signature: _____ Date: _____

Appendix G: Participant information statement

Date: 16 Feb 2016

Dr Richard Oloruntoba
Newcastle Business School
Faculty of Business and Law
Social Sciences Building
The University of Newcastle
University Drive, Callaghan
NSW 2308, Australia
Phone: +612 49216813
Fax: +612 49216911
Email: Richard.Oloruntoba@Newcastle.edu.au

**Participant Information Statement for the Research Project:
Third-Party Logistics Providers as Supply Chain Orchestrators: An
Evaluation in Hong Kong
Document version [3] dated 16/02/16**

Dear sir or madam,

You are invited to participate in the research project identified above which is being conducted by NG, Tsz Kin, a candidate for the award of the degree of Doctor of Business Administration at the Newcastle Business School. The Chief Investigator supervising the student researcher is Dr Richard Oloruntoba of the same School.

Why is the research being done?

The purpose of the research is to

- (1) Assess and evaluate the scope and depth of the functions outsourced to Third Party Logistics Service Providers (3PLs) in the Hong Kong context.
- (2) Assess and evaluate how strategic and critical the functions outsourced to Third Party Logistics Service Providers (3PLs) in the Hong Kong context is.
- (3) Assess and evaluate the extent to which Third Party Logistics Service Providers (3PLs) in Hong Kong undertake strategic coordination and orchestration of their customers' supply chains and facilitate supply chain management best practice.

The knowledge acquired and disseminated from this DBA research project may be applicable to any business organisation that imports or exports goods, transports cargoes/freight on board ships in a global supply chain, or is a freight forwarder, warehouse operator or third party logistics service provider (3PL).

Who can participate in the research being done?

You have been contacted because you meet at least 2 of the following selection criteria:

1. You are over 18 years old;
2. You have participated in a professional capacity in the planning, implementation and management of import / export cargoes; or you are a manager at a container liner shipping company, international freight transport company, freight forwarding company, warehouse operator, road haulage, or the manager of a third party logistics provider (3PL) in Hong Kong;
3. You are a manager at a manufacturing, retail or distribution company, or a company that uses the services of a container liner shipping company, international freight transport company, freight forwarding company, warehouse operator, export consolidator, road haulage, airfreight, or the manager of a third party logistics service provider (3PL) in Hong Kong;
4. You have participated in planning, implementation and management of the storage, transportation, delivery and distribution of containerised cargoes by sea; and
5. Your organisation plays a crucial role in Hong Kong's domestic and international trade.

What choice do you have?

Participation in this research is entirely your choice. Only those people who give their informed consent by completing and returning the attached Consent Form prior to the commencement of the face to face interviews will be included in the project. Whether or not you decide to participate, your decision will not disadvantage you. If you do decide to participate, you may withdraw from the project at any time up to the point of publication without giving a reason. Your personal information will remain confidential to the researchers and you have the option of withdrawing any data which may identify you.

What would you be asked to do?

If you agree to participate, you will be asked to:

1. Participate in a face-to-face interview with the interviewer (Mr Kin Tsz Ng) and having it digitally audio-recorded at a time and place that is convenient to you;

2. Answer a range of questions about the scope, depth and criticality of services that third party logistics service providers provide to their customers in Hong Kong as well as the functions and roles of 3PLs within their customers' supply chains, or to;
3. Answer a range of questions about the scope, depth and criticality of services that your company procures from third party logistics service providers in Hong Kong as well as the functions and roles of 3PLs within your company's supply chain;
4. Review your interview transcripts after 4-6 weeks for any possible corrections. The researcher will transcribe the interview, and send you the interview transcript for your review through an email. The researcher will after one week of sending the transcript to you follow up by phone call to enquire whether you want anything changed in the transcript of your interview, or if you wanted to add, or remove information from the transcript. Such a follow-up phone call will also provide you with the opportunity to further elaborate on any thoughts that you may have had on any of the interview questions after the interview session has concluded; and
5. You may volunteer to contact 1 other manager or professional that meet the selection criteria provided above, provide them with a copy of this Information Statement regarding the project, and recommend that they contact the researcher should they wish to participate in the research. Please note that this final action is entirely voluntary.

The face to face interview is conversational in style and is therefore meant to be relaxed and non-invasive. The interviewer will guide the participants but it is very much a case of participants exchanging views, and offering insights on the scope, depth, and criticality of the role of Third Party Logistics Service Providers (3PLs) in the management of the supply chains of their customers in Hong Kong.

How much time will it take?

The face to face interview will take between 60 and 90 minutes. Face to face interviews will be held at a mutually agreed time and place in Hong Kong. It is anticipated that the subsequent review of interview transcripts will take place 4 weeks after the interview.

What are the risks and benefits of participating?

There are no known risks to you, anyone, or any organisation arising from the conduct of this research. There is no risk of any infringement of any of the rights, the privacy, or professional reputation of any person or institution involved in participating in the research. However, the participants will benefit from the knowledge and understanding of the role of 3PLs in supply chains arising from the research.

How will your privacy be protected?

No research participant will be identifiable from the doctoral thesis, or any academic publications arising from the study. Participants' records will be disguised as, for example, 'organisation A', 'Interviewee A' and so forth. This ensures confidentiality of interviewees.

Storage, access and data disposal will be undertaken in the highest confidence. Data will not be accessible to others. Data gathered from the face to face recorded interviews will be stored on the researcher's digital dictaphone and then copied to a personal laptop computer after each face to face interview.

A backup duplicate CD-ROM will also be burned when each interview has been completed to ensure that no data is lost. All interview transcripts and subsequent transcript reviews will be stored on the researcher's personal laptop computer until their return to the University office, at which time the interview transcripts will be downloaded to the researcher's university desktop computer.

Access to both the researcher's personal laptop computer and university desktop computer is through a password known only to the researcher. Sophos virus software and various firewalls are used to protect the data on the university network. The backup CD will be kept in the researcher's office drawer locked away with their access key. The material on the dictaphone and personal laptop computer will be erased once the researcher's DBA thesis has been accepted. The data gathered from both the face to face interview and reviewed transcript will be destroyed five years after the interview phase (30/09/2021), in accordance with University of Newcastle policy.

How will the information collected be used?

At the end of the research, the researchers will write a report and the results will be published in a thesis to be submitted for Mr Kin Tsz Ng's Doctor of Business Administration (DBA) degree at the University of Newcastle in Australia.

The data will be analysed in order to determine the scope, depth, and criticality of roles performed by Third Party Logistics Service Providers (3PLs) in managing their customers' supply chains, with the methodology utilised in obtaining the data included in the researcher's doctoral thesis. The results of the analysis may also be utilised in future academic journal articles which the researcher may write in order to broaden the understanding of the topic by academics, shipping companies, freight forwarders, 3PLs and other businesses, managers, and policy makers.

However, individual participants will not be identified in any reports arising from the project.

It is important to note that participants will be able to review the interview recordings and/or transcripts. Participants may also request the editing or deletion of their contribution in the digital recording, interview transcripts, and/or updated transcript reviews. Participants have the option of requesting a summary of the research results once data is analysed.

What do you need to do to participate?

Please read this Information Statement and be sure you understand its contents before you consent to participate. If there is anything you do not understand, or you have any questions, please contact the researcher. If you would like to participate, please complete and return the attached Consent Form in the reply paid envelope provided. This will be taken as your informed consent to participate. The researchers will then contact you to arrange a place, time and date convenient to you for the interview in Hong Kong.

Name -----

Signature -----

Date-----

Further information

If you would like further information please contact:

Mr. NG Tsz Kin
Newcastle Business School
The University of Newcastle
1 University Drive, Callaghan, NSW 2308
Email: TszKin.Ng@uon.edu.au
Mobile Telephone: (852) 9450 7980

Signature]
Name] NG Tsz Kin
[Position] Student Researcher

Or

Dr. Richard Oloruntoba
Newcastle Business School
The University of Newcastle

1 University Drive, Callaghan
NSW 2324, Australia
Email: **Richard.Oloruntoba@newcastle.edu.au**
Ph: 02-49217114.

Thank you for considering this invitation.

Signature] *Dr. Richard Oloruntoba*

[Name] Dr. Richard Oloruntoba

[Position] Chief Investigator

Complaints about this research

This project has been approved by the University's Human Research Ethics Committee Approval Number [H-2015-0435]. The University requires that should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone +61 2 49216333, email HumanEthics@newcastle.edu.au

Appendix H: Invitation email

Invitation Email
16/02/2016
Version 2

Dear XXXX

Research Project: Third-Party Logistics Providers as Supply Chain Orchestrators: An Evaluation in Hong Kong

You are cordially invited to participate in the research project identified above which is being conducted by NG, Tsz Kin, a candidate for the award of the degree of Doctor of Business Administration in the Newcastle Business School at the University of Newcastle, Australia. The research is being supervised by Dr Richard Oloruntoba of the same institution.

This research has been approved by the ethics committee **H-2015-0435**. All the personal information collected from participants and participating organizations would be treated as strictly confidential.

Please read the attached Participant Information Statement for further information on this research project. A Consent Form is also attached to indicate your interest to participate this research project.

Thank you for considering this invitation to participate.

Best regards,

Dr. Richard Oloruntoba
Project Supervisor
Newcastle Business School
The University of Newcastle

NG Tsz Kin
DBA Candidate
Newcastle Business School
The University of Newcastle