

**A STUDY OF STRATEGIC INVESTMENTS BY MULTINATIONAL LOGISTICS
PROVIDERS IN CHINA**

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Abstract

This thesis investigates post-investment strategies of multinational enterprises (MNEs) in the Chinese logistics sector. Against the background of ever-intensifying globalisation, logistics MNEs cannot afford to neglect China, since the country is involved in the most-frequented global trade lanes. Thus, the Chinese logistics market provides huge opportunities for MNEs to grow their business, although a number of risks and disadvantages threaten their success. In order to strengthen their strategic position, logistics MNEs are required to invest considerably into their networks, technology, processes and, last but not least, their workforce. Furthermore, the Chinese institutional environment with its strict requirements and complex rules creates additional challenges. For example, it was mandatory for logistics MNEs to form a joint venture with a local partner to receive a licence in the Chinese express delivery sector. Other subsectors in the logistics market, such as warehousing and supply chain management, do not require a partnership and therefore can be entered much easier by foreign companies. One of the particularly interesting findings in this study identifies voluntary joint ventures as a suitable vehicle for even financially strong logistics MNEs to further penetrate the Chinese market in a reduced risk setting in order to access the customer and institutional network of the domestic partner.

The results of this study suggest that each logistics MNE needs to determine an individual strategy based on its specific strengths and capabilities in order to create a sustainable, competitive position in the vast market of the People's Republic of China.

Author's Declaration

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Gloucestershire and is original except where indicated by specific references in the text. No part of the thesis has been submitted as part of any other academic award. The thesis has not been presented to any other educational institution in the United Kingdom or overseas.

Any views expressed in the thesis are those of the author and in no way represent those of the university.

Signed

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About the Author

This work was written outside my profession as a senior expert in the headquarters of a major logistics MNE, Deutsche Post DHL Group in Bonn, Germany. My affiliation with this company started in 1999 and has so far included different positions in product management, project and programme management, global business services strategy and human resources. For example, I was involved the post-merger integration of Deutsche Post and DHL for some years as an expatriate in Brussels. Later on, another position led me to work in the Board of Director's staff for three different board members of the company. Currently, I am involved in the coordination of international employee relations, a topic that is increasingly in the focus of MNEs.

I spent a great part of my weekends and holidays over the past years conducting this research and writing up my thesis. Although my employment definitely motivated my choice of research topic, all the work was completed as a self-determined effort.

During my research project, I fell seriously ill and had to suspend my studies. After receiving the diagnosis of multiple sclerosis, my first focus was on learning to walk again and on coping with the many other constraints that come with this terminal illness. Nevertheless, I am convinced that continuing my research after being able to work again has clearly supported my optimistic attitude to life. As a disabled person, I am particularly glad to be able to contribute insights to academia and practice. Perhaps other researchers with an infirmity will be encouraged to undertake or continue a similar endeavour. Moreover, I am also determined to remain a researcher in the international business community in the future.

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Abbreviations

3PL	Third-Party Logistics Provider
4PL	Fourth-Party Logistics Provider
B2B	Business-to-Business
B2C	Business-to-Consumer
CAQDAS	Computer Aided Qualitative Data Analysis Software
CEO	Chief Executive Officer
CSA(s)	Country-Specific Advantage(s)
ERP	Enterprise Resource Planning (System)
FDI	Foreign Direct Investment
FSA(s)	Firm-Specific Advantage(s)
GCI	Global Connectedness Index
GDP	Gross Domestic Product
IB	International Business
IBE	International Business Environment
IDP	Investment Development Path
IMF	International Monetary Fund
IPR	Intellectual Property Rights
IT	Information Technology
LSP(s)	Logistics Service Provider(s)
LPI	Logistics Performance Index

MMR	Mixed Methods Research
MNE(s)	Multinational Enterprise(s)
NPC	National People's Congress of the People's Republic of China
OECD	Organisation for Economic Cooperation and Development
OLI	Ownership/Location/Internalisation Advantages
OLMA	Ownership/Location /Mode of Entry/Geovalent Adjustment Advantages
RQ	Research Question
RBV	Resource-Based View
SWOT	Strengths-Weaknesses-Opportunities-Threats Analysis
TMS	Transport Management System
VAS	Value-Adding Services
WMS	Warehouse Management System
WTO	World Trade Organization

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1. Introduction

1.1 Research Background

This section reveals how economic development and globalisation influence strategy within the logistics industry and the emergence of logistics multinationals in China.

The strategic activities of multinational enterprises (MNEs) have drawn the attention of researchers in the field of international business for some years. Foreign direct investment (FDI) appeared to be the preferred market entry mode, especially when MNEs were targeting a strong market position and a strategic expansion (Calvet, 1981; Hymer, 1970; Krugman, 1990). Although researchers have extensively examined entry strategies and location determinants for FDI in Chinese manufacturing sectors over the past decades (Buckley, 2007; Sun, 1999; Tse, Pan, & Au, 1997), the specific role of logistics MNEs as well as their strategies provides ample scope for investigation. China offers vast opportunities for multinational logistics providers to gain a competitive advantage if they move early enough and steer their strategic investments wisely (Brekelmans & Sunderland, 2012; Hong, 2008; Xiong, 2010).

This thesis discusses insights into the direction in which Chinese logistics are moving in the long term and what this means for a logistics MNE to have success in one of the most important emerging markets. Drawing on the 'Strategy Tripod' by Peng, this study builds on an in-depth analysis of the considerations of the industry, the firm itself and its influencing institutions. Therefore, the concept combines three views on strategy: the industry-based view, the resource-based view and the institution-based view (Peng, 2009, 2011; Peng, Sun, Pinkham, & Chen, 2009). Moreover, this study seeks to link the Strategy Tripod with another central theory in the area of international business (IB): the 'Eclectic Paradigm' by Dunning (Dunning, 2000, 2001; Dunning & Lundan, 2008a, 2008b).

In addition, the concept of dynamic capabilities by Teece is applied in order to identify its connection to the Eclectic Paradigm (Dunning & Lundan, 2010; Teece, 2014a, 2014b; Teece, Pisano, & Shuen, 1997; Teece & Pisano, 1994). A thorough examination

of the advancement of the Chinese business environment, the institutional influence as well as logistics market trends should provide an apt foundation for the examination of logistics MNEs' strategies (Tan, Yifei, Zhang, & Hilmola, 2014). This study strives to explain the impact of environmental factors in combination with company-driven strategic decisions. The analysis builds on an individual conceptual framework that combines the views of the Eclectic Paradigm and the Strategy Tripod, thus contributing to IB theory in the area of internationalisation and MNE strategy (see Chapter 2).

Current worldwide economic development is profoundly affected by ongoing globalisation in numerous areas. For instance, globalisation has fostered interregional and intra-regional connectedness, either by means of investments in production abroad, provision of resources or the exchange of goods and services. Nations, markets and companies have become interdependent (Ghemawat, 2003). This development can be expected to continue, even when the rate of development is slowing down and the overall trend becomes more ambiguous (Altman, Ghemawat, & Bastian, 2019; Ghemawat & Altman, 2014, 2016; Vahlne, Ivarsson, & Alvstam, 2018). Previous borders appear to be 'fuzzy', while distances in economic geography seem to shrink. A large component of this development is directly caused by the activities of MNEs with their ambitious growth strategies and business models that build on globalisation (Buckley & Ghauri, 2004; Kerr, 2016; Narula & Dunning, 2010). While a large amount of research in the area of IB and MNEs focuses on FDI and the internationalisation process of manufacturing and production (Buckley & Hashai, 2008; Dunning, 1988, 2001; Johanson & Vahlne, 1977), rather less effort is devoted to the impact of globalisation on strategy in the logistics industry (Abdelzaher, 2012; Boddewyn, Halbrich, & Perry, 1986; Dunning, 1989).

Recent global statistics show an annual growth rate of 3 per cent for the volume of world merchandise trade in 2018, while growth reached 10 per cent in value terms. At the same time, the global gross domestic product (GDP) at market exchange rates has grown by 2.9 per cent. While further threats based on trade-restrictive measures are expected, the actual effect on trade remains to be seen (World Trade Organization,

2019). The ever increasing need for the transportation of goods – either cross-border or domestically – builds a fertile ground for a growth in logistics services. The logistics industry can be defined as a transportation management concept focused on planning, implementing and controlling goods, services and related information within the efficiency and effectiveness aspects in companies or economic systems (CSCMP, 2011; Göpfert, 2009).

In 2018, merchandise exports by World Trade Organisation (WTO) member countries added up to a total of US\$ 19.09 trillion, which meant a growth rate of 10 per cent. This development has clearly driven the export of transportation services, amounting to US\$ 1,017 billion, thus growing by 7 per cent compared to the previous year. The import of transportation services showed a similar development, with US\$ 1,215 billion in imports and a growth rate of 9 per cent in 2018. Nevertheless, there has been considerable volatility over the last few years. For example, the annual growth in trade of transportation services only reached the worldwide average of 2 per cent in 2013 and 2014, which was an immense decline compared to prior years. In 2015, the sharp decrease in container shipping rates affected world transport negatively, which meant a decline of 10 per cent during that time. Recently, a specific positive development was seen in China's transport exports which grew by 14 per cent, partially driven by the noticeable rail freight expansion between Asia and Europe (World Trade Organization, 2013, 2014, 2015, 2016, 2017, 2018, 2019).

In 2018, China remained the world's largest merchandise trade country with exports of US\$ 2.49 trillion and imports of US\$ 2.14 trillion, thus leading the statistics ahead of the United States of America and Germany for the second year in a row (World Trade Organization, 2018, 2019). Likewise, China is one of the countries with a high and ever-growing inflow of FDI, reaching an FDI of US\$ 134.97 billion in 2018 (Ministry of Commerce Peoples's Republic of China, 2019). Although this investment mainly takes place in industrial sectors like manufacturing, this development directly induces a growing demand for services in transportation and logistics. These circumstances are the basis of China's increasing need for infrastructure advancement and the supply of adequate transportation and logistics services, both domestically and cross-border,

to support trade and the flow of commodities (KPMG, 2013). Logistics companies of all sizes, including the large logistics MNEs, understand the immense potential of the Chinese market. Each manufacturing MNE established in China is required to keep a stable supply chain and ensure continuous access to transportation services, both locally and within their global networks (Liu, Lee, Wang, Li, & Xiao, 2014a; Liu et al., 2016; Wang, 2011). The same requirements also apply to smaller companies that source in China or that have established collaborations with Chinese corporations (Towers & Burnes, 2008; Towers & Yi, 2010). And, of course, the group of emerging Chinese MNEs – the ‘upcoming heroes’ – provide great potential for the further growth in logistics services (Rugman & Li, 2007; World Economic Forum, 2014).

As acknowledged by the State Council's 2014–2020 logistics industry development plan, logistics costs in China are relatively high compared to other countries. China's aim is to reduce logistics costs from 18 per cent of the GDP to 16 per cent by 2020 (State Council of the People's Republic of China, 2014). The industry is still not working in an effective and efficient manner. For example, the underdeveloped logistics infrastructure is hindering productivity and institutional challenges put obstacles in the path of growth (Baljko Shah, 2002). In addition, ‘green logistics’ approaches are in focus for the development of a more standardised, low-emission and modern logistics network throughout China (Fischer, 2012; Lin & Ho, 2011; Straube & Borkowski, 2008). The increasing lack of a qualified logistics workforce provides another serious trial for all market participants, while simultaneously, large annual pay increases occur throughout the industry (Fung Business Intelligence Centre, 2013; Wang, 2014; Wang, Huo, Lai, & Chu, 2010). Logistics MNEs strive to increase their market share but expansion is limited by the influence of Chinese institutions (Carter, Pearson, & Li, 1997; Knowler, 2014). Moreover, developments in Chinese economic policies and the role of the government and further regulatory institutions need to be emphasised (Fung Business Intelligence Centre, 2013; Global Supply Chain Council, 2012). Based on these conditions, the Chinese logistics market is considered challenging for MNEs even though exceptional prospects may very likely compensate for this. Key emphasis needs to be placed on the conception and implementation of a sound business

strategy built on competitive advantage, thus enabling sustainable performance and value growth in China in the long term (Goh, Wang, Gan, Li, & Yu, 2010).

Building on the background outlined above, the research problem and the direction of the study are discussed below.

1.2 Research Problem

This section discusses the overall research problem, scope and boundaries of the study.

Most of the previous studies on logistics in China were conducted from a Chinese perspective, investigating the implications of politics on fostering economic growth and other positive spillover effects for China (Deng, Blake, & Falvey, 2009; Du, Harrison, & Jefferson, 2011). On the other hand, the focus of research in the area of MNE strategy in China was in the manufacturing sector. Service MNEs and logistics providers in particular were rarely in focus (Kumar, 2002; Wei, 2010; Wei, Liu, & Liu, 2005).

This study explores the major trends in the Chinese logistics industry and investigates how these developments influence the strategic decisions of logistics MNEs. The research builds on a thorough conceptualisation of theoretical and empirical perspectives of MNE strategy in the context of the Chinese market. Further, the economic environment for FDI in China and its effects on investment decisions by logistics MNEs are examined. This includes the identification and discussion of key success factors for logistics MNEs in China.

The Chinese national economy continues to show very impressive growth statistics, not only in its GDP but also in international trade, infrastructure investment and FDI in the production sector. The economic-environmental determinants and existing investment advantages and obstacles are analysed for their impact on the strategy of logistics MNEs. The logistics landscape in China is highly diverse, with more than 540,000 logistics entities offering their services (National Bureau of Statistics of China, 2019). While the logistics multinationals mainly concentrated their business in the

eastern coastal area of China in previous years, a large number of smaller logistics providers service the remaining major component of the domestic market. As shown in Figure 1-1, the logistics locations follow current Chinese infrastructure and traditional distribution systems, which means the scope of the logistics business according to city ranking should be prioritised.

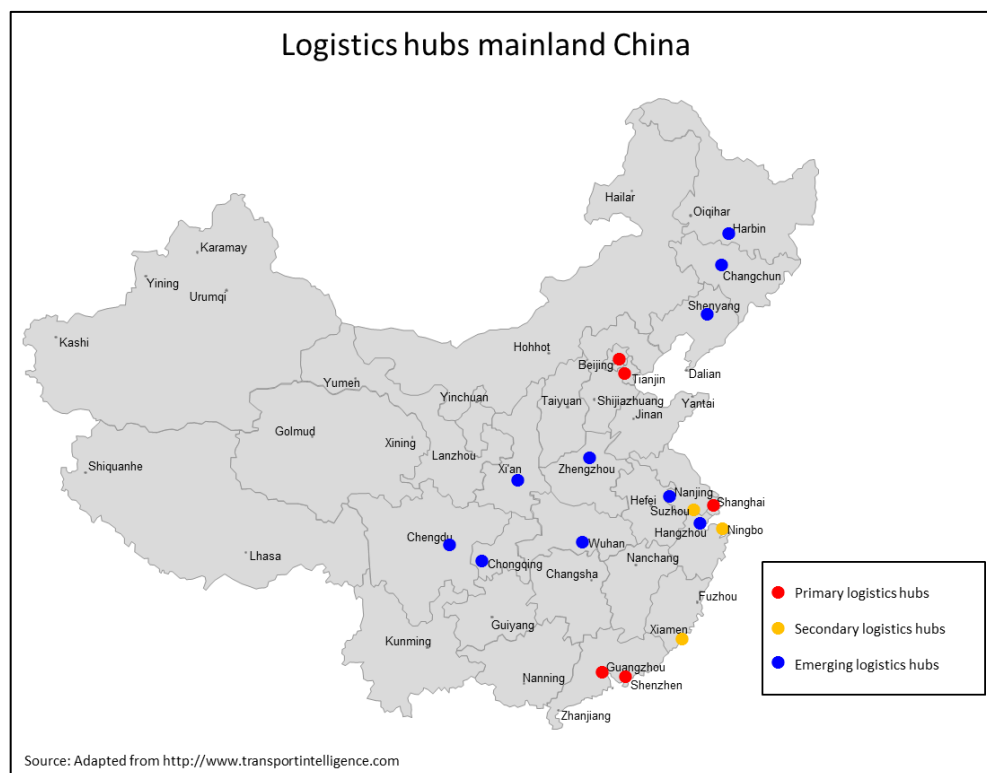


Figure 1-1: China's logistics hubs

The largest concentration of logistics businesses can be found in the 'Tier 1' core cities: Beijing, Guangzhou, Shenzhen and of course Shanghai with its combination of international airport and deep-sea harbour. Shenzhen serves as a logistics hub for Hong Kong that lacks industrial space owing to its geographical situation. Tianjin, as one of the transitional cities – ranked between 'Tier 1' and 'Tier 2' – can also be considered a primary logistics hub. Its harbour is the gateway to Beijing. Secondary logistics hubs occur mainly in other transitional cities, such as Dalian and Suzhou, but

'Tier 2' cities like Qingdao, Ningbo and Xiamen also play an important role here. When the emphasis is on the anticipated future logistics development in China, the emerging logistics hubs come into focus. These are predominantly based in transitional or 'Tier 2' cities like Chengdu, Chongqing, Hangzhou or Xi'an. However, nowadays the 'Tier 3' cities of Harbin and Changchun are also developing into significant logistics locations (Jiang & Prater, 2002; SINOSTEP, 2015; Transport Intelligence, 2008).

Economic development has become extremely fast and increasingly unpredictable. Not only has globalisation triggered more FDI, there has also been an enormous increase in the international flow of goods. There is a need to continuously adjust to changing customer requirements, technological progress and other new trends (Fang, 2012; Franklin & Meissner, 2014; Fuller, Mercier, Brocca, & Morley, 2013). It can be assumed that this overall trend will remain, despite growing national tendencies of protectionism and foreclosure measures like trade tariffs. For example, the Global Connectedness Index (GCI) is continuously increasing, thus showing that nationalistic policies have had less impact than originally suspected. Thus, based on the results of the GCI, it can be stated that globalisation has reached a new peak level and a real counter movement seems, as yet, unlikely (Altman et al., 2019).

The desire to understand the activities of logistics MNEs in China, to critically investigate this phenomenon in depth and to consider possible future developments for the creation of a sustainable strategy form the base of the key research problem in this study. Strategy, as the long-term course of a company, relies on gaining a competitive advantage within a volatile business landscape while facing high market pressure and dealing with the sometimes controversial requirements of its shareholders, employees and the institutional environment (Mintzberg, 1978, 1987a, 1987b). The identification of key success factors and business opportunities plays a key role in determining the 'right' strategy for each company (Brock & Barry, 2003; Hamel & Prahalad, 1994).

Based on these requirements, Ellinger, Ketchen Jr., Hult, Elmadag, and Richey Jr. (2008) stress the need for logistics multinationals to maintain a comprehensive

economic environment and market intelligence. Sources of market understanding may include knowledge about consumer demand, industrial supply chain requirements as well as logistics sector innovations. For example, new technologies like 3D printing or self-driving vehicles are either already in use or could become the norm in the near future (Deutscher, Schuurin, & Ritter, 2013; DHL Trend Research, 2014; Paludan, 2012). Apart from technological developments, the human element plays an important role in logistics; already today, the demand for skilled employees cannot always be met. Investment in the logistics talent field and workforce as well as organisational development will become more and more important (Langley Jr., 2015; Trunick, 2006).

Logistics systems play a major role in global supply chain improvement by supporting cost efficiency while securing the required customer service. In many cases, logistics act as the initiator or driver of innovation in transport processes or infrastructural advancement (Delfmann et al., 2010a, 2010b). A survey of German and Chinese companies' market entries concluded that strategic collaboration with logistics providers is a vital success factor within highly competitive markets (Straube, Ma, & Bohn, 2008).

The 2018 World Bank Logistics Performance Index (LPI) only ranks mainland China in 26th place when comparing 160 countries (Arvis et al., 2018). The leader in this index is Germany with the highest development in the six key logistics performance areas assessed. The index is based on the weighted average of:

- Efficiency of the clearance process,
- Quality of trade and transport-related infrastructure,
- Ease of arranging competitively priced shipments,
- Competence and quality of logistics services,
- Ability to track and trace consignments,
- Timeliness of shipments.

The current LPI clearly underlines the need for logistics advancement in China, especially when considering the country's ever-growing trade volumes. A comparison

with the 2016 LPI shows a positive change for China that resulted in an improvement of one rank (Arvis et al., 2018). In March 2015, the National People's Congress of the People's Republic of China (NPC) decided to put a distinct focus on the development of e-commerce, logistics and express delivery services. The NPC specified their plans: 'We will implement the mid-to-long-term plan and the three-year action plan for the development of the logistics industry, designate pilot cities for innovatively developing modern logistics, build national demonstration logistics parks and support building a shared logistics information platform.' (National People's Congress, 2015)

This study discusses recent developments in the Chinese logistics market to determine their influence on logistics MNEs' strategies. The scope of the research is limited to the investment-related area of logistics multinational strategy, and thus excludes other strategic means, such as licensing. The study was conducted to determine the long-term strategic impact on logistics multinationals invested in China. It includes the perspective of a multinational logistics company, industrial competition as well as Chinese regulatory institutions, thus providing a thorough examination of the phenomenon of strategic investments by logistics multinationals in the major emerging market country of China.

In addition to the market factors, further elements – the 'megatrends' – in the logistics industry were considered (Gue, Akcali, Erera, Ferrell, & Forger, 2014; Wittenbrink, 2014), for example the growing environmental awareness or digital lifestyles. Furthermore, an increased demand for cyber and information technology (IT) security applies to logistics multinationals, in particular due to their pivotal contribution to the economic infrastructure. This means that logistics providers have to provide their services and solutions in an agile but cost-sensitive way. On the other hand, vast opportunities are available to logistics companies if they make their strategic investments in the right location and in the right manner in order to gain a competitive advantage in the very demanding Chinese market (Deutsche Post AG, 2008).

Given the diversity of the several subsectors within the logistics market, this research concentrates on the supply chain outsourcing, freight forwarding and express service

areas. Hence, postal business areas, such as the classic mail business, are not part of the scope. Furthermore, the competitive situation between major logistics multinationals prevents the author, who is employed at the headquarters of a large logistics MNE, from actively engaging in strategic discussions with representatives of other companies. An independent academic researcher could possibly face fewer restrictions.

The inspiration behind undertaking the current research is discussed and explained in the following section.

1.3 Rationale for the Study

This section discusses the motivation for the research.

As competition is increasing rapidly, international logistics companies seek market expansion. China's increasing demand for infrastructure advancement and adequate transportation services offers exceptional business prospects for logistics MNEs, both domestically and across borders. Building and maintaining a strong foothold in the emerging markets, usually by undertaking FDI, is of particular interest for the major players in the industry (Branch, 2009; Straube & Pfohl, 2008).

All major logistics MNEs consider China as one of their strategic growth markets. For example, during a roadshow in 2012, the chief executive officer (CEO) of Deutsche Post DHL Group announced that they intended to expand their existing investments in the country and increase their market share in China (Appel, 2012). The other major logistics MNEs, like FedEx or UPS, are following suit, either by increasing the number of their locations, their product offers or by enhancing their market scope in domestic logistics services (Hayashi, Nemoto, & Nakaharai, 2014; Szakonyi, 2013). The competition will be further stimulated by well-established Chinese national logistics service providers (LSPs), such as Sinotrans or COSCO, which are gaining more and more market power (MarketLine, 2013). Furthermore, fast-growing Chinese internet-based retailers, such as JD.com or Alibaba, provide a portion of their logistics services in-

house and have already started offering their logistics services externally (Alibaba.com, 2019; JD.com, 2019).

Although scholarly interest in Chinese logistics and supply chain management is growing, there still remain areas worth exploring. While entry strategies and location determinants for FDI in the production industry sectors of China have been extensively examined by researchers within the last decade, the specific role of logistics MNEs as well as their strategic decisions provide ample scope for investigation (Chen, Tian, Ellinger, & Daugherty, 2010; Göpfert, 2009; Hong, Chin, & Liu, 2007; Liu, 2012).

This study aims to contribute new knowledge to the area of logistics MNE strategy in the context of China, a particularly complex market. A conceptual framework was developed to provide an appropriate foundation for the research to be carried out - 'The Tent Pole Strategy Framework for Logistics MNEs in China' (see Chapter 2). While Dunning's Eclectic Paradigm forms the exterior of the framework, the interior incorporates the Strategy Tripod by Peng (Dunning, 2000; Peng, 2009). The specific construct of the framework and its elements were established to support an in-depth analysis of MNE strategy in the Chinese logistics market. By applying the ownership/location/internalisation (OLI) parameters of the Eclectic Paradigm, the author seeks to understand what shapes the elementary strategic 'tent poles' for a logistics MNE in China. The analysis includes the MNEs' own competitive advantages or possible disadvantages (the 'O' element of the paradigm) as well as the country-specific resources and business environment of China (the 'L' element). Both O and L parameters can only be fully utilised when the MNE is able to apply them to value-added activities, which means to internalise them (the 'I' element). The author argues that the combination of all three tent poles provide a solid foundation of the MNE strategy. By building on these anchor points, a logistics MNE can pursue strategic aims like establishing a strong position in China, outperforming its competitors and facilitating a sustainable business performance for the future. To achieve these aims, the three key elements of Peng's Strategy Tripod were considered. The logistics MNE's strategy can only have success with the right combination of the firm's specific resources and capabilities, a suitable positioning with regard to industry-based

competition and an appropriate approach towards influential institutions (Peng et al., 2009).

The study's meso-level focus provides a wide-ranging overview on strategy knowledge applied within the logistics industry. This includes an examination of major trends and technological developments for their impact on the industry and on individual logistics MNEs. A logistics multinational wanting to establish a successful strategy needs to be aware of – or rather, be ahead of – all these developments and trends. Creating a true competitive advantage means logistics MNEs should invest in research and business intelligence (Klaus, 2011). Considering their exposed position, logistics MNEs, even more than other firms, are required to regularly re-evaluate their existing strategy in light of the volatile economy. Logistics companies can be viewed as early indicators of any elementary economic changes. Their business normally grows or declines earlier than any other industry. Therefore, logistics MNEs may be forced to dispose of unprofitable units and concentrate on business areas based on their core competencies. Based on these foundations, different strategic activities can be pursued. Once one of these opportunities shows the first signs of becoming prosperous, the logistics multinational will be required to become the first mover in order to leverage this success (Bohlmann & Krupp, 2007; Chow, Choy, Lee, & Chan, 2005).

The specific research objectives of this study are detailed in the following section.

1.4 Research Objectives

This section discusses the objectives of the research undertaken.

The research focuses on current strategies applied by logistics MNEs in China. The overarching goal is to provide a comprehensive understanding and critical assessment of the strategic investment consequences for multinational companies in the Chinese logistics sector. A review of published theories and empirical contributions to multinational strategy provide an understanding of the overall economic-

environmental determinants affecting the current development and foreseeable trends in the logistics sector in China. This requires an investigation into the phenomenon of dynamic competitive strategy by logistics multinationals in China which includes the employment of ownership, location and internalisation advantages or, conversely, the respective coping measures in the case of existing disadvantages (Dunning, 2000; Dunning & Lundan, 2008b). Furthermore, the research includes the perspective of multinational logistics companies, the industrial competition as well as Chinese regulatory institutions, thus providing a thorough examination of the phenomenon of strategic investments by logistics multinationals in the major emerging market of China (Peng & Vellenga, 1993; Peng et al., 2009; Peng, Wang, & Jiang, 2008).

Based on these considerations, the research objectives include the following:

- i. Evaluate the area of IB strategy for theoretical contributions based on the Eclectic Paradigm and the Strategy Tripod as applied to logistics MNEs in China.
- ii. Examine the Chinese business environment from the empirical viewpoint of a multinational logistics company, the regulatory institutions and the industrial situation regarding the consequences of building a competitive logistics MNE strategy.
- iii. Determine the critical success factors that provide strategic investment advice for a logistics MNE in China.

A competitive strategy in logistics – as in other sectors – needs to be simultaneously dedicated, sustainable and dynamic. With the changing regulatory rules resulting from globalisation and the speed of technological innovation, successful logistics companies will be required to move faster than their competitors do. In addition, the accelerated flow of information increases the urgency to keep pace with all relevant developments (Day, Reibstein, & Gunther, 1997). As described by Teece et al. (1997), the ‘dynamic capabilities’ approach targets the strategic use of firm-specific know-how and

experience to address the constantly changing business environment. The ongoing development of existing capabilities and the creation of new ones can be seen as a fresh base for cultivating new forms of competitive advantage.

Based on the research objectives, the research questions have been determined, and these are explained in the next section.

1.5 Research Questions

This section discusses the research questions investigated in the study.

As explained in section 1.3, a specific conceptual framework was developed as the foundation of this study: 'The Tent Pole Strategy Framework for Logistics MNEs in China' (see also Chapter 2). In this context, strategy relates to the established concepts by Porter and Mintzberg and enhances these views with a practical perspective applied, for example, by major consultancies (Bradley & Dawson, 2013; Mintzberg, 1978, 1987a, 1987b; Porter, 2004). The specific MNE strategy analysis in this study builds on Mike Peng's unified global business concept of integrating the industry-based, resource-based and institution-based views in a 'Strategy Tripod' (Peng, 2001, 2002, 2011; Peng et al., 2009). The outer frame of the research builds on the Eclectic Paradigm of Dunning to explain interdependencies between the ownership, location and internalisation advantages and their influence on a logistics MNE's strategy (Dunning, 2000; Dunning & Lundan, 2008b). Dunning differentiates the ownership-specific advantages (O) into three subsets:

- Property rights and/or intangible asset-driven advantages (Oa), which are influenced by the company's specific asset structure.
- Transaction-driven advantages (Ot), which means the capacity of the MNE to use transactional benefits and minimize transaction costs related to the corresponding assets.

- Advantages or disadvantages deriving from institutional assets (O_i), which include formal, informal institutions governing internal processes and the interactions between the company and its stakeholders.

It can be assumed that institutional assets (O_i) have a direct influence on property rights-driven advantages (O_a) and governance advantages (O_t). From the perspective of the author, this relationship underlines the significance of the institutional view and requires connecting the OLI paradigm with Peng's Strategy Tripod in the current research.

The location-specific factors (L) of the Eclectic Paradigm include the market structure and resources of the MNE's home country, but also of the host country. For example, the logistics infrastructure in the host country, China, is an important factor for determining the strategy of a logistics MNE in this market. Again, a connection between the resource-based and industry-based views of the Strategy Tripod can be expected. Dunning (2000; 2008b) himself describes the Eclectic Paradigm as an 'envelope' for matching other context-specific theories.

Here, also, a new concept of knowledge connectivity can be drawn from. This concept illustrates how MNEs and their locations co-evolve in a symbiotic manner. The current business environment with its increasingly developing information flows in combination with the need for ongoing innovation and process improvements forces MNEs to build up and leverage their knowledge management. They will have to establish a dynamic relationship between their organisational systems, their people and their locations (Cano-Kollmann, Cantwell, Hannigan, Mudambi, & Song, 2016; Cantwell, 2009).

The ability to either circumvent or even exploit market failure is described by the internalisation advantages (I). From the viewpoint of a logistics MNE in China, these internalisation advantages or disadvantages are of specific interest because the Chinese market is very complex and although it provides many opportunities, it has high risks. The interdependencies with the O_t element are of particular interest to the

author, as the ability to create economies of scale and scope seem to be crucial for the long-term performance of a logistics MNE in China.

Building on the research objectives, an overarching research aim was determined that guides the direction of the study. Based on this aim, the overarching research question to be addressed is as follows:

What are the critical success factors for a logistics MNE in China and how can these factors be used to steer strategic investments with the aim of achieving competitiveness and sustaining a vital business performance?

In answering this question, it will also be explained what recent political and technological developments mean for strategic investments in the logistics sector in China. Following an inductive approach, the research examines the contemporary strategy of logistics MNEs, outlines and explains similarities and differences and finally develops strategic advice.

Consequently, the present study aims to answer the following three underlying supportive research questions:

- 1) How can the 'Tent Pole Strategy Framework' be applied to analyse the strategy of logistics MNEs in China?
- 2) What are the major opportunities or threats that influence the performance and competitiveness of logistics MNEs in the Chinese market?
- 3) Which strategic factors can be determined for a specific logistics MNE to achieve a sustainable performance in China?

The first question aims to test the applicability of the developed conceptual framework and determine the range and depth of knowledge created through its use.

The second question focuses on examining the particular influence of the different parameters for logistics MNEs in China for their effects on the actual business strategy being applied. Thus the investigation needs to interlink the parameters of ownership, location and internalisation from to Dunning's Eclectic Paradigm with Peng's Strategy Tripod views on resources, industrial competition and the institutional setting of the

MNE (Dunning, 1988, 2000, 2001; Peng, 2009, 2011; Peng et al., 2009). The aim is to explain the extent to which the advantages and disadvantages of ownership affect the Chinese locational determinants as well as the ability to internalise the multiple impacts that influence the overall performance and subsequent competitiveness of logistics multinationals in China. In addition, the specific effects of the strategic implications of company-internal resources and capabilities are scrutinised for their influence on performance. Further emphasis is placed on reviewing supportive measures or obstacles originating from the institutional agenda. Finally, the way in which the industrial competitive situation affects logistics MNEs in China is analysed.

The answer to the third research question regarding a sustainable strategy includes the identification, testing and discussion of key success factors based on economic and company-specific determinants in order to provide strategic advice for a selected logistics MNE in China. The key goal for an MNE in its post-entry strategic positioning is not only to survive, but also to remain on a sustainable development path within a continuously competitive environment.

A suitable methodology, including several methods, has been applied in order to pursue these research questions. This is described below.

1.6 Methodological Approach

This section describes the methodology and methods applied in this study.

A doctoral study may be approached using multiple means and designs. Either way, a scientifically robust and reliable generation of knowledge is necessary (Drake & Heath, 2011; Wilkinson, 2000). The research design will explain and justify the methods of data collection and analysis as well as the planned structure of the evaluation process. In addition, questions relating to the applied methods, the course of inquiry and the actual contribution to knowledge will be anticipated. A researcher should bring awareness and knowledge of methodological alternatives to their specific context. Once the extent of personal assumptions, values and possible biases is understood,

the researcher will be prepared to handle any subjectivity in order to obtain a clear view of the data (Creswell & Plano Clark, 2011; Wing, 2009).

Consequently, the author investigated and compared a number of possible methods regarding their data collection, processing and analysis procedures. The type of methodology and methods to be applied in this study were thoroughly evaluated. Considering the research scope, its context, the data availability and finally the author's skillset, there were several options for the methodological design. Data reliability, internal and external validity as well as values and research bias were also taken into consideration. In addition, the philosophical fit, a match with the research questions and the skills required by the researcher were evaluated (Dellinger & Leech, 2007; Leech, Dellinger, Brannagan, & Tanaka, 2010). Based on an interpretivist worldview (Creswell & Plano Clark, 2011), the author chose a case study research design inspired by Yin (2009) as the foundational methodology for the research on strategic investments by multinational logistics companies in China.

The philosophical stance consequently justifies the choice of methodology that is based on the need to combine research techniques and several data sources in a single study to obtain a thorough understanding of the knowledge gained (Johnson & Duberley, 2000; Saunders, Lewis, & Thornhill, 2006). Thus, the methodological approach in a case study research design allows the creation of unique insights based on a synthesis of the outcome from different methods and diverse data. According to Eisenhardt (1989) and Yin (2009), a case study can be undertaken by applying an embedded design that includes more than one level of analysis. This means the scope of a case study may include investigations at both an industry and firm-specific level.

Therefore, sequential data collection and the embedded combination of several evaluation outcomes in the combination of evidence is considered appropriate for the present research. The case study consists of an analysis of video interviews by logistics experts, an analysis of media and company publications as well as insights gained by semi-structured interviews to provide an ample understanding of the phenomenon of dynamic competitive strategy by logistics MNEs in China. In addition to this qualitative

analysis, quantitative data gained from the Chinese Statistics Yearbook is also incorporated into the case study.

The results of the study should enable logistics MNEs to increase and stabilise their competitiveness in the Chinese market in the long term. Furthermore, the original contribution to knowledge of this research is in the IB field of FDI post-investment strategy research for MNEs in an uncertain economic environment. Thus, the enhanced audience includes both IB scholars and practitioners from international logistics companies with a specific focus on China.

The methodological approach and the research design of the case study is further explained in Chapter 3, while the following section provides an understanding of the structure of the thesis.

1.7 Thesis Structure

This section explains the thesis structure and content and the purpose of each chapter.

Table 1-1 Thesis structure

Chapter	Contents	Purpose
1. Introduction	<ul style="list-style-type: none"> ○ Research background ○ Research problem ○ Rationale for the study ○ Research objectives ○ Methodological approach ○ Thesis structure 	Position the thesis in the research areas of strategy in the context of MNEs and the field of logistics in China, explaining content and overall approach.
2. Literature Review	<ul style="list-style-type: none"> ○ Models of strategy and the key factors ○ Literature review process ○ Multidisciplinary insights from relevant literature ○ Formulation of specific conceptual framework ○ Analysis of application within thesis scope 	Specify the theoretical foundation for the research, focus on MNE strategy implications in relation to the existing IB literature and logistics practice publications for the context of China, identify the gap of knowledge the thesis is to fill.
3. Methodology and Case Study Research Design	<ul style="list-style-type: none"> ○ Research philosophy ○ Case study research design ○ Data collection and analysis approach ○ Data coverage and saturation ○ Research bias, reliability and validity 	Describe the philosophical stance of the thesis and the methodological choices made during the research.
4. Empirical Results	<ul style="list-style-type: none"> ○ Expert insights ○ Results from video, media and company information ○ Quantitative evidence from Chinese economic data 	Illustrate the empirical findings from the analyses conducted.
5. Synthesis of Findings and Conclusions	<ul style="list-style-type: none"> ○ Discussion of influential theory and empirical outcome ○ Formulate implications ○ Contributions and limitations ○ Recommendations for future research ○ Conclusions 	Advance the knowledge derived from the research and discuss its implications for theory and practice. Demonstrate the contribution to knowledge and managerial practice, discuss the limitations of the thesis and suggest topics for further research.

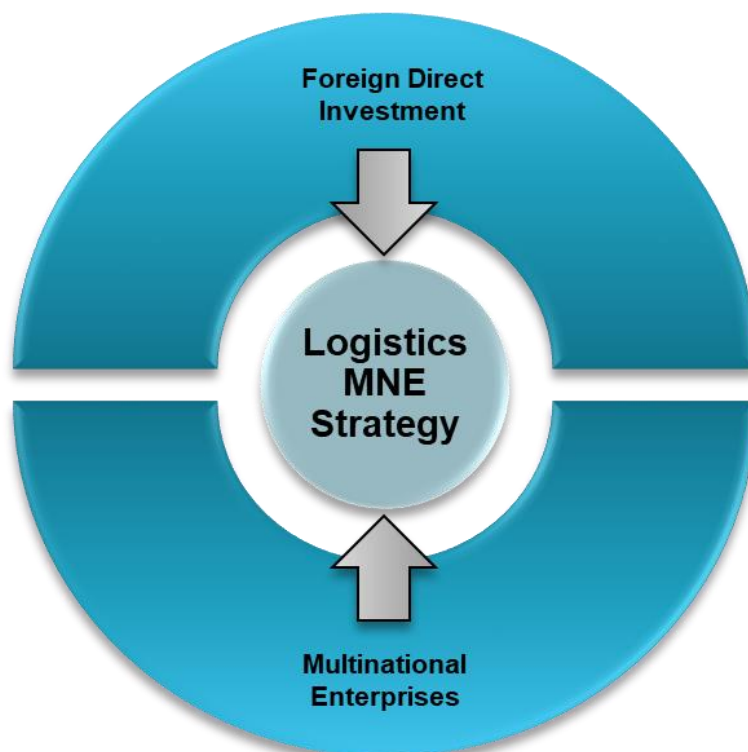
2. Literature Review

2.1 Outline of Approach

This section explains the applied approach for evaluating the literature and builds a foundation for the conceptual framework of the study.

The study builds on a thorough analysis of contemporary contributions to IB theory and its practical application for strategic investments by logistics MNEs in the Chinese market. A conceptual framework was developed by the author to build a solid basis for the intended research by visualising the interrelationships between the theories and specific economic concepts to be applied. The purpose was to link all outcomes back to the framework throughout the research process, thus contributing to the systematic assessment of the phenomenon under investigation.

The general scope of the research builds on IB concepts of FDI combined with MNE policies as the key elements enabling the logistics MNE strategy (see Figure 2-1).



Source: Developed by the author of this study

Figure 2-1 Study scope and core research area

A corporation investing internationally is considered an MNE if it has 'a controlling share of companies abroad' (Krugman & Obstfeld, 2009, p. 163). Another definition views the MNE as 'a coordinator of the system of domestic and foreign activities that are controlled and managed by it' (Dunning & Lundan, 2008b, p. 143). If an MNE attempts to 'create, acquire or expand a foreign subsidiary', an FDI is undertaken (Barba Navaretti, Venables, & Barry, 2004, p. 3). FDI is defined by Jensen (2006) using a characteristic based on International Monetary Fund (IMF) statistics: 'An investment becomes a foreign direct investment, as opposed to portfolio investment, if it gives the parent firm some amount of control over the management of the enterprise, usually over 10 percent of the firm' (Jensen, 2006, p. 23).

This study was carried out in an IB environment. From the vast field of publications, three major contributors provide the theoretical setting of the present research: Mike W. Peng, John H. Dunning and David J. Teece. MNE strategy analysis in this study builds on Peng's (2001, 2002, 2011; 2009) unified global business concept of integrating the industry-based, resource-based and institution-based view in the Strategy Tripod. As FDI was identified as the key strategic lever for logistics companies to establish their foothold in an important emerging market like China, theories of FDI form a foundational element of the study. For instance, the works of Dunning and his pivotal Eclectic Paradigm explain why MNEs choose FDI instead of merely licensing their services or forming alliances (Dunning, 1995, 2000, 2001). The specific nature of the MNE drawing its strengths from a combination of capabilities usage and multinational governance structures requires a different view on how these capabilities are reproduced when investing abroad. Teece (1984, 2014a) argues that an MNE has to continuously adjust its capabilities to the changing business environment and therefore proposes applying the concept of dynamic capabilities.

In the following section, the major IB concepts are reviewed for their relationship to the scope of this study.

2.2 International Business Theories

In this section, some general concepts in the area of IB are investigated for their applicability to this study, thus forming the initial research framework.

Eclectic Paradigm

According to Dunning (2000), the phenomenon of IB can be explained by applying an 'Eclectic Paradigm', meaning that investment decisions are influenced by the three major parameters of 'ownership advantages' (O), 'location attractions' (L) and 'internalisation benefits' (I). These OLI parameters build a foundation for the theory for IB-related research. OLI characteristics vary in their structural variables depending on country, industry or company point of view. Ownership advantages for a company may relate to its asset structure, size, product innovation, marketing or also intellectual property and risk affinity. The company's choice of location should include factors like experience of foreign involvement and the legal, cultural or language environment. Finally, internalisation advantages may be gained by adequate organisational and controlling measures in order to contribute to growth and diversification. An MNE activity will be largely affected by the firm's strategy to apply the OLI advantages to its best benefit. For example, a competitive advantage in ownership may be gained by 'common governance', meaning that the size and reputation of the firm provide a certain market power and easier access to resources and economies from shared multinational services like procurement. A location-specific advantage could arise from the sheer market size, the existing supply of real estate and skilled labour or also from investment incentives. Lastly, an internalisation advantage may be gained through the MNE's decision to keep full control of its operations in-house. Only a fully owned foreign subsidiary can guarantee maximum profit, which would not be the case for licenced operations or joint ventures (Cohen, 2007; Dunning, 2000; Dunning & Lundan, 2008b).

Although the original Eclectic Paradigm (OLI) aims to explain the activity of the MNE based on its entry mode and location decision, Guisinger (2001) argues that more

emphasis needs to be placed on profitability and performance. He suggests enhancing the paradigm by including an analysis of the MNE's business processes regarding their level of adjustment to eight 'geovalent' factors:

- Econography (climate, proximity to major markets, physical size, infrastructure),
- Culture (values, attitudes, beliefs)
- Legal systems (common, civil, religious law),
- Income profile (GNP per capita, growth of GNP, income inequality),
- Political risk (government instability, corruption, bureaucratic instability, quality of government),
- Tax system (effective tax rate for multinational firms),
- Exchange rates (exchange rate variability, exchange rate over-evaluation/under-evaluation)
- Government restrictions (tariffs quotas, investment controls).

In this context, adjustment is described as a combination of both adaptation and accommodation approaches within the environmental and structural complexity of an MNE. This extension of the OLI paradigm is termed the ownership/location/mode of entry/geovalent adjustment advantages (OLMA) paradigm and aims to explain the principal determinants of MNE performance through ownership (O), location (L), mode of entry (M) and geovalent adjustment (A). By linking both organisational and environmental evaluation approaches, the OLMA paradigm is to provide a complete set of determinants for studying today's MNEs (Guisinger, 2001).

The Investment Development Path

The development of FDI within a country can be assessed by applying the concept of the 'investment development path' (IDP), recently revisited by its originators, Narula and Dunning (2010). This theory explains the connection between the inflow of FDI and the development of a country by differentiating five stages in the evolution of FDI. These stages are closely linked to FDI stimuli from a macro-economic point of view. The relationship to a company's micro-economic view is less significant in more mature FDI situations, although the IDP status of a country is of relevance when an original investment decision needs to be taken. With regard to the OLI framework, it can be stated that IDP is reflected in the ownership advantages of both the MNE and its local competitors and in the location advantages of the particular country (Narula & Dunning, 2000, 2010; Narula & Guimón, 2010).

The International Business Environment

As this study looks at already-existing FDI by logistics MNEs and supports the prediction of its future development, another evolutionary element linking the view of the firm and its complex and volatile environment will be considered. The concept linking the firm-specific view of an MNE with the industry business environment, the national business environment and finally the international business environment (IBE) may be suitable. Ferreira, Serra, and Reis (2010) developed a knowledge-based and evolutionary perspective with the aim of jointly analysing the co-evolving effects on a company at the meta-, macro-, meso- and micro-economic levels. The meta-economic level includes all eight geovalent factors mentioned earlier – also known as the ECLIPTEP dimensions (Guisinger, 2001). An MNE will be required to dynamically adapt to the evolving international business environment by developing its own strategy and employing the existing resources and capabilities in an optimal way. The ability to adapt can be seen as a potential source of competitive advantage (Ferreira, Li, Guisinger, & Ribeiro Serra, 2009; Ferreira, Serra, & Reis, 2011).

FDI Motivations

In general, FDI motivations from the investor's point of view can be grouped into four categories: resource-seeking, market-seeking, efficiency-seeking and strategic-asset seeking (Narula & Dunning, 2010). Moreover, motivations may be split into a proactive, e.g. seeking a profit advantage, or a reactive orientation, e.g. to counteract competitive pressure. Whereas proactive motivations directly support a conscious strategic change within the company, reactive stimuli lead to an effort to adapt to external changes (Czinkota, 2009). When analysing the special case of FDI by MNEs, Dunning and Lundan (2008b) suggest the value-added chain as a major concept. An MNE aims to increase its value contribution throughout all stages of its value (added) chain as initially outlined by Porter (1998, 2004). The value chain describes a specific production or service delivery sequence from the beginning to the end. Each stage within this sequence adds value to the value that has already been created. It is of key importance for the MNE to develop from the initial FDI to the status of a 'globally integrated network of cross-border value-added activities' (Dunning & Lundan, 2008b). Inbound and outbound logistics form an essential component of the value chain and are considered primary activities providing direct added value to the product or service (Porter, 1998, 2004).

Advantages Applying to the Investor

An MNE will be required to dynamically adapt to changes in the evolving international business environment by developing its own strategy and employing the existing resources and capabilities to its own advantage. The ability to adapt can be seen as a potential source of competitive advantage (Ferreira et al., 2010). Porter's contributions on competitive advantage and competitive strategy and Rugman's extended internalisation perspective of firm and country-specific advantages (FSAs and CSAs) provide a foundation for the evaluation of how these advantages influence the strategy of the investor (Porter, 1998, 2004; Rugman & Verbeke, 1993, 2003, 2009a, 2009b).

When examining FDI by MNEs from a competitiveness perspective, both generic company advantages and the capability to connect its FSAs with CSAs from both home and the host country can be considered. According to Porter, a company should strive to create and sustain a competitive advantage by transforming its previously defined competitive strategy into concrete actions and then implementing these in practice (Porter, 1998).

In the following, the process of developing the initial research framework for this study is described.

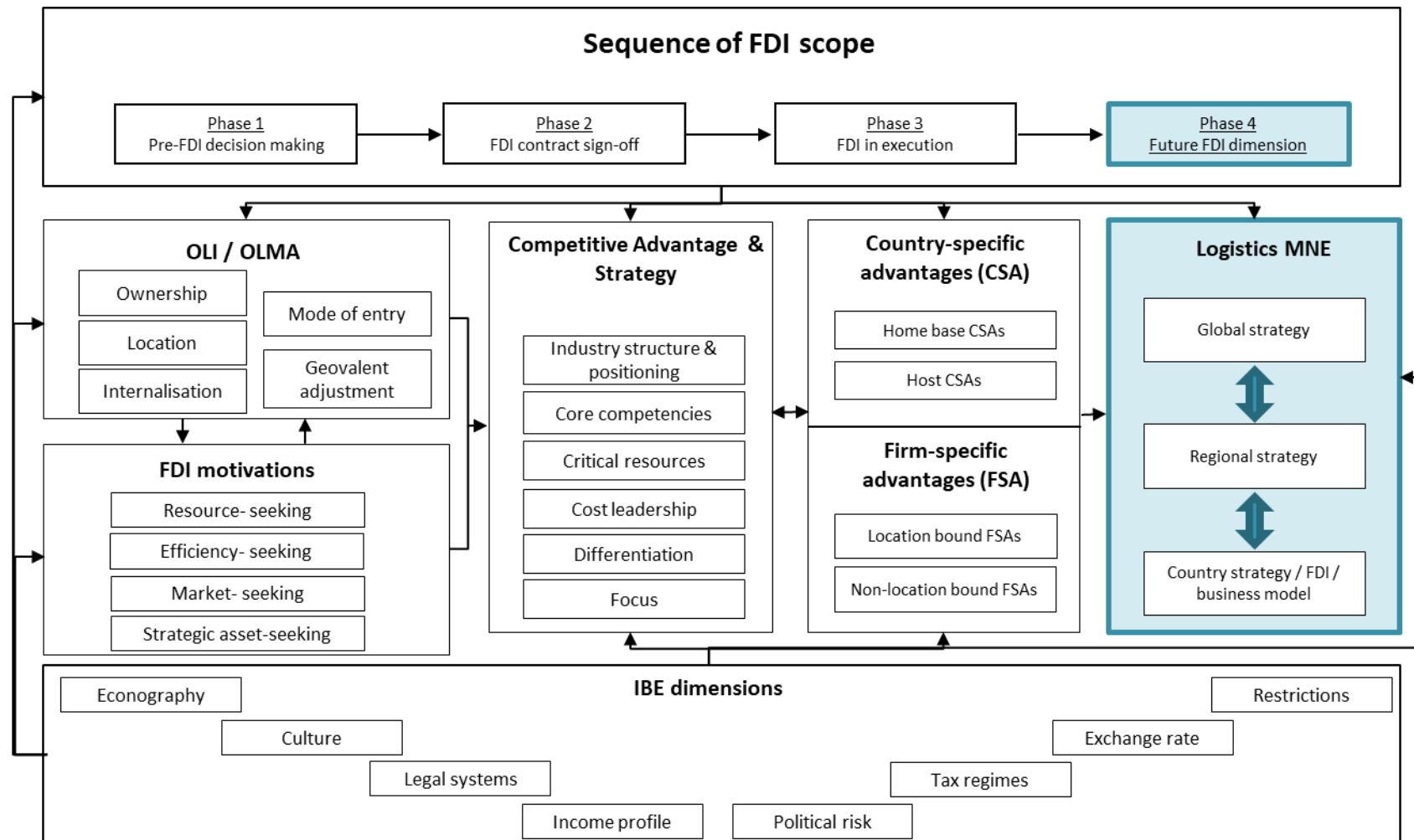
Initial Research Framework

When considering the IBE perspective, the OLI/OLMA parameters and the general FDI determinants in China all form the basis of the context of FDI from a logistics MNE's perspective. Consequently, the initial framework of the study builds on the major theories in FDI and MNE research as well as Porter's appreciation of competitive advantage and competitive strategy with a specific focus on logistics MNEs. In order to provide for specific future research, the author has included an additional Phase 4 in the traditional sequence of FDI scope to cover the future dimension (see Figure 2-2).

The initial research framework accompanied the early stages of the research. While the framework and its previously discussed theoretical concepts were considered as supportive during the orientation phase, it soon became obvious that the setting was very broad and too generic for the research topic in scope.

Based on the initial research framework building on major theories a further concretization was considered as necessary in order to embed the specific context of logistics in China. Therefore, the author reviewed further theoretical concepts for their applicability to the current research.

In the adjoining sections, the most popular concepts of corporate strategy are discussed and evaluated for their relevance to the current study.



Source: Adapted from Dunning (2000); Ferreira, Li, Guisinger, & Ribeiro Serra (2009); Ferreira, Serra, & Reis (2011); Guisinger (2001); Narula & Dunning (2000, 2010); Narula & Guimón (2010); Porter (1998, 2004); Porter (1998, 2004); Rugman & Verbeke (1993, 2003) and consolidated by the author of this study

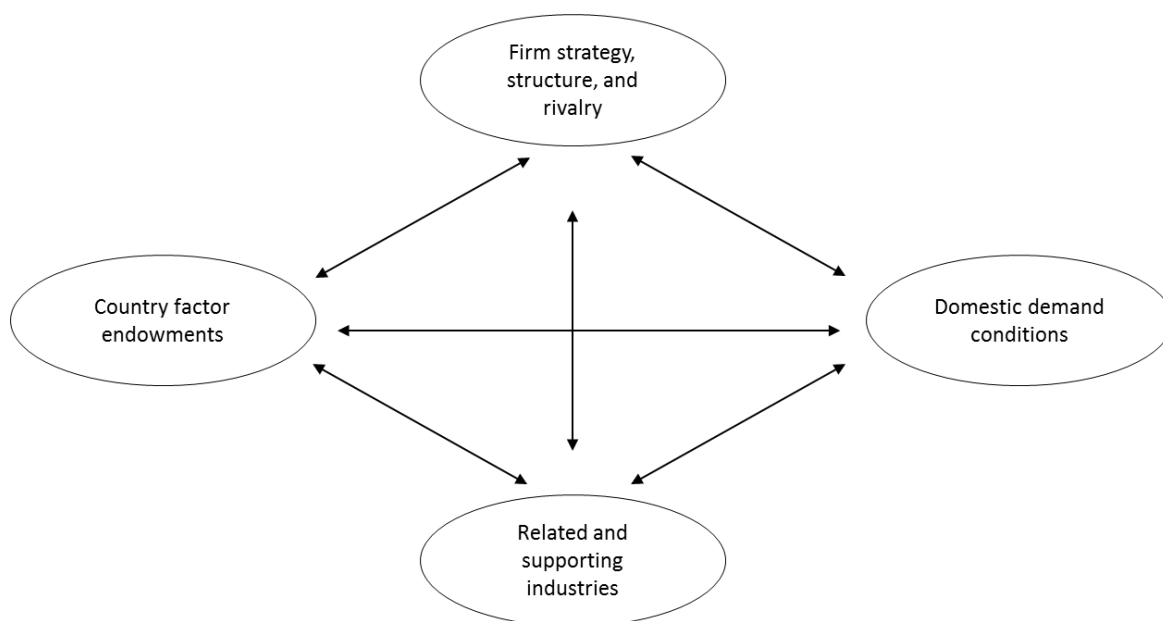
Figure 2-2: Initial research framework

2.3 Corporate Strategy

In this section, further academic concepts in the area of strategy are explained and evaluated for their relevance to this study.

Throughout the progress of the study, the initial framework was considered to be relatively broad and not specific enough for the scope of the research. Most existing IB theories seek to explain the FDI entry mode and an early positioning in a new market. Since the focus of this research is on a long-term strategy for logistics MNEs, the author became aware that more emphasis needed to be placed on a thorough foundation of academic concepts in the area of logistics MNE strategy.

The strategy of an MNE is determined by several influential factors. For example, in his theory, Porter (1990) illustrates how the competitive advantage of a national industry is built on four determinants in the form of a 'diamond' as shown in Figure 2-3.



Source: Porter (1990, p. 77).

Figure 2-3: Porter's Diamond Model for competitiveness

Porter's model can also be used to describe how a company can become competitive within its market and refers to how a company can achieve and sustain greater profitability than its rival firms. A competitive advantage in this context is based on superior performance, while company size or market share are seen as outcomes rather than sources of competitiveness. The four factors in the model represent an interconnected system as they influence each other, either in a supporting manner or as obstacles. The factors can be explained as follows:

- Country factor endowments: These are country-specific factors, which refer to the availability of production factors like human capital, availability and prices of raw material and energy, existing knowledge, availability and cost of capital and existing infrastructure.
- Domestic demand conditions: For example, discriminating customers may force the industry to bring forward innovation and a higher quality of products.
- Related and supporting industries: This factor describes the spatial distance of upstream and downstream industries, meaning that a well-connected and communicative structure fosters new ideas and innovation.
- Firm strategy, structure and rivalry: Strong competition can result in high grades of innovation and productivity.

In addition to these four factors, another version of Porter's model shows two more determinants that could influence the system but rarely have any kind of interdependency. These determinants are chance and government, where the latter may also include protectionism or domestic demand support. Porter reasons that a company that is successful in its highly competitive home market can also be successful in other foreign markets. This argument is based on an assumed self-enforcing nature of the Diamond Model. For example, strong home-market competition drives innovation which then enables a company to gain a competitive advantage, not only in its home base but also for conquering foreign markets (Porter, 1990).

Porter's model of competitiveness has received much criticism by both academia and business practitioners. For example, Davies and Ellis (2000) debate the factors, the explanations of success, the mode of reasoning and the core assertions of the model. In their view, there is no requirement for a strong home-base industrial 'diamond', as there are also internationally successful industries without that home base. Correspondingly, a high level of inward FDI in a specific national industry does not automatically indicate less competitiveness in that sector. In addition, the general applicability of the conclusions based on American examples can be disputed as emerging market countries have different economic structures. Further attempts have been made to increase the managerial practicability of Porter's model. Rugman and Verbeke (1993) suggest operationalising the 'diamond' by including a strengths-weaknesses-opportunities-threats (SWOT) analysis and assessing the existing competitiveness determinants of internal capabilities and the external environment for strengths and weaknesses as well as the opportunities or threats.

In addition to the Diamond Model for competitiveness, Porter also developed the Five Forces model (2004) shown in Figure 2-4.

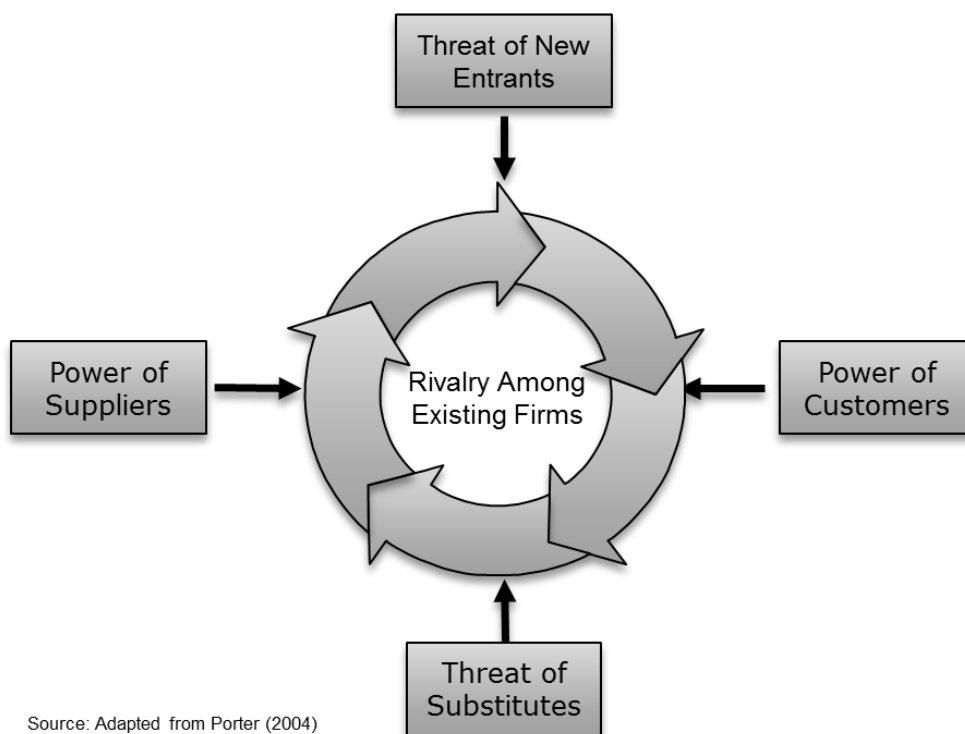


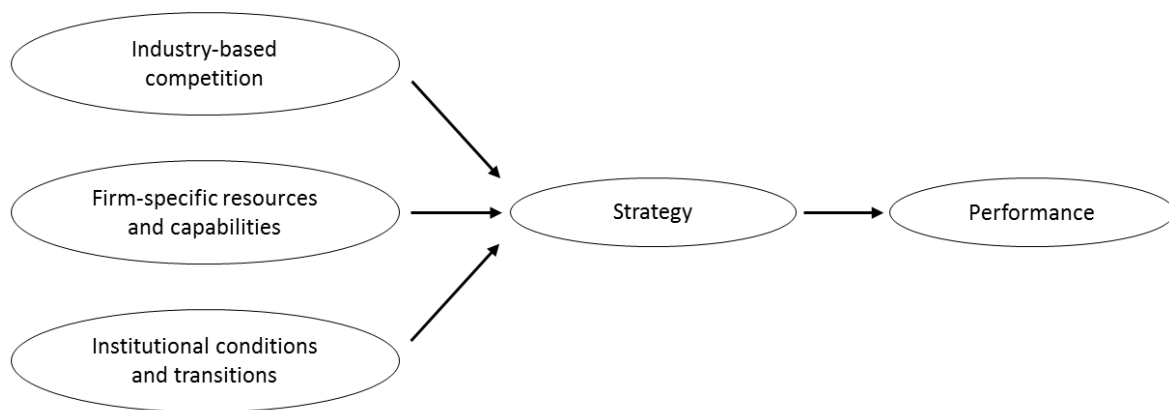
Figure 2-4: Porter's Five Forces model

This concept is used to analyse the level of competition within an industry. These five forces determine the attractiveness of the market and the opportunities to achieve the required performance:

1. Intensity of competitive rivalry among existing firms,
2. Threat of potential new entrant,
3. Bargaining power of suppliers,
4. Bargaining power of customers,
5. Threat of substitutes.

Again, Porter's five Forces Model has faced some criticism. For example, it should be noted that only one market at a time could be explained when applying the model, therefore any interconnections with other industries are neglected. In addition, its applicability to large and volatile emerging markets may not be so easily justified (Dunning, 1993, 1998). The importance of the institutional perspective is also widely neglected in the original Five Forces model (Narayanan & Fahey, 2005). Therefore, this model is considered suitable for supporting market entry decisions. Nevertheless, the exceptionally dynamic environment of China for a logistics MNE requires further elements for a thorough analysis.

Another approach to explaining strategy in the context of IB is based on the work of Mike W. Peng. While Peng acknowledges that the field of IB is very broad and interdisciplinary, he strives to develop a more unified framework. The one fundamental question to be answered is: 'What determines the success and failure of firms around the globe?' (Peng, 2004). Initially based on two core perspectives – the industry-based view and the resource-based view – the institution-based view was later added to enhance the framework (see Figure 2-5).



Source: Peng (2009, p. 15).

Figure 2-5: Peng's unified framework for IB strategy

The first component of Peng's framework forms the **industry-based competition** that assesses the company strategy from a competitive angle. This concept – also called the market-based view – aims to interpret the importance of the existing industry structure for the performance of a single firm. This structure strongly influences the firm's competitive strategy with the aim of outperforming its competitors. According to Peng (1998, 2004, 2008), the strategy may pursue one three targets:

- Cost leadership – being the cheapest provider in the market;
- Product or service differentiation – distinguishing the firm from other providers by providing other, generally better, product or service features;
- Specialisation – concentrating on specific parts of the service or product offer, thus achieving either cost leadership or differentiation.

Delgado, Porter and Stern (2014) also examined the influence of regional clusters on industry performance. There can be positive spillover effects from the strengths of related industries, but also negative effects for the whole market, e.g. those caused by diminishing returns for certain specialised offers. Positive effects may include several types of externalities that have their cause in clusters, such as industry-wide improved knowledge and skills of the workforce.

Furthermore, regional clusters can be the cause of several ‘agglomeration mechanisms’, such as improved customer interaction or innovation spirit within the industry (Delgado et al., 2014).

Another leading perspective when assessing strategy is to understand how the **firm-specific resources and capabilities** determine the degree of the firm’s success. This concept is named the Resource-Based View and seeks to analyse the company's resource position and how the relationship between resources and profitability is determined. Wernerfelt (1984) examined several aspects of this view, for example using existing resources as a basis for diversification, but also resource developments that could be targeted or specific acquisitions to bring in new resources. Resources in this context consist of tangible and intangible assets, e.g. capital, brand name, knowledge, technology, skilled workforce or customer base. The full scope of these resources forms the basis of the firm-specific advantages or in some cases also disadvantages. The manner in which these resources are applied determines the ability of the firm to increase its profitability or, more specifically, its success when entering new markets (Wernerfelt, 1984, 1995). For example, firms building businesses abroad generally face a liability of foreignness. However, a few internationally successful firms have not only overcome this disadvantage but have also changed it into an extraordinary triumph over their local competitors. These firms could rely on firm-specific advantages based on their internal resources (Barney, 2001; Fahy, 2002; Peng, 2001, 2009; Pitelis, 2004; Rugman & Verbeke, 2002).

The last element of Peng’s framework, the **institutional conditions and transitions** relates the success and failure of firms in the wider influence of formal and informal institutions. These institutions define rules for competition in the country that could be formal, e.g. laws, or informal, e.g. company ethics or values (Peng, 2009). Following the arguments of North (1990), institutions are generally considered to be the ‘rules of the game’ and thus determine how the interaction within markets takes place. A more specific definition explains institutions as ‘the humanly devised constraints that structure human interaction’ (North, 1990, p. 3). These institutions should not be considered a static market component; rather, they may be able to act in an ‘adaptively efficient’ manner by responding to the changes in their environment, for example market development or altered policies. In North’s view,

institutions form the 'incentive structure of economies', thus driving economic development. This 'institutional framework' consists of a regulatory pillar – the influence of formal regulations on the behaviour of firms and individuals – and a normative pillar, which summarises the influence of beliefs and norms (North, 2005; Peng, 2009).

Building on the insights from institutional economics, Peng assesses why companies with different origins also apply different strategies. He examines both the home and host country's perspective for the key influential factors that drive the firm's strategy. This newly introduced institution-based view is based on the understanding that it is not only the firm and industry conditions, but also the countries' institutional framework, that shape the specific strategy. Peng sees a dynamic interaction between organisations – with an industry environment and firm-specific assets – and the formal and informal constraints provided by the local institutions. This interaction drives the strategic choices of a company investing abroad, taking into account the overall conditions for doing business. In addition, Peng identifies specific national and cultural patterns in business strategy. For example, there is a tendency towards strong diversification and forming conglomerates in Asian companies, whereas Western companies are discouraged by their investors to follow this path. According to Peng, when determining their investment strategy in a certain country, firms are advised to put some effort in establishing the 'micro-macro link'. This means that the interpersonal relations of managers within multiple companies are translated into a broader inter-organisational interaction that supports the firm's performance for all companies involved. Although the micro-macro link is a necessary element driving performance, it is by far not sufficient (Peng, 2000a, 2002; Peng & Khoury, 2009; Peng & Luo, 2000; Peng et al., 2009; Peng et al., 2008).

It should also be acknowledged that the application of institutional theory in the context of MNE research is the target of some criticism. For example, Kostova, Roth, and Dacin (2008) clearly differentiate between traditional neo-institutionalism and a more contemporary 'dynamic institutionalism'. They argue that traditional institutional theory cannot be applied unconditionally to the study of MNEs. As these firms generally show a heterogeneous and complex organisational structure, their interactions with local, regional and global institutions should not be assessed in the same way as purely national firms. A common, homogeneous environment or 'organisational field' stressed by neo-institutionalism does not apply to MNEs

as these firms face numerous, often contrary institutional environments. Instead, MNEs create an ‘intra-organisational field’ that forms an environment of its own. MNEs also tend to shape the overall institutional environment being influenced by representative bodies like industry associations or home country/regional chambers of commerce in the host country. Therefore, a ‘blended institutional perspective’ is recommended, which means combining the concept of social embeddedness of organisations with the applied influencing via agencies and industry politics (Buchanan, Chai, & Deakin, 2013; Kogut, Walker, & Anand, 2002; Kostova et al., 2008). It can be observed that the institutional environment of an MNE in China is far from static and this contributes to the volatility of the overall business environment. This view is in line with Peng’s institution-based view, which emphasises the dynamic interaction between institutions and firms (Peng, 2002; Peng & Khoury, 2009; Peng et al., 2008).

Therefore, the views discussed above are connected with the concept of dynamic capabilities that follows below.

2.4 Dynamic Capabilities-Based Theory of the MNE

This section describes how the previously discussed IB theories can be enhanced by the concept of dynamic capabilities for this specific study.

The view of capabilities usage in this study draws on the dynamic capabilities-based theory elaborated by David Teece (1984, 2006, 2010, 2014a; Teece et al., 1997). While Teece’s theory is still controversial among IB scholars, the interaction between the intra-firm capabilities, home and host country capabilities and the overall orchestration is increasingly in the focus of IB research. For example, Cantwell (2014) demonstrates the applicability of the dynamic capabilities-based theory in contemporary research on the nature of the MNE and its interaction with the international and local business environment. Innovation plays a key role when developing your capabilities. An MNE can build on its competitive advantage of integrative capabilities that combine different locational capabilities, thus leveraging multinational sources of innovation and developing new capabilities. The continued interaction within the multinational network of an MNE creates new knowledge or

opportunities that support increased competitiveness (Cantwell, Dunning, & Lundan, 2010; Katkalo, Pitelis, & Teece, 2010; Pitelis & Teece, 2010; Teece et al., 1997). It can be stated that the MNE not only adjusts dynamically to the continuously changing business environment, but also actually initiates change and transformation outside its own company. This is in line with the evolutionary economics theory that explains how firms act within a volatile business environment and how strategic capacities are built to adjust to future changes (Contractor, 2007; Kogut & Zander, 1993; Teece, 2007, 2014b).

As the key focus of the present research is on logistics MNE strategy, further emphasis needs to be placed on providing insight into how a competitive advantage can be created and then sustained in the long term. Teece summarised that a company's competitive advantage derives from a combination of the firm-specific processes and assets. Another influential factor is the company's strategic revolution path. When considering the current volatile business environment, which is especially relevant in the emerging market of China, a dynamic approach to exploring and explaining the performance-relevant capabilities seems obvious (Teece et al., 1997). Teece (2014a) also argues that an MNE needs to combine its dynamic capabilities with a 'good strategy' that is dedicated to the markets in focus. The previously discussed internalisation theory of the MNE includes an additional element in the transaction cost-related governance perspective – the technology transfer and capabilities related perspective. Teece seeks to demonstrate that the latter perspective has thus far been neglected to some degree in IB research. He notes that a suitable theory applied to MNEs needs to target a sustained competitive advantage (SCA). It should be of key interest to MNEs to understand how this SCA is created and defended over time. Teece also suggests linking the internalisation theory with the field of international management. Thus, the concept of entrepreneurship and the respective (dynamic) capabilities come into play when explaining the true nature of the MNE and how the SCA is derived. This is underlined by the entrepreneurial and dynamic concepts of market creation or co-creation that are especially applicable to MNEs (Teece, 2014a).

At this point, the specific context of the Chinese logistics market is reviewed relating to how it is covered in the literature.

2.5 Literature Review of Logistics in China Relating to this Study

In addition to the theories discussed above, additional literature covering the specific context of the Chinese logistics market is reviewed in this section.

This literature review contributes to the research undertaken on the logistics market in China. The specific focus of this study is on the development of FDI in the Chinese logistics sector and the activities of logistics MNEs in China. Thus, a literature review of this area is included here. The target is to provide a broad understanding of the existing literature on the current situation and the major trends in the logistics business in China.

Considering the huge span of the research topic, a systematic and well-documented approach was chosen. Applying a systematic review within management research has only been practiced for a few years (Tranfield, Denyer, & Smart, 2003). As expected, this context-related literature review produced a broad spectrum of topic-related academic literature as well as contributions by business practitioners. Therefore, the scope of the initial research was narrowed down by applying explicit inclusion and exclusion criteria. The aim was to produce an adequate indication of the trans-disciplinary knowledge related to the research context.

As a starting point, a general localisation of relevant literature including the respective search terms was conducted. Academic research in the area of logistics business in China is not limited to one discipline. The intention is to provide a trans-disciplinary overview of the existing research related to FDI in the Chinese logistics market. The academic areas in the scope of this study include primarily management science, international business and supply chain management.

Search Process, Criteria Applied and Categorisation

The actual search process within online databases was conducted in a phased approach. Each step was tracked and documented (see Appendix I). Considering the different orientation of each resource, the search terms ‘logistics’, ‘investment’ and ‘multinational’ in combination with ‘China’ were applied where reasonable.

An initial online search in the OECD iLibrary for general economic information was conducted on 3 February 2019. This delivered 12 preliminary hits for ‘Investment AND China’ and 3 hits

for 'China AND Logistics'. Finally, only three documents were extracted after a screening of the content based on the criteria of the scope of the study.

The systematic search approach using academic online databases began on 17 February 2019 with Business Source Complete (EBSCO). Only the search terms 'Logistics AND China' were used for the title, concentrating on the central research topic. The single run produced 298 hits for the timeframe '2000–2019'. Following a content screening, 28 articles were extracted. The search with ProQuest for the terms 'Logistics AND China' on 24 February 2019 resulted in 169 hits and after a screening, 15 articles were extracted.

The next search was carried out with Emerald Insight on 3 March 2019. This resulted in 45 hits overall with only one article extracted, mainly due to the duplication of hits already found in the previously searched databases. The same was applied for further searches in ScienceDirect and Web of Science on 4 March 2019 with 5 extracts from 247 hits and 2 extracts out of 35 hits, respectively. In order to review the coverage of the topic in previous doctoral theses, the British database, EThOS, and the European database, DART, were searched for the terms 'Logistics AND China' on 3 March 2019. EThOS delivered at least one extract out of 47 initial hits, while DART delivered a zero result out of the initial 15 hits. Hence, it can be reasoned that the topic has been much more in the focus of research students at British universities so far. The full search results of all databases are detailed in Appendix I.

In order to appropriately determine whether the literature was valid for further review, clear criteria had to be set from the beginning. It was determined which search outcomes should be included in the scope and which should be ignored in further analysis. Applying traceable inclusion and exclusion criteria should ensure that only appropriate evidence and knowledge is incorporated. Thus, the criteria served as an interim quality check of the knowledge applied. It is crucial that the application of research criteria was stringently followed throughout the whole process (Tranfield, et al., 2003). The inclusion and exclusion criteria were set following an initial, high-level screening of the literature. Due to the huge supply of literature for the research topic, some generally interesting aspects were excluded for this context-related literature review.

The result of the literature search and selection by applying the pre-defined inclusion and exclusion criteria is illustrated in Figure 2-6. For further details, refer to Appendix II.

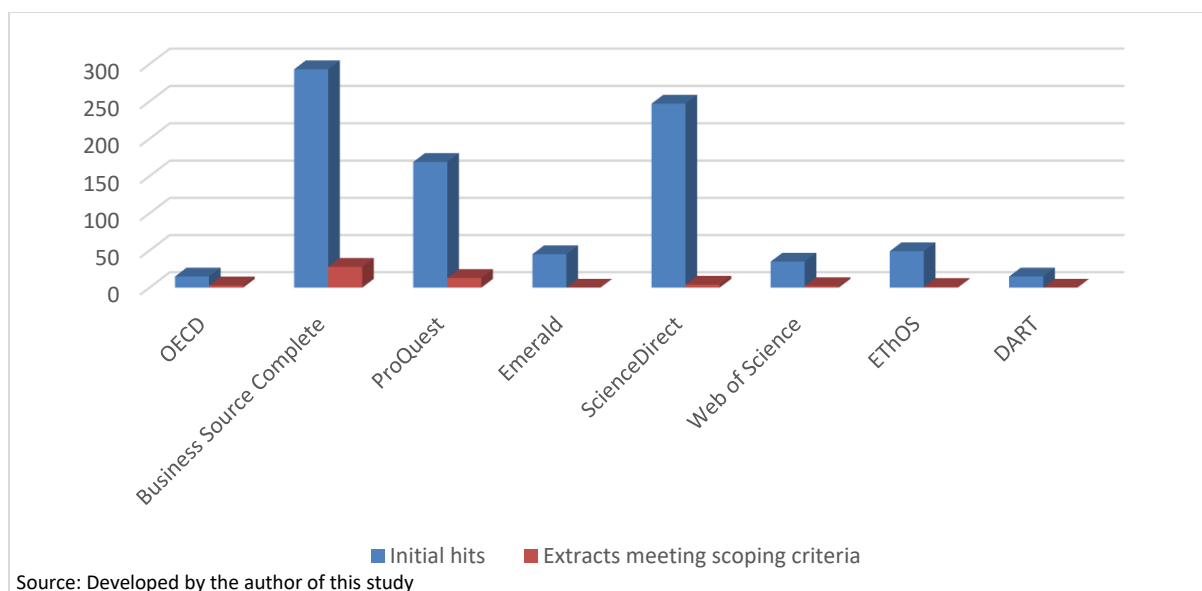


Figure 2-6 Search results including extracts and retrieved literature

It should be noted that several articles were generated for a second or third time during the search within the different databases. In order to obtain a broad understanding of the time-related allocation of literature, an additional analysis of the review extracts was performed (see Figure 2-7).

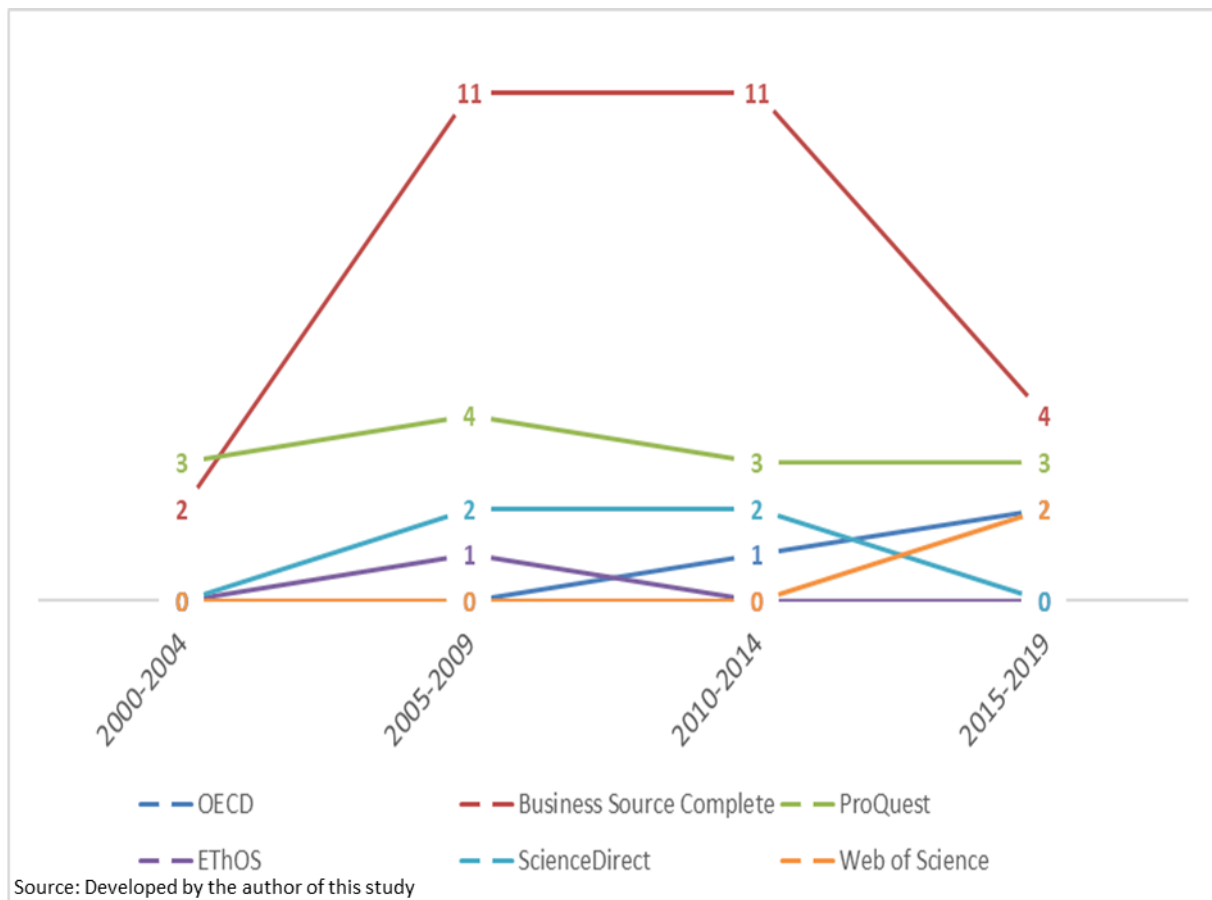


Figure 2-7 Time-related distribution of literature for 'Logistics AND China'

While the academic research on the topic 'Logistics AND China' between 2000 and 2004 was rare, an increase in interest can be identified between 2004 and 2014. In the most recent years after 2014, the interest was slightly lower but remained stable. Thus, it can be reasoned that the academic interest in Chinese logistics has grown significantly over the last 15 years.

In addition, an evaluation of the literature for the geographical distribution of authors was conducted. As shown in Figure 2-8, teams of mainly mixed nationality contributed to the literature, followed by Chinese-based and Western authors.

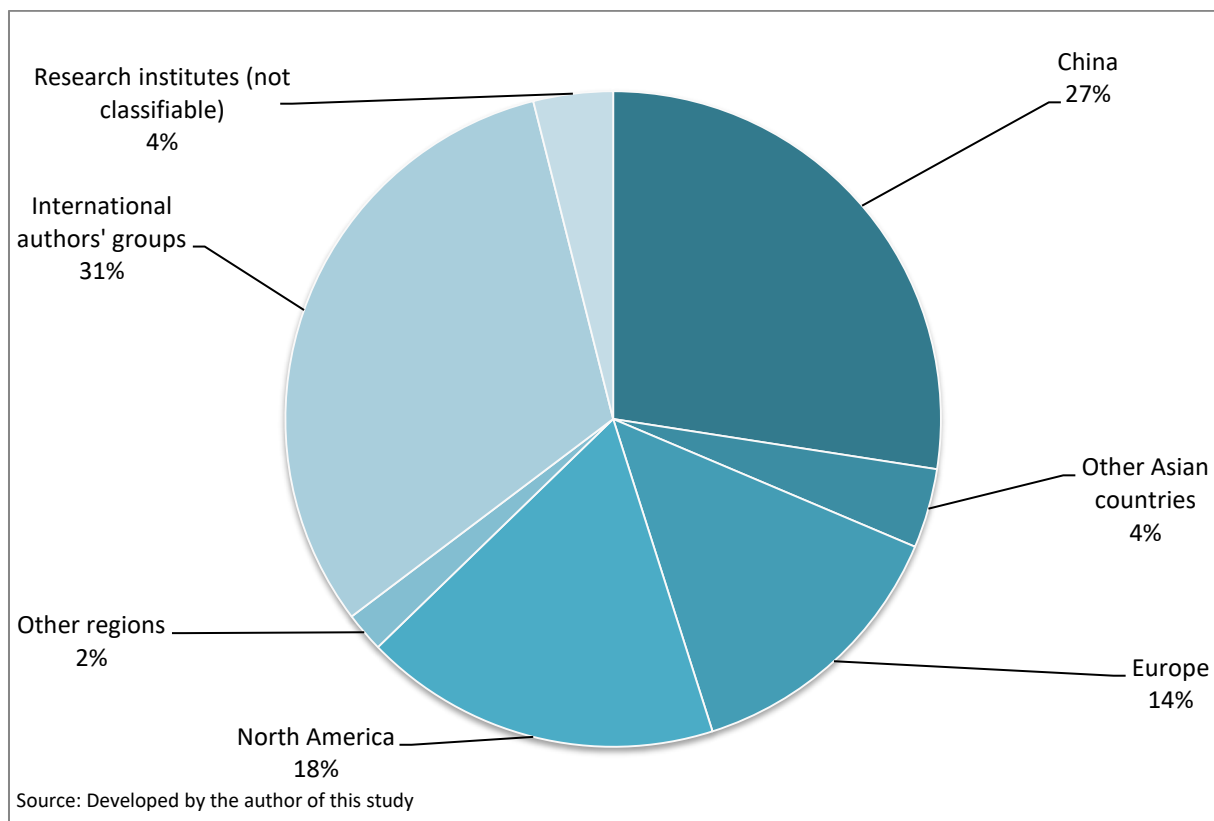


Figure 2-8 Geographical distribution of authors

Once the search outcome had been selected by applying the inclusion and exclusion criteria, a further categorisation was applied. Each document was assessed according to its category (i.e. qualitative or quantitative study) and fundamental methodology (i.e. type of model applied, narrative review, etc.). These results are shown in Appendix III.

In order to systematically evaluate the literature retrieved, a suitable order of review was determined. The knowledge retrieved was sorted into the three key sections (including applicable sub-matters) according to criteria of the study: FDI, logistics and MNEs in the geographical context of China.

The results of the systematic literature review within the Chinese context are discussed below using the structure as described.

FDI in China

In addition to other international institutions like the World Bank, the Organisation for Economic Co-operation and Development (OECD) in particular places a special focus on Chinese economic development. Although China is not an OECD member, a growing number of studies have been published by the OECD to investigate the effects of globalisation over the past years. This underlines the importance of China in economic policy research in general, and on the subject of FDI in particular. China's investment policy has been repeatedly reviewed, exemplarily by Davies (2013). Although the perception of China as an exceptional investment environment is maintained, the need for further liberalisation, increased transparency and a better predictability of the applied FDI framework is explicitly emphasised.

Furthermore, Chinese economic development plays an important role in OECD research. Among more general discussions, development in the Chinese service sector has been in specific focus. This tertiary sector is growing at a high rate, and has overtaken the secondary sector in its value-add. Due to increasing market liberalisation as well as a growing demand for outsourced specialised services, a positive effect on high value-added logistics services is anticipated. These developments are expected to enable further FDI in the Chinese logistics sector (Molnar & Wang, 2015).

Hong (2007) examined the effects of location determinants on FDI decisions in the Chinese logistics market. Some distinctive characteristics of the logistics branch initially discussed were:

- (1) Services are not tradable, which means provider costs increase over distance.
- (2) Users have the choice of keeping logistics in-house or outsourcing to third-party logistics providers (3PLs).
- (3) The degree of regulation differs by location and governmental policy may change conditions over time.
- (4) Access to the existing transport infrastructure is considered uncomplicated, e.g. close proximity to airport or harbours.

Whereas the first two parameters seem to be applicable everywhere, the latter parameters have a special focus in the Chinese setting. The key findings of the logit model applied by Hong (2007b) can be summarised as follows:

- (1) Wholly foreign-owned companies and mature firms preferred low labour costs, whereas joint ventures were oriented towards local market size.
- (2) Newly established firms were more focused on market size and existing urban infrastructure.
- (3) The impact of other location factors like economic privatisation level, lagged foreign logistics investment and accessibility to a seaport was seen as equally important for all types of logistics companies.

As the results were derived from a non-recurring census survey, the need to ascertain the validity of the findings was noted (Hong, 2007b).

In addition, the same author examined the firm-specific effects on the location decisions for FDI in the Chinese logistics market, again by using logit modelling (Hong, 2007a). The research results imply that smaller logistics firms as well as wholly owned foreign firms prefer locations with low labour costs, while joint ventures put specific focus on the local market size, respective demand and supportive government policies. Another location determinant is convenient airway transport that is specifically relevant to logistics FDI from non-Asian countries. As Hong (2007a) also points out, the importance of these location determinants differs across logistics subsectors and may also change once the FDI matures.

Chin and Hong (2005) studied the general impact of location determinants on investment decisions in the Chinese logistics market. By applying a multinomial logit model, the location determinants of transport infrastructure, market size, labour quality and cost, agglomeration economies, communication cost, economic privatisation degree and government incentives were reviewed for their relevance to FDI. The outcome implies that the importance of these factors on location decisions varies by region in the logistics investor. While North American and European companies tend to invest in large cities with lower labour costs and convenient

airway transport, Asian logistics investors view communication infrastructure as the most important factor (Chin & Hong, 2005).

The same authors, Hong and Chin (2007), continued their research of FDI location choices in the Chinese logistics industry. The previous results were generally verified, for example, logistics FDI was attracted by large market sizes, low labour costs with high labour quality and a generally good transportation infrastructure. In addition, the location advantage of big cities with a high grade of industrialisation was confirmed. Furthermore, they found that new logistics investors preferred those locations where other foreign logistics providers are already active. While this outcome demonstrates the existence of agglomeration economies in logistics services, specific location advantages of special economic zones could not be proven by empirical evidence in the applied nested logit model (Hong & Chin, 2007). The specific location determinant of transport infrastructure was separately analysed by Hong (2007c) who found that the existing transport conditions of roadway, railway and waterway, as well as future development plans, play an important role for FDI in Chinese logistics.

It can be concluded that FDI in the Chinese logistics market has thus far not drawn much academic interest. As the existing research mainly applies quantitative methods using census data, more specific insights into the strategic logistics investment decisions in China is required.

In the following section, the more prolific literature focusing on the overall Chinese logistics market is reviewed.

Chinese Logistics Market

The development of the Chinese logistics market has drawn some interest in the literature in previous years. While topic-related articles at the beginning of the 21st century tended to be short and focused only on general market views with some expectations on future growth, publications that are more recent provide additional specific insights using qualitative research approaches. Several examples of older market perspectives of a more general nature can be found in the literature (Anonymous, 2005; Armbruster, 2007; Bolton & Yan, 2003;

Byrne, 2006; Chan, 2008; Goh & Ling, 2003; Jiang & Prater, 2002; Kerr, 2004; Pennington, 2007; The Economist, 2009; Trunick, 2007). All these publications emphasise the importance of the logistics market in China while also discussing the existing hurdles and obstacles for logistics companies wanting to enter this market.

Contrary to the predominantly narrative-based publications on Chinese logistics, Wang, Zantow, Lai, and Wang (2006) conducted a mail survey of logistics providers in mainland China, thus combining national and international companies as well as joint ventures in one sample. The results of the survey show four different strategies in the Chinese logistics market, which originated in Porter's strategy framework. Cost leadership and differentiation are seen as the two main sources of competitive advantage. Thus, the four strategies are based on how these advantages are applied by the logistics providers. While the pure cost strategy appears to be underrepresented, a greater number of companies apply strategies of a purely differentiation type or a combination of cost and differentiation. Nevertheless, the study found that the majority of logistics providers in mainland China could not claim any specific advantage and therefore were limited in their strategic options. The study provides some strategic advice for logistics companies, such as focusing on differentiating their product offers, improving service quality and investing in employee training. It would have been interesting to see how national and international logistics providers differed in their specific strategic choices. This view was not provided by the study as it used a combined sample. Furthermore, evidence collected in a mail survey may be seen as less thorough compared to more detailed data collection using qualitative approaches like expert interviews. Another limitation of the study was that its theoretical foundation was only based on Porter's strategy framework, thus providing a rather static view and excluding further determinants like the institutional view. Nevertheless, the study claims to be the first research on the strategy of logistics providers in mainland China, which is justified (Wang et al., 2006).

In the following years, further studies focused on the development of the Chinese logistics market, again by using mail surveys incorporating both national and international companies. A summary of the results of the studies by Hong and Liu (2007) and Hong et al. (2007) shows that companies in the Chinese logistics market often lack comprehensive service portfolios, rarely use technology like information systems and therefore cannot provide the logistics

performance of international service standards. In addition, regional differences in the huge Chinese logistics market were identified. Logistics providers active in highly industrialised areas tend to be more advanced in their service offers. With regard to strategic alliances, by Hong and Liu (2007) found that most local firms prefer to work with a partner in order to enhance their competitiveness.

Simultaneously, the first studies comparing the Chinese logistics market with other locations were published. Wang, Chu, Zhou, and Lai (2008a) examined the differences between logistics in mainland China and Hong Kong. While both regions share many similarities in their logistics market, clear differences were also identified. Hong Kong-based logistics providers face more intense competition, forcing them to provide a reliable quality of service and to cope with market changes in a more flexible manner. In comparison, the logistics market in mainland China was described as an emerging industry where the logistics providers face low profit margins, a lack of qualified logistics personnel but also increasing competition. As the majority of the national and international logistics companies in the survey sample saw themselves as new entrants in the market, a major focus was on achieving a good service performance, often addressed by increased training of their employees (Wang et al., 2008a).

One of the rare doctoral research approaches in this context was undertaken in a PhD thesis by Liu (2008). The aim was to analyse the competitiveness of logistics providers in China and the UK. By analysing the data using combined methods, including multiple regression, exploratory factor analysis and factor analysis regression, a detailed picture of logistics providers in both countries was obtained. In addition, the distinct historical and environmental factors in China in relation to the UK were well explained. The advice for logistics providers seeking a strong performance position in China was summarised in a seven-step procedure for the creation of a competitive business strategy.

These steps consisted of:

1. Assessing the competitive position,
2. SWOT analysis,
3. Conveying the competitive strategy,

4. Developing management practices for strategy implementation,
5. Implementing the strategy,
6. Evaluating the success of the strategy,
7. Determining the existing gaps in resources and capabilities considering the business environment.

Finally, Liu (2008) pointed out that competitiveness in the customer view, capability development and the influence of specific resources should be investigated in future research. Later on, several articles developing the key findings of the original research were published, focusing, for example, on capability development for logistics providers in China (Liu, 2011; Liu, Grant, McKinnon, & Feng, 2010).

Following up on the question of key performance drivers for logistics providers in China, Wang et al. (2010) examined environmental factors like local and international competition, operational challenges as well as internal parameters like strategic decision making and operations emphasis. The results show that both internal and external factors drive operational excellence and financial performance. The authors indicated some room for future research, for example by analysing other factors, such as technology adoption, information sharing or benchmarking (Wang et al., 2010).

After 2010, Chinese logistics market-related publications tended to include more views by logistics experts as well as actualised market data. Again, the conclusions drawn were similar to those in previous years, for example underlining the global importance of the Chinese logistics market with its specific advantages and disadvantages as well as the need for international logistics providers to build and maintain operations there. Once more, the location determinants were described as predominantly positive, for example the policy-driven investment incentives to support logistics industry growth were highlighted (Burnson, 2013; Tuerxun, 2017). Nevertheless, the need for China to upgrade its logistics infrastructure in order to foster future logistics development was underlined (Fu, Bentz, & McCalla, 2011).

As already explained, the majority of publications relating to the Chinese logistics market are either short narratives with selected economic data or more detailed quantitative analyses

based on survey data. One of the rare qualitative analyses is a literature analysis undertaken by Mahpula, Yang, Kurban, and Witlox (2013). Their paper reviews logistics research undertaken by Chinese academics between 1990 and 2010 while applying a content-based analysis. Logistics research in the paper's context was limited to pure transportation matters, thus excluding supply chain management.

The results from the reviewed literature characterise Chinese research in a logistics context as predominantly focused on geographic-economic development and related policy advice. These results were partially confirmed in a further literature review by Liu (2014), which incorporated articles from eight peer-reviewed journals in the area of logistics and supply chain management between 2001–2012. The key findings showed a limited use of theories in the reviewed publications. Only a small number of published articles had a theoretical foundation, such as Porter's competitive strategy, the resource-based view (RBV), transaction cost economics and institutional theory. Along with greater methodological rigour, a more detailed examination of Chinese logistics trends was also recommended for future research.

While there has been further research on general developments in the Chinese logistics market, only a few of these publications show a stronger theoretical and methodological foundation. For example, Lean, Huang, and Hong (2014) found a long-term relationship between logistics development and economic growth through production function modelling.

The competitiveness of Chinese logistics enterprises was again the focus of a mail survey by Liu, Liu, Tang, Chen, and Liu (2014b), who identified specific competitive resources and capabilities including logistics risk control capability, human resource management and corporate culture.

Tan et al. (2014) applied a combination of focus group interviews and a mail survey to investigate the situation of domestic logistics providers in China. Starting with the identification of global trends, like logistics outsourcing and the existing opportunities and challenges in the Chinese market, critical success factors for logistics companies were determined. The success factors were ranked according to their perceived importance: IT, qualified employees, processes, company size, customer relationship and service quality. These results were not surprising, because IT has been the focus of Chinese logistics research

for some time. Further publications by Lai, Zhao, and Wang (2007) and Lai, Zhao, and Wang (2006) had already identified IT as a major competitive advantage in the Chinese logistics market. The same applies to human resource management and finding employees with the right qualification in logistics. In this case, articles by Ding, Kam, Zhang, and Jie (2014) and Shi and Handfield (2012) focused on employee selection, training and talent management, while the latter study focused explicitly on the requirements of multinational logistics providers in China. Likewise, the specifics of customer relationships in the Chinese logistics market were reviewed in a survey-based study (Chu, Feng, & Lai, 2018) which detailed the application of *guanxi* (Chinese networking methods) in logistics practice. *Guanxi* networks are considered informal institutions that can support access to information and resources of the firm. Furthermore, the applied social responsibility practices in Chinese logistics were investigated. These include environment, human rights and safety standards. In this context, a clear gap between Chinese domestic logistics providers and international companies was identified (Miao, Cai, & Xu, 2012).

On the one hand, the logistics and transport sector in China has an oligopolistic market structure based on severe restrictions in some areas; while on the other hand, more intense competition takes place in less restricted areas like trucking or general logistics services. As the cost of logistics services is seen as relatively high compared to other countries, logistics outsourcing has become quite popular for Chinese retailers. This development clearly fosters a continuous growth in the country's e-commerce business. As service quality is generally judged to be quite low, there is a growing demand for improved quality service offers (Molnar & Wang, 2015). Rapid e-commerce development in China was also in focus in a recent OECD publication on the economic outlook for Southeast Asia, China and India. The outlook for cross-border e-commerce in particular in the region is very positive and provides a huge potential for logistics companies prepared to meet the increasing demand. By applying digitalised service elements and maintaining a high quality throughout the supply chain, logistics companies could benefit from the huge growth potential in China as well as in other Southeast Asian countries (OECD, 2018). Articles by Lau and Su (2016) and Giuffrida, Mangiaracina, Perego, and Tumino (2017) also underlined the importance of e-commerce business in the Chinese logistics market.

The interconnection of Chinese logistics companies within their own market and with other industries was identified as a further research focus in the reviewed literature. Yi and Xie (2017) argued that the logistics industry in China is closely linked to other industries, being influenced but also providing stimuli. The same topic was examined by Gao, Chang, Fang, and Luo (2018) for a specific Chinese county with the purpose of identifying implications for economic policy.

Within this context-specific literature review, one article was found that discussed the company Amazon as a new competitor in the Chinese logistics market (Hook, 2017). Based only on secondary data, as no company response was provided, the article found that Amazon's expansion in China is expected to follow its development in the US with an own air cargo fleet and truck trailers. It was noted that the company obtained a Chinese shipping licence in 2016 and hired experienced Chinese logistics experts. It recommended to closely following further developments of Amazon's strategy in the Chinese market.

Emerging Trends in Chinese Logistics

When evaluating a specific logistics market from a strategic point of view, it is required to determine the dominant trends and assess their possible impact. Essentially, it is pivotal to analyse if and how the trends can influence the strategy of logistics MNEs wanting to operate successfully in a foreign market. Therefore, this literature review is enhanced by an ex-course on research and emerging trends affecting logistics MNEs in China.

In the quite broad area of logistics technology terms like 'digitalisation' or 'business model innovation' are trending upfront. For example, a study by Kersten, Seiter, von See, Hackius, and Maurer (2017) analyses digital growth chances for logistics from four essential perspectives: innovative technological concepts, supply chain transformation, changed logistics competency profiles and new business models.

Regarding innovative technological concepts, several key focus areas have been identified for logistics, for instance the use of transport management systems (TMS), enterprise resource planning (ERP) systems or warehouse management systems (WMS). In addition, the

application of predictive analytics to identify possible market developments, mobile data access for customers and use of sensors to control shipping throughout the whole supply chain are ranking quite high in the current technological requirements of logistics MNEs. In the longer term, more disruptive technology may become relevant within logistics. For example, self-driving vehicles and drones could be used for specific transportation needs once this technology is sufficiently matured and safeguarded for general usage. Augmented reality is already applied in areas like warehousing and block chain becomes more and more relevant to gain better transparency and control of complex supply chains (Kersten et al., 2017).

It can be stated that customer demand is driving digitalisation within the logistics industry, for example by requiring full supply chain transparency and real-time visibility of shipments. Logistics MNEs as well as smaller companies are well advised to make customer centricity and agility the foundation of all business activities. Of course, the continuous application of new technologies requires advanced qualifications of the logistics workforce and finally new or at least adjusted business models (Kersten et al., 2017).

The author attended a web-based conference on sustainability in transport logistics on 30th September 2020, organized by the German logistics association. A speaker from Kuehne & Nagel focused on the major trends in reducing emissions caused during transport. For example, one of the major trade lanes involves the seafreight course Shanghai to Hamburg. In view of this expert, this shipping line is generally referred to as 'the racing course' that needs to be accomplished in 33 days nowadays. Emission reducing measures like 'slow steaming' mean longer lead times that are not accepted by customers. Therefore, Kuehne & Nagel focuses on alternative fuels for their seafreight business. Biofuel usage is a clear trend, but it needs to be ensured that logistics provider focus on sustainable technologies for their emission-reducing fuel strategies. While requirements for alternative fuel to be non-toxic, biodegradable and renewable cannot be met immediately, logistics providers shall also compensation measures and 'bridging technologies' in order to reduce their carbon emissions on the way towards more environmental-friendly transportation (Maass, 2020).

Another trend can be observed in the Chinese market – there is a clearly growing demand for multimodal transportation that is only partially driven by environmental consideration. Multimodal or intermodal logistics offers include more than one transportation mode, for

example combining seafreight and rail freight on specific trade lanes with the key aims to shorten transport time and save costs (Glave, Joerss, & Saxon, 2014). Obviously, the Chinese government is promoting and encouraging multimodal logistics for some years. This initiative is targeting not only the national infrastructure, but also cross-border transportation that is relevant for logistics MNEs (Liu et al., 2014a).

Aside from their planes, trucks, hubs or warehouses, logistics companies draw their strength on intangible assets as well. While the protection of intellectual property rights (IPR) against product piracy and counterfeiting have been mainly in the focus of MNEs in the manufacturing sector in the past, the awareness of a growing need is evident for logistics MNEs too. They now understand that they have to protect also non-physical assets like network steering processes or transport managements systems. While reviewing their strategy on the Chinese market, logistics MNEs know they have to be more active in order to safeguard all resources. Chai, Choi, Michael, and Backler (2011) expect that China is continuously improving its regulatory systems regarding intellectual property, which should support multinationals in getting better market access and gain more influence. Of course, MNEs only benefit from Chinese regulatory support in sectors where local competition is still developing, which is the case in logistics. However, logistics MNEs are well advised to build their own, strong organisation internally in order to protect their intellectual assets. This could for example include hiring litigation lawyers specialised on the Chinese market or engage in professional networks. An example how network organisations can combine the strengths of their members is the European Chamber of Commerce with their Intellectual Property Rights Working Group. This group regularly assembles representatives from MNEs, law firms or specialised consultancies, and provides practical advice in form of position papers (European Chamber China Intellectual Property Rights Working Group, 2019).

When considering further emerging trends in the logistics industry globally, it can be noted besides advanced technologies also explicit service innovations are quite broadly offered by logistics MNEs in China. For example, there is a growing customer demand for the specific services offered by fourth-party logistics providers (4PLs). These services can be seen as a logistics business model of its own, as there is a clear differentiation compared to standard 3PL services. Logistics providers offering 4PL act as 'system integrators' by assuming the

responsibility for planning and controlling all logistics processes along the supply chain. By doing this, 4PL providers offer their customers additional cost savings, more flexibility and superior quality through holistic supply chain optimisation (Pfohl, Wagner, Ries, Berbner, & Witte, 2014). Also Kille and Reuter (2018) recommend a target-oriented lead logistics provider or 4PL selection strategy for multinational customers in the chemical industry.

Likewise, system-related innovations are increasingly relevant for logistics MNEs. Another trending example is the application of blockchain technology to improve and secure supply chains. These blockchains contain several extendible lists of data sets – called blocks – that are chained to each other by cryptographic methods. The main advantages of blockchain application in logistics are in its automated processes, the continuous tracking of shipments and secure data exchange. Over the last few years, blockchains have become publicly known as an instrument mainly used in financial markets. Recent use-cases are in healthcare and food logistics, which are pioneered in China by local market leaders like Alibaba or JD.com (PricewaterhouseCoopers, 2020).

From the literature review in the study's context of the Chinese logistics market, it can be summarised that the number of previously published articles and studies is still quite limited. There are only a few research examples that are based on a rigorous academic approach. In addition, it can be concluded that there is an obvious lack of comprehensive qualitative research in this area as the majority of publications are based on quantitative data collection and analysis. The academic research on logistics multinationals in China is thus far not very substantial. In fact, no research was found that directly addressed the situation of logistics MNEs in China. It appears that this field of IB provides a valid area for further exploration. These results underline the previously explained rationale for this study.

Based on these considerations, a conceptual framework was created in order to provide a methodical foundation for the research undertaken.

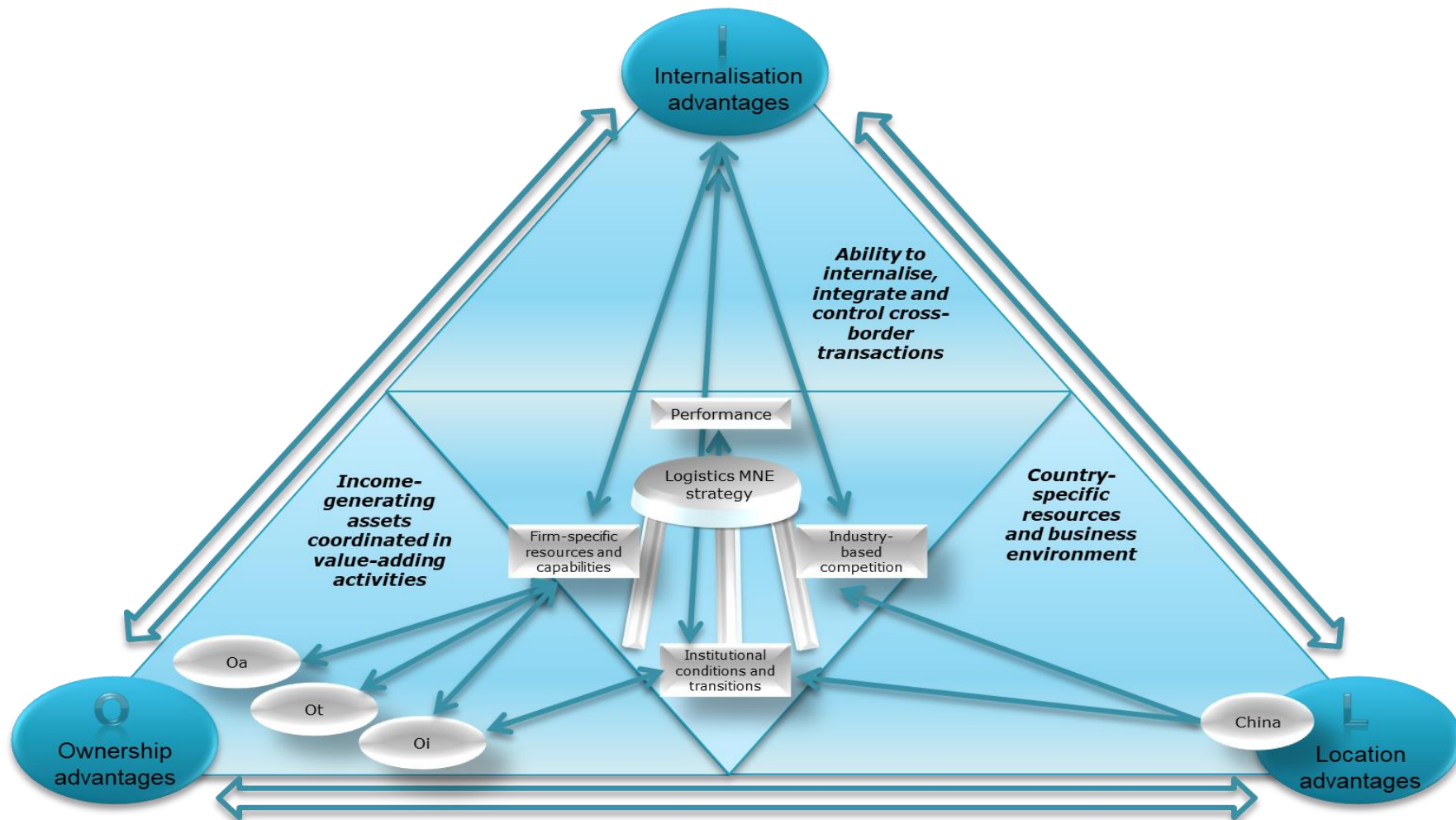
2.6 Building the Advanced Conceptual Framework

This section describes how the applied conceptual framework was determined for this study.

From the above review of IB theories and literature on Chinese logistics, an effort to integrate the paradigms that are explicitly relevant to the scope of the study was undertaken. This resulted in the creation of a new overall framework. As the focus of the study is on logistics MNE strategy as it relates to FDI, the associated literature was screened for its main influential papers.

Figure 2-9 illustrates how the key elements of the advanced conceptual framework are linked. The one overarching target for a logistics multinational is to form a sustainable strategy and achieve maximum performance in the market. The present research seeks to both explore and explain the phenomenon of logistics MNE strategy in China. It can be acknowledged that the country context of China plays an important role in the present study's contribution to knowledge in the area of IB theory. Therefore, the context is directly embedded in the framework of applicable theories. The concluding conceptual framework builds on the Eclectic Paradigm by John Dunning and the Strategy Tripod by Mike Peng in order to demonstrate how the several elements of MNE strategy are interconnected when the key target is to achieve an outstanding and maintainable performance for an investment already undertaken in the Chinese context.

The researcher chose to name the advanced conceptual framework of this study the Tent Pole Strategy Framework for Logistics MNEs in China.



Source: Adapted from Dunning (2000); Dunning & Lundan (2008); Peng (2011) and consolidated by the author of this study

Figure 2-9: Advanced conceptual framework: The Tent Pole Strategy Framework for Logistics MNEs in China

Dunning's Eclectic Paradigm (Dunning, 2000) forms the all-encompassing frame of the resulting conceptual framework. Its author describes the OLI paradigm as an envelope or even a 'big tent' to accommodate further complementary paradigms. This can be justified by its pivotal contribution in distinguishing FDI by MNEs from other ways of obtaining a foothold in an international market. As the performance and success of an MNE is predominantly driven by its ability to use existing capabilities and to develop new ones, the way an MNE is able to exploit ownership, location and internalisation advantages is of high importance. The OLI advantages build the tent poles of the frame as they explain how the value-added activities of the MNE are undertaken. The OLI paradigm draws its strengths from the combined examination of three sets of forces (Dunning, 2000; Dunning & Lundan, 2008b):

1. The company-specific competitive advantages originate from the **ownership (O)** of income-generating assets that are co-ordinated in a cross-border manner and in a more successful way than the competition. The ownership advantages (or disadvantages) can be further differentiated:
 - a. **Asset-specific driven advantages (Oa)** are determined by the resources the company possesses and its structure. For example, these can be the organisational system, specific knowledge or the capability to innovate.
 - b. **Transaction-cost minimising advantages (Ot)** are generated through the MNE's ability to coordinate value-adding activities internationally and realise gains from risk diversification.
 - c. **Institutional assets (Oi)** are determined by formal and informal institutions that govern the value-adding activities within the MNE.
2. The advantages arising from engaging in value-adding activities abroad, while making use of the business-environmental opportunities in the **location (L)**.

3. Advantages that draw on the degree of the company's market **internalisation (I)** in order to create or make use of income-generating assets and value-adding activities.

Each of the forces within the OLI paradigm has a significance of its own, but it is the specific combination of all parameters that shapes the performance of the MNE. Of course, there are geographical differences applying to all elements, for example, companies may bring in different home country-specific ownership advantages. In addition, the way markets influence the ability of the MNE to internalise its advantages or cope with its disadvantages is different across industries. The location-specific business environment plays an important role in how a balance within the Eclectic Paradigm is determined for a specific MNE situation. Thus, the strategic emphasis on the several elements of OLI may be specific to the company, industry and location. Nevertheless, while there are other options for an MNE to engage abroad, such as licensing to a local company or forming an alliance with other companies, the full scope of the OLI advantages can only be fully appreciated when the MNE has control of the networks and assets in the foreign country. As global connectedness increases, knowledge connectivity within the worldwide network of the MNE will also play a more important role. Knowledge connectivity means the ability of a multinational to draw on internal knowledge creation and finally integrate and recombine it across borders, thus creating network advantages that are important in the age of ever-increasing information flows (Alcácer, Cantwell, & Piscitello, 2016; Cano-Kollmann et al., 2016; Cantwell, 2014; Cantwell et al., 2010; Dunning, 1988, 2000, 2001; Dunning & Lundan, 2008b; Ghemawat & Altman, 2016).

The locational scope of this study is limited to China, which can be justified not only by the specific importance of the market within MNEs' strategies but also by the specific application realities of the OLI aspects. As argued earlier, the context of the present study forms a key element of the explanation on its own. This is based on the specific situation of China compared to other emerging markets. For instance, the

centrally planned and driven economic transition is of particular interest to IB scholars. The complex Chinese business environment with its uncommonly deep involvement of state-owned institutions requires further exploration from the viewpoint of the logistics industry (Child & Tse, 2001). In addition, the extraordinarily high concentration of FDI and MNE activity in China implies outstanding opportunities throughout different industries. This again underlines the applicability of the OLI paradigm within the context of logistics in China. Apparently, this market provides explicit internalisation advantages and therefore all big MNEs make China a key element in their strategy. This is also the reason why the Chinese market is a must-have for logistics MNEs and an undeniably important pillar in their global strategy. Considering the different countries of origin of logistics MNEs, an analysis of the L and I advantages provides interesting insights (Schroath, Hu, & Chen, 1993). As demonstrated by Pan (1996), it is success-critical for an MNE to determine the right approach for exploiting the location-specific advantages of both home and host country and to internalise these factors in the Chinese location. In addition, the outstanding status of China in attracting FDI is underlined by the lower investment risk, the incentives provided by the authorities and, last but not least, the already existing MNE concentration in special economic zones and metropolitan cities.

Despite its acknowledged importance in the field of internal business, the OLI paradigm has been challenged and enhanced (Buckley & Hashai, 2008; Cantwell & Narula, 2003; Eden & Dai, 2010; Guisinger, 2001; Rugman, 2010). Nevertheless, the general relevance of Dunning's Eclectic Paradigm remains unquestioned, as the focus of critique is its possibly limited scope for analysing the complex interactions of the MNE with its dynamically changing environment. For this reason, the author has chosen a complementary paradigm and merged it with the OLI.

Peng's Strategy Tripod was selected as the central strategic element of the Tent Pole Framework based on its combinatory nature linking established IB theories within a unified structure. The three elements include the resource-based view (observing firm-specific capabilities), the industry-based view (interpreting the impact of the

industrial competition) and the institution-based view (examining the influence of formal and informal institutions in the market). A further reason for choosing the Strategy Tripod as the focal element in the study's advanced conceptual framework is Peng's focus on emerging markets – especially China – throughout his research contribution. Peng also argues that separating international business and business in the relevant domestic target markets does not make much sense today. Most of the markets of both MNEs and upcoming national firms are closely interlinked and the overall speed of new development is blurring previous boundaries even further (Peng, 2011).

It can be concluded that by combining the two paradigms of Dunning and Peng, a thorough and comprehensive conceptual framework for the present research was determined. This 'Tent Pole Strategy Framework for Logistics MNEs in China' includes the theoretical prerequisites that support the analysis of the phenomenon of logistics MNE strategy advancement in the challenging Chinese market. As the time wise range of the study is the post-entry strategic development of investments made by logistics MNEs, the author acknowledges the foundational relevance of other central IB paradigms but has chosen to concentrate on the conceptual building blocks in the 'Tent Pole Strategy Framework for Logistics MNEs in China' for the research. This means strategy determinants for the conceptual framework should be considered when placing special emphasis on how to achieve a sustainable competitive advantage and finally an outstanding performance for the logistics multinational.

To the best knowledge of the author, it has been the first time that a consolidated framework of Dunning's and Peng's paradigms has been created with the aim to provide a solid theoretical foundation for doing research in the area of logistics strategy in China. In the following, some early conclusions have been drawn from the comprehensive literature review. The thoughts to create a distinctive conceptual framework for the current research also led to initial expectations towards the interconnections and influential forces of the advanced conceptual framework to the current research.

2.7 Initial Beliefs and Expectations

Following the review of existing theories and literature in the context of this study, some initial conclusions and expectations are outlined in this section.

Since the key focus of the study is on the strategy of logistics MNEs in China, one question to be answered relates to why and how they will continue to expand their already-existing investments. Any logistics MNE is keen to understand how to achieve maximum performance and gain those benefits that were expected at the time the investment was made. Therefore, it is crucial to identify the concrete conditions that positively influence the required results, for instance the specific capabilities and critical success factors that improve the company's performance. During the course of the study, each element of the conceptual framework is weighted for its specific impact. This means the identified advantages are scrutinised for how they can best be leveraged, while on the other hand, disadvantages are assessed for suitable options to compensate for them.

Therefore, it can be expected that more than one factor has an important impact on the logistics MNE's performance. There are ownership-specific advantages from the home country in combination with the locational advantages or disadvantages of the host country to be considered, for example the maturity of logistics outsourcing. If the major local industries seek to outsource their logistics operations on a large scale, this results in additional internalisation opportunities for logistics MNEs. They will be encouraged to extend their company boundaries and invest in additional capabilities in order to fully leverage their value-adding activities across borders.

Regarding locational advantages, the concept of (cultural) distance comes into consideration because the influence of the home and host country context should not be underestimated (Harzing & Pudelko, 2015; Pudelko & Harzing, 2008). Consequently, the distance effects reviewed in the empirical part of this study were not limited to culture, language or management practice, but included institutional

differences as well. In addition, the concept of knowledge connectivity (Cano-Kollmann et al., 2016) needed to be considered. Logistics MNEs are innovation-driven companies seeking to enhance, transfer and leverage their knowledge across different locations (Cantwell, 2009). The existing lateral connectivity of firms and locations causes a co-evolution, meaning that both the MNE and its specific location can be seen as symbiotic elements that influence each other. Cano-Kollmann et al. (2016) explicitly called for more academic emphasis on exploring the promising sources of co-evaluation of the MNE and its location within the Eclectic Paradigm.

The internalisation advantages are influenced by several factors within the conceptual framework. There are also indirect internalisation factors, such as risk avoidance or company-internal knowledge protection influenced by the business environment that need further emphasis. Here again, the connection between the all-encompassing OLI paradigm with the Strategy Tripod was shown. For instance, the institutional perspective provided further insights as the country-specific institutional conditions should not be underestimated. Several studies in the field of emerging markets research (Geleilate, Magnusson, Parente, & Alvarado-Vargas, 2016; Rottig, 2016; Thomé & Medeiros, 2016) underline the request for more knowledge regarding the influence of institutional conditions in the home and host country.

The following chapter provides an understanding of the research philosophy that is the foundation of this study as well as the applied methodology and research design.

3. Methodology and Case Study Research Design

3.1 Introduction to Methodology

This section gives an overview of research approaches and how ontological and epistemological issues influence the research methodology of this study.

Management research is a relatively new field in the sciences; however, as for the more traditional sciences, its theoretical background is based on epistemological and ontological approaches. It is a distinct research discipline with specific requirements and challenges (Tranfield & Starkey, 1998). Nevertheless, there has been an ongoing debate on the purpose and scope of management research amongst researchers. Tranfield and Starkey's view supports an open dialogue between researchers from different management sub-disciplines and philosophical opinions. Management research is defined as an applied discipline that differs from 'pure' academic disciplines that follow a linear approach to gain knowledge. In contrast, management research is required to be pragmatic as there are influencing factors, such as political or environmental changes, that cannot be ignored. Thus, management research needs to adopt more comprehensive methods to gain and further develop knowledge and, as a result, to create solutions to be applied in practice. The research undertaken for this study was carried out within a professional doctoral programme for the degree of Doctor of Business Administration (DBA). While the scientific foundation and accuracy of the research needed to be justified in the same manner as for the degree of Doctor of Philosophy (PhD), the difference is in the combined purpose of the DBA that is to contribute to both business theory and new knowledge in professional practice. The involvement of practitioners or professionals in academic research is increasing; the term 'practitioner researcher' has been created for an individual employed in a professional capacity while undertaking academic research, usually aiming for a degree (Drake & Heath, 2011). A key benefit of practitioner research may generate synergies between research and practice so that both occupations benefit (Fox, Green, & Martin, 2007). As Drake and Heath (2011) point

out, the creation of new knowledge is based on combining insights from professional practice, academic understanding and the researcher's individual distinct project.

The decisions to be made regarding the use of tools, methods and knowledge – also from contributing disciplines – depend on the context of the research work in question. The key challenge is to find the most appropriate approach to link theoretical knowledge and practical findings. Tranfield and Starkey (1998) outline the trans-disciplinary nature of management research and practice, originally described as one key element of the 'New Production of Knowledge'. The concept is called 'Mode 2' and is in contrast to 'Mode 1' which is traditional academic 'pureness' (Gibbons et al., 1994).

Nowotny, Scott, and Gibbons (2003) describe five characteristics for the application of 'Mode 2':

- 1) Knowledge is created in the context of the application environment.
- 2) Trans-disciplinarity adheres to the involvement of different theoretical perspectives, practical methodologies as well as individual perspectives of researchers.
- 3) Diversity of the location and technology for knowledge assembly is considered supportive to unbiased interaction.
- 4) Knowledge created following 'Mode 2' is reflexive. Research in this context cannot be conducted in a solely objective manner. A dialogue between the researcher and the research subject should be part of the problem-solving process.
- 5) Quality control requires new principles as the identification of scientific 'peers' becomes more complex due to the concept of trans-disciplinarity. In addition, the definition of clear and undeniable criteria for quality is much more difficult. This new form of quality control needs to accept multiple definitions and approaches equally.

Management research generally addresses questions and problems arising in the 'real world' and is often carried out by practitioner-researchers with limited experience in academia (Drake & Heath, 2011; Fox et al., 2007). Their management experience and practical approach to issues can be of benefit due to detailed company insights and an understanding of the aims, while limited research experience may impede a diligent procedure. In order to exploit the advantages and balance the disadvantages of a practitioner-researcher, specific emphasis needs to be placed on a conscious design of the study in order to be able to correctly collect data as well as interpret and understand its findings (Crowther & Lancaster, 2009; Robson, 2011). In any case, an awareness of the applied research paradigm and an understanding of ontological and epistemological positions by managers plays a pivotal role in the carrying out of meaningful research.

A paradigm is explained by Patton (1978, p. 203) as 'a world view, a general perspective, a way of breaking down the complexity of the real world. As such, paradigms are deeply embedded in the socialisation of adherents and practitioners: paradigms tell them what is important, legitimate, and reasonable.' According to Guba and Lincoln (1994), paradigms represent basic sets of ontological and epistemological beliefs that cannot be ranked over one another on criteria of right or wrong. Consequently a 'paradigm represents simply the most informed and sophisticated view that its proponents have been able to devise' (Guba & Lincoln, 1994, p. 108).

Ontology, in the philosophical context, means the 'systematic account of existence' (Gruber, 1993) or the 'nature of reality or being' (Saunders et al., 2006). It can be described as an explicit specification of a conceptualisation for the capture of knowledge. According to Whitehead, the purpose of philosophy is 'to rationalise mysticism: not by explaining it away, but by the introduction of novel verbal characterizations, rationality coordinated' (Whitehead, 1968, p. 174).

The concept of epistemology in academic research can be defined as ‘the study of justified belief’ (Steup, 2010). This concept in research philosophy is connected to the question of how knowledge is produced and utilised. The epistemological position also guides the way in which the acquired knowledge is shared with others. Bryman and Bell (2007) explain that an epistemological issue relates to what can be regarded as ‘acceptable knowledge’ in the respective discipline.

A thorough understanding of the philosophical issues influences the choice of research design and shapes the overall quality of the research (Easterby-Smith, Thorpe, & Jackson, 2008; Skinner, Tagg, & Holloway, 2000). While a doctoral study may be approached with multiple means and designs, a scientifically robust and reliable generation of knowledge is necessary. This means that an association of concepts, design and underlying theories, as well as the significance of professional practice, forms a pivotal principle. Thus, the challenge of a professional doctorate can be seen as integrating learning and knowledge at the highest academic level with the intention of bridging a theoretical-professional knowledge divide (Drake & Heath, 2011).

The research design will explain and justify the methods of data collection and analysis as well as the planned structure of the evaluation process. In addition, questions regarding the applied methods, the course of inquiry and the actual contribution to knowledge need to be anticipated. A researcher should bring an awareness and knowledge of methodological alternatives to their specific context. Once the extent of personal assumptions, values and possible biases is understood, the researcher is prepared to handle any subjectivity in order to obtain a clear view of the data. Furthermore, each method under consideration shall be examined for its specific capabilities, advantages and disadvantages (Creswell & Plano Clark, 2011; Wing, 2009).

A researcher may apply two different theoretical approaches depending on their worldview, the methodology and the specific research question(s): a deductive or

inductive approach. A deductive approach starts with building a theory that is then empirically tested by applying universal rules and objective tools such as statistical analysis (Saunders et al., 2006). This means that the researcher must develop a distinct theoretical position before beginning with any data collection. The main goal of a deductive research approach is therefore to test a theory. The inductive approach follows a different procedure. In inductive research, the development of knowledge is built on empirical observations, which then support the development of the theory after data collection is complete. One major criticism of the deductive approach is the building of cause-effect links between variables without a deeper understanding of how these relationships are interpreted by the social actors. Establishing an understanding of human interpretation of the social world is a key strength of the inductive approach. Another distinct characteristic of the inductive approach is to emphasise the context of the events or phenomena being researched. This implies a smaller sample of usually qualitative data in order to provide a deeper understanding of relationships. In addition, the use of different data sources or data collection methods is typical for inductive approaches with the aim of viewing the researched phenomenon from different angles (Easterby-Smith et al., 2008; Saunders et al., 2006).

Easterby-Smith et al. (2008) conclude that managerial research issues often require 'eclectic designs' and thus a methodical review of philosophical options may lead to a choice including more than one worldview. A researcher's worldview and philosophical stance shape how the research approach is developed. The choices and decisions for the research, such as the research paradigm, research design, methodology and methods, need to be aligned with the research questions and objectives.

The overarching research question in this study is:

What are the critical success factors for a logistics MNE in China and how can these factors be used to steer strategic investments with the aim of achieving competitiveness and sustaining a vital business performance?

The question aims to answer these three underlying supporting research questions (RQs) with their corresponding objectives described in Table 3-1.

Table 3-1 Research questions and objectives

Supporting research questions	Research objectives
RQ 1) How can the 'Tent Pole Strategy Framework' be applied to analyse the strategy of logistics MNEs in China?	Test the applicability of the developed conceptual framework and determine the range and depth of knowledge creation through its use.
RQ 2) What are the major opportunities or threats that influence the performance and competitiveness of logistics MNEs in the Chinese market?	Examine how the parameters of ownership-location-internalisation are interlinked according to the perspective of Dunning's Eclectic Paradigm and Peng's Strategy Tripod for resources, industrial competition and the institutional setting for the MNE. Explain how ownership advantages and disadvantages, Chinese locational determinants and the ability to internalise multiple impacts influence the performance and competitiveness of logistics multinationals in China. Determine the effects of company-internal resources and capabilities, the institutional agenda and the industrial competitive situation of MNEs in China.
RQ 3) Which strategic factors can be determined for a specific logistics MNE to achieve a sustainable performance in China?	Identify and discuss key success factors based on economic and company-specific determinants to provide strategic advice for a selected logistics MNE.

This author considers herself a practitioner-researcher. Following an inductive approach, this study scrutinises the existing strategies of logistics MNEs, derives an understanding of potential future development and defines strategic advice.

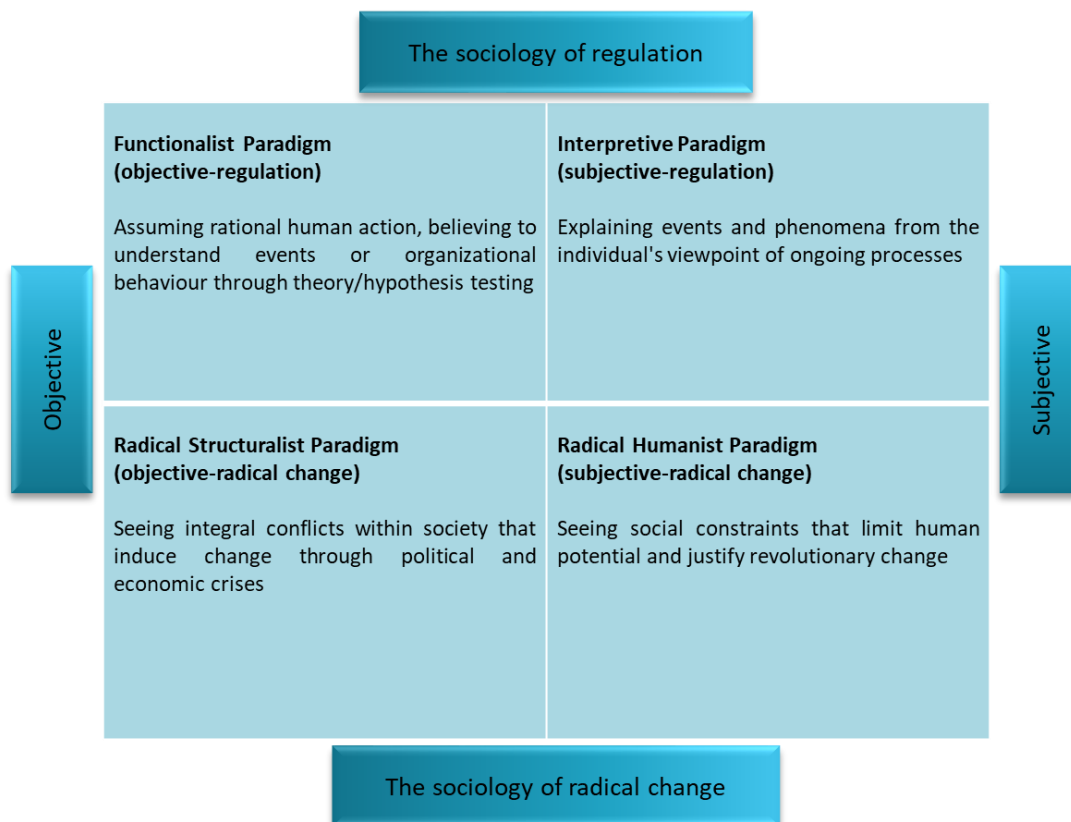
In the following section, the philosophical alternatives that could guide the research are discussed and evaluated regarding their application to this study.

3.2 Philosophical Perspectives

This section discusses the ontological worldviews, evaluates different options in epistemological knowledge production and discloses the manner in which the author's adopted philosophical position was determined.

The key question from the ontological perspective in both social and management research is whether there is an objective external reality for social actors or if everything can be seen as a social construct depending on the views and activities of these social actors (Bryman & Bell, 2007). This means that a researcher's position depends on their ontological view of whether the real world can be observed objectively or whether it is subjectively interpreted (Saunders et al., 2006).

Burrell and Morgan (1979) also differentiate between objective and subjective worldviews. They have arranged sociological theories into four major paradigms as illustrated in Figure 3-1. This overview provides a useful summary of the differences in the paradigms or worldviews and can support researchers in identifying their individual stance.



Source: Adapted from Burrell and Morgan (1979)

Figure 3-1 Overview of paradigms

As demonstrated by Burrell and Morgan (1979), the major worldviews can be further contrasted by comparing their stances towards radical change or regulation.

Bryman and Bell (2007) simplified the ontological options and explained two opposite worldviews: objectivism and subjectivism. These are described below.

Objectivism is based on the belief that social phenomena exist independently of social actors. This means that a phenomenon like an organisation is seen as a tangible object or an external fact that is beyond the influence of the social actors involved. Therefore, structures and processes can be analysed from an external and independent position of the researcher (Bryman & Bell, 2007). For example, objective research ontology could justify considering management an objective entity and could study any managerial operations from an independent viewpoint. This means

hierarchies and job descriptions provide the structural framework and it is assumed that this is consistent in any situation and organisation. Thus, any differences in the management of organisations are seen only as a function of the different objective aspects in these organisations (Saunders et al., 2006).

In contrast to objectivism, the focus of subjectivism is on understanding the individual views of a social phenomenon. Social actors create phenomena from perceptions and actions in a continual process of interactions. In this, ontology is essential for recognising the subjective meanings of the social actors' motivation in order to understand the resulting actions. This involves the different situations and interactions of actors with their environment that shape their perception of the world. The researcher seeks to understand the subjective reality of actors in order to understand the motivation and resulting actions in a comprehensive manner (Saunders et al., 2006).

It can be summarised that the ontological position of a researcher is based on their view of social entities. When these entities are considered from an objective viewpoint, their reality is external to the social actors. In contrast, a subjective worldview implies that social entities are created from the actions and understandings of the social actors. A researcher's ontological stance has to be seen in connection with how the research is epistemologically conducted (Bryman & Bell, 2007).

In Table 3-2, four major positions in research philosophy are outlined regarding ontology, epistemology, central concepts, well-known representatives, and an assessment of researcher profiles, methodology and typical research outputs.

Table 3-2 Comparison of major philosophical positions

	Positivism	Critical Realism	Constructivism	Interpretivism
Ontology	There is a real world out there, ...	There is a real world out there, ...	Social reality is constructed and maintained through social actors and their interactions, ...	Social reality can only be perceived through the human construct, ...
Epistemology	... and it can be captured through observation.	... but it will never be fully understood.	... and knowledge will be gained by constructing the processes involved.	... and knowledge of this reality can be gained by an embedded researcher who influences a context-dependent construct.
Central concepts	Single reality, empiricism, determining causality and predicting future development.	Transitive and intransitive domains, theory-laden, generative mechanisms.	Actor-network theory, construction/deconstruction, determining a deeper sense.	Multiple realities, construction/deconstruction, personal involvement of researcher.
Representatives	Vienna Circle	Roy Bhaskar	Berger & Luckman	Hudson & Ozanne, Lincoln & Guba
Researcher's profile	Impartial observer, value free.	Reflexive explorer, mainly value free.	Interpreter and constructor, bi-ased.	Embedded interpreter and constructor, bi-ased.
Methodology	Deductive, control and verification, single method, e.g. survey, experiment, quantified data.	Deductive/inductive, seeking understanding, multiple and mixed methods.	Mainly inductive, multiple methods or case study.	Mainly inductive, multiple methods or case study, verbal and visual data.
Research Output	Cumulative truth claim, representative and absolute knowledge.	Interactive truth claim.	Description of a social construct.	Rich analysis of a social construct, unique and context-related knowledge.

Source: Bryman and Bell (2007), Saunders et al. (2006), Robson (2011), Easterby-Smith et al. (2008), Pizam and Mansfeld (1999) and Myers (2008)

The two most antithetical philosophical positions, positivism and interpretivism, are described below in more detail with their foundational elements and beliefs. In addition, the paradigms are evaluated for their applicability to study logistics multinationals strategy in China.

Positivism and Post-Positivism

Positivism applies an epistemological position similar to the natural sciences where this position is still prevalent since the aim is to obtain the truth, to comprehend the existing phenomena and to calculate and control them. The key characteristics are the belief in a real world existing outside that can be observed in a direct, value-free manner by applying deductive methodology (Bryman & Bell, 2007; Easterby-Smith et al., 2008; Trochim, 2006).

The research philosophy and technical advancement of positivism developed during the 19th century. This is also why technical rationality can be seen as a key element of positivism (Schön, 1983). Positivism is directly connected to the quantitative research paradigm, which is also a major point of criticism from other philosophical positions. A founding element is the 'standard view', which means the same reality is seen in the same way by each researcher. Only objective and value-free research is considered credible and the goal is to develop universal causal laws. This very rigid stance was then further developed into post-positivism, where socio-political factors are believed to influence the creation of knowledge. Nevertheless, a researcher is required to ensure objectivity and thus full control throughout the research process. The latter prerequisite in particular appears to be challenging when approaching 'real world research', as in in management science (Robson, 2011). Research under the post-positivistic paradigm largely follows deductive methodology. This means that researchers think in in terms of cause-and-effect and conduct detailed data collection to test their theories (Creswell & Plano Clark, 2011).

A key criticism of the (post-)positivist position relates to a reduction in practical knowledge as it purely contributes the instrumental means for research (Schön,

1983). When considering the research area of logistics multinational strategy in China, the (post-) positivistic paradigm appears to be too limited to accommodate the wide-ranging knowledge required in this study, which should deliver a thorough understanding of the phenomenon involving personal experience and the values of social actors. In addition, the aim of this research was to develop a new theory without being limited to purely testing previously determined principles. Therefore, in the following section the subjectivist paradigm of interpretivism is reviewed to see whether it is better suited to the current research.

Interpretivism

The epistemological position of interpretivism can be seen as the clear opposite of positivism (Robson, 2011; Saunders et al., 2006). Interpretivism is based on the social sciences and is fundamentally different to the natural sciences. Interpretivism focuses on explaining and understanding human behaviour within social actions (Bryman & Bell, 2007). Interpretivism is also known as ‘advocacy and participatory’ (Creswell & Plano Clark, 2011). This qualitative-oriented approach includes the active involvement of the researcher during the inquiry process. While the methodology is considered participatory, the researcher provides the direction and interpretation. Thus, knowledge is constructed by both the researcher and the ‘research subject’ (Bryman & Bell, 2007; Saunders et al., 2006).

Researchers acting under the interpretivism paradigm have a worldview that is shaped by their understanding, experience or subjective opinion of people. Therefore, qualitative approaches are typically applied. The aim is to create new, specific and unique knowledge that is relative to the context, culture, meanings and values of the social actors involved. Interpretivism is based on relativist ontology, thus perceiving reality as being built on the subjectively interlinked meanings and understandings of social constructs. The epistemology of interpretivism is subjectivist since knowledge is seen in connection with social actors, i.e. a clear link between the researcher and research subject is not only accepted but is advocated (Myers, 2008;

Pizam & Mansfeld, 1999; Saunders et al., 2006). Creswell and Plano Clark (2011) state that the interpretivist form of inquiry follows an inductive or 'bottom-up' approach: single viewpoints are sorted into patterns, which then create the theory.

Within interpretivism, emphasis should be placed on studying and understanding phenomena within their context and by incorporating personal experiences and the opinions of social actors. Therefore, the paradigm of interpretivism is considered most suitable for the current study of logistics multinationals strategy in China due to its acceptance of the social reality as a social construct and the approach towards knowledge creation by the researcher being embedded in the social interaction. Considering the aims of this research, there was a clear need to examine the phenomenon as a whole, which meant including different viewpoints and personal experiences of the social actors involved. The obvious bias and prejudice on the side of the researcher and the social actors taking part in the research could be balanced by applying an appropriate methodology, e.g. using triangulation approaches and multiple data sources.

The following section explains how the interpretivist paradigm shaped the methodology applied in this study.

3.3 Choice of Methodology

This section discusses how and why the methodology of this study is chosen.

As already outlined, academic and practitioner research can be related to different philosophical worldviews that shape the actual research approach and the methodology applied. Methodology is defined as the 'theory of how research should be undertaken, including the theoretical and philosophical assumptions upon which research is based and implications of these for the method or methods adopted' (Saunders et al., 2006, p. 595). This means that the actual techniques and procedures applied in a research project can be summarised under the term methods, while

methodology covers the whole theoretical approach of how the research is carried out (Saunders et al., 2006). Two fundamental, methodological approaches are generally recognised: the quantitative and the qualitative paradigm. The quantitative approach is typically conducted within a positivist worldview and relies on measures. Qualitative methodology often adopts a constructivist or interpretivist stance and involves a multiplicity of viewpoints throughout most phases of the design and analysis. Only recently, a third set, known as mixed methods research (MMR), has become established in academia. A combination of quantitative and qualitative approaches is applied within the mixed methods approach, while often assuming a critical realist position (Creswell, 2009).

Since the research topic of logistics MNE strategy in China is fundamentally driven by managerial decisions, the interpretivist viewpoint is seen as the most appropriate research philosophy. Consequently, this research used the form of an interpretivist inquiry, building on a primarily inductive research design and approach and using mainly qualitative methods for data collection. This aim of the study was the creation of a new theory as well as the validation, rejection and refinement of existing theories.

According to Saunders et al. (2006), research can be undertaken in different ways depending on the specific aims. Descriptive research follows the purpose 'to produce and actuate representation of persons, events or situations' (Saunders et al., 2006, p. 590). Explanatory research 'focuses on studying the situation or problem in order to explain the relationships between variables' (Saunders et al., 2006, p. 591), while exploratory research 'games to seek new insights into phenomena, to ask questions, and to assess the phenomena in a new light' (Saunders et al., 2006, p. 592).

This study used three research techniques for studying logistics MNE strategy in China: descriptive, exploratory and explanatory inquiry. Descriptive inquiry represents the overall phenomenon and delivers an understanding of the strategic issues in the scope of this research. Exploratory fieldwork was undertaken with the

aim of understanding the various viewpoints of logistics managers and experts. This study is also explanatory as it combined fieldwork outcomes with additional data to determine the underlying relationships of the phenomenon (Saunders et al., 2006; Yin, 2009).

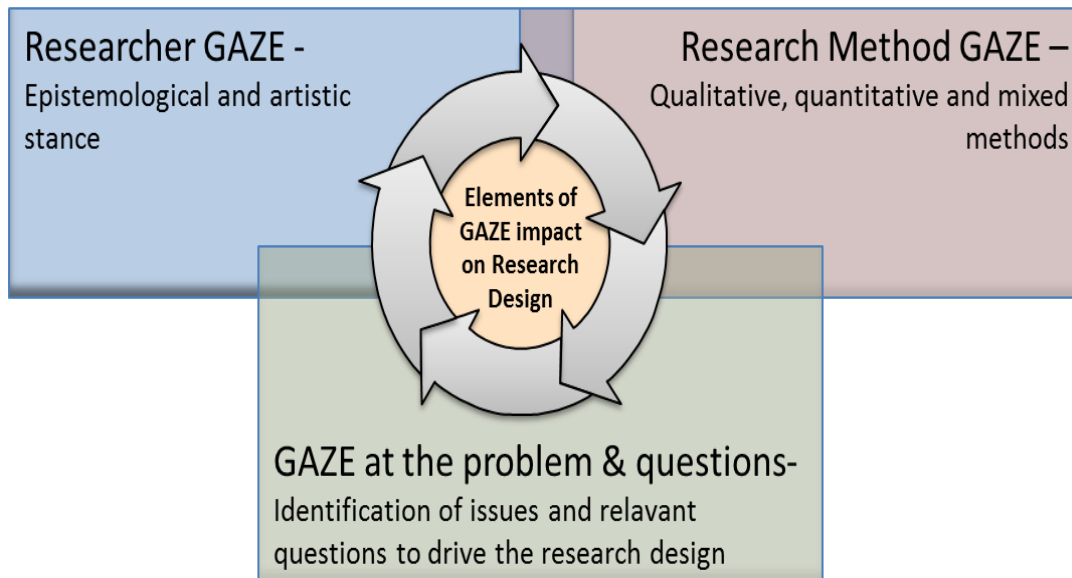
The choice of method determines the applied research design, which is outlined in the following section.

3.4 Research Design

This section discusses the action plan applied in this study based on philosophical assumptions, strategies of inquiry and specific methods in the form of a case study research design.

One particular concept supporting the method selection process by combining the researcher's worldview, the research design and questions and finally the data and its analysis, is the 'GAZE method'. The researcher needs to be aware of the close relationship between three elements: researcher gaze based on research philosophy and skills, method gaze incorporating the specific technique-driven advantages and disadvantages and finally the contextual gaze, which is described by the research aims and questions. The overarching aim of 'GAZE' is to ensure the internal coherence of the whole study by selecting the most effective research design. The researcher is required to understand the relationship between 'GAZE' and the data in order to avoid ambiguity within the research (Wing, 2009). Figure 3-2 shows the interrelationships in the 'GAZE' model.

The GAZE model



Source: Adapted from Wing (2009)

Figure 3-2: The GAZE model

Wing (2009) correspondingly argues that the researcher does not choose the method. On the contrary, the most suitable method will be indicated by the combination of prior research outcomes and the research question(s). The close links between the three elements of the GAZE model shows this view. It is also advisable to apply more than one method or more than one source of data in the case of complex research topics that call for a holistic analysis of the phenomenon in the scope of this study (Wing, 2009).

Depending on the research method applied, a differentiation can be made between quantitative and qualitative research designs. One main difference derives from the form of the data. Numerical data or data that can be quantified belongs to the quantitative category. On the other hand, non-numerical data or data that cannot be quantified is categorised as qualitative data. Quantitative data is associated with a

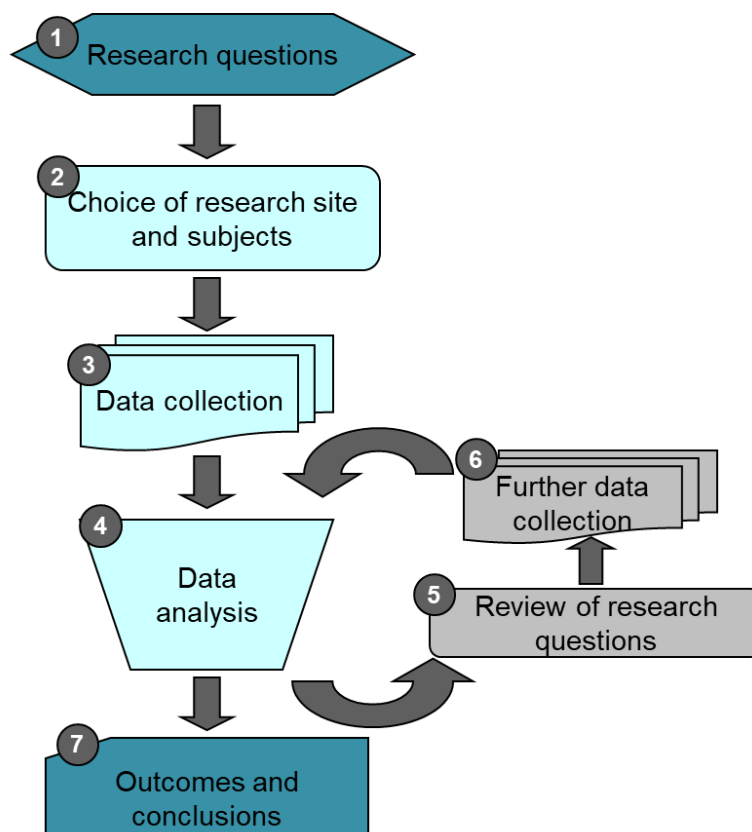
direct or 'thin' abstraction of the data analysis, while qualitative data results in richer outcomes based on a 'thick' or 'thorough' abstraction (Bryman & Bell, 2007; Crowther & Lancaster, 2009; Easterby-Smith et al., 2008; Saunders et al., 2006).

Quantitative research with its broad spectrum of analysis techniques plays an important role in the classical sciences but also in management research. The analysis applies deductive logic in order to explore and examine relationships and trends within the data. The numerical data can contain simple counts while complex algorithms for statistical modelling can also be applied. For example, statistical analysis software packages like SPSS can be used to support the calculations and the presentation of the outcome in form of diagrams and charts. As quantitative data allows for a more direct outcome, special emphasis needs to be placed on a thorough interpretation of the results. When using statistics, the relationship of one variable to another or to a set of other variables is explored. Usually, the likelihood of the relationship is then verified by applying significance or hypothesis testing (Robson, 2011; Saunders et al., 2006).

Qualitative research applies inductive logic in order to gain open-ended information with meanings and contexts playing a major role. A qualitative approach builds on the subjective views and personal experiences of the participants regarding the phenomenon in the scope of this study (Robson, 2011). The usual epistemological position of a qualitative researcher is that of an interpretivist, while the ontological stance is that of a constructivist. Yet, a great variety of qualitative research approaches exists using specific methods. Generally-used qualitative methods are: ethnography or observation, several forms of interviews, focus groups, discourse and conversation analysis and content analysis (Bryman & Bell, 2007). In addition, qualitative research can be supported by computer aided qualitative data analysis software (CAQDAS), for example NVivo™ or ATLAS.ti™ (Bazeley, 2007; Saunders et al., 2006).

The general outline of a qualitative research design consists of several steps. According to Bryman and Bell (2007) these steps may be described as follows (see Figure 3-3):

1. Refining the research aims and formulation of the research questions.
2. Determining the research site and subjects for the conversation.
3. Procedure for data collection with participants.
4. Comprehensive analysis of the data and its interpretation.
5. Determining a conceptual and theoretical perspective.
 - 5.1. Review and possible revision of research questions.
 - 5.2. Additional data collection, if applicable.
6. Capturing outcomes and verbalising conclusions.



Source: Adapted from Bryman and Bell (2007)

Figure 3-3 Qualitative research design

This generic qualitative research design can be further specified for explicit methodologies, for example a case study. The choice of the research site involves, for example, the case selection, while the choice of subjects comprises the actual unit of analysis. The data analysis also includes the evaluation of theoretical saturation within the chosen design (Bryman & Bell, 2007; Saunders et al., 2006).

A research design needs to be methodically planned; nevertheless, its application throughout the research process may require some specific guidance. Subsequently, the approach of reflective practice that has guided this study is explained below.

Reflective Practice

Based on the work of Schön (1983), an ‘epistemology of practice’ was introduced that can be understood as supportive methodological guidance. This approach addresses how academic enquiry and research should be applied by practitioner-researchers as outlined in the introduction of Chapter 3. Practitioners can contribute a ‘knowing-in-practice’ that includes personal values or interests but also builds on their skills and experience. Obviously, these social actors may bring in additional prejudices, adding to the research bias. Therefore, this approach is usually applied within subjective research settings. The objects under review are selected, the scope or boundary of the enquiry is determined and finally the directions for change are determined. In professional practice, problem-solving often occurs as a repetitive action (Schön, 1983). This is why practitioners commonly use the terms ‘project’ or ‘case’. While ‘knowing-in-practice’ from long-standing experience can frequently be applied to an advantage, there is still the risk for a practitioner to only rely on their personal expertise and understanding. Therefore, Schön (1983) called for a new approach in management research: reflection-in-action. This concept is explicitly recommended for research areas in more uncertain environments, like strategy research. Uncertainty should be used as a learning opportunity instead of being neglected. Market participants should be seen as sources of knowledge and need to be involved

in the actual research project. This also means dealing with a multitude of views in order to achieve a comprehensive view for the research (Schön, 1983). Reflecting-on and reflection-in-action can be seen as pivotal elements in doctoral research (Johnson-Leslie, 2009).

Supported by the Gaze model and reflecting on the research problem as well as the personal practical knowledge of the author, the research design of a case study was chosen for this work. The reasons for the decision are outlined in the section below.

Case Study Research Design

When considering the philosophical position, methodology and research design selection, a case study approach was considered the most appropriate design for this study. While a purely quantitative design has its merits in management research, it is too narrow for the study of logistics MNE strategy in China. The personal experience of logistics experts in combination with a broad supply of additional qualitative data on the topic gives the most suitable insights. Flick, Kardorff, and Steinke (2007) recommend a qualitative research approach when analysing a thus far rarely researched area. Qualitative insights allow differing quantitative data and provide quantitative data with greater depth. In addition, qualitative reasoning can be used to interpret statistical data in order to clarify interdependencies. For this reason, the author decided to use available economic data from official Chinese statistics as a supplement to the predominantly qualitative case study approach.

A seminal paper on case-based research by Siggelkow (2007) defines three important uses for a case study. First, a case study can provide ample motivation to demonstrate the importance of the phenomenon being analysed. Second, rich case data can inspire the formulation of new ideas or at least contribute to the existing theory that is a key element of any inductive research. And third, case studies can be employed as illustrative practice examples to prove a conceptual argument (Siggelkow, 2007).

Yin (2009) argues that case study research is not just another qualitative research practice because it uses both quantitative and qualitative data sources. In addition, it is required to define the case. Nevertheless, a case study is often listed under qualitative research, e.g. by Robson (2011) or Creswell and Plano Clark (2011).

A broadly accepted definition of a case study is that of Yin (2009):

‘A case study is an empirical inquiry that investigates a contemporary phenomenon (the “case”) in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident.’ (Yin, 2009; Kindle positions 958-960)

However, Yin’s understanding of case study research design is more detailed. This is why the second part of the definition lists specific features of a case study:

‘A case study inquiry

- copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result
- relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result
- benefits from the prior development of theoretical propositions to guide data collection and analysis.’ (Yin, 2009; Kindle positions 973-977)

Saunders et al. (2006) and Yin (2009) propose case study research design when the intention is to answer ‘why?’, ‘what?’ and ‘how?’ questions. This means case studies are frequently used in explanatory and exploratory research. Specific emphasis needs to be placed on data collection techniques as well as on combining the analysis outcomes. It is advisable to use multiple sources of data in order to triangulate the data. This practice can make a case study a very suitable approach to explore or challenge existing theory (Saunders et al., 2006; Yin, 2009). Blatter and Haverland (2012) assess the advantages of case study research designs similarly. In their view, the key contribution of a case study can come from reflecting and finally determining

the relationship between empirical observations and the theoretical concepts at the core of the research. Benefits can be achieved when investing appropriate time and intellectual analysis efforts in the examination of personal perceptions of individual case study participants. The ability to do this in a suitable manner is more easily applied to a smaller case study than a large-scale research approach (Blatter & Haverland, 2012). A case study can be seen as the 'essence of good science' (Thomas, 2016, p. 23) because it studies a topic or phenomenon in its completeness and applies an in-depth enquiry in order to gain specific analytical insights.

A case study design can be applied under various research paradigms. However, it is often oriented towards a constructionist or interpretivist perspective, meaning that reality exists through its construction from social actors. In addition, the researcher can also be considered a social actor due to their involvement in the research process. Further, the lack of a clear border between the researched phenomenon and its context is specific to a case study. It is also necessary to identify an individual case, because this is what actually distinguishes a case study from other forms of research (Yin, 2009).

The resulting overarching research design for this study is visualised in Figure 3-4. This scheme is inspired by Creswell (2009) and demonstrates how the philosophical paradigm, the strategy of inquiry and the methods for data collection and analysis were interconnected.

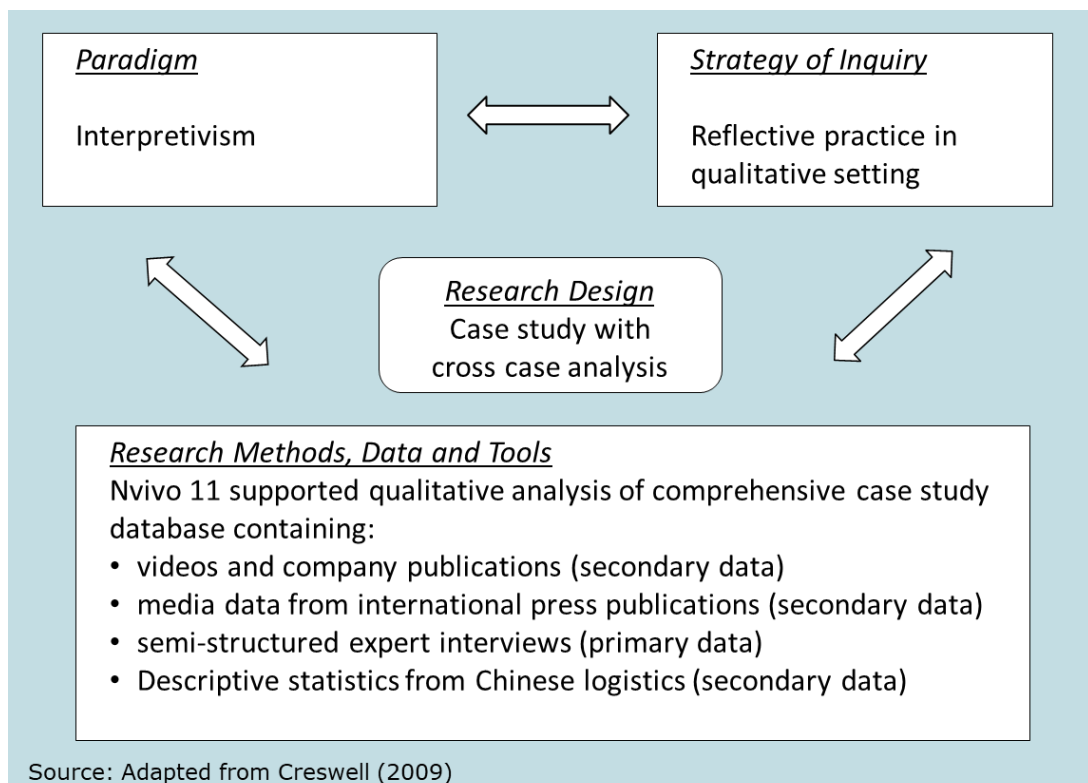


Figure 3-4 Overarching research design

Since this study sought to uncover new insights into strategy by logistics MNEs in China with the aim of increasing the understanding of the phenomenon, multiple viewpoints and thus multiple sources of data were incorporated. As recommended by Yin (2009), a comprehensive case study database was created in order to systematically collect and analyse data from various sources. This data consists of a variety of qualitative data such as audio-visual data, company publications, media and interview data. The case study database also contained some statistical information as a supporting quantitative element to complement the picture of the phenomenon. The process of the applied case selection is described further in the subsequent section.

3.5 Case Selection, Sampling and Types of Analysis

This section provides information on the selection process for the case study and how sample size and types of analysis within the case study were determined.

Case Selection

Yin (2009) proposes a twofold process when selecting the case for a study. First, the case needs to be thoroughly defined before the classification or bounding is decided. A case can be an individual person, a specific event or programme where the individual, event or programme is then also the primary unit of analysis. The research questions should lead to the right case or unit of analysis for a study. In Yin's understanding, an appropriate case can also be a country's economy or a specific industry in a marketplace. Once the case is defined, bounding will help to define the scope of data collection. In addition, the data directly related to the actual phenomenon being studied (the 'case') needs to be differentiated from context-related data (external to the case). This means that spatial or temporal boundaries have to be applied. A case definition needs to be as concrete as possible, while the boundaries between the phenomenon and its context are not always clearly distinguished. Yin argues that:

‘The desired case should be some real-life phenomenon that has some concrete manifestation. The case cannot simply be an abstraction, such as a claim, an argument, or even a hypothesis.’ (Yin, 2009; Kindle position 1370)

Further, a case needs to be built on a sound theoretical concept. The outcome of the case study should then be used to validate, advance or reject the foundational concept. Thus, a case study can contribute to new theoretical concepts. One key target when conducting a case study is to strive towards analytic generalisation. It can also be argued that the terms ‘sample’ or ‘sample size’ do not apply to a case study. Nevertheless, a case requires an appropriate design and bounding in order to be specific to the phenomenon in scope (Yin, 2009).

It can be assumed that MNE strategy is a phenomenon closely related to its context. This supports a case study approach (Saunders et al., 2006; Yin, 2009). This study examined the phenomenon of logistics MNEs strategy in China building on a multiple case study including several embedded units of analysis. Thus, the in-depth study aimed to provide cross-case comparisons in order to generate specific insights into the phenomenon in the scope of the study. The cases were bounded by the MNE share of the logistics market in China, and the major logistics MNEs operating there formed the units of analysis (see Appendix IV for more detail). The temporal aspect considered the chronological horizon for strategy building that considers past and current developments in order to determine sustainable strategies. The Chinese market, with its high international trade volumes, was the context of the research. The influencing factors and manifestations of logistics MNE strategy were thoroughly examined considering various viewpoints by using different data sources. This approach is in line with Thomas (2016), who characterises a case study as a holistic portfolio of sources and information. The data sources were determined by reflecting on the research questions as well as the conceptual framework of the study. This included the impact of ownership, locational and internalisation advantages (Eclectic Paradigm by Dunning) and well as the company, industry and institutional perspectives (Strategy Tripod by Peng). This approach is supported by Yin (2009), who explicitly recommends developing solid theoretical propositions as guidance for data collection and analysis.

It should be clarified that this research is not a study of individual logistics MNEs. The author created an extensive case study database in order to reflect the involved units of analysis. The database consists of multiple data sources:

- 35 television interviews by top managers of logistics MNEs operating in China.
- 150 international media publications featuring logistics MNE strategy in China.

- 20 company publications and press reports by logistics MNEs.
- 12 semi-structured personal interviews with subject matter experts.
- 4 variables from the Chinese Statistics Yearbook on the logistics market in China.

Although the author is associated with a particular logistics MNE, a specific emphasis was placed on gaining the perspectives of additional Chinese logistics specialists. The company's code of conduct prevented the author from engaging in direct strategic discussions with competing logistics MNEs due to a possible conflict of interest and the antitrust law. Therefore, the viewpoints of competitors were collected through television interviews, media and company publications. In addition, other market participants also involved in logistics MNEs in China were included in personal interviews. This approach allowed for a reflection on outsider versus insider perspectives towards the phenomenon in the scope of the study. In this manner, multiple viewpoints were collected to allow for an in-depth analysis of different experiences and insights. As pointed out by Yin (2009), a huge number of variables of interest in a case study can be expected. At the same time, a case study cannot be expected, when incorporating multiple cases, to include a number of cases that would equal the number of variables. Nevertheless, a case study should follow a triangulation approach with the aim of combining the data collected from multiple sources of evidence and to confirm the insights obtained (Yin, 2009).

Thus, the case study aimed to deliver a comprehensive understanding of the strategic positioning of logistics MNEs in China and offer a theoretical contribution.

More information on the different data sources and sampling considerations are provided in the following section.

Discussion of Sampling Approach

At this point, the question of how the sample for the current study was determined needs to be addressed. A careful choice of data sources in the form of 'sampling' is pivotal for any research. Qualitative studies differ from quantitative studies, where the sampling is statistically driven and should be both representative and generalizable. In contrast, sampling for qualitative studies is often not specified in much detail in advance (Yin, 2009). According to Patton (1990), sampling in qualitative settings is usually done purposefully while focusing on information-rich cases. An information-rich case provides in-depth insights 'about issues of central importance to the purpose of the research' (Patton, 1990, p. 169).

Purposeful sampling can follow different approaches, for example 15 different strategies are listed by Patton (1990). The three sampling approaches that were applied to this study are outlined below:

1. Typical case sampling that is done by identifying characteristic cases that are illustrative for the research.
2. Stratified purposeful sampling that this done by combining the typical case sampling strategy with other sampling approaches with the aim of capturing major variations in cases.
3. Snowball or chain sampling that is done by locating key informants or critical cases that are able to contribute rich information, usually by using referrals.

It can be summarised that any chosen purposeful sampling strategy should have the main aim of contributing to the information-richness of the selected cases for the research. The arguments for choosing a certain sampling approach or for applying mixed purposeful sampling need to be justified by the researcher. Patton (1990) also points out that the researcher does not necessarily have to pick only one of these

approaches and that it may be advisable to use a combination of purposeful sampling approaches. The application of a multi-level sampling strategy is also advocated by Fletcher and Plakoyiannaki (2011) who recommend that the researcher makes an informed decision about case sampling and applies different strategies of purposeful sampling at different points in the overall process.

As already pointed out, the term 'sample size' may not necessarily be applicable to a case study (Thomas, 2016; Yin, 2009). The choice of an adequate sample size is discussed quite intensely in academia and with very heterogeneous results. Patton (1990) argues that purposeful sampling of information rich cases in a study plays a more important role in the credibility and validity than actual sample size. He recommends starting with a minimum sample size and using a flexible and emergent design throughout the whole research process. The comparative study by Mason (2010) provides a good understanding of the different views and resulting discourse amongst qualitative researchers. While there is a clear understanding that sampling in qualitative research designs generally differs from that applied in pure quantitative studies, opinions on the appropriate qualitative sample size differ widely. The concept of saturation can be seen as a widely accepted measure. For example Guest, Bunce, and Johnson (2006) recommend that saturation should be operationalised. In their study they concluded that saturation was already achieved within the first twelve interviews, and 'meta-themes' could even be identified by the time the first six interviews were completed. Similar patterns within the data could be determined, which would have been sufficient evidence for their research without having to collect data from 60 interviews. Using this approach, a more general idea of data saturation was applied in research practice (Guest et al., 2006).

Similarly, Mason (2010) conducted an analysis of PhD studies using interviews as the only method of data collection. This analysis also differentiates between 26 qualitative research approaches from different academic fields. For the case study approach, sample sizes between 1 and 95 could be identified. A clear risk is that by misinterpreting the saturation concept, PhD researchers tend to increase their

sample size to be on the 'safe side'. This implies that researchers could seek a better understanding of saturation and also of the limitations linked to the chosen approach (Mason, 2010). The author has further reviewed the existing literature and previously published doctoral theses for their sampling approaches. While the majority of studies in the area of Chinese logistics are based on quantitative analyses, only one doctoral thesis about logistics management in China using qualitative interviews could be identified. Wilmking (2009) builds his qualitative analysis on the interview outcomes of 13 study participants in top and middle management positions in unspecified companies doing logistics in China.

It should also be acknowledged that there is ongoing academic discourse about the applicability of the saturation concept for qualitative research (Bowen, 2008; Morse, 1995). In any case, the researcher is required to explain how saturation is achieved and demonstrate the results as part of the analysis. The author of this study evaluated the advantages and disadvantages of the chosen case selection method and the concept of saturation accordingly. Following the advice of Yin (2009), more than one source of data and also more than one analysis method were applied in this research. According to Bryman and Bell (2007), a researcher following a qualitative approach may apply more than one sampling approach.

For this study, a combined sampling approach was applied using typical case sampling, stratified purposeful sampling and snowball sampling. The complete sample for this case study consisted of 35 television videos, 20 company publications and press reports, more than 150 international media publications, 12 semi-structured interviews with topic experts and finally data for four variables from the Chinese Statistics Yearbook. The author is confident that the chosen sampling approach identified particularly rich data to provide answers to the research questions and thus deliver a comprehensive understanding of the phenomenon.

Considering the multiple data sources in this study, the application of specific sampling approaches varied depending on the actual source. More detailed

information on the applied process of data collection is provided in the following section.

3.6 Data Collection

This section describes how data from different sources was collected for this study.

As already described, this case study incorporates a variety of data sources with the aim of providing comprehensive insights into the strategy of logistics MNEs in China. In order to allow for a broad range of information, a combination of secondary and primary data collection has been applied. This study follows the three principles outlined by Yin (2009):

1. Using multiple sources of evidence in order to allow for converging lines of enquiry and appropriate triangulation and validation.
2. Creating a case study database in NVivo 11 including all qualitative data, reports, etc.
3. Maintaining a chain of evidence in order to increase reliability of the overall research process.

These processes of data collection for the different sources are explained in more detail below.

Process for Video, Media and Company Publications

As already outlined, this case study was built on a large variety of mainly qualitative data sources. This part of the research design was illustrative, thus enabling further insights to the questions of what, why and how logistics MNE strategy is applied in

China. Data collection from secondary sources was carried out over a period of 80 months from 2010 to 2019. This included the screening of published videos on the topic that were collected by the author. These videos covered interviews given by CEOs and other top managers of logistics MNEs to international TV channels on the topic of logistics strategy in China. The data collection was supported by the use of Deutsche Post DHL's daily media extract. In addition, a separate internet search on video sources with the relevant keywords 'Logistics in China', 'DHL China', 'FedEx China', etc. was undertaken. Thus, the sampling approach for this component of data collection was performed by applying stratified purposeful sampling. The aim was to contribute characteristic strategic insights from the major logistics MNEs operating in China that would also allow for a comparison between different viewpoints. The video data collected consisted of 35 data sources. Appendix V shows more information on the logistics managers featured in the videos.

Furthermore, international newspaper articles were searched for the topic of logistics in China during the same period from 2010 to 2019. The sampling for media content was done by applying typical case sampling in order to capture the major developments in the area of interest. The author read these articles and only those dealing directly with logistics MNE strategy matters were finally selected. The 150 applicable media extracts were then sorted into the case study database.

In addition, company publications by the major logistics MNEs were taken into account. These publications included, for example, annual reports, company portraits and country websites available on the internet. Again, the sampling strategy of stratified purposeful sampling was applied with the aim of obtaining comparative data. The information extracted was mainly used to improve the focus of the case within its boundaries and provide further descriptive data for the MNE area of the Chinese logistics market. In total, 20 company publications were incorporated into the database.

Process of Semi-Structured Interviews

Given the context of the logistics market in China and the aim of understanding the strategic approach of logistics MNEs, semi-structured interviews were chosen as an appropriate means of supportive data collection for this case study. This method is relatively common in qualitative research. The procedure of the semi-structured interview is usually supported by a general guideline that consists of preselected questions on the topic in the scope of this study. The main difference from the fully structured interview is its flexibility, meaning that the researcher does not necessarily have to adhere to the predefined schedule in every single detail (Harrell & Bradley, 2009).

Because the author of this study is directly affiliated with Deutsche Post DHL, a personal discussion of Chinese strategy with other logistics MNEs was precluded due to a possible conflict of interest. This meant that the more conventional approach of selecting interview participants from a broad variety of logistics MNEs had to be excluded. Instead, the interview participants were recruited by following a networking approach under consideration of the conceptional framework, thus contributing to the different perspectives of the OLI paradigm and the Strategy Tripod. At this point, it should be acknowledged that the author has clearly influenced the process of interview data collection. This approach was justified by creating a more trustful relationship during the research process through recruiting the interview partners using the personal network of the author.

The selection of subject matter experts required the fulfilment of at least one of the following criteria:

- Local practitioner's experience in a logistics MNE operating in China.
- Expertise in logistics research in China.
- Consulting perspective focusing on the Chinese logistics market.

- Logistics MNE customer in China.

The composition of the interview participants followed the recommendation by Starkey, Pettigrew and others on how the 'knowledge supply chain' works in practice. In their understanding, the specific knowledge that can be obtained from researchers, teachers, consultants and practitioners differs and shall therefore be co-produced and combined in a synthesis approach (Starkey, Pettigrew, Hambrick, Markides, & Van de Ven, 2002; Van de Ven, 2002). The author is convinced that the specific setup of the semi-structured interviews within this case study contributed to an adequate synthesis of diverse insights and the triangulation of knowledge.

All interview participants have had senior roles in their respective areas of responsibility for at least five years before the interviews and were highly involved in the topic in the scope of this study. This involvement was proven either by their professional activities in Chinese logistics or by engaging in research on the topic from an academic perspective. Since the majority of interviewees preferred to remain anonymously, the study contains neither the individuals' names nor the company affiliation of any non-DHL participants.

The following Figure 3.5 illustrates some particular characteristics of the interview participants, whereas for instance the nationality and their workplace location can be seen major relevant factors for this study. Considering the study's research context, high emphasis was put on involving interview participants with relevant local expertise. When evaluating the twelve participants of the semi-structured interviews, it can be indicated that the expertise involved in the interviews quite well reflects the professional structure of the Chinese logistics market. With 46 percent, Chinese logistics experts build the biggest group, whereas expatriates working in China with 39 percent provide a good balance of international understanding of the Chinese market. Finally, only two participants – the remaining fifteen percent - were not located in China at the time of the interview, but had personal working experience from earlier engagements in the country.

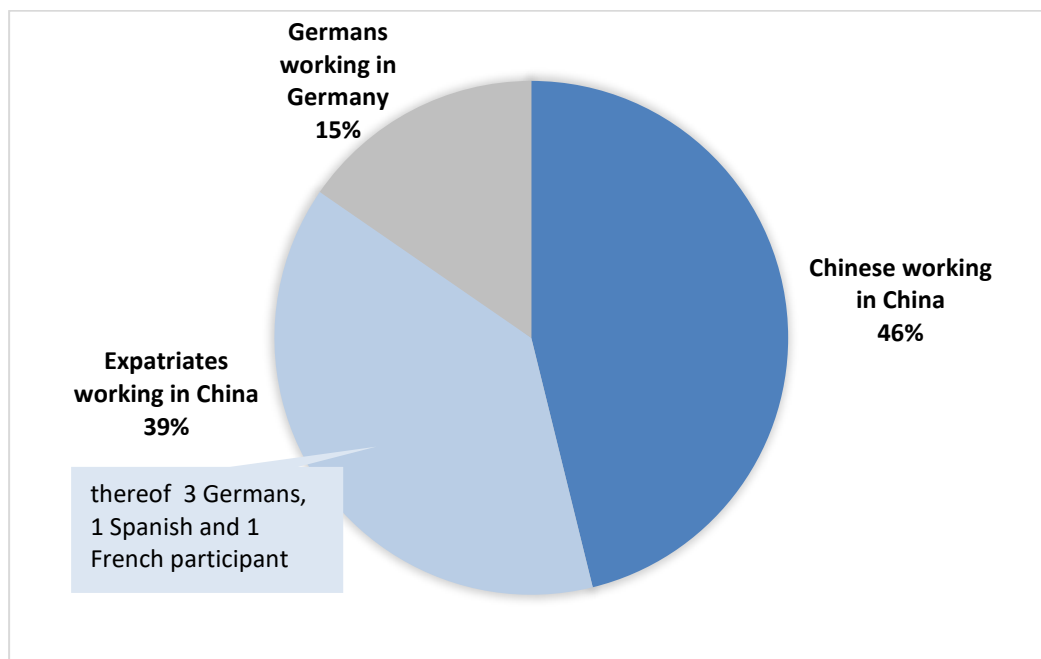


Figure 3-5 Nationality and location of semi-structures interview participants

A more detailed overview of the interview participants, providing specifics on their professional expertise, is shown in Appendix VI.

Owing to temporal and organisational restrictions that the author faced during a field research trip to China, a smaller number of interviews were planned by originally applying stratified purposeful sampling. The aim was to identify experts from particular subgroups that were able to contribute specific insights into the phenomenon while allowing for a comparison between outsider and insider views. The author identified possible interview partners who were asked whether they were interested in participating in the interviews and were available during the author's field trip to China. Some of the experts contacted were personal business contacts or worked for the same logistics MNE as the author. Nevertheless, Chinese-style networking methods (*guanxi*) were also applied by obtaining a referral from an existing contact to the actual expert to be approached (Xin & Pearce, 1996). This approach is also known as snowball or chain sampling and is considered a specific type of purposeful sampling. Purposeful sampling (also known as purposive sampling)

means identifying and selecting individuals that are especially experienced with the phenomenon in scope (Creswell & Plano Clark, 2011; Johnston & Sabin, 2010; Patton, 1990).

The author had met some the interview participants earlier, either in her business environment or when attending international logistics conferences. By interacting with the prospective interviewees in professional discussions, their expertise in the area of logistics MNE strategy in China could be verified. Snowball sampling was applied to identify and contact further suitable interview candidates. The original expectation was to agree a minimum of five to seven interviews of a maximum of one hour each. Finally, ten semi-structured interviews aimed at meso and micro-level insights were conducted in China in June 2012. In order to test internal validity and data saturation, further interviews of topic experts in Germany were planned. After two additional interviews in March/April 2013, repetitive insights and thus a confirmation of the data and themes collected thus far were achieved. The twelve interviews lasted between 40 minutes and 1.5 hours each.

The study aimed to provide a more extensive view rather than a pure DHL perspective. The composition of interview participants is meant to ensure a triangulation of data sources by including multiple viewpoints of managers and market experts both inside and outside a logistics MNE. The focus was to gain an in-depth understanding of experiences, perceptions and interpretations of logistics MNE strategy in China. Considering the different affiliations of the interview participants, it can be concluded that a one-sided view of the phenomenon was avoided as far as possible. The outsider perspectives in particular can be seen as valuable contributions towards an effective understanding of the strategic approaches of logistics MNEs in China while considering the contextual influences. The actual process of face-to-face interviews in China and Germany is described in more detail below.

According to Wilkinson (2000), the interview is an appropriate research tool if in-depth information is required to clarify issues within a sensitive environment. This is, for example, the case when discussing future business development and determining corresponding strategies (Harrell & Bradley, 2009). As defined by Kvale (2007), 'the interview is a specific form of conversation where knowledge is produced through the interaction between an interviewer and an interviewee' (Kvale, 2007, p. xvii). One special form of interviewing is the semi-structured interview that focuses on 'obtaining descriptions of the life world of the interviewee with respect to interpreting the meaning of the described phenomena' (Kvale, 2007, p. 8). As also outlined by Kvale (2007), an interview ideally follows a seven-stage path that includes thematising, designing, interviewing, transcribing, analysing, verifying and reporting.

Effective interviews require thorough preparation by the researcher. Interviews are commonly differentiated into structured, semi-structured and unstructured interviews (Saunders et al., 2006). The procedure of the semi-structured interview is usually supported by a general guideline consisting of preselected questions. The main difference from the fully structured interview is its flexibility, meaning that the researcher does not necessarily adhere to every single detail in the outlined schedule.

It is the opinion of the author that semi-structured interviews ensured an appropriate level of control while allowing for a dynamic dialogue with the interviewees. As Denscombe (1998) noted, the 'flow of the discussion' shall be monitored to ensure coherence to the research agenda. This approach is generally supported in a variety of qualitative interviewing literature. The researcher should continuously reflect on the narrative from the interviewees in order to probe for further information or support when required (Gillham, 2005; Harrell & Bradley, 2009; King & Horrocks, 2010; Packer, 2011).

The personal interviews for this study were conducted at a place agreed in advance with the participants. This was usually an office or conference room of the interviewee's affiliated company. In addition, other meeting places were used that

are common for conducting business in logistics, for example an international logistics exhibition in Shanghai or a coffee shop in a business district. The data collection in the interviews was supported by recording the entire conversation using a digital voice recorder, which was agreed to by all participants. In order to allow for a sufficient understanding, the interviews were conducted in English or German. The participants could choose between these two languages. The author is convinced that this is the most effective way of communication, since the context of the research entails the use of international logistics industry terminology that all participants should be familiar with. Business strategy for logistics MNEs in China is generally conducted in English owing to the international management structure. With the interviews either already being undertaken in this language or being translated from German into English by the author, it can be assumed that a possible risk of translation errors does not apply to this study.

The interviews were conducted with the support of a guideline (see Appendix VII). This guideline may appear quite detailed for semi-structured interviews, but it should be emphasised that interviewees were not required to answer every question in the guideline. At the start of each interview, a focus area was agreed on, thus reducing the total number of questions. Nevertheless, there was room for further questions, for example when following up an interesting idea or specifying a certain view during the flow of the interview.

Qualitative interviewing needs to follow clear ethical codes of good research practice. For instance, one key requirement is that the participants give their 'informed consent'. Usually the researcher informs prospective participants about the study aims and its procedure when inviting them for the interviews. A relatively common way to obtain mutual agreement is for the interviewer and interviewee to sign a consent form containing key topics like confidentiality, anonymity, data security and planned publication (Gillham, 2005; King & Horrocks, 2010). Both procedures were applied in this study.

Process of Statistical Data Collection

Since a target of this study was to provide a comprehensive overview of logistics MNE strategy in China, further quantitative data was also incorporated. The official Chinese economy statistics were the chosen data source (National Bureau of Statistics of China, 2013, 2015, 2017, 2019). This annually published data provides the most comprehensive information on economic variables in the Chinese market.

Chinese economic development is the basis of the context in this case study on the strategy of logistics MNEs in China.

For this study, the following variables were chosen in order to provide complementary insights into the development of the Chinese market:

- GDP China (1991–2017),
- Total value of imports and exports (1990–2017),
- Freight traffic (1990–2017),
- Foreign direct investment actually utilised by sector - transport, storage, post (2000–2017).

In order to obtain a sufficient understanding of the Chinese statistics, the author procured the printed version of the China Statistical Yearbook 2013. This publication contained a DVD with all available variable data in the form of Excel tables. The author then manually complemented the data for additional years that are published in the Internet (National Bureau of Statistics of China, 2019).

Comparison of data sources

As outlined in the previous sections, this study draws on a comparatively broad assortment of different data, which have been collected over a longer period from various sources. While the case study research design applied in this study is not intended to follow a longitudinal approach, a more specific evaluation and comparison of the data sources considering their respective acquisition periods

delivers valuable insights. This means that the aspects of temporality deliver relevant information that is complementing and enriching the research. Table 3-3 illustrates the specific nature of the individual data sources and explains in which timeframes the respective data was collected. Furthermore, this comparison allows evaluating each data source for its strengths and weaknesses in contrast to the other sources.

Table 3-3 Comparison of 5 data sources

	Nature of data	Collection timeline	Strengths	Weaknesses
35 TV interviews	Qualitative, video transcripts	2010 - 2019	Senior manager insights covering all 8 logistics MNEs in scope, covering long timeframe	Lengths and depth of interviews depending on TV feature
150 media publications	Qualitative, narrative from newspapers and logistics magazines	2010 - 2019	Long duration of data capture, covering a variety of aspects, covering long timeframe	Content and depth of information depending on media
20 company publications	Qualitative, narrative from annual reports or company brochures	2010 - 2019	Information directly published by logistics MNEs	Content and depth of information depending on communication strategies
12 semi-structured interviews	Qualitative, transcripts from primary interview data	2012 / 2013	In-depth personal interviews	Limited access to experts outside DHL, specific timing
5 statistics variables	Quantitative, presented in diagrams	1996 - 2019	Official Chinese economic data, historic data	Calculation of variables cannot be verified by author

Source: Developed by the author of this study

It becomes obvious that the data sources incorporated in the study show several differentiating elements but also have some aspects in common. While the semi-structured interviews as a primary data source have been conducted in person by the author, this single data source cannot be placed upfront the others considering its static collection timing and the limited group of interview participants. The other secondary qualitative data sources provide their usage justification by a longer collection timeline and the complete coverage of logistics MNEs in scope of this study. Therefore, it can be argued that Chinese logistics market developments and emerging trends have been covered through the longer timeframe of data capture for these additional data sources.

By jointly evaluating all data source specifics, the effectiveness and necessity for using this broad assortment of different sources within this case study approach is reasonable. It can be stated that individual data source weaknesses are balanced and - in the best case - even overcome by incorporating a high number of data from different sources.

The processes of data analysis for the different data sources is described in the following section.

3.7 Data Analysis

This section explains the analysis process for all data sources and provides information on the coverage of data.

In the following section, the types of analysis are explained in more detail with regard to their specific contribution to the overall case study research design.

Types of Analysis

As outlined previously, this study aimed to provide comprehensive insights into logistics MNE strategy in China. The case study in the investigation contained the

following types of analyses with their respective aims, data sources and methods applied as outlined in Table 3-4.

The research design, as described by the types of analyses, aimed for a suitable robustness in order to fulfil the requirements of a consistent case study on the phenomenon of logistics MNEs strategy in China. By combining multiple data sources and applying a variety of analysis tools, an appropriate triangulation approach was ensured.

The different types of analysis within this study were applied in the following three-step approach: first, the data is categorised and coded, thereafter patterns and relationships between the categories are identified and finally theories are developed and conclusions drawn (Bryman & Bell, 2007; Saunders et al., 2006; Yin, 2009).

The coding scheme was adjusted and updated throughout the whole analysis procedure. By considering the previous results based on the conceptual framework as well as the initial data collection, the coding scheme was continuously enhanced using new insights from data collection and analysis going forward. This meant, for example, adding new codes and revising or merging existing ones. By determining further attributes from the data, nodes for specific topics within these themes were developed.

Table 3-4 Types of analysis

	Video and print media analysis	Analysis of semi-structured interviews	Statistical data review
Methodology	Qualitative Research	Qualitative Research	Qualitative interpretation of quantitative data
Aims	Provide additional insights from personal perspectives based on video statements, media and company publications	Provide detailed descriptions of personal views on logistics MNE strategy and possible future developments	Provide complementary views based on Chinese logistics market statistics
Paradigm	Interpretivism		
Research method	Thematic search in media, video and statistics	Semi-structured Interviewing based on guideline	Descriptive statistics
Logic	Inductive	Inductive	Deductive
Type of data	Secondary	Primary	Secondary
Form	Media data in analogue and digital form, videos	Interview recordings transferred into transcripts	Statistical tables and diagrams
Output of analysis	Narrative and illustrative	Primarily narrative	Numeric, illustrative and graphical
Objectivity/subjectivity	Subjective, interpretative	Subjective, interpretative	Objective, explanatory
Role of the researcher	Researcher partially involved in process	Researcher actively involved in process	Researcher in reviewing role
Bias	Possibly affected by bias in original data, and to a lesser extent from researcher	Possibly affected by bias of researcher and/or participants	Possibly affected by bias in original data, and to a lesser extent from researcher

Source: Developed by the author of this study

The data from the different data sources was scrutinised against the existing nodes and during the process further nodes emerged. The NVivo-supported analysis was done in several process loops, thus the nodes were continuously reviewed and regrouped. The regrouping of nodes and the possible merging of some nodes is seen as a prerequisite for building a thematic understanding.

By creating thematic categories that are further grouped into specific themes, a thorough review of the contributions and interrelations of the different data sources can be achieved (Bazeley, 2009, 2013; Saldaña, 2013).

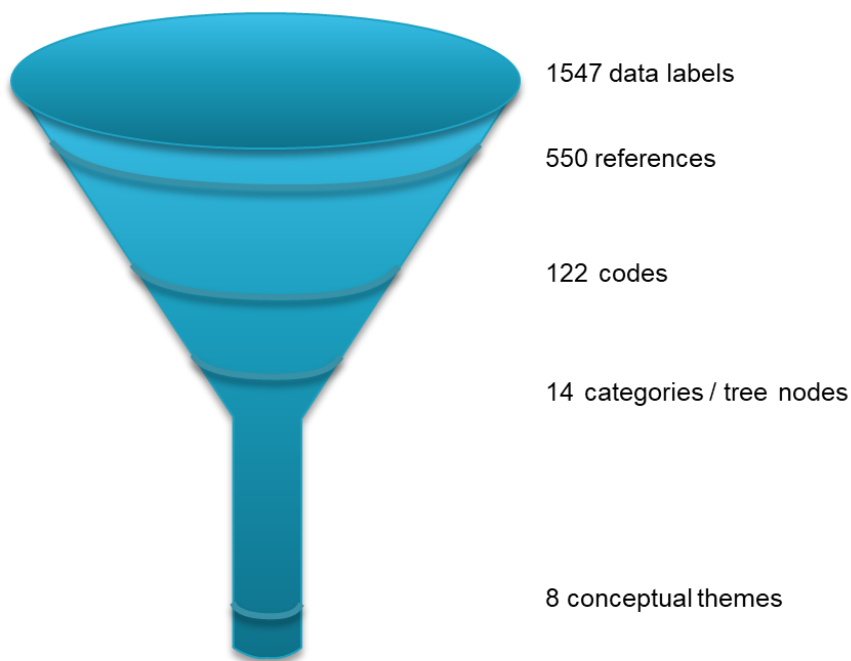
The software QSR NVivo 11 supported the qualitative analysis in this study. The CAQDAS enabled the import of data in the form of interview transcripts, video or audio material into a database with a robust architecture. The software then supported an exploration of the data and sorted it into themes. This was followed by data coding and finally querying and evaluation by applying further analysis approaches like queries. A specific use of NVivo is given by its various options of data and result visualisation. The analysis framework of concepts, categories and themes is continuously adjusted and improved throughout the process (Bazeley, 2009; Easterby-Smith et al., 2008; Flick et al., 2007). Using this approach, the analysis extrapolated a logical conclusion from the available evidence from different data sources with the aim of creating an ample picture of the specific insights into logistics MNE strategy in China as well as the personal experiences of logistics experts.

The outcome of the NVivo-supported analysis processes included 1,547 explicit occurrences of information, called data labels. These data labels were supported by 550 references (e.g. video or interview quotations). The data labels were grouped into 122 codes initially defined from the literature and further enhanced by insights from the qualitative sources in the case study database. These codes were clustered into higher condensed categories, producing 14 tree nodes. Examining the data for patterns and further filtering it to identify subsets resulted in the initial construction of eight conceptual themes:

1. Chinese economic development,
2. Chinese FDI environment,
3. Chinese logistics trends,

4. Current status of logistics in China,
5. Current strategy of logistics MNEs in China,
6. Competitive advantages and disadvantages of logistics MNEs,
7. Strategic levers,
8. Applied strategy of logistics MNEs in China.

Figure 3-6 illustrates the funnel process of analysing the qualitative data with its specific steps and results.



Source: Developed by the author of this study

Figure 3-6 Funnel process of qualitative data analysis

All data in the analysis was compared and contrasted segment by segment with other data within the study. The analysis framework of categories and themes was continuously adjusted and improved throughout the procedure.

The validation and discussion of knowledge obtained from the various sources was conducted. This included continued clustering, connecting of ideas and investigating textual details.

In addition, exceptions in the data were explored. The final steps included extrapolating a logical conclusion from the available evidence and linking all explanations back to the theoretical framework and research question (Bazeley, 2007; Edhlund, 2011). Thus, the qualitative enquiry contributed to the inductive approach of knowledge and theory creation in this thesis.

In the following sections, the specific analyses of the various data sources are described in more detail.

Analysis of Video Data

Scrutinising the collected video material of 35 television interviews by CEOs and further top managers of logistics MNEs formed a key element of the current case study research. As described earlier, the use of NVivo 11 for a thorough analysis of this particularly rich qualitative data enabled the author to gain abundant insights into the major logistics MNEs operating in China. As these television interviews were mainly given in finance-related features, focusing on topics like company strategy, growth plans and product offers, relatively detailed information could be obtained in order to contribute to the research questions. As outlined previously, the analysis of this secondary data can be considered a major element of the research design as it allowed a comparison of the strategic ambitions of logistics MNEs in China.

Analysis of Media Content and Company Publications

The research was enhanced by an additional qualitative research element in the form of an analysis of media content and company data. The analysis was again carried out

by applying various tools provided by the software NVivo 11. Media entries from newspapers, logistics journals, company publications and professional network contributions were scrutinised for additional insights on logistics MNE strategy in general and the Chinese market more specifically. The media and company data analysis was designed to gain qualitative insight on themes and issues relevant to logistics MNE strategy in China (Altheide & Schneider, 2013; Macnamara, 2005).

Analysis of Chinese Statistical Data

In order to complement the insights on logistics MNE strategy in China, an analysis of the statistical market data published in the China Statistical Yearbook was undertaken (National Bureau of Statistics of China, 2013, 2015, 2017). As this analysis formed an element of the case study research design, any additional specific quantitative scrutiny of the data was discarded. The application of more sophisticated data evaluation methods, such as time series modelling and the creation of future development scenarios, is appealing for any strategic research. However, the limited data supply prevented a legitimate analysis. The most relevant variable – investment value of FDI into the Chinese logistics sector – only had 15 years of data available. A time series model should build on a robust variable base; the minimum is generally seen as data availability of 20 to 25 years (Brandt & Williams, 2007; Brockwell, 2002). Therefore, the available data points were used to provide supplementary information in the form of descriptive statistics. The outcome was illustrated in tables and diagrams, thus adding to a comprehensive understanding of the existing phenomenon of logistics MNE strategy in China.

Greater analytical emphasis was placed on the personal interviews with logistics experts in the Chinese context and the applied procedures are described below.

Analysis of Interview Outcomes

Once the interviews had been conducted, all recordings were transcribed with the support of speech recognition software by applying a second 'own voice recording'.

This procedure enabled a comprehensive examination of participants' answers while allowing for a repeated review. In addition, this practice provided an appropriate log for proving research accuracy (Bryman & Bell, 2007). An example of a transcript from one interview is shown in Appendix IX.

The outcomes of the semi-structured interviews in the form of transcripts produced by the author were allocated into categories and analysed for their contribution to the research questions (Creswell & Plano Clark, 2011). An analysis approach generally related to 'content analysis' was applied, thus allowing for a structured examination without losing the depths of meaning provided by the interviewed experts (Davies, 2007; King & Horrocks, 2010). The aim throughout the whole process was to create a comprehensive picture from the personal experiences and expectations of the experts involved (Easterby-Smith et al., 2008).

The transcribed interview data was structured for further exploration. This included allocating the results into categories, coding them, searching for keywords and retrieving the contribution to the research objectives (Saldaña, 2013). The exploratory component of the qualitative analysis focused on gaining insights into the following areas:

- The current and anticipated future development of the Chinese logistics market and how these developments are embedded in a logistics MNE's strategy.
- The influence of local institutions and industrial competition on a logistics MNE in China and how these affect the MNE's own resources and capabilities.
- The long-term success factors that will form the competitive differentiators for a sustainable strategy for logistics MNEs in China.

The outcomes of the interviews were analysed for their contribution to the study's research questions. The identification of patterns, their further examination and the determination of correlations provided a suitable approach for a structured qualitative analysis (Davies, 2007; King & Horrocks, 2010; Krippendorff, 2013).

The overall contribution of the data being analysed in this study and the level of saturation achieved are evaluated in the following sections.

Data Coverage and Saturation

The evaluation of data coverage contributes to the justification of the chosen research methodology and design. For the case study research, the author chose a specific design and methodological analysis strategy. The data captured during the research was evaluated for its applicability. The research builds on eight principal themes that were assessed by applying empirical data models. These themes were derived from the initial literature review and then applied during all phases of the data analysis. Each data source was evaluated for its contribution to the themes, thus showing its impact on the overall saturation. This approach follows the advice from Fusch and Ness (2015) in order to aim for both richness (as quality) and thickness (as quantity) in data coverage as far as possible. Saunders et al. (2017) approach the topic of situation in qualitative research from a more systematic angle. They differentiate between four models of saturation:

- (1) Theoretical saturation: to be considered in sampling.
- (2) Inductive thematic saturation: relates to coding and generation of themes.
- (3) A priori thematic saturation: shown by codes and themes represented in the data.
- (4) Data saturation: demonstrated by replication of information within data.

Quite often, hybrid forms of saturation concepts are applied in qualitative research practice (Saunders et al., 2017). By incorporating various data sources, which included larger sample sizes for some sources and contributed a depth of information for other sources, the author is confident that the research was built on an adequate data coverage and saturation.

As the qualitative analysis was conducted with the support of NVivo 11, the total number of identified nodes from the analysed data sources is shown for each theme.

Table 3-5 shows the empirical data models based on the data sets captured with their individual coverage and themes saturation. The term 'comprehensive data provided' means that the collected data for a specific data source is providing large-scale insights on the respective theme. In return, the term 'partial data provided' described that the data from the respective data source contributes limited insights that cannot provide for full coverage of the specific theme. Therefore, involving the variety of different data sources contributes to an overall sufficient data coverage.

Table 3-5 Empirical data models – data coverage

No.	Themes	Total no. of nodes	Qualitative data sources					Quantitative data
			35 TV interviews by managers of logistics MNEs	150 international media publications	20 logistics MNE company publications	12 semi-structured expert interviews		5 variables from Chinese economic statistics
						Insider perspective (5 participants)	Outsider perspective (7 participants)	
1	Chinese economic development	174						
2	Chinese FDI environment	33						
3	Chinese logistics trends	157						
4	Current status of logistics in China	417						
5	Current strategy of logistics MNEs in China	479						
6	Competitive advantages and disadvantages of logistics MNEs	63						
7	Strategic levers	106						
8	Applied strategy of logistics MNEs in China	118						



comprehensive data provided



partial data provided



no data provided

Source: Developed by the author of this study

Based on the outcome of the data coverage analysis, it can be concluded that the level of data saturation was sufficient for this study. According to Fusch and Ness (2015, p. 1408) ‘data saturation is reached when there is enough information to replicate the study when the ability to obtain additional new information has been attained, and when further coding is no longer feasible.’

As the themes are derived from the objectives of the study, they can be directly linked to the research questions. The author developed a thematic map of the empirical data models showing the connections between the research questions, the various themes and their analysed qualitative and quantitative data sources. The thematic map builds on the concept of ‘theme mapping’ advocated by Thomas (2009). In this concept, a network analysis was carried out by identifying the interconnections between different topics, their outcomes, e.g. quotations, and finally mapping them into themes.

Theme mapping in this study started with repeated reading and scrutinising of the different data sources in order to identify sufficiently stable constructs from these data. A qualitative researcher needs to strive to capturing the real essence of data, which then can be labelled as key themes for the research undertaken (Thomas, 2009, 2016).

As Thomas (2016) also pointed out, only identifying themes does not provide an understanding of interrelationships between themes. For case studies, but also other qualitative research concepts, a deeper analysis of connections and interdependencies within the data is seen as necessary. This means that the identified themes need to be brought into a specific structure highlighting their relationships. The procedure of theme mapping shall be applied in a multi-stage, iterative process (Thomas, 2016):

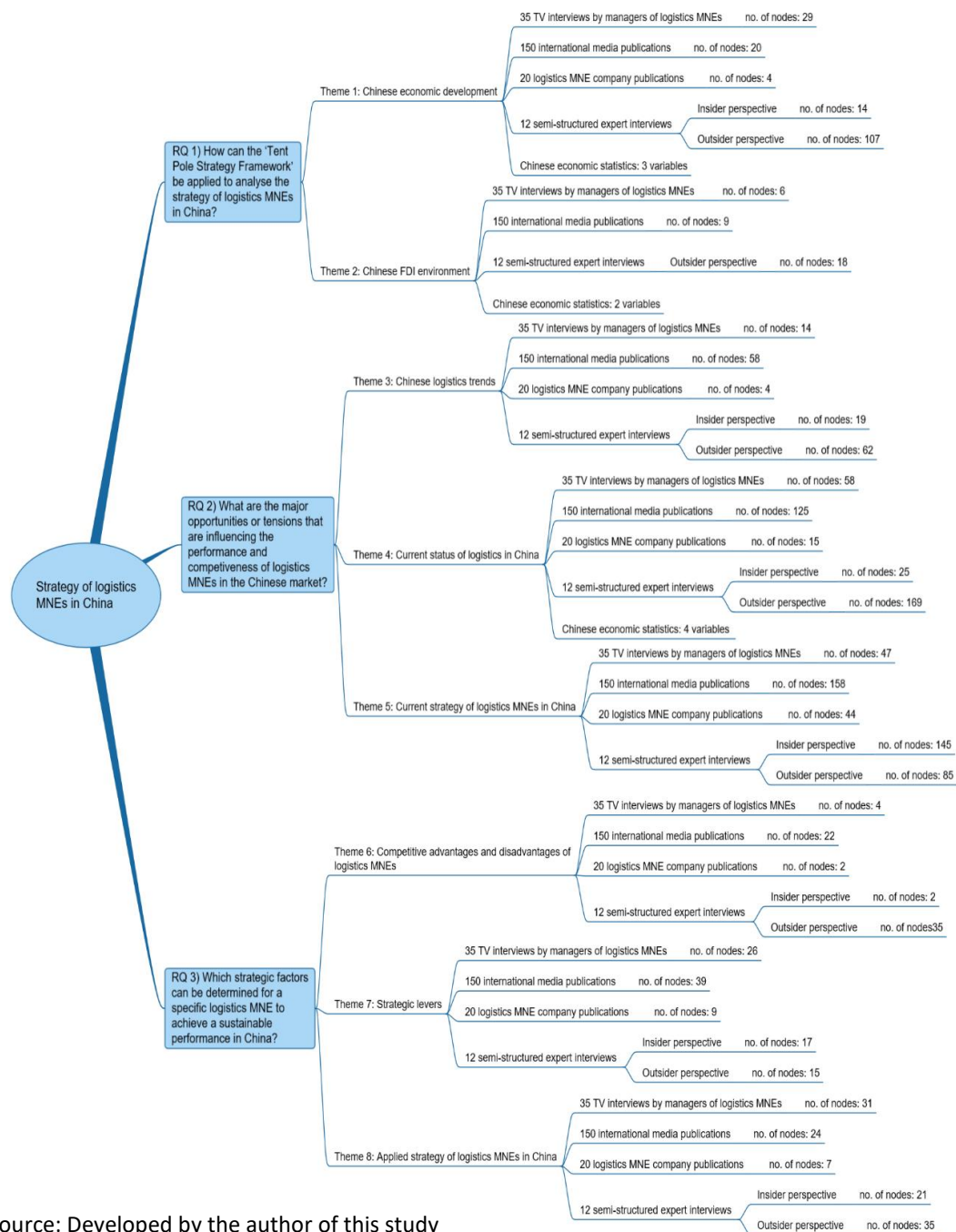
- 1) Reading of all available data like transcripts but also additional notes taken throughout the research process
- 2) Compiling a structured electronic storage of data while keeping a separate set of original data sources and creating a working database
- 3) Reading of all data within the working database and creating 'temporary constructs'
- 4) Reading of the data a second time while comparing against the list of 'temporary constructs' and linking suitable references
- 5) Using references in order to reinforce the 'temporary constructs' where applicable or to eliminate those parts not being evidenced
- 6) Creating 'second-order constructs' that are fitting the data by summarising the relevant themes identified from the data
- 7) Reviewing these constructs by applying them to structure the data and label the captured essence of the data as themes

- 8) Evaluating the identified themes once again in order to capture connections but also contradictions
- 9) Mapping all themes, for example by creating a visual overview
- 10) Demonstrating the relevance of the themes by showing the allocated evidence from the data

As criticised with good cause by Bazeley (2009), solely finding themes in qualitative research cannot efficiently provide the full width and depth of insights. Qualitative studies using a variety of data sources shall identify interconnections and especially interdependencies within their assembly of themes. Themes as such can only be seen as the starting point within rigorous qualitative research. Therefore, this study contextualises its themes, identifies connections and finally links them to the research questions in order to produce a convincing argumentation from the analysed data. Bazeley (2009, 2013) strongly advocates creating models and visualisations of the analysed themes including their respective data.

Theme mapping may be applied on a very detailed level for each single data source, e.g. an interview transcription (Thomas, 2016). Considering the high number of 217 qualitative data sources in this study, the concluding mapping process was applied at a holistic level comprising the full base of multiple data.

The result of the theme mapping process in this study are empirical data models that are providing more detailed insights into the interconnections between the single data sources and the originally identified eight key themes and how these results are contributing to the research questions. The thematic map illustrating the impact of the empirical data models on this study is presented in the adjoining Figure 3-7.



Source: Developed by the author of this study

Figure 3-7 Thematic Map of Empirical Data Models

It can further be assumed that the triangulation of data sources and the resulting synthesis approach for the different analyses contributed to a comprehensive thematic coverage and holistic insights into the phenomenon. In the next section, the outcomes of the analyses of empirical data are synthesised and the results are discussed.

Synthesis of Outcomes and Relevant Discussion

Only a functional combination of different methods, and therefore different perspectives, can provide a solid understanding of the complexity within the chosen topic. For the given case of logistics MNE strategy in China, a reasonable integration of method-specific research outcomes was advisable. As explained previously, a thoroughly defined case study design is a sensible choice within the paradigm of interpretivism. All insights from the multiple analyses were scrutinised in a synthesis approach to gain a comprehensive view of the knowledge created (Denyer & Tranfield, 2006; Gluck, Jacobides, & Simpson, 2014). As supported by Thomas (2016) especially case studies can greatly benefit from applying a holistic but thorough synthesis approach throughout the whole analysis procedure. A consequent theme mapping and the displaying of existing connections and interdependencies can support the desired meaningful representation of the essential research outcomes.

This approach allows for a decent triangulation of data, methods and conceptual assumptions (Flick, 2007a; Yin, 2009). The synthesis built on the thematic map of the empirical data models (see Figure 3.7) in order to examine each theme for its specific impact. The themes were considered building blocks of the overall analysis. It is essential to identify the interrelationships between the themes for a thorough research synthesis of the outcomes from the various analyses (Thomas, 2016). There are diverse approaches towards research synthesis. Bazeley (2013) differentiates between two broad approaches to qualitative synthesis: aggregative and interpretive synthesis. While aggregative synthesis focuses on summaries and conclusions of

overall patterns, interpretive synthesis applies a refined analysis with the aim of constructing new meanings. For this study, an approach closely linked to interpretive synthesis was applied. The qualitative analyses involved coding and the building of categories and themes in order to create a holistic and in-depth understanding of the phenomenon in the scope of this study.

The vulnerability of the study to bias as well as coping measures to ensure reliable and valid outcomes are addressed below.

3.8 Research Bias, Reliability and Validity

This section discusses the research bias for the current study and the specific issues of reliability and validity.

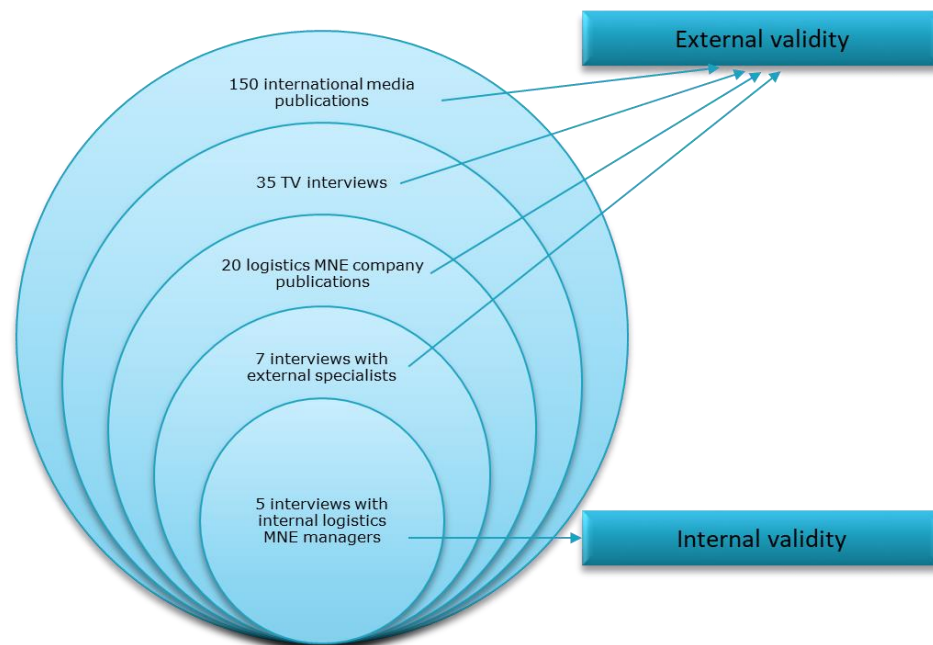
Qualitative research has been criticised for its reputed lack of reliability and validity (Maxwell, 2012; Whitemore, Chase, & Mandle, 2001). Obviously, this criticism links back to the epistemological question of objectivity and how to obtain adequate knowledge by interviews or other qualitative data collection methods. For a qualitative researcher, the occurrence of an 'intersubjectivity' forms an elemental component of the research, meaning an agreed level of objectivity should be applied (Kvale, 2007). This implies that qualitative research can create objective knowledge according to its own definition, despite the direct involvement of the researcher and their possible bias.

The author supports the views of Flick (2007a) and Hammersley (2008) which distinguish between different purposes of triangulation. This study used triangulation not only for pure validity testing but also for providing complementary viewpoints in order to obtain a more bias-balanced picture of the phenomenon in the scope of this study. Nevertheless, the validity and the consistent, reliable usage of the case study research design needed to be proven. The concept of triangulation promotes the application of at least two independent data collection or analysis methods in order

to ensure research insights at different levels, thus enhancing the quality of the knowledge retrieved (Yin, 2009). Likewise, Flick (2007a, 2007b, 2007c, 2007d) explicitly advocates the use of triangulation within a qualitative research design in order to prove its validity. For this study, these forms of triangulation were applied:

1. Wide-ranging data triangulation by using verbal data from interviews, visual data from videos, international press and logistics MNE publications and quantitative statistical data.
2. Between-method triangulation by combining several qualitative data analysis methods with descriptive statistics.
3. Theory triangulation by applying a multidimensional conceptual framework and transporting foundational theoretical assumptions from the different analyses to the insights (Flick, 2007d).

Figure 3-8 illustrates the several layers of data in this study and their contribution to validity. The different qualitative data sources contributed to a breadth of topic-related insights. While the interviews with company internal logistics MNE managers contributed to the internal validity of this study, external validity was supported by incorporating several external data sources, such as interviews with external specialists, the analysis of company publications, TV interviews by logistics managers and international media publications. The variety of different data sources complemented each other and can be seen as a pivotal element within the triangulation approach of this study.



Source: Developed by the author of this study

Figure 3-8: Layers of qualitative data triangulation

Internal validity refers to the correctness of the results. This 'reflection of reality' can be influenced, for example, by choosing an appropriate sampling method (Easterby-Smith et al., 2008). For a case study this applies for the term 'construct validity' when defining the case. As proposed by Yin (2009), multiple sources of data were used in this study in order to build a chain of evidence. Internal validity for a case study means applying appropriate data analysis methods, for example when identifying obstacles and deriving explanations from the data.

External validity aims for a generalisability of the research outcome (Easterby-Smith et al., 2008). Qualitative findings obtained, for example, in interviews can also be reviewed for their generalisability, or rather for their ability to be transferred to other contexts and environments. Yin (2009) defines external validity within a case study not only by the ability to replicate the analysis or statistically generalise its results, but also in the analytical generalisation by linking the outcome to the foundational theory, which plays a major role, specifically for case studies. This thesis aimed to strengthen its validity by applying suitable triangulation and synthesis measures

throughout the research process. This approach was supported by applying the software NVivo 11 to maintain a comprehensive case study database and analyse the different sources in order to achieve data and method triangulation.

Reliability of research is determined when the same procedures repeatedly deliver the same results (Wilkinson, 2000). The reliability of this study was demonstrated by its protocolled data collection and the structured case study database. This approach follows Yin's advice: 'The needed case study database will be a separate and orderly compilation of all the data from a case study. Such data will go beyond narrative or numeric information and include documents and other materials collected from the field.' (Yin, 2009; Kindle-Positions 3242-3243). Considering the connection of the author to a specific logistics MNE, a personal bias could potentially exist. The same concern might also apply to interviewees from the same company and also to other market participants. In order to even out any single-minded views as far as possible, the author included participants with different company affiliations for the personal interviews. The other external data sources, for example TV interviews or company publications, could also contain biased views. As this study applied wide-ranging triangulation measures, the insights included in the research can be considered moderately heterogeneous, thus balancing any one-sided views.

This study focused on providing strategic advice to the logistics MNE where the author is employed. Nevertheless, the general findings may also be relevant to other logistics MNEs active in China. The adaptability to other major emerging countries should consider the disparities in economic, political and infrastructural parameters.

In the following chapter 4, the outcome of all analyses conducted within the case study are presented and discussed.

4. Empirical Results from Case Study Analysis

4.1 Outline of Approach

This section gives an overview of the findings from the empirical analyses using wide-ranging data triangulation, between-method triangulation and theory triangulation by conveying the foundational theoretical assumptions to the insights gained from the analyses.

As outlined in Chapter 3 ‘Methodology and Case Study Research Design’, this study aims to answer the overarching research question:

What are the critical success factors for a logistics MNE in China and how can these factors be used to steer strategic investments with the aim of achieving competitiveness and sustaining a vital business performance?

The previously developed conceptual framework was applied to test how the ‘Tent Pole Strategy Framework’ (see Chapter 2 ‘Literature Review’) could contribute to creating knowledge on the phenomenon of logistics MNE strategy in China. In particular, this study examined the interlinks between the major theoretical foundations applied – Dunning’s Eclectic Paradigm (OLI) and Peng’s Strategy Tripod – and the actual opportunities or threats logistics MNEs face in the Chinese market. The individual determinants of the OLI Paradigm are discussed using the following acronyms according to Dunning (2000) and Dunning and Lundan (2008a):

- **O** – Ownership advantages that are further differentiated by:
 - **Oa** – Asset-specific driven advantages,
 - **Ot** – Transactional advantages,
 - **Oi** – Institutional assets;
- **L** – Location advantages;
- **I** – Internalisation advantages.

The determinants relating to the Strategy Tripod (Peng, 2011) and their effects use abbreviations as follows:

- **FRC** – Firm-specific resources and capabilities,
- **IBC** – Industry-based competition,
- **ICT** – Institutional conditions and transitions.

In the following paragraphs, a positive or negative sign given to each of the determinants defined above reveals whether an advantage or disadvantage has been identified. Each determinant is discussed, not only for its effect on the phenomenon in the scope of this study, but also relating to whether the theoretical concept is confirmed or contradicted by the empirical results. Finally, key success factors are derived and discussed regarding their applicability to logistics MNEs in China.

In order to achieve these research goals, a comprehensive research approach using specific methods in the form of a case study research design was applied. Using an inductive approach, the existing strategy of logistics MNEs was analysed, the influence of the various determinants of the study's conceptual framework were evaluated and strategic advice was derived.

This study analysed four different data categories which included 217 qualitative data sources (see also Section 3.6). More details on the individual qualitative data sources are provided in Appendix V to VII. The incorporated data sources contain in particular:

- 35 TV interviews by managers of logistics MNEs (cited as V-1 ... V-35),
- 150 international media publications (cited as M-1 ... M-150),
- 20 logistics MNE company publications (cited as C-1 ... C-20),
- 12 semi-structured expert interviews (cited as I-1 ... I-12).

As discussed earlier in the section ‘Comparison of data sources’ the variety of different qualitative data sources provides a depth of insights for this case study. Several of the sources contain evidence that have been collected over an extended timeframe. It was therefore of key interest for this study to search the captured results for consistencies of findings or - on the other hand - noticeable contradictions within topic-related data over time. First, the empirical results have been reviewed again for their inter-connections. The study results were evaluated according to the original eight key themes derived in the analysis approach (as already discussed in Chapter 3). A thorough verification of the themes within the analyses led to the final structure of consolidated four key themes representing the empirical results, see Figure 4-1:



Source: Developed by the author of this study

Figure 4-1 Themes and sub-themes

After reviewing and consolidating the study's key themes, the results have been scrutinised more specifically in order to present the themes with their impact on logistics MNE strategy in China. This means, all identified themes are supported by their respective evidence the empirical results and discussed for their relevance towards the research objectives. Considering the individual qualitative data sources with their time-wise coverage, an additional focus has been put onto identifying any influential developments over time.

In the following section, the results of the analyses using qualitative outcomes created with the support of the software NVivo 11 are described in more detail. The results are structured based on the analysis of the four key themes that are further broken down into 12 sub-themes. The subsequent sections follow this theme structure in order to present the findings of the study, starting with the economic context of China that forms an essential element of this study.

4.2 Chinese Economic Context

In the following, the research results embedded in their locational context are explained.

An analysis of the various qualitative data sources shows that actors in the Chinese logistics market are well informed about Chinese economic development. The insights from the qualitative analyses were supplemented with statistical data from the China Statistical Yearbook (National Bureau of Statistics of China, 2019). While the depth of insights into the topic varies depending on the focus of the applied sources, it can be concluded that the environment of the host country, China, plays an important role for the strategy of logistics MNEs. The findings for specific subsets of economic development are summarised below.

Overall Economic Situation

The analysis of the several data sources revealed that the overall economic situation in the country is closely observed by logistics MNEs active in China. Figure 4-2 shows the development of GDP in China, where a continuous positive trend is obvious.

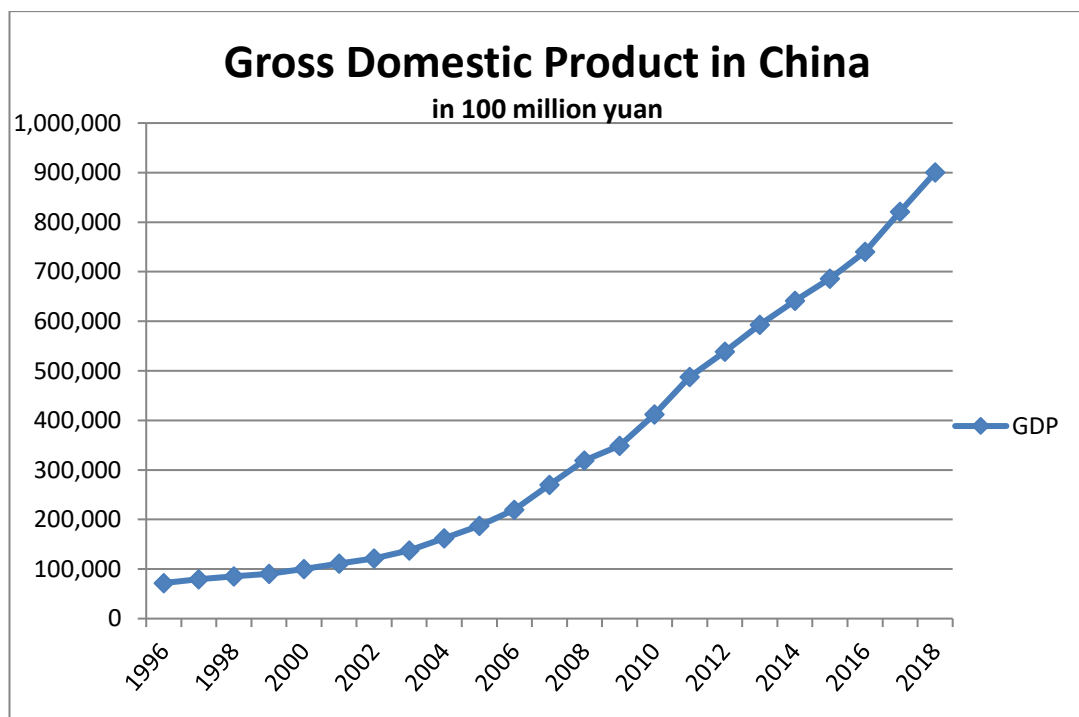


Figure 4-2 Gross domestic product

Nevertheless, Chinese GDP growth can only be seen as one single indicator of economic development. The use of economic indicators to analyse market developments requires an understanding of their limitations. At this point, the quality and reliability of Chinese national statistics needs to be briefly addressed. While there is ongoing discourse on how far the published statistics mirror the reality, academics and practitioners rarely question whether Chinese growth rates still outperform the global average (Holz, 2013; Orlik, 2012).

Market insiders often express a certain level of trust in the growth statistics, as for example shown in an interview from 2012 (see I-6 in Table 4-1). While growth rates above 10 per cent per year were seen as outdated in China, logistics MNEs tend to continuously showing a positive stance in the course of time (V-11 from 2015, C-11 from 2017).

Table 4-1 Empirical results for the overall economic situation

Data source	Quotation
I-6	<i>Nowadays China GDP growth figures are done more carefully and realistic.</i>
V-11	<i>Now, a lot of people are saying China's GDP is slowing down. But, if you look deeper into the primary and secondary industry, maybe it is slowing down. But, if you look into the tertiary industry, the consumption and the service industry in China are actually doing better than the average of 7%.</i>
V-14	<i>People are asking why people are interested in the China market: because of the growing of the economy and the growing of the middle-class people in China. And, that brings instead of being a traditional export country now the country itself being a market especially for the foreign brands.</i>
I-2	<i>I mean the Chinese government clearly stands by their five- year plans. And, within these five-year plans, the measures will definitely be implemented.</i>
C-6	<i>China's economy continues to decelerate, particularly in the manufacturing sector, and recent financial market turmoil has raised concerns that the pace of deceleration might be faster than initially expected. This in turn has driven down commodity prices worldwide, and weakened the outlook for China's major trading partners such as the EU and other emerging Asian nations.</i>
C-11	<i>China provided for a pleasant surprise with a slight acceleration in growth to 6.9 % (previous year: 6.7 %). The main boost to the Chinese economy came from the sharp rise in export activity.</i>

Logistics experts underline that the general development within the Chinese market and its society need to be considered when assessing the Chinese business environment. Another observation is that the Chinese government is clearly

supporting measures to advance the economy overall. This means that reaching high growth rates is no longer the target. The attention is rather on stabilising economic development by considering long-term measures, which again was viewed very positively in 2012 (I-2). For example, the shift from an exporting economy towards imports driven by domestic demand plays an important role in the ongoing attractiveness of China (V-14 from 2013).

In contrast to these views, a statement from the UPS Annual Report 2015 (C-6) raises strong concerns about the situation of the Chinese economy. However, this negative perception can be viewed as a once-off occurrence as this was not repeated in the UPS annual reports in the following years. Particular statements in recent company publications, e.g. the 2018 annual report of DHL (C-17) also confirms the generally positive perception of the Chinese economy by logistics MNEs .

These results lead to the conclusion that Chinese economic development plays a pivotal role in the strategy of logistics MNEs. China's business environment is still considered superior compared to other locations, even with GDP growth slowing down over the recent years (V11). Logistics MNEs cannot afford neglecting China as the country is seen as an essential element in their international network. Therefore, the logistics market size of China continuously qualifies as a key investment motivator and a locational advantage (L+).

While the general economic determinants of China influence the overall business position, further factors, such as labour market conditions, need to be considered by logistics MNEs. Whereas in previous years the low cost of labour was one of the key attractions for moving lower-qualified manufacturing jobs to China, the situation has now changed considerably over the last decade, as expressed by I-9 in 2012. Jobs offered by logistics MNEs in China require a certain qualification level. A lack of a qualified workforce has already become obvious in the logistics industry, as for example stated by V-29 in 2016. The situation in the Chinese labour market makes it more and more difficult for logistics companies to find the right experts. This is

especially true when companies move further into the western part of China (see I-1 from 2012 in Table 4-2).

Table 4-2 Empirical results for the Chinese labour market

Data source	Quotation
I-9	<i>In the past, one of the ... advantages for China to attract FDI is cheap labour, and I do not think that is a plus now, because we are seeing cheaper labours from India, from other Asian or even African nations. And, China itself is already seeing shortage...</i>
I-1	<i>You will not bring somebody from Shanghai to Chongqing, only vice versa.</i>
V-29	<i>There is a shortage of qualified people, definitely in logistics. And therefore, we are training people and people are leaving again, joining other organisations. Sometimes they are even joining the exporting companies of manufacturers directly because better pays in their industry.</i>

China is seen as an ‘employee market’ in the logistics sector. It is already a challenge for big companies to hire the required staff in Shanghai or other eastern centres. This is reflected in annual pay increases of 10 or even 20 per cent that can be seen in some branches. While logistics MNEs are still hiring new staff, it becomes more and more necessary to engage further in order to retain these employees. Fluctuation has a major impact on the workforce of logistics MNEs. Highly qualified employees are in particular demand, as for in other industries, therefore retention measures are becoming more and more important (see V-29 from 2016).

Considering the insights evaluated in this study, the Chinese labour market cannot be seen as beneficial to logistics MNEs. The overall development with high wage increases and shortages in qualified labour have to be considered as clear locational disadvantages (L-). Thus, the locational advantage element of the OLI paradigm is not confirmed for the effects of the Chinese labour market on logistics MNEs. In consequence, it can be stated that logistics MNEs do not pursue an efficiency-seeking FDI strategy in China. Wage arbitrage can be a major investment driver in

manufacturing, but it is less relevant in service industries. The same applies to strategic asset-seeking investments, i.e. gaining access to local knowledge in technologically advanced markets. It can be assumed that the Chinese logistics market is still in a premature stage and these advantages cannot be applied yet.

The explicit influences of the Chinese environment on FDI in logistics are evaluated in the following section.

FDI Environment

Along with the general economic development in China, the specific influences originating from the FDI-related business environment are of importance for logistics MNEs. As a starting point, the current FDI situation in China was reviewed in order to assess the circumstances in which logistics MNEs have to develop their country-specific strategy. China is still largely attracting FDI (see Figure 4-3).



Figure 4-3 Total amount of foreign investment actually utilised

Over the past 20 years, the amount of FDI has grown steadily. Nevertheless, the rate of FDI growth appears to be slowing down. While there are no separate logistics FDI statistics available, it can be argued that logistics MNEs follow the overall trend. Although these companies rarely disclose their country-specific investment strategy, several examples show that logistics MNEs have extended their networks and infrastructure in China over the past years.

As shown in Table 4-3 for example, DHL has based recent investment decisions on location factors like topographical setting and individual GDP development (see M-94 from 2015). Similar reasons apply to the strategic investment of the FedEx Asia Pacific hub (see M-108, also from 2015), where the proximity to newly emerging Chinese customer segments has obviously also been a pivotal reason. For quite a while, it is expected that logistics MNEs will move regional headquarters to China (see M-20 from 2011 and I-9 from 2012).

Table 4-3 Empirical results for the FDI environment

Data source	Quotation
M-94	<i>Suzhou is a magnet for foreign investment because of its proximity to Shanghai and its large manufacturing sector, while Chengdu is the country's western centre of logistics, a hub for transportation and communication and an important base for manufacturing and agriculture. Together, the provincial GDP of the three cities make up 20 percent of China's GDP last year.</i>
M-108	<i>As FedEx expanded, it moved its Asia Pacific hub from the Philippines to Guangzhou in 2009. By making the switch, it cut down delivery time to within four-and-a-half hours from the hub to any other major city in the region. Even now, the company's operation in China is still evolving by embracing "micro-multinationals". These small start-ups have "global" appeal or use online business platforms to pursue a worldwide approach.</i>
I-9	<i>So you might see then Singapore losing a bit of its headquarter power and lots will go into China, maybe with a first stop in Hong Kong, but then Shanghai.</i>
M-20	<i>"We wish we could have known earlier that the law would change, and if we did, we wouldn't have invested."</i>

This predominantly market-seeking approach demonstrates that logistics MNEs consider the Chinese location advantages (L+) in their investment strategy. In addition, the improved proximity to the targeted customer group of manufacturing MNEs also plays an important role, thus proving that market internalisation advantages (I+) are also taken into account.

It can be summarised that the Chinese FDI environment is very challenging for MNEs. This also means that the applicability of the OLI paradigm can only partially be confirmed. Consequently, each logistics MNE has to decide if the overall FDI disadvantages can be outweighed by effects from other determinants in their specific business environment. The particular factors applying to FDI by logistics MNEs are evaluated below.

Overall, the Chinese logistics market is seen as a very complex environment that requires much determination and patience from MNEs when dealing with specific requirements. These requirements have their origin mainly in the rules issued by the local institutions. One example is the specific joint-venture situation that is mandatory in certain market sectors for logistics MNEs. In addition, Chinese legal development cannot be considered a stable ground for undertaking FDI in logistics. As an example, a change in government policy in 2009 was a dramatic setback for logistics MNEs when a new law was passed prohibiting invested foreign entities from delivering letters or documents within China. This meant that the complete local express and courier delivery business of logistics MNEs was affected. DHL, for example, commented at the time that approximately one-third of their overall business in China was going to be lost. Therefore, their investment and position in the domestic market had to be reappraised with the consequence of DHL withdrawing from domestic express delivery in China (see M-20 from 2011).

Thus, the logistics FDI environment in China can be assessed for its foundational links to the elements of the conceptual framework. The previously introduced policy changes clearly have a lasting negative institutional influence (Oi- and ICT-). Logistics

MNEs remain to be guarded towards the Chinese investment law. In the example of DHL's withdrawal from the domestic express market, further ownership-related disadvantages (Oa- and FRC-) can be recognised due to their financial impact. In the following section, the situation of the Chinese logistics sector is evaluated.

4.3 Logistics in China

This section discussed the research outcome from different sources on the Chinese logistics market with its major influential factors, institutional environment and trends.

The market for logistics services in China can be considered as the one with the biggest potential worldwide. The enormous size of the country and its continuing economic development – even with lower growth rates – attracts a great number of logistics companies. Over the previous years, considerable growth in the logistics market has been recognised.

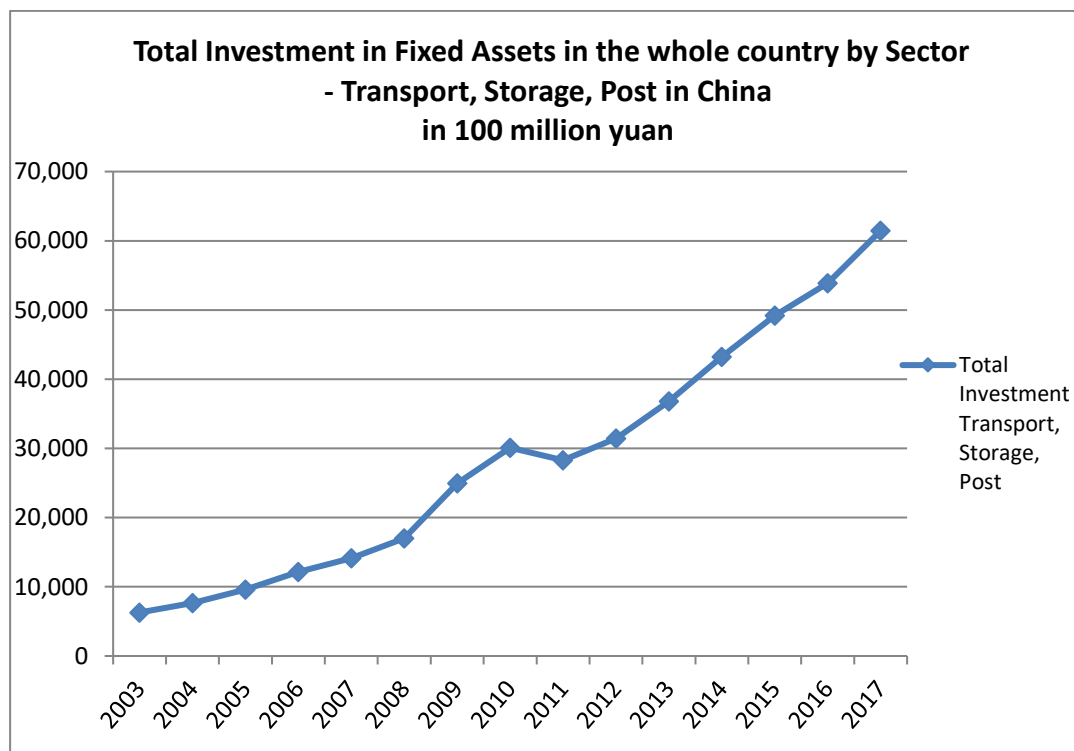


Figure 4-4 Total investment in transport, storage, post

This is illustrated in Figure 4-4, which shows the development of total investment in the sector transport, storage, and post. While the Chinese National Bureau of Statistics only started publishing data for this area in 2003, a steady growth trend between 2003 and 2017 can be recognised. Unfortunately, this statistical indicator was discontinued, thus further limiting the quantitative investment data insights in this context. Nevertheless, the available data underlines the increasing importance of logistics for China. Considering the competitive situation in Chinese logistics, the specifics of the local market play an important role for logistics MNE strategy. While the evaluated company publications in this study rarely focus on very detailed market analyses, one individual example from DB Schenker's Annual Report 2016 can be distinguished (see C-10 in Table 4-4).

Table 4-4 Empirical results for logistics in China

Data source	Quotation
I-7	<i>A general view is that for logistics, I would say there is a very tense competition in China. The major players, because of their good service, good quality, I think their business is doing rather well. Only for the express delivery, I would think that there is quite, quite fierce competition. Because we already have a number of domestic, Chinese service providers.</i>
C-10	<i>Growing e-commerce business requires much more warehousing capacity than conventional retail and is stimulating the market for warehousing space, especially in the USA and China, or the Asia/Pacific region. From a regional perspective, growth rates were high in Asia/Pacific, the Middle East and Africa. Although growth remained high in China, it was nevertheless slightly down year on year. In a fiercely competitive environment, DB Schenker achieved an increase in revenues of more than 5%.</i>
I-5	<i>Yes, we have this number of half a million small and even tiny suppliers, which come into play. ... Well, and this is how the competition is situated.</i>
I-7	<i>The characteristics in China logistics market is that still the domestic logistics ...; the major market share is pretty much controlled by local players.</i>

The originality of this statement derives particularly from providing a company-specific business growth rate while obviously not sharing absolute data on the business in China. The other logistics MNEs limit their comments on Chinese business development to more general observations in their annual reports over the period reviewed in this research.

The logistics sector in China can be considered extremely diversified, meaning that companies seeking logistics services have to consider a very broad number of possible suppliers. This situation makes it difficult for customers to select the right logistics supplier for their individual requirements. Nevertheless, an ongoing trend to outsource logistics can be experienced. This trend and the pure size of the Chinese logistics market provide a clear locational advantage (L+) for logistics MNEs. On the other hand, the competitive situation has a negative effect (IBC-). It can be summarised that in total the Chinese logistics market clearly provides location advantages (L+) for logistics MNEs. They may also be able to benefit from their internalisation advantages (I+) owing to their size and company structure. These advantages need to be balanced against institutional driven disadvantages (Oi- and ICT-), ownership disadvantages (Oa- and Ot-) and a very competitive market (IBC-). Further relevant market factors are discussed below.

Influential Market Factors

The Chinese logistics market is seen as a very multifaceted business environment for logistics MNEs. As explained previously, the enormous diversity of logistics providers adds to its complexity. In addition, there are further market determinants that influence the business activities of logistics MNEs, as mentioned in Table 4-5.

Table 4-5 Empirical results for influential market factors

Data source	Quotation
I-1	<i>Interestingly, I see infrastructure and logistics in the last ranks...</i>
I-7	<i>Actually, ... the customers only care about two things: one is cost, of course the price, they want cheaper price, and they want an optimised, how to say, logistics set-up for their supply chain to reduce their... transportation cost, (and) their inventory carrying cost, ... direct associated with transit time, and the supply chain efficiency.</i>
I-12	<i>They prefer to pick their logistics provider like choosing a dish from a menu.</i>
V-23	<i>So, it hasn't come full blown where there is Chinese global competitor like we have in Germany in DHL. But, I do not think there is any question that will happen.</i>
I-11	<i>If you look at it overall, you know, in China I think the logistic cost is probably about 8 per cent of the GDP while in the US it is three.</i>
I-7	<i>And another trend is that the labour is getting more and more expensive in China. I think there will be some labour shortage, in certain ... labour intensive industries.</i>
I-7	<i>As far as DHL is concerned, we are working with local schools, either universities or colleges to have programmes to cultivate future workers and future leaders.</i>
C-18	<i>To ensure that our customers' needs are always met, we implement a rigorous recruitment process, and are strong advocates of training and continuous professional development. Our in-house training centres work hard to empower our employees with the knowledge and the confidence to meet the demanding challenges of global logistics.</i>

Regarding the key important factors for foreign companies in China, personnel, exchange rates and intellectual property rights are named. In the view of one interviewee in the study (I-1 from 2012), infrastructure and logistics play a minor role for most foreign companies in the Chinese market. He bases his knowledge on a survey undertaken by his institution with multinational companies in the metropolitan areas of Shanghai, Beijing and Hong Kong. These companies mainly require flexibility to increase their production and need to be able to deliver to their

customers in time. Therefore, he claims that these multinational customers are less price sensitive in the area of logistics. A DHL manager (I-7 from 2012) contradicts this view, outlining that transportation costs are one the main drivers for deciding on a logistics provider in China. Especially for potentially new businesses, even though the scope is larger, the cost factor remains an issue for logistics multinationals. It is stated that logistics customers often tend to choose local providers, at least for pure transportation services, based on costs (I-12 from 2013).

It can also be argued that the Chinese market shows a tendency towards short-term contracts with logistics providers or even for procuring services ad-hoc when an actual demand arises. This becomes more distinct when even larger customers choose different providers each time they need logistics services. This means that customers make their decisions for a certain logistics provider not only based on cost but also considering the specialised services offered. Again, the broad market diversification in Chinese logistics provides many alternatives from which to choose.

However, the competition of local Chinese logistics providers is currently not seen as a predominant threat by logistics multinationals. Nevertheless, there is a clear risk of an increasing number of Chinese logistics MNEs in the near future, as pointed out by V-23 in 2017.

It is expected that the described restricting trends will continue in the Chinese logistics labour market. This means local logistics companies as well as MNEs will face more difficulties in finding sufficiently qualified employees for their business.

In order to address these developments, logistics MNEs have already introduced specific measures. These activities include, for example, in-house training and cooperation with Chinese educational institutions (C-18 from 2012). The efforts of establishing formal or informal cooperation with local institutions could improve the general relationship (Oi+). Possibly, the transaction costs (Ot+) could also be lowered through an improved enforcement of the regulations, thus providing access to more business opportunities.

In general, the current workforce situation can be classified as a weakness for logistics MNEs in China. Since they are required to offer more distinctive and specialised services than the local competition, they need better qualified staff. Investments in employee development measures mean that additional costs need to be borne by logistics MNEs. This means that the restrictive local workforce situation provides a location disadvantage (L-) which in turn creates a transaction cost disadvantage (Ot-) for logistics MNEs because they are initially forced to invest further in their capabilities (FRC+). On the other hand, the efforts of logistics MNEs in cooperating closely with local institutions in the education sector may qualify for other advantages due to improved institutional relations (Oi+ and ICT+). These advantages are gained by aligning the MNE strategy to the requirements of the Chinese economy. Thus, logistics MNEs may be able to prove their legitimacy through providing benefits to the local community. These external benefits are seen as spillover effects and considered supportive factors for their local embeddedness in their host country, China. Logistics MNEs can create 'first mover advantages' by engaging in underdeveloped areas like occupational education, which can be considered an important competitive improvement (IBC+), thus creating a new locational advantage (L+) in an emerging market economy. It can be further stated that the upgraded institutional relations form a pivotal element of logistics MNE strategy in China and are worth the investment in the same way as investing in the business network.

Consequently, it can be concluded that customer requirements in the Chinese logistics market are multidimensional. While the price of logistics services plays an important role in customers' decision-making for a logistics supplier, a higher quality and depth of service, including consultative components, are also required.

This means that logistics MNEs will be required to invest in their resources and capabilities in order to gain competitive advantages. Thus, an initial internalisation disadvantage (I-) may occur due to increasing costs.

The complexity of the Chinese logistics market also drives up the cost for transportation services. While this can be seen as a disadvantage for logistics customers, it may also be an advantage (I+) for logistics companies who offer their customers efficiencies from logistics outsourcing.

A further important environmental factor, especially for logistics MNEs, is generated by the combined impacts of increasing protectionist developments in global markets, which lead to accumulated trade barriers and additional bureaucracy in China.

Protectionism, Trade Barriers and Bureaucracy

The Chinese market is seen by foreign companies as a difficult environment to navigate. In particular, logistics MNEs with their experience in worldwide markets are still astonished when facing the complexity of China (see Table 4-6, interviewees I-1 and I-6 from 2012).

Foreign companies do not expect special treatment (see M-18 from 2011), but they often face difficulties that their national competitors do not have to deal with. Logistics MNEs work quite closely with the respective international Chamber of Commerce. These institutions support foreign companies in China because of their close relationships with the respective Chinese authorities. The obstacles for MNEs doing business in China are very similar across the branches of the industry; therefore, the issues are quite often addressed in a coordinated manner (I-7 from 2012). The most common complaints are market barriers, bureaucracy or limited transparency of the applied rules. The practice of very selectively granting or even withholding licences from foreign companies in particular is seen as a major problem. Thus, managerial networking will improve and institutional advantages (Oi+ and ICT+) can be created even within an uncertain economic environment.

Considering the complexity of the Chinese economy and its official and unofficial rules, logistics MNEs also make explicit use of the existing situation to promote their services to potential customers (see V-14 from 2013). This is especially true when

addressing companies with limited experience in China who might be more easily convinced to use a full service offer from their logistics provider.

Table 4-6 Empirical results for protectionism, trade barriers and bureaucracy

Data source	Quotation
I-6	<i>In China, you can expect dual administrative efforts.</i>
M-18	<i>We want to be treated equally to local enterprises.</i>
V-14	<i>Expanding in Asia can seem a little intimidating - different culture, language, currency, not to mention rules and regulations in each country that can change often, sometimes without notice. China is a great example where we have in country expertise. ... UPS is here to guide companies through that process. We have the infrastructure, resources, technology and scalable expertise to navigate China's trade regulations and get your products closer to the customer.</i>
I-7	<i>I think they are on their side, actually DHL is working with them also on a new, some sort of position paper, or we call it White Paper. This White Paper actually comprises of all the suggestions or recommendations to central government, different bureaus like the Transportation Bureau, like the Tax Bureau, or like the Postal Bureau to give specific suggestions that they can make certain revisions to make the competition more fair or to make the supply chain more efficient, something like that.</i>
I-1	<i>It is explicitly difficult for tariffs, because the Chinese have their own tariff codes, which are quite similar to the international ones but can differ in single cases. And then there is always the classic question that is asked worldwide: how is the value determined? Which code shall be applied in the end? And how much is the tariff? That is... That is why most of the companies don't do this on their own, even if they have the right licence for doing imports.</i>

The influence of increasing worldwide protectionism and trade conflicts on the one hand, and the growing complexity and bureaucracy in China on the other hand, create more opportunities for logistics MNEs to offer their services, for example by providing customs clearance. Therefore, the clear disadvantages for manufacturing

and exporting companies can be seen as strong location advantages (L+) for logistics MNEs. In addition, further benefits may apply. This is the case, when logistics MNEs are better positioned than their competition (IBC+) regarding their resources and capabilities, for example international networks and processes (FRC+ and I+) as well as expertise in handling trade regulations with the relevant institutions (ICT+ and Oi+). When evaluating the logistics market in China, emerging trends need to be considered that have an influence on the strategy of logistics providers.

Chinese Logistics Trends

In this section, the specific changes in the Chinese logistics market are evaluated and discussed. While there are general developments, such as the continued growth in logistics, further specific trends influencing the strategy of logistics MNEs are identified. The logistics market is still developing, which is illustrated by the growth in Chinese freight volumes (see Figure 4-5).

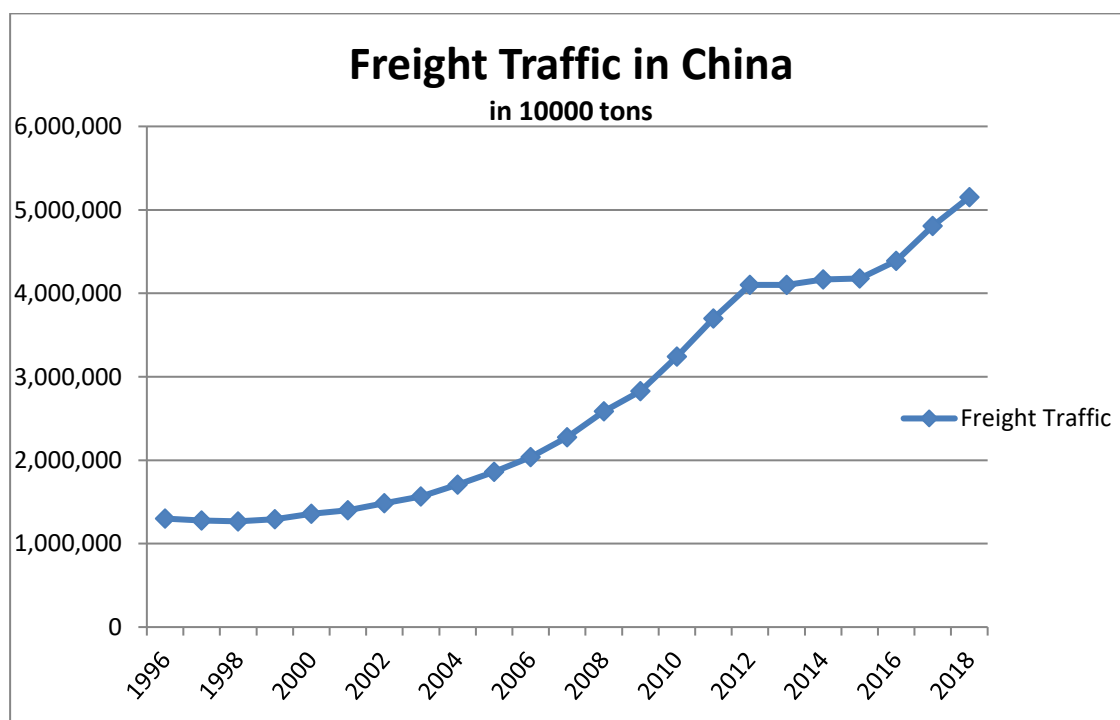


Figure 4-5 Freight traffic in China

Given the present situation, it can still be assumed that freight traffic and its ongoing growth in China provide a locational advantage (L+) for logistics MNEs. It is advisable for logistics MNEs to follow the developments in the Chinese logistics market very closely in order to be able to take strategic measures.

While the freight traffic data shown above focuses on the domestic market in China, cross-border transport of goods is of particular importance for logistics MNEs. Therefore, the development of imports and exports should also be considered when evaluating the logistics market in China.

Figure 4-6 provides an understanding of the situation in foreign trade. Even though growth in Chinese cross-border trade has been slowing down in recent years, the total annual values are still considerably high. Again, logistics MNEs should track developments in Chinese exports and imports very closely in order to plan their own business and network capacities accordingly. The development of Chinese imports shall be of particular interest as it relates to the growth in local consumption.

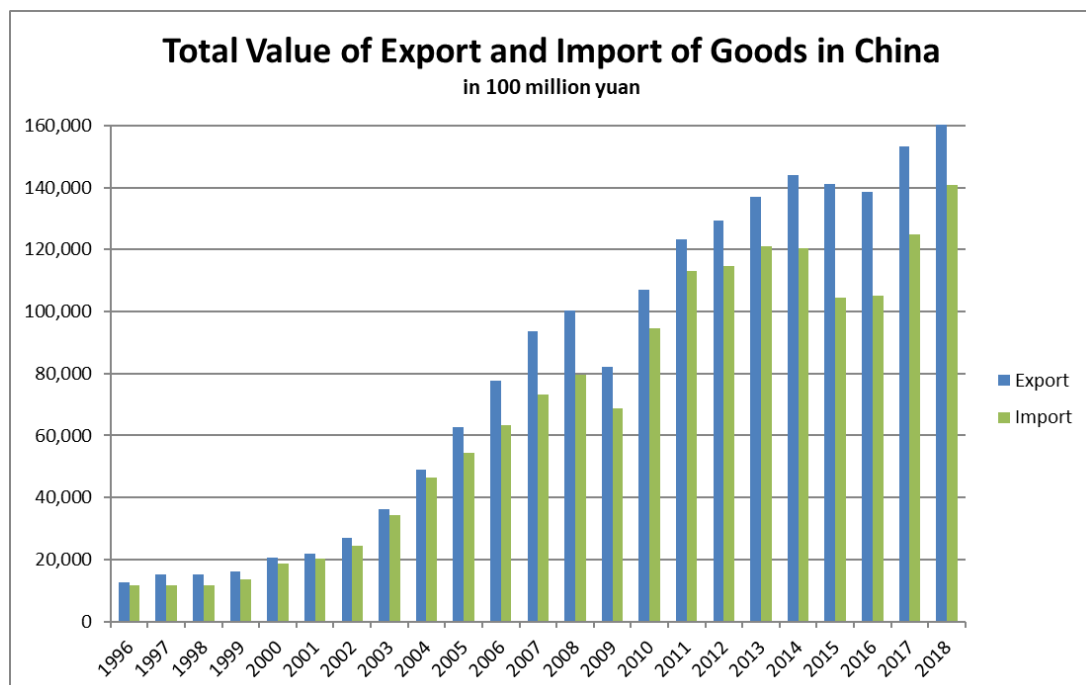


Figure 4-6 Total value of export and import of goods

Once more, it can be argued that the development of Chinese exports and imports provides a further locational advantage (L+) for logistics MNEs. In addition, a clear internalisation advantage (I+) is applicable since they still have greater experience in cross-border transportation and stronger operative networks than their Chinese competitors do.

As previously mentioned, all developments in the Chinese logistics market are regularly observed by MNEs. This particularly applies to watching specific trends and their impact on business. In the following section, the major trends identified from the various sources analysed in the case study are explained and analysed for their influence.

Amongst the trends mentioned by logistics experts, company and media publications, the continued outsourcing of logistics services in China is ranked relatively high. It can be assumed that all logistics MNEs active in China consider the growing demand for logistics services by almost all branches of industry as an important business opportunity. Evidence is for example given by company statements in the media from 2012 and 2015 (see M-72 and M-95 in Table 4-7).

This also means that logistics MNEs are becoming increasingly integrated in production processes of consumer goods in China. As an example, the packaging process of Mars has been automated through outsourcing to DHL's Supply Chain business unit (M-96 from 2015). In a further example, the UPS Annual Report 2015 interprets the outsourcing trend as a reason for further expansion (see C-10). Other logistics MNEs share this view. For example, DB Schenker explicitly outlines the growing outsourcing demand as a main driver for its continued investment in China (see C-10 from 2016). The management of CEVA Logistics also stresses this as a strategic approach in order to win new customers (see C-13 from 2017). The company aims to benefit from the growing domestic demand for outsourced logistics services. It can be summarized that Chinese logistics experts explicitly outline the huge

business opportunities for logistics companies without dismissing the location disadvantages.

Table 4-7 Empirical results for Chinese logistics trends - outsourcing

Data source	Quotation
M-72	<i>... the trend for outsourcing logistics solutions is growing. In China, although the penetration rate is in single digit, it is increasing rapidly. Companies recognized that it is important to concentrate their efforts on their core competencies, business development and other management functions. They see the benefits of flexibility when their logistics function is outsourced.</i>
M-95	<i>The concept of outsourcing to third-party logistics (3PL) firms is also a relatively new concept in China, Millar said. As of last year, only about 20 percent of transportation and warehousing activities were handled by 3PLs. Compare that to the 45 percent penetration rate for 3PLs in the United States, the nearly 50 percent rate among Western European countries and the 80 percent rate in Japan. The low 3PL penetration rate and reliance on a vertically integrated market structure is one of the reasons why forwarders are so interested in the underdeveloped Chinese logistics sector. However, China's logistics sector "remains hugely complex and brutally competitive".</i>
M-96	<i>DHL Supply Chain has deployed semi-automated machinery in the company's Zhejiang Province warehouse that will enable Mars to pack confectionary items into retail containers more than 12 percent faster than previous manual processes. "With more than 500,000 sets being processed every year, Mars' China operations were a prime candidate for supply chain automation.</i>
C-10	<i>As before, the dominant driver remained, above all, the persisting strong trend toward outsourcing in the key industries (especially electronics, consumer, healthcare and industrials).</i>
C-13	<i>Important new wins (partially yet to be implemented in 2018), qualified pipeline with strong customer traction in consumer & retail (including e-commerce), industrials and automotive</i>
V-24	<i>Well, so far, you know, only Alibaba uses a third-party provider mostly. And JD.com has, I think, 256 warehouses in 54 cities. So they use a direct delivery to the consumer. But when only the logistics, there is also a problem. It is the excess capacity, when you do not use it. Then what do you do when you have excess capacity? Then you have to deliver for other people, otherwise it will be a waste of your own resources.</i>

In particular, domestic Chinese online retailers are increasingly becoming the focus of logistics MNEs. These continually growing local companies offer definite business opportunities, but this depends on the capability of logistics MNEs and their ability to meet these demands. Some large Chinese online retail companies, for example Alibaba, have developed their own internal logistics services that are in competition with third-party logistics providers. It remains to be seen whether other companies like JD.com will follow this example and outsource their logistics risks (V-24 from 2018).

It can be concluded that the developments in the Chinese logistics outsourcing market have triggered further advantages for logistics MNEs. These advantages are mainly recognised as location (L+) and internalisation (I+) advantages, which are intensified by the MNEs advantageous position regarding their own capabilities (FRC+) compared to their competitors (IBC+). Logistics MNEs clearly understand that they continuously have to strengthen their resources and capabilities in order to stay ahead of the outsourcing market competition in China. There are also potential disadvantages (Oa-) when market demand slows down and previously established investments turn out to be over-dimensioned.

Outsourcing in logistics generally involves the services of 3PLs, meaning a direct relationship between logistics suppliers and their customers. Nevertheless, growing customer demand and new market trends require logistics MNEs to improve their service offers and adopt new business models.

In China, a trend can be perceived that 3PLs are increasingly enhancing their service offers with logistics consulting and supplier management, thus positioning themselves as fourth-party logistics providers (4PLs). The distinction between these business models has already been explained in more detail in Chapter 2. It can be assumed that this advancement in logistics business models will become an essential service and quality differentiator for logistics MNEs in the Chinese market. A manager from DHL already underlined in 2012 that market demand for 4PL services was very

positively increasing in China (see I-11 in Table 4-8). While several logistics MNEs nowadays have dedicated logistics consulting units, DB Schenker prominently mentions these consulting offers in their Annual Report 2017 (see C-9).

Although it can be argued that logistics MNEs already have established their capabilities and infrastructure in China, they may be urged to use local providers in order to balance risks in relatively unknown new market sectors. This means that logistics MNEs may opt to share their already existing internalisation advantages (I+) with a partner if they can also reduce the accompanying risk of creating overcapacity. Accordingly, further asset-specific driven advantages (Oa+) and improved capabilities (FRC+) through concentrating on specialised services can be generated, which in consequence may lead to further internalisation benefits (I+) from the increased scope of logistics MNEs.

In addition to emerging changes in logistics business models, the specific locational attraction of China also requires a more thorough evaluation because of the actual size of the country and therefore of its logistics market. The way in which the trend of manufacturing moving into China's western region influences the strategy of logistics MNEs is discussed below.

From a geographical perspective, the Chinese economy has for some years been undergoing a tremendous change. Promoted by the 'go west' strategy of the Chinese government, several efforts have been undertaken to establish further industrial production centres in the western part of the country. Logistics MNEs already decided some years ago to follow their mostly international manufacturing customers into the new Chinese interior locations.

Several media publications illustrate this development, for example Kuehne + Nagel (M-13 from 2011). Similar strategies have been applied by all logistics MNEs operating in China. For example, UPS stresses the growth opportunities for logistics providers (M-34 from 2011).

Table 4-8 Empirical results for Chinese logistics trends - 3PL/4PL and 'go west'

Data source	Quotation
C-9	<i>DB Engineering & Consulting (DB Schenker) further expanded its business in the first half of 2017, opening new locations in several countries, including China and Australia. In view of the growing demand, in the future DB E&C will further strengthen its capabilities by adding more specialists...</i>
I-11	<i>It will come, it will come. Actually, this year we (DHL) start to get some opportunities we can do 3PL or 4PL just because we have the carrier-base, supplier-base that is still fragmented. If you see the customer is demanding this, then you would have a huge capacity for managing, performance tracking and everything. Now they realise getting a professional company like us for them, we have existing logistics processes than all those other carriers and also on the other hand there are some specific things like health and safety and quality control, they do not want to do individual interfaces with all the carriers. So in that case, there is a market for us.</i>
M-13	<i>Further network expansion is now on the cards in China. "Kuehne + Nagel has been expanding its footprint throughout China, not only in the eastern region, but also in the central and western provinces of China," ... "The company focuses primarily on organic growth, with aggressive Investments in local logistics experts in core business fields such as seafreight, airfreight and contract logistics as well as building up a virtual road logistics network. "We will set up more offices, in line with our growth strategies and China's 'Go West' initiatives."</i>
M-34	<i>UPS gave the region another boost with the launch of express service to Chengdu. With foreign trade in this city surging to \$32.78 billion last year - a 36-percent hike from 2009. The decision to address Chengdu's growth was an easy one. "China's 'Go West' program is making it very attractive for companies to move production facilities to inland cities like Chengdu, and we believe the area is poised for accelerated growth in express shipping."</i>

It can be reasoned that the Chinese 'go west' initiative provides a combination of location (L+) and institutional advantages (Oi+ and ICT+) for logistics MNEs. The location advantages are the basis for the move of manufacturing to western areas,

thus requiring logistics services and creating business opportunities. The government-backed 'go west' initiative provides easier institutional conditions for logistics MNEs willing to invest in West China. Therefore, the trend of 'go west' means a good opportunity for logistics MNE to form a cooperation or even ally themselves with Chinese institutions.

Yet again, there is a threat of transaction cost-driven disadvantages (Ot-) when logistics MNEs overrate the business potential and thus overinvest in this area. There is clearly a dependence on whether enough large domestic and international logistics customers set up and continue new production locations in West China. This dependence creates further risks for logistics MNEs resulting in an internalisation disadvantage (I-). These disadvantages remain as long as the cost of these risks exceeds the benefits from the companies' ability to diversify the risks and actually gain from the extended scale and scope of their operations.

While logistics MNEs provide services as required by their direct customers at their preferred locations, they also need to consider further demands from their customers' customer – the consumer. These requirements provide an additional determinant for logistics MNE strategy in China, as shown in Table 4-9. Regarding the impending requirements by Chinese consumers, a growing demand for home deliveries of purchases like groceries is anticipated. The simple purchasing of these goods will be increasingly outsourced so that the consumer has more spare time. This would mean a further growth stimulus in the domestic business to consumer (B2C) logistics market. Logistics MNEs obviously recognise the growing importance of consumer demands. For example, DHL is well aware of changing consumer demands and the impact on their business. An increase in home delivery, for example, means logistics MNEs could enhance their capabilities for the 'last mile' (I-11 from 2012). Further references for this section of the logistics market can be found in company publications like Panalpina's Annual Report 2017 (C-15).

Table 4-9 Empirical results for Chinese logistics trends - consumer requirements

Data source	Quotation
I-11	<i>E-business is a strong growing sector while they actually put a lot of pressure for logistic infrastructure for the home delivery so, therefore, you know, in the next year e-business will come, they're changing the whole logistic landscape, especially for the commercial consumer behaviours.</i>
C-15	<i>With consumer aspirations and spending growing in large countries such as ... China, there will be a requirement for more manufactured products, and consequently an increase in the transportation of cargo. ... Panalpina expects to see a growing customer base, increased complexity and a higher variety of automotive, manufacturing parts and other goods being shipped. There will be an increased focus on reducing inventory in warehouses, with higher frequencies of shipments. Consumer sales are increasingly being made through e-commerce, with the most sophisticated online channel markets in Asia, China in particular.</i>

It can be concluded that logistics MNEs are fully cognisant of the growing complexity of consumer demands, i.e. e-commerce requiring further improvements in firm-specific resources and capabilities. This strong increase in consumer demand may create additional location advantages (L+) for logistics MNEs based on further increasing market growth. Only when the companies are willing to continue investing in their assets and capabilities, they can increase their company-internal advantages (FRC+ and Oa+) compared to the local competition (IBC+). They may be able to benefit from growing internalisation advantages (I+) through extended market and business scope. This means that if logistics MNEs obtain access to exogenous resources and capabilities and are able to link them with their own internal resources and capabilities, they will be creating added value and benefitting from these new network relationships.

How logistics MNEs react to the existing market determinants and trends is reviewed in the following section.

4.4 Logistics MNEs in China

Based on the Chinese economic situation and the developments of the logistics market discussed before, the research outcome regarding the explicit situation of logistics MNEs is reviewed in this section.

When assessing the strategy of logistics MNEs, it is important, in this author's opinion, not only to consider the internal perspective of these companies, but also to gain an understanding of the insights of external actors in the logistics market. It also seems sensible to differentiate between the companies in the scope of this study, as they not only apply different strategic measures but the market perception of these approaches differs considerably too.

Logistics Licences, Tax Law and Compliance

As previously mentioned, there are clear protectionist measures in place that aim to regulate the Chinese logistics market. Logistics licences are identified as one key element when it comes to handling the complexities of the Chinese market, especially when interacting with institutional authorities. While the necessity of obtaining logistics licences can be seen as a disadvantage (Oi- and ICT-) for logistics MNEs in China, it can be assumed that this is not a major obstacle when it comes to making use of their existing strengths based on their experience in other markets (see Table 4-10, interviewee I-7 from 2012). Thus, they may be able to outweigh the disadvantages by fully applying their network internalisation advantages (I+).

However, even when a licence has been successfully obtained, there are further legal requirements for logistics MNEs to consider. For instance, a considerable portion of capital is blocked when doing business in China. This requirement qualifies as a further institutional disadvantage (Oi- and ICT-). This means that even if a logistics MNE already has an existing infrastructure, it needs to prove its financial strength by providing registered capital of US\$ 500,000 for each new branch (I-9 from 2012). This

money is then blocked and cannot be used for other investments, thus possibly providing further ownership disadvantages (Oa- and Ot-).

Together with the overall market situation and specific institutional requirements for foreign companies in China, the logistics tax law is seen as another driver of complexity (I-6 from 2012).

Table 4-10 Empirical results for logistics licences and tax law

Data source	Quotation
I-7	<i>Even if there are still multiple licensing requirements, I think for international business logistics players, if you have already obtained most of the required licences, I do think because of the capability of doing door-to-door business, still they have a good market here in China, comparing to the domestic players.</i>
I-9	<i>So that means you set up a logistics company, your registered capital is one million US Dollars. The minimum requirement, and then you set up ... two branches; first of all, you need to do a capital increase. One million more. And, after that, you are permitted to set up the two branches.</i>
I-6	<i>Previously the business tax of 3 to 5% was applied for services and transfer of intangible assets. This was then moved into the VAT system, which is now 11% VAT for transportation. For this means international tax planning and transfer pricing remains an issue. Logistics companies have to deal with a constricting corset in China.</i>

It can be concluded that this change in legislation from 2012 meant clear institutional disadvantages (Oi- and ICT-) for logistics MNEs. At the end of 2017, the Chinese Ministry of Finance announced another change in the law. Applied retroactively from 1 January 2017, foreign companies are exempted from paying taxes on their earnings if these are reinvested in China (MOFCOM, 2017).

As a consequence, this new law now provides institutional advantages (Oi+ and ICT+) for logistics MNEs as long as they keep and enhance their considerable investments in China. Overall, it can be assumed that the limited public discussion on Chinese tax law

is caused by a hesitance by logistics MNEs to complain openly about this specific institutional condition.

When doing business in China, it is of utmost importance for MNEs to ensure compliance to a responsible business practice, for instance their company's code of conduct. This means that these companies have to establish certain controls and procedures on how to deal with possible corruption threats. The same applies to any suspicions in the area of anti-trust incidents or other violations of the company code. Of course, this requirement does not only apply to logistics MNEs, but across the industry.

The compliance situation in China can be described as quite complex and, given local market determinants, cannot so easily be influenced or changed by MNEs. While this study does not attempt to provide an in-depth discussion on *guanxi*, it can be established that logistics MNEs need to be at least aware of the unofficial Chinese rules of applying *guanxi* in business.

Considering these requirements, it is quite common for MNEs to seek the support of local law firms, ideally specialising in the industry sector, to establish a Chinese code of conduct. The international customers of logistics MNEs explicitly require their suppliers to establish comprehensive compliance measures (see Table 4-11, interview verbatim from 2012).

Table 4-11 Empirical results for compliance assessment

Data source	Quotation
I-1	<i>For sure, corruption is a problem. But I rather like the example of Siemens China. For some years, they have - for well-known reasons - the obviously most strict compliance system existent in the world.</i>
I-4	<i>Then there are three characteristics: Firstly, often there are restrictions on paper. Secondly, somebody finds a way to circumvent these restrictions by applying another law or policy. And, the third thing is what the Chinese call guanxi.</i>
I-4	<i>Guanxi in China has its classical rules in the huge and wide-ranging family structures. And, these families have a great number of contacts. In the Chinese are masters in keeping a network of 400 to 500 persons, and to play with these contacts. These contacts have developed over 20, 30 years within their families. And, this means that using one of these contacts for a private or business matter is then seen as legitimate beyond doubt.</i>
I-9	<i>So, as we are also having a sort of new business is that we are helping ... a number of our clients to adapt their global code of conduct, compliance rules into the Chinese legal environment. Because you cannot just take it from the headquarters and directly use in China. There are different laws.</i>
I-2	<i>Well, for our International Lanes we are working with the well-known big companies. This means of course the well-known competitors of DHL. And, as a starting point, we assume that these companies, because they are the well known, consider themselves closely tied to the compliance topic. I am in regular contact with the board members and managing directors of these companies and it is very important that our partners follow up these compliance things in their own companies.</i>

Naturally, publicly available information regarding compliance incidents involving logistics MNEs is very limited as these topics are usually handled confidentially within the company. This is the reason why further evidence on logistics regulations and the application of unofficial business rules are rarely publicly available in the Chinese context.

When evaluating the Chinese compliance situation for logistics MNEs, the results provide a varied picture. While some progress can be seen, the overall situation in the Chinese logistics market has to qualify as a location disadvantage (L-). Logistics MNEs still cannot apply their firm-specific advantages (FRC+) in compliance and responsible business practice in a way that outbalances this disadvantage. Consequently, they could also suffer further internalisation disadvantages (I-) from the Chinese market compliance situation because of the current limited usability of the companies' acquired international experience and knowledge in this area. In consequence, several elements of the conceptual framework again cannot be confirmed when considering the compliance factor in Chinese logistics.

As a final point, it can be reasoned that the statements given by interviewees, when explicitly questioned on these quite sensitive topics in 2012, generally continue to be relevant for logistics MNEs in China over time. Along with the market factors, trends and specific institutional requirements logistics, MNEs have to determine a particular strategy to avoid being in a pure reactive role towards these requirements. Instead, they are well advised to take on a more pro-active role and to prepare for a sustainable presence ensuring future growth of their business in China.

Current Strategy of Logistics MNEs

While some similarities can be observed in the entire strategy of logistics MNEs in China, there are some distinctive differences in the specific approaches of the single enterprises. For example, market experts have considered the growth strategy applied by DHL in the previous years as quite forceful (see Table 4-12, interviewees I-2 and I-4 from 2012).

The visibility of a logistics MNE plays an important role in customer perception. The speed of market penetration shown by DHL is explicitly emphasised. Regarding the general brand positioning of DHL, opinions in the market differ widely. The company is generally seen as international business, but it is not well-known that its home country is Germany (I-4 from 2012).

Table 4-12 Empirical results for strategy of logistics MNEs – market positioning

Data source	Quotation
I-2	<i>I mean, DHL has grown here quite aggressively over the past years also based on their acquisitions.</i>
I-4	<i>DHL is massively present in the streetscape because of their wide public appearance. The second thing, which is noted by myself and the Chinese as well, are the new cars in use. They can be seen in the morning, at noon, in the evening. And because China has no opening hours or other restrictions they are driving 24 hours and also on Saturday and SUNDAY. And so FAST rarely an international enterprise has made its positioning in the market, despite not having an own Chinese name but been with DHL written on the cars.</i>
I-4	<i>Well, I've frequently asked this question myself: DHL is definitely not seen as German. But if you ask how the company is perceived, it cannot be clearly answered. But it is seen as a foreign company just because of the three letters. [I-4]</i>
I-7	<i>DGF China actually is ranked number one in airfreight, in China, and number three in ocean freight. Actually it includes all the players in China, includes those, state owned enterprise like Cosco, like Sinotrans, and also includes those multinational freight forwarding companies like Schenker, Panalpina, Kuehne. So it ... can basically reflect the situation primarily in China of the DHL or DGF competitiveness in this market.</i>
C-18	<i>We [Kuehne + Nagel] could not have become one of the global market leaders in airfreight without offering the market comprehensive solutions and unbeatable levels of customer service. Through our global network of more than 300 offices, we provide a range of logistics products designed to meet even the toughest challenges of our customers.</i>

In order to evaluate the market position of logistics MNEs in China, the organisational setup also needs to be considered. For DHL, this means the business divisions need to be viewed separately: DHL Express, DHL Global Forwarding (DGF) and DHL Supply Chain. The competitive ranking can then be assessed in each specific market segment (I-7 from 2012). Understandably, DHL's competitors also wish to distinguish themselves regarding their strategic positioning in the market. In the example of

Kuehne + Nagel, the company clearly emphasises their global leadership position in the airfreight market (C-18 from 2012).

In general, it can be reasoned that the companies mostly refrain from giving regular public assessments of the Chinese market and their competitors. While not much evidence on competition can be found in the later years covered by this study, the patterns at hand underline that logistics MNEs are fully aware that a superior market position provides them with clear competitive advantages (IBC+). Consequently, intangible assets like the brand power will also be strengthened, hence creating further ownership advantages (Ot+).

Logistics MNEs can further increase their transaction advantages (Ot+) through gaining more experience in a similar way like manufacturing companies. Moreover, they can create particular intangible ownership advantages (Oa+) like reliable service quality, brand reputation, economies of scope through a highly diversified product portfolio and economies of scale through specialisation and market access.

In order to evaluate the particular strategies of the logistics MNEs, several strategic building blocks are reviewed, starting with the offered product and service portfolio. The firm-specific product and service portfolio can be seen as critical element of logistics MNE strategy in the Chinese market. It is reasonable that logistics MNEs have to advertise their services actively, as shown in Table 4-13. Both company publications (see C-18 from 2012) and interviewee's contributions (I-3 and I-7 from 2012) underline the necessity to provide more than basic transportation services. These views accentuate the importance to fully understand customer requirements when defining the logistics product portfolio in China. It becomes obvious that standardised services and, accordingly, a low-price strategy are not seen as unique selling propositions by logistics MNEs. Instead, they highlight their ability to create and implement customer-specific, non-standardised solutions. Once more, specific capabilities like a comprehensive Chinese infrastructure or special customs handling are underlined as key strategic elements. While the cited evidence on the topic of

product offers in this study dates back to the year 2012, it can still be reasoned that the tenor of statements continue to apply for the situation of logistics MNEs in the very demanding Chinese market.

Table 4-13 Empirical results for strategy of logistics MNEs - product portfolio

Data source	Quotation
C-18	<i>No two customers of Kuehne + Nagel have the same needs, and so it is of paramount importance to us that we can provide flexible and customised solutions. This philosophy is reflected in our business model that designs operations and products around specific industries, rather than adopting a 'one size fits all' approach.</i>
I-3	<i>By offering system solutions and certain specialised products, perhaps also niche products and value-added services a logistics provider is better enabled to achieve cost-covering results.</i>
I-7	<i>And also, the customers want more and more end-to-end solutions. What I mean end to end is domestic associated with international movement, and in China, because, you know, there are a lot of special zones, or bonded zones, so the capability of the freight forwarder in specific zones is quite crucial for some customers, because they want merchant transit, they want special customs formality in certain zones, they want to transfer goods from one zone to another zone, across the region, across different cities, so this will require special capability in customs formality as well as the design of a infrastructure setup in China.</i>

Thus, it may be concluded that a product portfolio with a certain grade of flexibility - according to the requirements of the Chinese market - can provide distinctive asset-specific driven advantages (Oa+) for a logistics MNE. In order to achieve these service capabilities, companies would need to invest into their firm-specific resources, thus creating further capability driven advantages (FRC+) in order to gain an improved competitive position (IBC+) in China. A cost reduction (Ot+) through synergies from the broadened portfolio can possibly be achieved as well. Further to the product portfolio of logistics MNEs, the use of technology has become an important strategic element worldwide and explicitly in China.

Within the area of technology that is influencing the logistics industry, several trends need to be considered. For example, Kuehne + Nagel acknowledge the benefits from technological developments like digitalisation (see Table 4-14, video statement V-29 from 2016).

As another example, DHL also strives to apply new technology to gain better market insights and then use these to further strengthen their global and local strategies. Some of the technological developments as well as, specifically, the public interest are seen as exaggerated for the time being. Logistics MNEs try to moderate expectations that these technologies will become ubiquitous in the near future.

Nevertheless, logistics MNEs collaborate with academic or research partners to develop possible usage options for new technology. Several companies have also established internal research organisations in order pursue their own development projects, as shown by V-28 from 2016).

It becomes obvious that there is a certain urgency for logistics MNEs to test existing technology for its applicability, as stated for example by FedEx (M-113 from 2016). The speed of new developments in the industry clearly affects the strategic positioning of these companies. Ownership advantages result from companies' additional resources and knowledge arising from applying technology (Oa+) and possibly also from minimising transaction cost through further value-adding activities (Ot+). Technology can also be seen as a means to improve the control of the cross-border networks, thus also providing internalisation advantages (I+).

Table 4-14 Empirical results for strategy of logistics MNEs - technology

Data source	Quotation
V-29	<i>Digitalisation is something, which is very high on our agenda. ... I believe there will be many, many benefits. Let us focus on one, which is the increased planning accuracy ... will result in much more efficiencies and effectiveness of the supply chain. And that will be, in my opinion, one of the biggest benefits of digitalisation as well as technology.</i>
V-2	<i>For every shipment that moves from country A to country B, you also have to move information. So you need to have the technology and the information capability connected to all countries in the world. But, also, that information creates big opportunities for big data and to really start to understand the customer better.</i>
M-113	<i>The thing with drones is that they're very good at catching headlines. But the challenge ... is how you take a neat gadget and make it a technology that is sustainable, scalable and delivers real benefits to the customer...and it's got to be significant customer needs (before we invest in this).</i>
V-28	<i>Creating prototypes and pilot projects within the Schenker enterprise lab for logistics and digitisation is an excellent platform for innovation for example the work very intensively on prototyping augmented reality technologies and solutions to be used in the warehouse but also we are prototyping digital services that help to improve logistics operations. We have been able to develop a decision support algorithm that has actually been used already on a specific side but it was taken up already in the warehouse in the field to rapidly gain practical insights and fail fast.</i>

Further to the product portfolio offered and technologies applied, logistics MNEs also strive to improve their management capabilities in order to suit the Chinese market requirements.

Another key element of MNE strategy is how strategic measures are actually applied within the company-internal business environment. The evidence in this case study

leads to the understanding that that logistics MNEs in China implement quite diverse management approaches.

DHL for example explicitly underlines the necessity to work exclusively with local management in China, at least in senior positions (see Table 4-15, M-55 from 2012). Other experts contradict this view by stressing the benefits of a diverse management team with a corporate mind-set and local expertise (see I-5 from 2012). Nevertheless, it is clearly not advisable to install a solely foreign management team in China.

China, like other Asian countries, is well known for its hierarchical working culture. That is the major reason why logistics MNEs foster development measures for their employees to enable a proactive and entrepreneurial working mode. Developing a company culture that fosters the connection of employees to their company and encourages them to bring in ideas to improve processes requires time. However, logistics MNEs seem to be willing to invest in this area as a superior culture can support employee retention as underlined by the quotations in Table 4-15 (see I-8 from 2012).

Table 4-15 Empirical results for strategy of logistics MNEs - management culture

Data source	Quotation
M-55	<i>Above all, the CEO repeatedly emphasises the role of the purely Chinese management on location. Managers have to understand culture and language. A German or American is not able to do that...</i>
I-5	<i>Because, otherwise I have this 'ufo' landing there. Even if they all are super intercultural trained, they are still expats, you see. Then, if I only take locals then I have to risk to lose fully the control, meaning the thing becomes too independent a certain point and has no connection with the parent company any more. Of course, the dream cast is a part expats and apart locals. In my opinion, it has not to be on a basis of parity. ... And ideally, I have two, three bridges in between, who know both cultures.</i>
I-8	<i>Well this is a very important point, especially in China. In China, there is a lot of competition out there, and it tends to be a high turnover of staff, and I think DHL has definitely got the right approach, and that is to involve in staff and as much training as possible, and engage them as much as possible. ... I have experienced it personally within my colleagues and my teams, so really, it is developing the people, really developing the people, and part of that has to do with the culture, and part of that has to do with experience as well. Because the culture in China is, it can be that, it does not very much encourage, from an early age, it does not really encourage pro-activeness. This is in my experience. So people will get the job done, and they follow your instructions, but it is finally that pro-activeness and that mind-set to really make a difference to yourself.</i>

Aside from training and development measures, managers from logistics MNEs place a strong emphasis on motivating their employees and improving the company culture. For example, staying in close contact with local business forms an essential element of DHL's China strategy which is underlined by regular visits or even longer stays by board members

The applied managerial practice of logistics MNEs advances the resources and capabilities (RBC+) and thus determines to what extent they are able to exploit their

internalisation advantages (I+). The structured approach of established corporate practices and human resource capabilities is the backbone of an effective local strategy. It can be assumed that also in recent years, logistics MNE have continued to put strong emphasis on the development of their managerial practice and company culture in China.

As previously outlined, when discussing the product portfolio, logistics MNEs should limit themselves to merely being providers of standard services in China. Although all logistics MNEs should provide these basic services along high quality standards, a standard portfolio cannot be used as a differentiator within the extremely competitive Chinese logistics market.

For example, a growing interest in environmental matters by both the Chinese government and the society plays an increasingly important role for the logistics industry. This development has been noted by logistics MNEs and therefore green logistics solutions are promoted quite extensively.

As outlined by interviewees in 2012, senior logistics managers clearly acknowledge the increased demand for environment-friendly logistics services in China (see Table 4-16, I-7 and I-11). While these exemplary statements were made already a few years ago, it can be stated that the trend for at least partially greener logistics services has become quite stable at the Chinese market.

Table 4-16 Empirical results for strategy of logistics MNEs – green logistics

Data source	Quotation
I-7	<i>I mean the 'Go green' agenda is on top of the list of ... central government as well as local government, they also have KPIs ... , especially reducing the pollutions, either by closing down some of the high pollutant industry in that specific area moving to inland or just using new technology like green vehicles, something like that.</i>
I-11	<i>Chinese government realised that the environment is now in kind of a sacrifice of the economic development and they're really fighting hard to improve the water quality, soil and so in that case a green technology, the carbon footprint is already right on the agenda of the government. We have some leading customers who are in discussions with us and who are willing to pay a premium for green solutions. Although some of them probably only remaining for the marketing issue or other like that.</i>

However, in China, like in many other markets, it is questioned whether customers are willing to pay for more environment-friendly logistics options. It is not only the business customers of logistics MNEs that make the choice; ultimately, it is the consumer who undoubtedly influences the overall demand for green logistics solutions in the market. This means that business customers may be willing to pay a higher price for 'green logistics' when they can use this as an additional marketing argument for their products (see I-11).

A further special market component of logistics MNEs is railway transport from China to Europe and vice versa. Several application examples are provided in Table 4-17. For instance, DB Schenker was among the first companies to establish these 'China Rail' services. The media publication M-122 from 2018 celebrated the pioneering success in earlier years. As another example, DHL explained why they upgraded their China Rail offer with temperature-controlled services, thus aiming for a distinctive portfolio differentiation (M-94 from 2015).

Recent developments show that the China Rail services can meet growing demand and have therefore been enhanced with further destinations in Europe, for example Austria (see M-130 from 2018).

Table 4-17 Empirical results for strategy of logistics MNEs – China Rail services

Data source	Quotation
M-122	<i>DB Schenker pioneered the China - Europe rail freight solution, with an established service to and from Europe in place for many years, "We are seeing strong growth in the next decade along with China's one belt one road strategy, and I believe the entire development now through the new silk-road corridors will bring us good opportunities in developing multi-model solutions. This is an important milestone for us to achieve our leading market positions in the logistics of perishable goods in China."</i>
M-94	<i>The new Zhengzhou-Hamburg service complements DHL Global Forwarding's established multimodal network. The first is a weekly scheduled block train along the trans-Kazakh West Corridor rail service from Chengdu, a hub for high-tech and automotive goods and the main distribution centre for western China, to Lodz in Poland. The second, also weekly, travels to Warsaw from Suzhou via the trans-Siberian North Corridor. It serves the manufacturing and commercial centres of Shanghai, Suzhou and surrounding areas. In 2014, DHL pioneered the first temperature-controlled China-Europe rail service, providing customers with temperature-sensitive products and year-round access to shipping route regardless of season.</i>
M-130	<i>The latest route in DHL's Asia-Europe-Asia multimodal network connects Chengdu to Vienna in just 15 days, spanning 9,800 kilometres and crossing six countries -- China, Kazakhstan, Russia, Ukraine, Slovakia and Austria. "Trade growth between China and Austria shows no signs of slowing down, and we are delighted to partner with RCG to further streamline freight connections between both countries."</i>

Thus, it can be reasoned that on the one hand, specific capabilities are required to offer the special logistics services just discussed, while on the other hand, the

competitive positioning of a logistics MNE and the size of its customer base plays a pivotal role in the success of these services. This means that aside from ownership advantages (Oa+), advantages from the ability to internalise the benefits (I+) with an adequate customer base will also apply to logistics MNEs. Finally, further advantages can be generated from the local business environment (L+) and also the supportive institutional conditions (ICT+) as these China Rail services are closely embedded in the 'Belt and Road Initiative' of the Chinese government. This initiative is also known as the 'New Silk Road' and aims to establish a strong logistics connection between Asia and Europe (Cheng, 2016; Huang, 2016; Li, Bolton, & Westphal, 2018).

The whole situation of the MNEs' resources and capabilities can be seen as one prerequisite to successfully address the logistics market demand. Consequently, the specific strengths and weaknesses applicable to logistics MNEs operating in China are discussed and evaluated in the following section.

Strengths and Weaknesses

The previously discussed complexity of the Chinese logistics market provides an opening for MNEs to apply and even extend their strengths. The sheer global size of logistics MNEs and their established local Chinese presence provides ample ground for instituting sustainable business strategies. The development of the different industrial sectors in China will have an impact on the future strategy of logistics MNEs in the market. Therefore, these companies are required to continuously evaluate growth opportunities across all industries in order to secure their local footprint.

When reviewing weaknesses for MNEs in the Chinese logistics market (see Table 4-18), a certain lack of market understanding and deficiencies in getting close to potential customers could be described as a flaw in the past. Recently, however, logistics MNEs have shown to be strongly anchored in China and have therefore gained more experience and trust with customers. This means the previous weakness has been converted into a strong internalisation advantage (I+) for logistics MNEs

that is predominantly based on their ability to gain from acquired business knowledge and dynamic capabilities (Ot+ and FRC+).

Table 4-18 Empirical results for strengths and weaknesses

Data source	Quotation
I-12	<i>I would say the former disadvantage from not fully understanding the Chinese logistics market has now turned into an advantage for multinationals.</i>
M-57	<i>Foreign companies hold less than five per cent of the Chinese market for services in the express industry, says Da Wa, secretary-general of the China Express Service Association. "Foreign companies' advantages are in branding, management and technology, which domestic companies can learn about from watching the competition."</i>
I-8	<i>We should be the early mover. What I mean by that, if I can elaborate this, that obviously locally, there is a lot of competition, and there is the requirement for, let's say, how can I put it, perhaps lower scale logistics ..., where a lot of local providers are obviously a lot more competitive than DHL.</i>
M-61	<i>However, the Deutsche Post chief also made it clear that DHL has no intention to re-enter the highly competitive Chinese domestic express market, which it quit in 2010 by selling its loss-making business. This was because of the "very strong domestic players" and the "regulatory circumstances" that would make it "very rough and tough" to establish a sizeable operation, he commented. Moreover, the CEO played down the likelihood of any Chinese competitor growing large enough to become a significant international rival due to high financial entry barriers in express and the need for a worldwide network in freight forwarding.</i>

It can be concluded that the anticipated development of industrial sectors as well as the political environment significantly shape the localisation strategy for logistics MNEs in China. The pattern of locational choice continuously reflects the investment climate. The ongoing move of manufacturing to Chinese interior locations

encourages logistics MNEs to follow their existing and potential new customers. Their major aim is, of course, the creation of further internalisation advantages (I+) when enhancing their network in China. Additional effects can be expected in the form of asset-based ownership advantages (Oa+ and FRC+) where resources are enhanced and lower transaction costs (Ot+) can be achieved within a growing market.

In the following section, the opportunities and threats for logistics MNEs in China are reviewed.

Opportunities and Threats

Logistics experts have a very comprehensive understanding of the threats and risks affecting their industry. These risks consist not only of direct industry-related topics but also involve developments in other industries or in specific locations in China.

There are several options for logistics MNEs regarding exploiting potential market opportunities as well as coping with possible threats. Logistics experts list some exemplary options and explain their impact on strategy in the extremely competitive Chinese market (see adjoining Table 4-19).

In order to achieve sustainable performance in their business operations, logistics MNEs have to consider additional business opportunities. For instance, there is the expected consolidation of the domestic logistics market in combination with the demand shift towards the western regions of China, as explicated by an interviewee (see I-2 from 2012).

Logistics MNEs have identified additional new business opportunities that arise from their specialised capabilities in cross-border business. Building on the strengths and weaknesses discussed previously, there are new openings in specific sections of the logistics market. Especially, Logistics MNEs offering their customers full customs clearance services in each county on the transportation route is surely creating additional opportunities in China (see interviewee I-7 from 2012). Another example is the offering of multimodal services, as outlined by DHL in a media publication (I-7

from 2012 and M-94 from 2015). Multimodal or intermodal service offers are a clear trend in the Chinese market that is explained in more detail in Chapter 2.

Table 4-19 Empirical results for opportunities

Data source	Quotation
I-2	<i>Well, I think that the domestic market will face a strong consolidation process. And, because we have this topic 'Go West' also the international logistics providers need to provide for this. And this can actually only be done by building a sustainable logistics network across China.</i>
I-7	<i>One hidden agenda is about the capability as well, especially the capability of customs clearance. So some of the customers, they may require 24 hour customs clearance capability, they may require special assistance from freight forwarder on documentation side, because ... actually the customs system in China is quite complicated, because different kind of commodity ... will need different kind of documentation, certification, ... like life science, healthcare products, you will have dedicated customs area to clear the shipments, it cannot be allowed to clear that in all customs locations in China.</i>
I-7	<i>Actually, our core competence lays in first network, second economy of scale, third our expertise on our sector knowledge ... and last one is our fairly complete and comprehensive product portfolio as compared to other competitors. Now we have, except for international freight forwarding like airfreight, ocean freight, we have domestic operations, includes domestic airfreight and domestic road freight. And plus a little bit of domestic rail. ... And one important, another important component of our product portfolio is multi-modal. Multi-modal actually includes international rail, includes rail-air service, and includes sea-air service.</i>
M-94	<i>Zhengzhou, Suzhou and Chengdu were key economic centres of trade and development in China. "Their strategic locations with close proximity to main Chinese cities of economic importance, such as Shanghai, Nanjing, Dalian and Shenzhen, are integral to a successful multimodal network spanning China to Europe ... Offering multiple loading points across China has created business opportunities for customers in many industries and we are investing to expand our network to further increase these opportunities."</i>

These results show that the Chinese logistics market provides many business opportunities for logistics MNEs, if they are willing to make full use of their

capabilities in order to meet customer demands. Once again, asset-specific ownership advantages (Oa+) and internalisation advantages (I+) open up under the prerequisite of adequate firm-specific resources and capabilities (FRC+).

It is often stated that other major logistics market participants have more and more influence on the strategy of logistics multinationals in China. These include, for example, fast-growing Chinese e-commerce companies like Alibaba. As shown by the media and video quotations in Table 4-20, their market power also gives them a large amount of influence in the logistics market (see M-91 from 2015, V-15 from 2017 and M-117 from 2017). Based on the evidence it becomes obvious that Chinese logistics providers are also establishing an international footprint and enhancing their product offers, but it might take some time for them to become even with current logistics MNEs. Nevertheless, logistics MNEs are putting a lot of effort in further fostering their management of customer relationships with these companies. It can be interpreted that logistics MNEs recognise the growing domestic competition but also the opportunities for collaboration or even alliances.

Also originating from the highly competitive market situation in China, another threat for logistics MNEs has been identified. The volatility of logistics rates not only affects current business, but also strategic planning. This means the issue of pricing remains a challenge, as for example underlined by Kuehne & Nagel (see V-29 from 216). Some logistics MNEs are already implementing measures, either by aiming to convince their customers to pay adequate prices or by entering into a rigorous customer selection process.

Table 4-20 Empirical results for threats

Data source	Quotation
M-91	<i>Currently, there are not any Chinese domestic express providers that can deliver goods globally such as the big four - DHL, FedEx, TNT and UPS. With that being said, express providers such as SF Express and STO are making great strides towards overseas expansion. However, YTO Express took what may be a giant step forward towards global success thanks to Alibaba. ... "Chinese private delivery services are still lagging behind global delivery giants such as UPS and FedEx in terms of the management team, networks and the information system. I believe Alibaba can help bridge the gap."</i>
V-15	<i>Well, that is of course any time you like to do business in China, Alibaba is a force to be recognised. They just have significant presence. We (UPS) already have a good relationship with them and we will continue. In fact, next month Alibaba is having their first US conference with small and mid-sized customers and I will be one of the presenters of that conference. And we feel very good about their relationship.</i>
M-117	<i>Carriers and freight forwarders alike have expressed their trepidation of what Alibaba's moves into Southeast Asia might mean for their business. While the prospect of more business from the world's largest e-commerce company shines like a diamond, they also worry that with Alibaba will come SF Express - the air carrier logistics partner of the e-commerce giant - and potentially other Chinese logistics players into an already crowded landscape. SF Express has indeed indicated its intent to expand regionally; it already has a basic footprint across part of the region, and further afield and this seemingly could create a new competitor to the likes of DHL Express. ... I think for anyone to replicate what DHL, FedEx, or UPS has on an international basis is going to be extremely difficult and extremely costly. DHL Express works "very closely with Alibaba and they are converting the way the world does business"... "They are fabulous for us - Rakuten, Alibaba, Amazon - they're really stimulating the global demand and therefore I really see it as a growth engine for the foreseeable future."</i>
V-29	<i>And the second challenge is certainly the rate volatility. Nowadays the rates are very, very unstable. It was not too long ago that you paid for a 20 foot container 3 ½ thousand dollars from China to Europe. And rate is now down to \$300. So the volatility in rates is bad for planning accuracy for our customers.</i>

Thus, the additional investment efforts logistics MNEs have to apply in order to stay ahead of their growing domestic competition (L- and IBC-) can be classified as ownership disadvantages (Oa- and FRC-). In order to overcome these disadvantages, they have to balance their price structures against market conditions (Ot-) in order to keep costs under control.

Building on the previous discussion on strengths, weaknesses, opportunities and threats, the relevant success factors have been determined that can support a logistics MNE in China in a sustainable manner.

4.5 Success Factors for Logistics MNEs in China

This section reveals the success factors that logistics MNEs should consider when defining and implementing their individual strategies for the Chinese market.

In order to strengthen and defend their presence in China, logistics MNEs are required to apply a dedicated strategy. The strategy needs to fit the individual resources and capabilities of the logistics MNE. In the following section, the overall advantages and disadvantages for logistics MNEs in the Chinese market are discussed.

Competitive Advantages and Disadvantages

It can be summarised from the different sources analysed in this study that logistics MNEs still benefit from several competitive advantages in the Chinese market. For example, one major advantage lies in the pure firm size (Oa+) and the international networks (I+) that provide access to foreign export markets and allow imported goods to reach the Chinese market in a coordinated manner. Another advantage of logistics MNEs originates from their large and diversified product and service portfolio (Ot+ and FRC+). Dunning and Lundan (2008b) identified specific reasons for why transactional benefits can be higher for service MNEs than for manufacturing firms.

This is mainly due to services being more customer-tailored and specialised, but also because the human element has a greater influence on service quality than in fully automated manufacturing.

When it comes to possible disadvantages for logistics MNEs in the Chinese market, both the requirement to obtain logistics licences (see I-4 from 2012) and establish joint ventures should be mentioned. Both topics have their origin in the institutional conditions and transitions in China. These conditions have an impact on how logistics MNEs are able to balance this institutional assets-related ownership disadvantage (Oi- and ICT-). While there is limited information available on actual business practice in logistics joint ventures involving logistics MNEs in China, some companies publish selected statements in their annual reports. One example is the DHL Annual Report 2017 (see C-1 in Table 4-21). Although the information published in annual reports fulfils legal requirements and thus mainly targets the financial market, it also provides an understanding of the importance of this joint venture for DHL's Express business unit.

On the other hand, the important joint venture construct in part of the logistics market may also create advantages for MNEs. The local joint venture partner generally brings in valuable institutional contacts, thus creating advantages (Oi+ and ICT+) in an otherwise rather difficult environment for logistics MNEs. It is not unexpected for logistics MNEs to publicly report in an enthusiastic manner on their joint venture situation that forms an essential component of their China strategy, like DHL in 2012 (see M-61). In a further example, UPS also describes its joint venture partnership with SF Express in a very positive light (see V-15 from 2017).

However, it can be noted that logistics MNEs not very often broach the issue of their joint venture strategy in China. Like with any other political aspect of the business, these topics are handled very carefully in a rather complex institutional environment.

Table 4-21 Empirical results for competitive advantages and disadvantages

Data source	Quotation
C-1	<i>DHL Sinotrans International Air Courier Ltd. (Sinotrans), China, is a significant company that has been consolidated despite Deutsche Post DHL Group not having a majority of voting rights. Sinotrans provides domestic and international express delivery and transport services and has been assigned to the Express segment. The company is fully integrated into the global DHL network and operates exclusively for Deutsche Post DHL Group. Due to the arrangements in the Network Agreement, DHL is able to prevail in decisions concerning Sinotrans' relevant activities. Sinotrans has therefore been consolidated although Deutsche Post DHL Group holds no more than 50 % of the company's share capital.</i>
I-4	<i>A local partner, to be fair, also brings in some advantages. He is the only one who can handle licences and who can deal with language barriers, not in the sense of translation but in a cultural sense. And having a government representative, an employee from the ruling party in their own company brings the benefit of having a direct contact to the government... The old saying applies: „The higher your contacts are, the faster your topics will work.“</i>
M-61	<i>DHL is “very happy” with DHL-Sinotrans, its 50-50 international express joint venture with Chinese state transportation group Sinotrans. “It gives us the best of both worlds,” ... The company would continue with this “very fruitful” cooperation for the foreseeable future, he emphasised. “Our intention is to remain together with Sinotrans in the express business.” DHL Express was the clear market leader in the region and bigger than FedEx, UPS and TNT combined, he claimed. The business was expanding with the North Asia hub, new intercontinental flights and ‘a Go West’ strategy within China.</i>
V-15	<i>Well you know, we were always looking for what is best for our customers. We have a significant presence in China, we are really proud of our operations. But if you take the mutual histories of the two companies, it just increases the value in the eyes of our customers. So, S.F. Holdings has an incredible presence as far as 13,000 access channels to small and mid-size Chinese companies. You combine that with our incredible express network where we deliver 19 million packages a day through 220 countries and territories. And one plus one equals a lot more than two in this case.</i>

These insights comprehensively illustrate the capabilities necessary for logistics MNEs to gain a competitive advantage in China. It can be argued that logistics MNEs will only benefit from the existing ownership (Oa+ and Ot+), location (L+) and internalisation (I+) advantages when they are willing to continuously invest in their firm-specific resources and capabilities (FRC+).

It can further be argued that the mandatory joint ventures in the Chinese express sector can be seen as a balance of the advantages (Oi+ and ICT+) and limited influence on assets (Oa-) and processes (I-) for logistics MNEs. This study does not explicitly focus on joint ventures because this legal construct is only required for the licenced area in the Chinese logistics market, namely the express delivery sector. Therefore, a deeper analysis on joint venture strategy has not been undertaken.

Thus, it can be reasoned that logistics MNEs still possess huge competitive advantages in China. Their international experience in particular, in combination with their acquired brand power, delivers a strong market position for the moment. Obviously, it can be expected that Chinese logistics firms may draw on this experience in order to strengthen their own competitive standing in the coming years. This means that strategies definitely differ for the several companies in the scope of this study. Nevertheless, several strategic levers have been identified that are applicable to all logistics MNEs active in China. These are discussed in the following section.

Strategic Levers

Considering the volatility of markets and the international political developments that are threatening free trade, logistics MNEs have to operate with flexibility. Being able to react speedily to possible changes in demand for logistics services seems to be one of the most important strategic levers. Comprehensive industrial sector expertise, including subsectors, is seen as an important prerequisite for gaining a competitive advantage.

Logistics MNEs have also identified that voluntarily establishing a joint venture with a strong local partner can be of benefit for them in China. These partners are private logistics companies, which are growing quite rapidly not only in the Chinese market but also internationally. One of the most prominent examples for these joint ventures is UPS' newly formed enterprise with SF Express in 2017 (see C-4 in Table 4-22).

In autumn 2018, DHL applied a similar strategy with another logistics MNE. DHL choose SF Holding as joint venture partner for their Chinese supply chain business. This new kind of business partnership involves the transfer of DHL's supply chain operations in Mainland China, Hong Kong and Macau to SF Holding for an upfront payment of CNY 5.5 billion (approximately EUR 700 million) and a revenue-based partnership fee over the 10-year strategic partnership within a co-branded organisation operating under the existing DHL leadership. Quite extensive statements of both joint venture partners have been published in a joint media statement (see M-150).

Table 4-22 Empirical results for strategic levers – voluntary joint ventures

Data source	Quotation
C-4	<i>In 2017, we (UPS) formed and received approval for a joint venture with SF Express, China's leading small package company, which will ultimately provide millions of potential customers in China with improved access to buyers and sellers around the world.</i>
M-150	<i>The joint capabilities of Deutsche Post DHL Group and S.F. Holding will create a unique platform to meet the need for a high quality end-to-end supply chain provider in China. S.F. Holding's local market expertise in China has real advantages for our customers across all industries including technology, healthcare, retail, automotive, and e-commerce. Combined with our global operations standards and network support, the agreement provides a solid foundation to continue exploring further opportunities in China in the coming years.</i>
M-150	<i>S.F. Holding has been actively expanding its business-to-business (B2B) capabilities and pursuing different strategic partnerships to grow S.F. Holding into a truly integrated logistics solutions provider that delivers best-in-class services for our clients. This partnership agreement will strengthen our capability in providing supply chain services to a diverse realm of industries and allow us to bring world-class management expertise into our supply chain business operations, enabling us to further understand and tailor to our customer needs. This agreement will help us achieve our vision to grow further internationally, partnering with Deutsche Post DHL Group, a world class organization.</i>

As outlined earlier, the logistics market segments of express services and supply chain management differ widely in their product offers. Therefore, they cannot be seen as direct competition. This justifies the choice of SF Express and SF Holding as joint venture partners for the competing companies of UPS and DHL as they are addressing different markets.

This means, the former ownership and institutional disadvantages (Oa-, Oi- and ICT-) from mandatory joint ventures are turned into advantages for logistics MNEs by

creating a stronger competitive position (IBC+) with access to new customer groups through their partnerships. This could provide new internalisation advantages (I+) through the increased scale and scope of operations. MNEs seek less ownership control when they are facing political or economic uncertainty. This means that transaction costs disadvantages (Ot-) also drive the deliberate decision of a joint venture. Within an uncertain investment environment, full ownership is seen as too risky. In this case, firms will voluntarily set up a joint venture structure with an appropriate partner. Furthermore, partnering with a renowned and successful local enterprise may also provide institutional advantages through improved relations with local authorities as well as access to the guanxi network of the partner. As a result, even new ownership advantages (Oa+) from increased operations, enhanced knowledge (FRC+) as well as an improved competitive position (IBC +) through the partner's network can be generated. In addition, a transaction cost advantage relating to reduced environmental and behavioural uncertainties may be achieved. This position may also create further opportunities for internalisation (I+). It should be highlighted that these advantages have to be shared with the joint venture partners. The benefits obviously appear to be large enough to satisfy both partners, as shown earlier in the example of DHL Supply Chain and SF Holding.

As already discussed, logistics MNEs increasingly base their strategic development on technological progress. One advantage of applying new technology is the reduction of human error, but better logistics pipeline visibility and improved efficiency are also seen as general factors influencing the MNE strategy.

It is further recommended that logistics MNEs place more emphasis on their marketing strategy and increase their targeted advertising efforts in the Chinese market. This also includes a regular presence at local logistics exhibitions and congresses. It is noted by market actors that the largest logistics MNEs, like DHL, UPS and FedEx, are often absent from these events (see I-12 from 2012 in Table 4-23).

Another aspect in future strategy relates to the people side of the business. Logistics MNEs in China need to act with care in order to retain an engaged workforce within a fast-developing labour market. The strategic levers of improved branding and people management – for example see I-7 from 2012 – contribute to additional intangible ownership advantages and improved resources (mainly Ot+ and FRC+).

Remarkably, the growing public expectations addressed to logistics MNEs regarding their corporate social responsibility is also named as a strategic lever (see DHL interviewee I-7 from 2012). As another example, UPS published information on an international programme to improve public car drivers' safety in their Annual Report 2016, which is also implemented in China (see C-5).

Table 4-23 Empirical results - further strategic levers

Data source	Quotation
I-12	<i>The multinationals should boost their brand name much more.</i>
I-7	<i>I mean the big challenge for us is how to maintain the momentum of our employees and how to really reflect our, you know, how to really show to our employee that we are a people business; we care a lot about their voices.</i>
I-7	<i>As an enterprise, we should also extend our corporate social responsibility to the society here in China. We should do more.</i>
C-5	<i>Nearly 8,500 teenagers and novice drivers in the U.S., Canada, the U.K., Germany, Mexico and China participated in UPS Road Code. This safety program for new drivers features our employees as instructors – a role where they share driving knowledge and safety tips amassed over our long history of safe driving.</i>
C-19	<i>DB Schenker is the first global forwarder developing logistics and “green” logistics options at Zhapu port.</i>
M-109	<i>DHL Global Forwarding has launched its 'Green Danmar' service that will give customers the option of more carbon efficient ocean freight by allowing them to select a carrier for full container shipping that is upwards of five per cent more carbon efficient than the industry average. Customers are also able to choose to combine the service with DHL's offsetting solution, and transform their consignment into a CO2 free shipment. 'We see more and more customers expressing an interest in minimising the carbon footprint of their shipments.</i>

In addition, the development of more environmentally friendly logistics services is high on the agenda for logistics MNEs in China. Examples are issued in company publications or media statements like C-19 and M-109, both from 2016. A better positioning of logistics MNEs in the area of environmental and social responsibility may also contribute to further institutional assets ownership advantages (Oi+ and ICT+) based on an improved relationship with local authorities. Furthermore, additional internalisation (I+) may be created through a possibly increased scale and scope of operations.

Thus, it can be summarised that logistics MNEs are well advised to carefully consider and apply specific levers for their China strategy. In the following section, the functioning China strategy of a particular logistics MNE is discussed and evaluated for areas of improvement in the example of DHL.

Applied Strategy of a Specific Logistics MNE

It can be reasoned from the research undertaken in this study that logistics MNEs act in a relatively cautious manner when it comes to publicly disclosing their strategy. When directly asked for their strategic direction, logistics managers are quite willing to share some insights into certain aspects of the strategy. In the following section, the specific China strategy applied by DHL is investigated in more detail. For example, the strategy comprises specific technological capabilities that the company has already started to implement globally.

As outlined earlier in this Chapter 4, cross-border trade and its development is an important determinant for the global logistics business. Considering the connectedness of China with the major trade lanes, DHL strives to gain a better understanding of how trade develops in order to apply and develop resources and capabilities accordingly. Especially for this purpose, a 'Global Trade Barometer' is published quarterly (see Table 4-24, M-123 from 2018). The specific use of artificial intelligence and machine learning underlines the importance of emerging technology for logistics MNE strategy. In general, technology accumulation is a major determinant of MNE effectiveness and provides competitive advantages (see I-11 and I-7 from 2012). These advantages mainly apply to the resources and capabilities (RBC+), thus supporting ownership advantages (Oa+) through the creation of possibly superior market knowledge.

Table 4-24 Empirical results for applied strategy of a specific logistics MNE

Data source	Quotation
M-123	<p><i>We have been working on the Global Trade Barometer for around three years ... During this period, with the help of Accenture, we have developed the model, applied machine learning to identify the intermediate commodities with a leading predictive quality and a high correlation with future movements in actual trade and created and calibrated the regression model that produces the Barometer index.</i></p> <p><i>The reason we decided to roll out the Global Trade Barometer was that we recognized that DHL ... was able to take advantage of new developments in technology and digitalization (specifically AI ...) to help our customers by developing a predictive model and using our expertise to interpret the data and provide insights on what the data meant for their supply chain planning and management.</i></p>
I-11	<p><i>I think we need to have technology, we need to be the operations excellence and we need to have a process actually instead of standardisation but not optimisation. This is because kind of like a DHL way of doing things and it is important. IT we not only do for security, but for liability and flexibility for the IT solution.</i></p>
I-7	<p><i>And last, but not least, we need to... build a unique and strong culture of DHL in China. We need to differentiate ourselves from other players, or from other companies, which will give DHL employees a strong sense of reliance and make them proud to work for DHL.</i></p>
I-8	<p><i>You know especially in China, there is a lot of competition, that even At very local level we need to be promoting, can we promote desk more, can we promote Global Forwarding more as we mentioned earlier, people often think of DHL Express.</i></p>
M-30	<p><i>DHL has found a survival mechanism in its business mix, protecting it from such falls. The player has a more extensive intra-Asia business than FedEx and UPS, both of which are more focused on longer-haul routes from regions to Europe and North America. ... We haven't seen a slowdown in the volumes moving through our warehouses, ... Electronics, fashion and life science-related businesses are all holding up.</i></p>

Nevertheless, other aspects in logistics MNE strategy are also valid areas to pursue. As already mentioned, logistics can be seen as a 'people business'. This is why logistics

MNEs place a lot of emphasis on building a corporate culture and investing in their employees, for example by establishing wide-ranging development programmes. These requirements are clearly emphasised at, for example, DHL.

A specific situation is observed for DHL regarding brand positioning. Although the company consists of three specialised logistics business divisions, only DHL Express is well known to the public (see I-8 from 2012). Therefore, it seems advisable to continue targeted marketing addressing the relevant customer groups.

Regarding the positioning on growing competition in the Chinese logistics market, it has been acknowledged that implementation speed is pivotal. Logistics MNEs need to find a way to offer their services based on a specialised product portfolio and high quality rather than the lowest price. This also means claiming a large market share as fast as possible and then defending it. Media publications stressed a certain immunity of DHL to changes in the Chinese logistics market, citing the board member for finance (see M-30 from 2011). However, DHL's management consistently emphasises that they will not target the Chinese domestic express and parcel market for the near future.

These insights stress that DHL follows its own specific strategy in the complex Chinese business environment. The company concentrates on their strengths and therefore strives to grow the business in those areas where they have better resources and capabilities than the local and international competition. This appears to be the case for cross-border express services but also freight forwarding and supply chain management. By considering the insights gained in this case study, it seems advisable to promote the market positioning and branding of the different DHL business units further. Additional strategic levers that could be strengthened are a greater emphasis on the existing capabilities in advanced technology and a highly qualified workforce. The previously identified strategic levers could become tangible success factors for DHL in China. Thus, considering the best way to apply their ownership advantages (mainly Oa+ and FRC+) helps in exploiting the existing location advantages (L+) of the

huge Chinese market. As outlined earlier, DHL is generally seen by market participants as the logistics MNE market leader in China, which is an ownership advantage (Oa+ and IBC+) in itself. By successfully controlling the applied business processes and integrating these into DHL's international network, further internalisation advantages (I+) can be realised.

In the following section, the empirical results from the case study approach are reviewed in their entirety in order to draw some initial conclusions.

4.6 Initial Conclusions from Empirical Results

This section contains an initial review of the results gained from the analyses of the several empirical data sources and provided initial conclusions.

As previously outlined, this study aims to answer the overarching research question:

What are the critical success factors for a logistics MNE in China and how can these factors be used to steer strategic investments with the aim of achieving competitiveness and sustaining a vital business performance?

The 'Tent Pole Strategy Framework for Logistics MNEs in China' forms the conceptual framework of this research. Therefore, the analyses conducted aimed to investigate and explore logistics MNE strategy from the different angles of the framework in order to convey findings relating to the research question.

Not surprisingly, the different sources analysed for insights into logistics MNE strategy in China provided a broad range of information. However, the depth of evidence provided differs greatly between the categories of sources. When comparing, for example, videos and personal interviews with company and international media publications, the different purposes of the sources determined the level of information provided. Data for eight logistics MNEs active in China was analysed. The differences in the information provided by these companies was a

worthwhile area for in-depth evaluation. The comparison of available company publications, in particular, delivered a very heterogeneous picture. As the majority of company publications in the scope of this study were recent annual reports, the level of China strategy-related information differs greatly. While some of the logistics MNEs quite openly shared their views on logistics opportunities in China and outlined their strategic approaches to a certain extent, other annual reports provided no information on China at all. On the other hand, companies like Kuehne + Nagel or DB Schenker published specific China-related brochures promoting their service portfolio in great detail to potential customers. Of course, it can be assumed that annual reports mainly target the finance community. However, the increasing amount of information on China strategy in these publications becomes obvious and underlines the importance of this logistics market.

It can also be stated that personal prejudices and opinions clearly drive the kind of information shared. This is especially obvious in the personal interviews conducted by the author but also in the video interviews produced by international TV stations. Therefore, it is advisable to acknowledge the existing source-specific bias in the data. On the other hand, by incorporating four different categories of data sources in this case study, the bias can be considered as balanced to a certain extent. This means that viewing the logistics MNE strategy from various angles supports a comprehensive and critical picture of the possible levers and success factors.

The research findings from analysing the various data sources can be summarised using different structures. While the author of this study aimed to capture the applicable strategic implications for logistics MNEs in China, further relevant insights could be derived when viewing and comparing the strategies of the single logistics companies in the scope of the study. Therefore, an overview of the results shows the differences and similarities of the eight logistics MNEs that were investigated.

When considering the emergent findings over time it can be concluded that there is a clear consistency both across the various data sources and over the long timeframe

of up to 9 years covered by this research. While it was not intended to perform a longitudinal study, it can be stated that the amount of data included in the analyses strengthened the results. The analyses have been carried out in a time-sensitive manner, thus incorporating temporality into the research. Therefore, it can be reasoned that this study contributes a rather ‘thick description’ of the researched phenomenon. Such a case study approach is recommended exemplarily by for example Dyer and Wilkins (1991) or Mir (2011).

It can further be concluded that company statements on strategy or on how to address institutional restrictions are very limited. TV interviews, company and media publications are the secondary data sources evaluated in this study. Although, compared to the primary data source of semi-structured interviews, only small differences in the level of detail have been identified. The general tenor of statements on strategic investments by logistics MNEs in China certainly did not change, regardless of the data source or the time of its occurrence. On the contrary, being active in the Chinese market has become more and more an obligation for the companies in scope of this study. Of course, new trends, use of innovative technology and advanced service offers are covered in more recent data sources, but this underlines the commitment of logistics MNEs to China.

At this point, it needs to be stressed that further classical success aspects like total market revenue or even profit data for China are not published by logistics MNEs. Therefore, this study cannot incorporate financial comparisons for the logistics MNEs. Clearly, this sensitive information is withheld from the public, including the financial markets, because of its competitive relevance. This cautious behaviour underlines once again the strategic importance of the Chinese market for logistics MNEs.

Table 4-25 shows the findings in the form of patterns that can be associated with specific strategic categories that form the success factors in the scope of this study. These success factors are derived from the earlier discussion of strengths and

weaknesses as well as opportunities and threats for logistics MNEs in China. Building on the success factor categories, particular dynamic capabilities can be derived that will be required for establishing a sustainable strategy in China. Where there was evidence available on these success factors, the insights are shown for the particular logistics MNEs in the scope of this study.

Table 4-25 Assessment of success factors for individual logistics MNEs

Logistics MNE	Success factor 1 – product and service portfolio	Success factor 2 – applied technology	Success factor 3 – managerial practice	Success factor 4 – logistics workforce	Success factor 5 – local footprint
DHL	Most comprehensive product portfolio comprising international express services, freight forwarding including China Rail and multi-modal services, supply chain management and specific e-commerce solutions.	Testing and already applying new technologies within the Chinese business units, i.e. warehousing technology or forecasting tools, publishing technology features like Logistics Trend Radar.	Working exclusively with a native Chinese top management team in China, promoting a company culture that enhances pro-active-ness and engagement of employees.	Offering intense training for new employees, cooperating with Chinese universities and colleges, also investing in training and talent management to develop further Chinese managers.	Largest presence of all logistics MNEs in China, regularly communicating about new investments in China.

Logistics MNE	Success factor 1 – product and service portfolio	Success factor 2 – applied technology	Success factor 3 – managerial practice	Success factor 4 – logistics workforce	Success factor 5 – local footprint
UPS	Specialising in international and domestic express services in China, also offering freight forwarding, multimodal services, supply chain management and e-commerce solutions.	Limited public statements on use of new technologies, publishes focus on new investments like aircraft.	Local management team consists of Chinese natives and expatriates, no information on specific Chinese company culture efforts.	Limited topical information available.	2nd largest presence, also regularly publishes information about their investments in China.
FedEx	Similar product portfolio as UPS, specialising in tailor-made solutions for individual customers.	Similar public positioning as UPS.	Local management team consists of Chinese natives and expatriates, no information on specific Chinese company culture efforts.	Limited topical information available.	3rd largest presence in China, occasional press releases on Chinese investments.

Logistics MNE	Success factor 1 – product and service portfolio	Success factor 2 – applied technology	Success factor 3 – managerial practice	Success factor 4 – logistics workforce	Success factor 5 – local footprint
DB Schenker Logistics	Specialist for rail logistics China - Europe and vice versa.	Prototyping digital services to improve logistics operations, i.e. decision support algorithms.	Limited topical information available.	Limited topical information available.	Smaller Chinese presence, limited information on further investments planned.
Kuehne + Nagel	Leading in seafreight solutions and major provider of airfreight, also offering supply chain management with main focus on automotive and China Rail services.	Applying new technology to increase planning accuracy as well as customer-facing tools.	Limited topical information available.	Established in-house training centres in China.	Smaller Chinese presence, limited information on further investments planned.
TNT	Express service specialist, also offering road freight via Asia Road Network.	Applying enhanced shipping tools for customers.	Limited topical information available.	Limited topical information available.	Smaller Chinese presence, limited information on further investments planned.

Logistics MNE	Success factor 1 – product and service portfolio	Success factor 2 – applied technology	Success factor 3 – managerial practice	Success factor 4 – logistics workforce	Success factor 5 – local footprint
Ceva Logistics	Main focus on contract logistics in China, i.e. warehousing solutions.	Published statements on specific advantages to be gained by new technology, i.e. block-chain.	Limited topical information available.	Limited topical information available.	Smaller Chinese presence, limited information on further investments planned.
Panalpina	Offering freight forwarding and supply chain management with main focus on automotive, also promoting China Rail services and intra-Asia road services.	Testing technology like 3D printing, emphasizing investments into customer-facing technology, i.e. dashboard 'My Panalpina Plus'.	Limited topical information available.	Limited topical information available.	Smaller Chinese presence, limited information on further investments planned.
Source: Developed by the author of this study					

It can be concluded that the success factors identified in this study provide profound insights into the level of effective strategies of logistics MNEs in China.

Furthermore, it has been recognised that the available evidence differs widely between the eight logistics MNEs in scope of this study. It is not surprising that the most comprehensive data was found relating to the three largest logistics MNEs in the world: DHL, UPS and FedEx. These three companies are represented in all market segments of Chinese logistics: express services, e-commerce, freight forwarding and supply chain management. It can be assumed that this omnipresent footprint gives these MNEs a particular competitive advantage in the Chinese market. This advantage has its foundation in the generally greater advantages resulting from the elements of the Eclectic Paradigm (OLI+), when compared to the smaller logistics MNEs active in China. Superior firm-specific resources and capabilities (FRC+) further enhance these advantages which then provide a better competitive standing in the market (IBC+). Quite often, the bigger logistics MNEs may also be able to enjoy a better institutional relationship with the Chinese authorities (ICT+).

Considering the evidence evaluated in this study, smaller logistics MNEs could choose individual success strategies, for example by concentrating on specialist advantages (I+) in their dominant areas. These advantages could then also lead to an improved positioning regarding the other elements of the Eclectic Paradigm and the Strategy Tripod.

For instance, for DB Schenker this is obviously the China Rail business, where they are already striving to position themselves as the most capable supplier with long-standing experience and their own infrastructure. The segment of freight forwarding provides a fertile ground for Kuehne + Nagel to grow their China business. The smaller logistics MNEs should be able to find their strategic niches when applying their capabilities accordingly. They might consider stressing their advantages in a possibly closer customer intimacy due to their smaller organisation (I+). Nevertheless, all logistics MNEs active in the Chinese market need to be fully aware of the growing domestic competition. Once the local Chinese logistics providers have successfully increased their international footprint, including network and services, they will

prove to be worthwhile competitors even for the global logistics market. In addition, any changes in the Chinese institutional environment might have a considerable effect on the strategy of logistics MNEs in China. Therefore, it can be argued that Chinese locational advantages (L+) for logistics MNEs confirm the applicability of the OLI paradigm for this foundational element of the study's conceptual framework. MNE investment decisions that are influenced by the absolute current market size expressed by GDP as the main determinant, especially in service-driven industries, is described as market-seeking FDI. Therefore, the logistics market size of China qualifies as a key investment motivator.

In order to appraise the overall situation for logistics MNEs in China, all the relevant links to the conceptual framework have been evaluated. The 'Tent Pole Strategy Framework' comprises an integrated construct with Dunning's OLI paradigm as the outer structure that is enriched by Peng's Strategy Tripod as its inner element.

Logistics MNEs need to build a comprehensive strategy aimed at making the best use of its firm-specific resources and capabilities, the institutional conditions and its standing in the industry-based competition in China. In order to actually benefit from existing advantages and achieve a sustainable business performance in China, logistics MNEs should strive to continuously enhance their knowledge and capabilities, improve their relationship with institutional authorities and strengthen their competitive position. This means that all elements of the conceptual framework apply to logistics MNE strategy in China.

At this point, it should be acknowledged that the applicability of the study's conceptual framework based on the OLI paradigm and the Strategy Tripod can only be confirmed when considering specific determinants in the Chinese logistics market. Logistics MNEs face clear disadvantages in China, for example in the labour market or through institutional rules relevant to logistics FDI. These disadvantages may have led to the conclusion that some elements of the conceptual framework, i.e. the OLI paradigm, would be not applicable for logistics MNEs in China. However, the Chinese

logistics market also offers undisputable advantages that outweigh any unfavourable determinants. For instance, the complexity for MNEs of China, with its trade barriers and bureaucratic obstacles, creates advantages of their own for logistics MNEs. They may use these locational disadvantages applicable to manufacturing companies to their benefit, thus building a highly advantageous position for themselves and their logistics service offers. This means that in order to be successful in the Chinese market, logistics MNEs have to continuously invest into their capabilities. Thus, the applicability of the dynamic capabilities concept is also confirmed, meaning that logistics MNEs need to develop their capabilities along with a 'good strategy' for the specific market. These considerations are also in line with further developments of the Eclectic Paradigm, where the firm's strategic influence and interaction with market actors as well as external dynamics are confirmed as essential elements of the concept.

While the key positive influential factor for FDI decisions are the location advantages (L+) and predominantly asset-driven and transactional ownership advantages (Oa+ and Ot+) in China, further determinants like the internalisation ability (I) and the often unfavourable institutional conditions (Oi- and ICT-) also have an influence on logistics MNE strategy. Furthermore, on the negative side, there are also transaction costs which increase the disadvantages (Ot-) to be considered. On the other hand, the supplementary elements of the conceptual framework can provide additional advantages, for example the logistics MNE's firm-specific resources and capabilities (FRC+) as well as its standing within the industry (IBC+). The sum of the positive effects needs to compensate for the existing disadvantages for logistics MNEs.

A specifically interesting finding of this study relates to the institutional environment and its influence on MNE strategy. It could possibly be assumed that a strong institutional framework encourages MNEs to strive for full ownership in order to keep control and internalise the gains from the investment. While the institutional setting appears quite strong for logistics MNEs in China, the evidence from two deliberately

set up joint ventures by UPS and DHL Supply Chain contradicts this view. As already outlined in an earlier discussion, in these cases, logistics MNEs still see more advantages and fewer risks, even when sharing the ownership. This means that logistics MNEs need to establish their China strategy very carefully. They may then be able to benefit from the clearly existing advantages while minimising the threats arising from the disadvantages.

The analysis of the evidence evaluated in this study demonstrates that the success of logistics MNEs in China depends crucially on the strategic decisions of these companies. This means, in particular, the kind of product portfolio they offer, how they manage their business relationships and how they deal with local restrictions and institutions. Thus, the applicability of Peng's Strategy Tripod as the internal element of the conceptual framework is clearly demonstrated. MNEs are required to respond flexibly to the local environment by adapting to changes through strengthening existing advantages and developing dynamic capabilities.

This study provides novel insights into MNE strategy by highlighting the differences of the logistics business compared to other industries. This means that the applicability of the conceptual framework has been confirmed not only for a single firm or a specific industry, but also across industries when considering logistics MNEs and their customers in the Chinese market. In addition, the uniqueness of China as a logistics business environment makes it impossible for logistics MNEs to ignore the country in their international strategy. Thus, not only does China provide the context for logistics MNEs business operations, all eight companies in scope of this study repeatedly underlined that China is a central element in their strategic planning as they are considering growing their investments in this market even further.

Table 4-26 summarises the specific findings from this study and compares them to the relevant literature. The conclusions from this comparison with IB publications reveal specific insights into the theoretical contributions of this research to the phenomenon of logistics MNE strategy in the Chinese context.

Table 4-26 Comparison of findings with literature

Findings	Related literature	Conclusions
FDI motivations for logistics MNEs: mainly market-seeking, less efficiency-seeking due to decreasing wage arbitrage, no strategic asset-seeking motivation yet.	Narula and Dunning (2010)	No application of the common FDI motivations in the literature with the exception of market-seeking investment strategy for logistics MNEs in China.
Link between transaction cost and internalisation ability of logistics MNEs.	Wei (1996) Buckley and Strange (2011)	Confirmation of the literature - internalisation can also foster transactional benefits for logistics MNEs by minimising negotiation and transaction costs, ensuring quality control and avoiding risks through dissipation of knowledge, thus offsetting the original increase in transaction costs through economic, policy uncertainty and institutional obstacles.
Formal or informal cooperation with local institutions.	Li (1996) Khanna and Palepu (1997) Luo and Peng (1998) Peng (2000a) Luo (2003) Oppen, Wong, and Hu (2004) Frynas, Mellahi, and Pigman (2006)	Confirmation of literature - formal or informal cooperation with local institutions can lower the transaction costs through a better enforcement of regulations and better access to new business opportunities thus providing additional internalisation advantages.

Findings	Related literature	Conclusions
Influencing and creating location advantages by logistics MNEs.	Phelps and Waley (2004) Cantwell (2009)	Confirmation of the literature - logistics MNEs engage in occupational education, thus creating a new locational advantage.
Impact of protectionism and trade barriers on MNE strategy.	Clegg and Scott-Green (1998)	Previous research mainly focused on the manufacturing industry circumventing trade barriers. The specific situation for logistics MNEs in this respect has not been much emphasised in academia yet. Therefore, it can be concluded that this study provides novel insights into a further application area of this aspect in IB theory because logistics MNEs gain additional business opportunities from trade barriers, e.g. in tariff clearance.
Trade as enabler of FDI and MNE activity.	Buckley and Casson (2009)	The positive influence of trade as an enabler of FDI and MNE performance is widely acknowledged in the literature and can definitely be confirmed for logistics MNEs in China.

Findings	Related literature	Conclusions
Creating overcapacity is a high risk for logistics MNEs in China.	Peng (2000b)	Overcapacity may cause transaction-cost driven disadvantages (Ot-) and further internalisation disadvantages (I-). These disadvantages can be overcome by the MNE's ability to diversify risks and benefit from the extended scale and scope in the country.
E-commerce provides exogenous resources and capabilities.	Dunning (2001)	The effects of e-commerce on MNE strategy are in line with literature.
Effects of guanxi	Tsang (1998) Park and Luo (2001) Buckley, Clegg and Tan (2006)	As described for other industries, logistics MNEs also need to be aware of guanxi in business in order to follow their own and their customers' compliance policies.
Intangible ownership advantages in the service industry.	Dunning and Norman (1983) Dunning (1989)	The application of intangible ownership advantages for logistics MNEs in China is confirmed, e.g. brand reputation, economies of scope through a diversified product portfolio, economies of scale through specialisation and market access.
Applicability of dynamic capabilities concept.	Teece et al. (1997) Katkalo et al. (2010) Teece (2014a) Buckley (2016)	Logistics MNEs demonstrate further internalisation advantages based on their ability to gain from acquired business knowledge and dynamic capabilities.

Findings	Related literature	Conclusions
Service differentiation as strategic lever.	Lai, Cheng, and Yeung (2004) Yeung (2006)	Service differentiation in logistics is seen as quite controversial, while this study confirms its relevance as a strategic lever. Contradicting views that advise concentrating on improved quality for core services are refuted for logistics MNEs in China.
Importance of local expertise and management culture.	Kamis, 1996 Yeung and Li (2000)	Applying a predominantly local management provides advantages for MNEs by giving access to local knowledge and networks. The relevance of this lever can be confirmed in this study and it has to be acknowledged that logistics MNEs apply diverse strategies in China.
Voluntary joint ventures.	Hennart (1988) Meyer (2001) Meyer, Estrin, Bhaumik, and Peng (2009) Rottig (2016)	The recent strategy of logistics MNEs shows that voluntary joint ventures are established in logistics sectors outside of express, where this structure was mandatory. Thus, an additional application of the joint venture concept is brought into research focus by this study.
Source: Developed by the author of this study		

It can be summarised that the empirical results provide quite varied views and responses towards the existing literature in the research area of IB. While some positions can clearly be applied to logistics MNEs in China, other literature viewpoints can only be partially confirmed or even need to be rejected with respect to the phenomenon in the scope of this study.

The category of confirmed positions includes seeing trade and e-commerce as enablers of logistics MNE activity or underlining the need to form relationships with local institutions in China. It is generally acknowledged by the logistics MNEs in the scope of this study that a solid strategic positioning in the highly competitive Chinese market can be best supported through differentiating the logistics services offered. This means that a more diverse and comprehensive service portfolio is definitely the focus of these companies. Thus, more simplified practices focusing on the pure quality improvement of a more standardised service range seems not to be the preferred option.

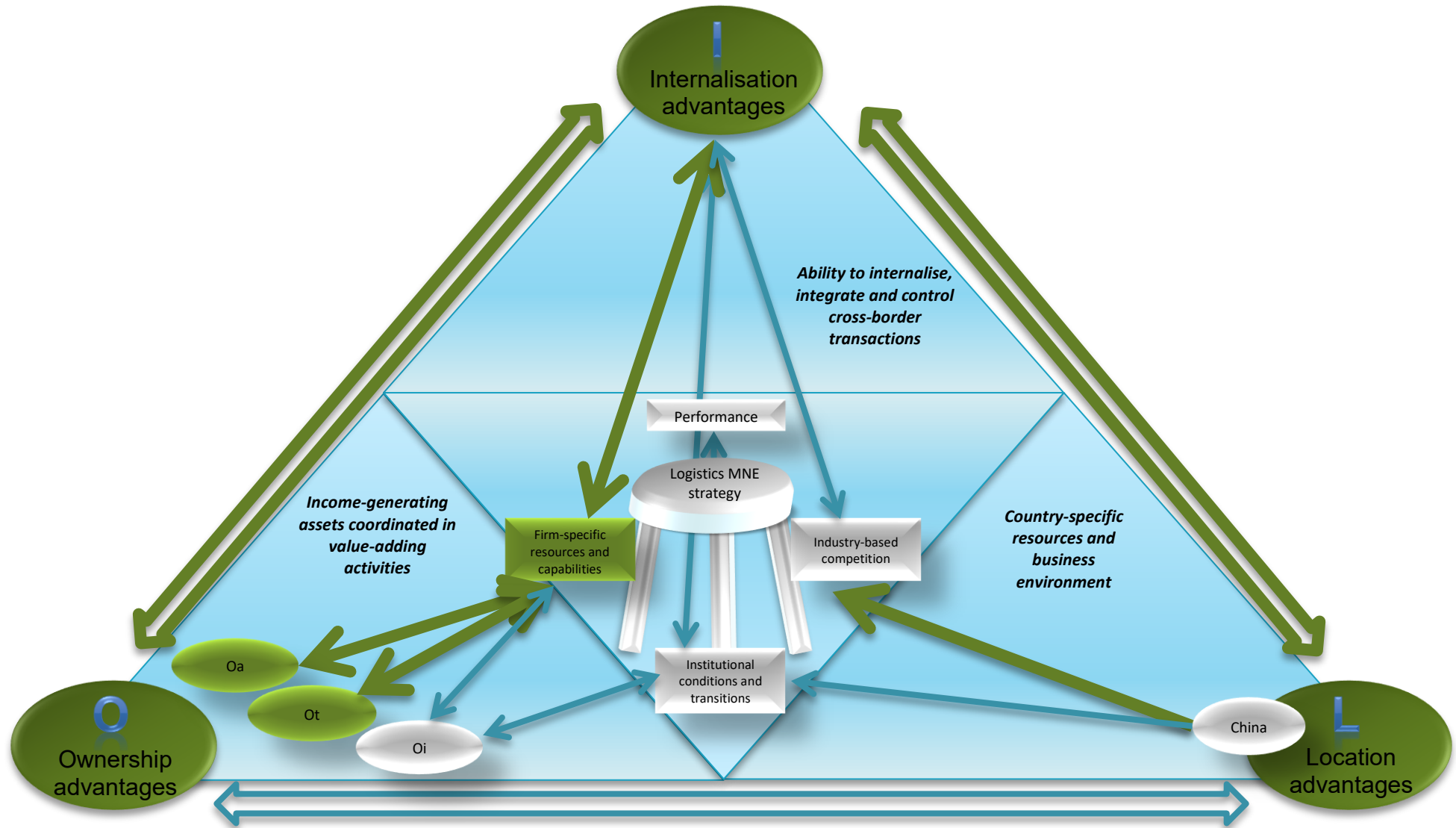
Further, a strong connection between internalisation ability and transaction cost is established as an essential component of logistics MNE strategy in order to minimise risk exposure. The same applies to the need to actively manage overcapacity in the volatile Chinese logistics market in order to prevent high transaction cost and internalisation disadvantages. On the positive side, intangible ownership advantages, for example a superior brand reputation, the continuous enhancement of the company's knowledge and dynamic capabilities as well as the sensible application of guanxi-driven relationship management practices were identified as supportive strategic levers for logistics MNEs in China. The integration of local expertise by employing predominantly Chinese managers and the creation of a company culture embracing native traditions is viewed quite controversially by logistics MNEs. While some companies, like DHL, openly classify these practices as key strategic advantages, the majority of logistics MNEs obviously do not put much emphasis on these topics. It can be established that top management positions in China are often

still held by expatriate managers and the local company culture is rarely addressed in interviews or company publications.

An example of non-confirmed viewpoints in the area of IB literature is the limited applicability of FDI motivations with the exception of market-seeking strategy. It can additionally be highlighted that protectionism and the creation of trade barriers have, thus far, had a positive influence on the business of logistics MNEs in China, which is in contrast with other industries. Further, in contradiction with some of the existing literature, logistics MNEs may do well to prioritise service differentiation over quality improvement for the core services in their strategy. Explicitly, new insights have been provided in this study regarding voluntarily forming joint ventures with local logistics companies in China. The existing literature on joint ventures focuses more on the manufacturing industry, which means a new application area for the joint venture concept has been brought into perspective.

The previously discussed empirical results shed light on the strategy applied by logistics MNEs in China, or more specifically on the major advantages and disadvantages these companies face, as well as on dominant strategic levers being applied in order to strengthen their competitive position. The novel perspectives on MNE strategy in the context of the Chinese logistics market are substantiated with research findings about key success factors which can support sustainable strategic advantages with respect to circumstantial influences.

Considering the outcomes of the empirical analyses, the author has partially adjusted the conceptual framework in order to differentiate between strong positive determinants and existing threats for logistics MNEs in the Chinese market. The tested and confirmed 'New Tent Pole Strategy Framework for Logistics MNEs in China' is shown in Figure 4-7.



Source: Adapted from Dunning (2000); Dunning & Lundan (2008); Peng (2011) and consolidated by the author of this study

Figure 4-7 Tested and confirmed conceptual framework: The New Tent Pole Strategy Framework for Logistics MNEs in China

The advantages for logistics MNEs based on the empirical results involve all three elements of the OLI Paradigm: ownership, location and internalisation advantages. Within the ownership area, predominantly asset-specific driven advantages (Oa) and transactional advantages (Ot) were identified in the analyses conducted. Logistics MNEs show their greatest weaknesses regarding their ability to build substantial institutional assets for their Chinese business.

These results correspond with the outcome for the elements of the Strategy Tripod, where firm-specific resources and capabilities are confirmed as the major strengths of logistics MNEs in China. In return, industry-based competition and institutional conditions are major threats as these areas can be influenced less.

The most important connections between the single determinants of the framework are now shown as bolder arrows. The key interlinks, being particularly significant for the strategy of logistics MNEs, can be seen between ownership and internalisation advantages, while the latter is also closely connected with location advantages. The firm-specific resources and capabilities build the key drivers of the company-specific strategy.

Thus, it can be reasoned that the 'New Tent Pole Strategy Framework for Logistics MNEs in China' (see Figure 4-7) has been successfully applied to the phenomenon of logistics MNE strategy in the Chinese market. While Dunning's Eclectic Paradigm and Peng's Strategy Tripod are well established IB theories of their own, combining these within a novel conceptual framework applied for logistics creates original insights into a generally less researched area. So far, existing studies on logistics in emerging markets rarely used a comprehensive theoretical IB foundation. By developing a distinct framework, testing it throughout all phases within the research and finally confirming its applicability provides relevant knowledge about how logistics strategy works in the still most important emerging market China.

The specific implications and boundaries of the insights provided by all analyses in this study are synthesized in Chapter 5, where also opportunities for future research identified by this study are pointed out.

5. Synthesis of Findings and Conclusions

5.1 Discussion of Empirical Results relating to the Research Questions

This section explains how the results based on empirical evidence contribute to the research questions in this study.

The overall target of this study is a thorough examination of the investment strategies applied by logistics MNEs in the Chinese market. A literature review of the relevant IB theories and concepts provided the overall theoretical foundation for the research activities carried out. Further literature research within the context of the Chinese logistics market confirmed a gap in the knowledge for the phenomenon in the scope of the study and contributed to the development of a concluding conceptual framework. This study builds on a thorough theoretical foundation in the form of a newly created 'Tent Pole Strategy Framework for Logistics MNEs in China' (see Figure 4.7). This unique framework integrates Dunning's Eclectic Paradigm (OLI) and Peng's Strategy Tripod (Dunning, 1988, 2001; Peng et al., 2009).

Regarding the general applicability of the OLI paradigm on the strategy of logistics MNEs in China, a different view needs to be considered. The Chinese logistics market provides considerable disadvantages for MNEs, for example the labour market situation or the competitive restrictions resulting from exacting institutional rules for foreign companies. While these disadvantages are mainly caused by locational (L-) and institutional determinants (Oi-), further negative effects that hinder logistics MNEs to fully realise gains can be assumed from the existing ownership (Oa+ and Ot+) and internalisation advantages (I+). However, these negative effects do not prevent logistics MNEs from strengthening their presence in China, and thus act partially against the theoretical assumptions from the OLI paradigm (Dunning, 2000, 2001). When only considering the present OLI disadvantages, the existing literature might be contradicted by this study. However, this is not the case. Despite the negative determinants, China offers a rather unique combination of great advantages for logistics MNEs that obviously outweigh the existing disadvantages. For example,

the huge size of the Chinese market with its increasing demand for logistics services offers considerable location advantages for logistics MNEs and thus motivates even further investments. Service-driven industries tend towards a market-seeking FDI that is driven by the actual market size and demand (Narula & Dunning, 2010). When considering all determinants, it can be concluded that the sum of positive influences from the OLI factors outweighs the existing negative effects in Chinese logistics for investment decisions by MNEs.

Thus, it can be assumed that the Eclectic Paradigm can be applied to explain the specific situation of logistics MNEs in China and to analyse the strategies. The same applies to Peng's Strategy Tripod, where initially its applicability could also be questioned. Considering the obvious disadvantages from the institutional conditions (ICT), logistics MNEs face sizable impediments when executing their strategy in the Chinese market. Again, the other components of the Strategy Tripod, as the central element of this study's conceptual framework, create sufficient positive effects that clearly outweigh the existing negative effects. For example, MNEs are well advised to carefully apply *guanxi* rules in their local business relationships (Buckley, Clegg, & Tan, 2006). As described by Luo (2003) or Frynas et al. (2006), institutional conditions can also be improved by adequate managerial networking. Logistics MNEs make use of government-supported initiatives when establishing operations in West China or offering transportation services along the 'New Silk Road'. By investing in peripheral locations (McDonald, Buckley, Voss, Cross, & Chen, 2018), logistics MNEs could utilise additional location advantages (L+) not open to smaller competitors. These strategic measures may further support cooperation with Chinese institutions (Peng, 2000a), thus creating new advantages in this area (ICT+). As discussed earlier, logistics MNEs in China are strongly dependent on large domestic and international customers. When extending their operations, the risk of overinvestment may result in a possible internalisation disadvantage (I-). As outlined by Peng (2000b), MNEs can only apply their operational scale and scope advantages when they carefully diversify their risks. The most commonly applied risk diversification measure by logistics MNEs in China

identified in this study is service differentiation through offering a specialised product portfolio, which is also recommended by Lai et al. (2004). In addition, the use of new technology, such as robotics or in-depth data analysis, may provide additional strategic advantages for logistics MNEs (Wang, Lai, & Zhao, 2008b).

This study has revealed evidence that at least some of the logistics MNEs under investigation explicitly employ local managers in order to ease access to local knowledge networks, which is in line with previous research by Kamis (1996) or Yeung and Li (2000). Having a dedicated managerial practice in China builds a key strategic element that enables logistics MNEs to realise their internalisation advantages (Björkman, Ehrnrooth, Smale, & John, 2011). Logistics MNEs also focus on vocational training and employee development measures in order to create additional internalisation advantages (I+) as, for example, stated in earlier research on MNEs in the Chinese context by Li (1996) or Oppen et al. (2004). As structured occupational training is still seen as an underdeveloped area in the Chinese economy, logistics MNEs may be able to realise gains from new locational (L+) and internalisation (I+) advantages, thus confirming earlier MNE research insights (Cantwell, 2009; Luo & Peng, 1998; Peng, 2000a; Phelps & Waley, 2004).

Considering all these impacts, important strategic factors derive from the strong firm-specific resources and capabilities (FRC+), which then enable a superior competitive position (IBC+) for logistics MNEs in China. In order to establish a successful strategy in the complex Chinese market, logistics MNEs need to consider their individual situation regarding firm-specific resources and capabilities, institutional conditions and industry-based competition, thus all elements of the Strategy Tripod apply (Peng et al., 2009). This means that strategic measures should aim to enhance knowledge and capabilities in a continuous manner, while at the same time improve institutional relationships and strengthen the standing within the competitive Chinese logistics market. This means that the applicability of the dynamic capabilities concept by Teece (2007, 2011, 2014a) is proven for this study's context. The strategic positioning of MNEs considering external dynamics is explicitly stressed by Dunning and Lundan

(2008b), Cantwell et al. (2010) and Buckley (2016), and is confirmed by the empirical results in this study.

In addition to the previously discussed balancing effects within the conceptual framework, this study discovered a novel finding regarding the influence of the institutional environment on logistics MNE strategy. While it is often assumed that MNEs strive for full ownership in order to control their investments and be able to internalise the gains within a strong institutional environment (Meyer et al., 2009), empirical evidence was found that disputes this notion. Both UPS and DHL Supply Chain have deliberately set up joint ventures with local Chinese logistics companies. It can be concluded that in these cases, logistics MNEs face explicit advantages through improved market access and a balancing of risks based on the shared ownership with a strong local partner. It is important for MNEs to strategically choose appropriate partners for a voluntary joint venture in order to create transaction cost advantages (Ot+) and possibly also internalisation advantages (I+) by reducing environmental and behavioural uncertainties. This is also stressed in earlier research by Hennart (1988), Standifird and Marshall (2000) or Meyer (2001).

It can be argued that the application of a comprehensive conceptual framework based on linking the OLI paradigm with the Strategy Tripod for research of logistics MNE strategy provides new and unique insights. Two prominent IB models have been used in an integrated framework to analyse the subject matter in Chinese logistics. Previous research in this area rarely applied IB theory. Although the majority of publications focused on developing quantitative models to determine causal correlations between economic and logistics development (Lean et al., 2014; Wang, 2010), there are some examples that applied the resource-based view in order to explain the empirical findings (Lai, Li, Wang, & Zhao, 2008; Liu et al., 2010; Wong & Karia, 2010).

Furthermore, it can be stated that this study enhances earlier research on MNE strategy reactions to protectionism and circumventing trade barriers. While previous

research mainly focused on the manufacturing industry, e.g. Clegg and Scott-Green (1998), this study also proves the applicability of this explicit strategic MNE positioning for the logistics sector.

Based on all these considerations, the overarching research question addressed by this study can now be answered:

What are the critical success factors for a logistics MNE in China and how can these factors be used to steer strategic investments with the aim of achieving competitiveness and sustaining a vital business performance?

While individual logistics MNEs have developed individual strategies based on their specific resources and capabilities in the Chinese market, there is a general strategic imperative applicable to all of them. All evidence gathered during the research process was evaluated for specific patterns across logistics MNEs in the scope of this study. It can be concluded that logistics MNEs active in China are well advised to focus on business areas related to their current competitive advantages while, at the same time, addressing existing threats or disadvantages in a suitable manner.

Table 5-1 summarises the results related to the respective supportive research questions in this study, thus fulfilling the research objectives in this study.

Table 5-1 Research questions and patterns of evidence

Supportive research questions	Results based on evidence from research
RQ 1) How can the 'Tent Pole Strategy Framework' be applied to analyse the strategy of logistics MNEs in China?	<p><u>Ownership advantages</u></p> <ul style="list-style-type: none"> • Asset-specific driven ownership advantages (Oa+) due to firm size of logistics MNEs, their brand value and image, their Chinese network of logistics branches and sites, operating fleet and qualified workforce (evidence for DHL, UPS, FedEx, Kuehne + Nagel, DB Schenker; only partial evidence for TNT, CEVA, Panalpina). • Transaction benefits (Ot+) of logistics MNEs due to benefiting from risk diversification or avoidance by offering a differentiated product portfolio and the ability to specialise according to market requirements (evidence for DHL, UPS, FedEx, Kuehne + Nagel, DB Schenker, CEVA, Panalpina). • Institutional asset disadvantages (Oi-) for logistics MNEs in the Chinese market due to restrictions on sector level, i.e. changes in relevant legislation, necessary licences and joint-venture constructs (noticeably less evidence, available only for DHL, UPS, FedEx). <p><u>Location advantages</u></p> <ul style="list-style-type: none"> • Value-adding activities in the Chinese location provide locational advantages (L+) due to the large market size, ongoing positive economic development, increasing demand from new social classes and growing Chinese imports via e-commerce (repeated evidence for DHL, UPS, FedEx, Kuehne + Nagel; less frequently for DB Schenker, TNT, CEVA, Panalpina). <p><u>Internalisation advantages</u></p> <ul style="list-style-type: none"> • Market internalisation abilities (I+) generate additional income by answering to Chinese demand for outsourced logistics solutions, by applying economies of scale and scope through multi-nationality, network expertise and IT (evidence for DHL, UPS, FedEx, DB Schenker, Kuehne + Nagel, CEVA and Panalpina).

	<p><u>Firm-specific resources and capabilities</u></p> <ul style="list-style-type: none"> • Benefits (FRC+) from MNE governance and internal capabilities, managerial practice, applied technologies and innovation efforts (evidence for DHL, DB Schenker and Kuehne + Nagel; limited data for other logistics MNEs), <p><u>Industry-based competition</u></p> <ul style="list-style-type: none"> • Currently superior positioning of MNEs in the Chinese logistics market (IBC+) due to applied ownership and internalisation advantages, MNEs apply differentiation strategies aimed at distinctive service offers and high quality while majority of domestic competitors mainly pursue low-priced strategies (evidence for DHL, UPS, FedEx, Kuehne + Nagel; limited data for other logistics MNEs). <p><u>Institutional conditions and transitions</u></p> <ul style="list-style-type: none"> • Often unexpected changes in legislation provide obstacles for logistics MNEs (ICT-), which they are trying to balance with on institutional support, i.e. chambers of commerce and use of managerial networking contacts.
<p>RQ 2) What are the major opportunities and threats that are influencing the performance and competitiveness of logistics MNEs in the Chinese market?</p>	<p><u>Major opportunities</u></p> <ul style="list-style-type: none"> • A continuously growing Chinese logistics market, i.e. regions in western China, shift to imports and domestic consumption, new Chinese middle-class in 'Tier 2' and 'Tier 3' cities (evidence for DHL, UPS, FedEx; less data for other logistics MNEs) • Continuously improving local infrastructure, i.e. new airports, road and rail connections, especially in connection with politically supported investments within the 'Belt and Road Initiative' for the 'New Silk Road' (evidence for DHL, DB Schenker, UPS, TNT, Panalpina; less data for other logistics MNEs). • Geopolitical uncertainty and Chinese business complexity for the manufacturing industry may be an opportunity for logistics MNEs, i.e. further outsourcing within the supply chain, growing demand for customs processing (evidence for DHL, FedEx, Kuehne + Nagel; limited data for other logistics MNEs).

	<p><u>Major threats</u></p> <ul style="list-style-type: none"> • Chinese labour market with its workforce shortages and increasing wages (evidence for DHL and Kuehne + Nagel; limited data for other logistics MNEs). • Extensive customer demands and continuous price pressure in the Chinese market (evidence for DHL, CEVA, Panalpina; limited data for other logistics MNEs). • Institutional restrictions, i.e. complicated licensing procedures and mandatory joint venture structures (limited evidence overall, occasional comments by DHL and FedEx only).
RQ 3) Which strategic factors can be determined for a specific logistics MNE to achieve a sustainable performance in China?	<p><u>Key success factors</u></p> <ul style="list-style-type: none"> • Exploiting the existing advantages and minimising, or at least balancing, the effects of the remaining threats (applicable for all logistics MNEs in China). • For the example of DHL, specific success factors can be applied in order to achieve an outstanding and sustainable performance, which include: <ul style="list-style-type: none"> ○ conscious application and further advancement of technology, e.g. for forecasting of economic and trade development as strategic determinants, ○ extensive employee development programmes and measures to further advance the company culture, e.g. focusing on entrepreneurial mind-sets and company-wide collaboration, ○ continued emphasis on corporate social responsibility and environmental contributions in China, e.g. collaboration in education or vocational training, green logistics solutions, ○ increased but focused marketing measures drawing on the superior brand value and company image, e.g. presence at domestic logistics exhibitions and congresses, ○ voluntary joint ventures with successful Chinese partners, e.g. DHL Supply Chain and SF Holding.
Developed by the author of this study	

As already pointed out, while there are some general competitive advantages for logistics MNEs in China, each company has to select its specific strategy based on individual critical success factors. For the example of DHL, this means investing in technology, employee development, company culture and collaboration as well as enhancing their activities in the area of corporate social responsibility. In addition, targeted sales and marketing activities can help to further stabilise and increase the brand image in China. While all these factors could have been expected to a certain extent, this study determined one rather surprising strategic factor. Deliberately choosing a joint venture structure in the Chinese logistics market is definitely a new strategic option for logistics MNEs. Until now, the mandatory investment policy from previous years that only allowed a logistics licence for specific services when working with a local partner, such as in the express delivery sector, was seen as a clear locational disadvantage. These days, a clear turnaround in managerial opinion has taken place. DHL and UPS, the two largest logistics MNEs in China, actively sought partnerships with successful local logistics providers in the logistics subsector of supply chain management. There was no institutional influence visible and both companies claimed that they made these decisions from a purely strategic point of view. This means that the empirical evidence of independently choosing joint venture structures in logistics can be interpreted as a completely new strategy in the Chinese logistics market.

In the following section, the conclusions of the study are elaborated in more detail.

5.2 Conclusions

The conclusions from the research results are outlined and synthesised in this section.

Previous discussions in this study focused on how the logistics sector in China has undergone tremendous developmental steps in recent years. It can be argued that logistics MNEs view the Chinese market as an essential element of their global strategy.

Patterns of evidence gathered in this study were applied to answer the research questions. The applicability of the chosen conceptual framework was generally confirmed for all its elements, while the specific determinants differ in the degree of their influence on logistics MNE strategy. In addition, specific insights into the opportunities and threats for logistics MNEs in China have been determined. Finally, the strategic factors that should be considered by a logistics MNE' strategy in China for sustainable performance were identified.

Based on the attractiveness of China, with its high growth rates and continuing demand for transportation services, there is considerable competition in the logistics sector. This competition is characterised by a race for the most advantageous locations, the need for building a reliable network and a comprehensive service portfolio and finally achieving all of this at a competitive cost. International logistics companies cannot afford to neglect the busiest trade lanes that connect China with Europe, the US and possibly also Africa in the future (Agility, 2015, 2019). The general market tenor is that logistics services in China are sold by price rather than by quality, which has proved to be an issue for logistics MNEs. However, logistics multinationals seek to provide unique qualities to differentiate themselves from the competition, i.e. by providing value-adding services (VAS) as part of their service offer. The increasing lack of a qualified logistics workforce is another serious consideration for all market participants, while on the other hand huge annual pay rises occur throughout the industry (Goh et al., 2010). The logistics MNEs strive to increase their market share, but expansion is limited by the influence of Chinese institutions, such as local investment law and the influence of local authorities when deciding on logistics licences (Chen, 2007). Moreover, high emphasis needs to be placed on developments in Chinese economic policies, the role of the government and further regulatory institutions. One of the key public policy determinants influencing FDI in logistics is the tax law with its recently introduced incentives like the value-added tax pilot programme or the benefits from the Free-Trade Zone in Shanghai (KPMG, 2012a, 2012b; Taylor Wessing, 2014; Tung & Cho, 2000). As for all MNEs, it can be

argued that logistics multinationals also actively engage within policy influencing bodies, e.g. chambers of commerce (European Union Chamber of Commerce in China, 2013).

In the past, logistics multinationals like DHL, UPS, FedEx or Kuehne & Nagel as well as local providers concentrated their activities in the eastern and north-eastern parts of China. The main reasons for the previously applied strategy were the existing logistics infrastructure including the major ports and airports in that area. Therefore, the largest concentration of logistics MNE activity can be found in and around Shanghai or Hong Kong. Some ten years ago, the logistics industry began moving to central and western locations like the Zhongyuan City Cluster in the Henan Province of Central China with Xi'an as a fast-growing logistics hub or the Chengdu-Chongqing Economic Zone (Chen, Liu, Wei, & Liu, 2013). Both logistics MNEs and national providers followed their existing and potential future customers who were drawn by the industrial development in those areas. The fast growing automotive and electronics manufacturers in particular required logistics services and thus offered tremendous growth opportunities (Liu et al., 2016; Luo, 2004; Wang, 2012; Wellins, 2012).

The findings in this study confirm China's increasing need for infrastructure advancement and a supply of adequate transportation services, both domestically and cross-border, in order to support trade and the flow of commodities. Logistics companies of all sizes, including the big logistics MNEs, understand the immense potential of the Chinese logistics market. Each manufacturing MNE established in China is required to keep a stable supply chain and ensure continuous access to transportation services, both locally and within their global networks. The same requirements apply to smaller manufacturing companies that have established subsidiaries or joint ventures with Chinese corporations. In addition, the new group of emerging Chinese MNEs provide great potential for the further growth in demand of logistics services.

Logistics MNEs address the above-mentioned shortage of a qualified logistics workforce by introducing vocational training, which is a relatively new concept for

this sector in China, and further engage in development measures for their existing staff. Additional efforts are made to further develop the company culture, improve employee engagement and retain highly sought-after logistics employees in a highly competitive environment.

Based on the given conditions, the Chinese logistics market is still considered as very challenging for foreign investors, while on the other hand exceptional prospects could compensate for this. Key emphasis needs to be placed on the conception and implementation of a sound business strategy, thus enabling sustainable performance and growth for logistics MNEs in China in the long term. While the leading logistics MNEs have a competitive advantage based on their pure company size, financial strength and network capacity, smaller logistics companies may find also their strategic niches in the huge Chinese market with its increasing demand for domestic and cross-border logistics and distribution services.

While it can be concluded that each of the eight logistics MNEs in the study have been proven to be able to operate in the complex Chinese market, the degree of success, as a whole and for specific factors, appears to differ to a certain extent. Obviously, the three biggest logistics MNEs worldwide – DHL, UPS and FedEx – offer the broadest range of logistics products and services, use advanced technology and openly address topics from managerial practice to how to develop their workforce in China. The pure size of these companies relating to their advanced capabilities enables them to establish a considerable local presence and network across the Chinese market. While the more powerful companies have stronger strategic advantages, smaller logistics MNEs may successfully claim market niches with regard to their individual capabilities and areas of specialisation, such as offering comprehensive rail logistics services or cross-Asian trucking. Regarding further advancing company-specific organisational capabilities, it appears to be advisable for logistics MNEs to address the ‘war for talents’ pro-actively through dedicated measures. Often these measures are part of an organisational development programme initiated and co-ordinated by the corporate headquarters, but a certain customisation relating to the Chinese

culture seems to be sensible. While the logistics sector will have to compete with the currently dominant manufacturing sector even more in upcoming years, the opportunities within this service sector with high growth rates will have to be better communicated in order to attract the required employees. At the same time, working conditions and company culture will have to be advanced in order to increase the attractiveness of jobs in logistics. In addition, logistics MNEs might be better positioned than smaller competitors in the Chinese market to gain benefits from new technologies and the ongoing trend of digitalisation. In addition to these previously discussed strategic determinants and success factors, it can also be argued that logistics MNEs – like other multinationals – have responsibilities towards how they pursue expansion in their respective host countries. This is where measures in the area of corporate social responsibility come more into focus of the MNEs overall management process of their strategic investments.

The outcome of this study captures the different strategic perspectives of the major logistics MNEs in China, illustrates similarities as well as different approaches in managerial practice and provides advice on how to improve strategic positioning. Also discussed are the benefits and values of a thoroughly planned strategy for the Chinese logistics market by carefully applying the individual strengths of the logistics MNEs. While this study has identified that the overarching strategic decisions for the Chinese market are, thus far, predominantly made in the headquarters of logistics MNEs, the local subsidiaries seem to be gaining more influence regarding their service adaptation and advancement. Based on their specific absorptive capacities, local MNE subsidiaries draw on country-specific expertise, knowledge and local networking practices that may enable them to achieve additional performance gains in China which then might provide greater strategic responsibility in the local market (Zeng, Glaister, & Darwish, 2019). This study demonstrates that the resources and capabilities of the local logistics MNE subsidiaries and thus their strategic potential has not yet been fully exploited in China.

Possibly the most challenging and provocative conclusion is that the more traditional strategy approaches applied in manufacturing industries and analysed in previous IB research are likely to be not completely suitable for logistics MNEs in the Chinese context because this industry benefits from other strategic advantages and therefore applies different success factors in the specific Chinese context. Nevertheless, developments in the Chinese manufacturing sectors need to be closely observed by logistics MNEs. The correlation between the industries is strong, which means a positive development in other sectors of the Chinese economy will have a direct impact on logistics and vice versa (Gao et al., 2018). It has to be considered that the large manufacturing MNEs active in the key industrial sectors automotive, technology or life sciences in China represent a considerable component of the logistics MNEs' customer base. Changes or disruptions in the industrial supply chains will have a direct impact on logistics suppliers. For example, protective measures like high import tariffs may lead to a restructuring of complete value chains if MNEs move their investments to other Asian countries (Donaubauer & Dreger, 2018). Another important development is taking place in the Chinese economy which is moving from low-priced manufacturing towards the production of high-value products. This is in line with a move from export orientation to increased domestic consumption in China. These developments will create major supply chain changes of their own. If these changes continue, the whole logistics sector in China will need to adjust its way of doing business in order to navigate uncertainties and cope with the general complexity in an already very challenging market. In addition, modifications within the Chinese institutional environment may create further risks and thus additional transaction costs for logistics MNEs, which then influences the success of currently applied strategies. Balancing the different and often conflicting demands from customers, logistics regulations and continuous competitive pressure requires a responding capability to apply strategic variation and flexibility. Logistics MNEs have to act in a highly agile way in order to cope with the complex dimensions and competitive dynamics in this Chinese market that generally builds a core location within their corporate strategy.

As outlined earlier in Chapter 4, this study was not intended to carry out longitudinal research, even when the temporal bracketing of data collection covers the years 2010 to 2019. However, the various analyses of the 217 qualitative data sources from four different categories incorporated in the present research design have also been conducted in a time sensitive manner. Thus, the temporality of the emergent findings and consequently the dimensions of time within the drawn conclusions can be considered as a strengthening factor for the depths of knowledge provided in this study. With its overall mission to provide a thorough examination of logistics MNE investment strategy in China, this research contributes in-depth insights into a complex phenomenon within a highly relevant emerging market context. With the creation of a novel conceptional foundation in form of 'The New Tent Pole Strategy Framework for Logistics MNEs in China' (see Figure 4.7) this study has proven the applicability of two major IB concepts in order to add new knowledge in the areas of theory, methodology and managerial practice.

Based on these conclusions, it can be argued that this study provides particular and, in some areas, unique contributions targeted towards both academic and management audiences. Consequently, researchers in IB and strategy with a focus on China as well as practitioners from logistics MNEs are a suitable audience for the insights gained.

In the following sections, the specific contributions of this study are further discussed for their impact in three areas: international business and management studies theory, methodological advancement and managerial strategy guidance. This differentiation follows Drake and Heath (2011), who propose combining insights from professional practice, academic understanding and the researcher's individual distinct project in order to create new knowledge.

5.3 Theoretical Contributions

This section describes the specific contributions of the study to IB theory.

In general, the contribution to knowledge by this thesis should be seen in the area of MNE strategy advancement considering the context of the Chinese volatile economic environment. This means linking established theories from IB and FDI to the requirements of the fast-moving logistics industry.

Influential factors based on global and industry-specific trends have been brought into the discussion, thus enhancing the macro and meta-economic scope of the research. While a major share of the existing research in the area of IB within the Chinese context applied a purely quantitative approach, this study strives to create contributions from qualitative research.

A novel holistic research framework combining Dunning's Eclectic Paradigm and Peng's Strategy Tripod in one conceptual framework was applied with the purpose of examining strategic decisions of logistics MNEs in China (Dunning, 2000, 2001; Peng, 2011; Peng et al., 2009). Both concepts were previously mainly applied for research undertaken in the area of FDI in the manufacturing sector. In this study, the applicability and relevance of these concepts to logistics research was proven. While ownership, location and internalisation advantages provide a rather static view of specific FDI, the introduction of dynamically applied firm-specific resources and capabilities as well as strategic measures towards industry-specific competition and institutional conditions complete the research of the phenomenon in the scope of this study. This study also extends the current theoretical discussion around the 'new institutionalism' as a research area within strategy and management science (Peng, Nguyen, Wang, Hasenhüttl, & Shay, 2018).

Considering the highly volatile Chinese market with its continuously changing and increasing customer demands, the newly developed 'Tent Pole Strategy Framework for Logistics MNEs in China' (see Figure 4.7) provides a thorough foundation for the research carried out in this study. The tent poles of the framework constitute the key

competitive fundamentals that are required for building a sustainable MNE strategy for the extremely competitive Chinese logistics market. As the tent poles involve Dunning's OLI determinants that enclose the elements of Peng's Strategy Tripod, the complexity of interconnections between all these framework determinants calls for a dedicated strategy in order to address all influential elements. In consequence, logistics MNEs are required to determine their explicit strengths relating to all these elements and focus on exploiting and extending their relevant capabilities in order to build and defend their competitive position in China.

Bearing in mind the increasing volatility, uncertainty, complexity and ambiguity of the global economy, this study also extends existing theoretical discussion around the 'VUCA' phenomenon within the context of the logistics industry in the important emerging market of China. There has recently been increased academic research on this topic, often with a specific focus on the Chinese economy (Bennett & Lemoine, 2014; Huang & Cantwell, 2017; Mack, Khare, Kramer, & Burgartz, 2016; Tulder, Verbeke, & Jankowska, 2019).

To summarise the theoretical contributions, this study has made several distinct impacts to the areas of International Business (IB) and Management Studies in general and to MNE strategy in particular. In the subsequent Table 5-2, the specific theoretical contributions are outlined and explained. The individual contributions are supported by their respective evidence that has been captured and evaluated in this study.

Table 5-2 Theoretical contributions

Contribution	Explanation	Supporting evidence
Verifying IB theory for logistics context	Evaluating and confirming the applicability of IB strategy in form of the foundational concepts of the Eclectic Paradigm and the Strategy Tripod for the explicit situation of logistics MNEs in China	The IB concepts have been successfully applied to the phenomenon of logistics MNE strategy in China as proven in this case study
Developing an individual conceptual framework connecting major IB concepts	Creating a novel and unique conceptual framework by interlinking these IB concepts in order to visualise the pivotal influential determinants identified for logistics MNEs in China and its impact on strategic post-investment decisions	The initially created 'New Tent Pole Strategy Framework for Logistics MNEs in China' integrates the IB concepts and forms a distinctive theoretical research foundation of its own (See Figure 2.9)
Proving the applicability of 'The New Tent Pole Strategy Framework for Logistics MNEs in China'	Applying and proving this framework in order to examine the Chinese business environment from the empirical viewpoints of multinational logistics companies, the regulatory institutions as well as the industrial situation relating to the consequence of building a competitive logistics MNE strategy	Tested and confirmed the initial framework for all elements, thus generating a more specific framework highlighting the strategic determinants most relevant to logistics MNE practice in China (see Figure 4.7)
Substantiating logistics MNE strategy research	Identifying and evaluating the holistic manifestation of the phenomenon of logistics MNE strategy across different companies in the Chinese market as a VUCA environment	Conceptual framework further tested for eight logistics companies being strategically invested in China

This study aims to increase the attractiveness of applying IB research concepts within the context of the logistics industry in general and in the Chinese market specifically. Other researchers may be motivated to engage in further contributing to the research in this area.

Supplementary to the theoretical contributions, this study contributes particular insights from the applied research methodology.

5.4 Methodological Contributions

This section outlines how the applied methodology and research design contribute to the creation of new knowledge.

The contributions in the area of the applied methodology and advancement were initially derived from the literature review, and specifically from the examination of logistics publications regarding the Chinese market. These previous publications rarely applied a strong theoretical foundation and thus often did not show a rigorous research approach concerning methodological issues on logistics strategy in the Chinese context (Mahpula et al., 2013).

As outlined in Chapter 3, this study is based on an interpretivist philosophical stance in order to investigate logistics MNE strategy in China. Consequently, the research design follows an inductive approach and applies mainly qualitative methods for data collection and analysis.

This study has created individual contributions towards methodology that can be summarised shown in the following Table 5-3.

Table 5-3 Methodological contributions

Contribution	Explanation	Supporting evidence
Identifying the gap of knowledge to respond to in this study	Giving comprehensive insights into the published literature on the phenomenon of logistics MNE strategy in the context of China and showing missing knowledge	Systematic review of topic-related academic literature and managerial publications
Addressing the lack of qualitative research in logistics	Developing and conducting predominantly qualitative-oriented research design based on a very broad database covering the years 2010-2019	Four different data categories containing 217 qualitative data sources, collected from TV interviews, company and media publications as well as semi-structured interviews
Extending established methods by performing a fully-fledged case study research building on an inductive logic	Creating an innovative, comprehensive case study approach that is demonstrating the strength of the inductive approach applied	Insights from different angles by building on human interpretation of the phenomenon while thoroughness of research is demonstrated by stringent evaluation of data coverage and saturation
Demonstrating methodological rigour, validity and reliability of the applied unique case study research design	Confirming the depth of knowledge and understanding resulting from the analyses of the various data sources	Wide-ranging data triangulation (using four qualitative data sources), between-method triangulation (combining qualitative data analysis methods with descriptive statistics) and theory triangulation (applying a multidimensional conceptual framework)

In addition to the principally applied qualitative analyses, this study supplements its extensive data pool by including quantitative data in the form of descriptive statistics and graphics that illustrate the development of context-related economic determinants. Considering the highly complex research environment of logistics in

China, this study recommends the particular consideration of qualitative elements for holistic research projects in order to foster the methodological rigour, validity and reliability of the research outcome.

Further to the theoretical and methodological contributions of this study, the achieved research outcome has been interpreted for its respective practical implications at a company level that are summarised in the following section.

5.5 Managerial Contributions

This section discusses the study's contribution to managerial practice.

The aim of this study undertaken for the degree of Doctor of Business Administration is not only to advance the section of logistics MNE-focused research in the area of IB through academic rigour, it also aims to highlight the practical relevance of the research outcome by enhancing the dialogue on existing strategic practices applied in the Chinese context. Such an orientation towards corporate strategy forms an important element of this research carried out from a practitioner perspective. It can be argued that this additional orientation in the field of management Studies contributes to the legitimacy of the research as applied social science. The relevance to managerial practice needs to be proven in order to bridge the transfer of knowledge from theory into applied strategy (MacLean & MacIntosh, 2002; Starkey & Madan, 2001; Tranfield, 2002).

It is pivotal for managers of logistics MNEs to fully understand the complex Chinese market in order to define and implement a sustainable strategy addressing the numerous challenges. While knowledge of the local business environment and continued efforts to gain up-to-date market intelligence form an important element of an MNE's strategy development, further market actors aside from competitors and customers need to be considered. The Chinese logistics market still experiences huge intervention by governmental and local regulatory authorities, thus constituting a

strong institutional influence. Logistics MNEs are well advised to never underestimate the threats of volatile market developments, changing customer demands, intense competition from growing domestic logistics companies and the often unpredictable institutional environment in China.

Considering the aspects previously outlined the specific contributions of this study towards managerial practice for logistics MNEs in China can be described as follows:

Table 5-4 Managerial contributions

Contribution	Explanation	Supporting evidence
Evaluating the positioning of logistics MNEs from company internal, competitive and institutional angles	Analysing logistics MNE strategy in the context of China and developing a deeper understanding of major influential determinants on the business of logistics MNEs	Insights into logistics MNEs in China through structured incorporation and thorough scrutiny of 217 qualitative data sources for their managerial relevance
Conducting a cross-case scrutiny of existing strategic approaches	Providing a comprehensive account of logistics MNEs strategy through determining and explaining the differences and similarities by incorporating different notions and perspectives	Appraisal of strategies applied by the eight competing logistics MNEs in scope of this study
Building a key-area evaluation of what makes logistics MNE strategy successful in China	Determining the critical success factors for a sustainable strategy in the highly competitive and complex Chinese logistics market, which are a transferable to other logistics growth areas in emerging markets globally	Evaluation of determined success factors in China under consideration of major global trends in logistics based on a specific literature and insights gained from qualitative data scrutiny
Developing strategic advice for an exemplary logistics MNE	Elaborating particular intelligence relevant to managerial practice that is based on applied strategic practice and recommending specific measures for a sustainable strategy in China	Detailed within case analysis of one logistics MNE as foundation to derive strategic guidance

This study provides its contributions based on evidence of effective strategy application and challenge-responding behaviour by logistics MNEs in China. Specific managerial practices applied to dynamically address the challenges within the fast-changing business environment are analysed and evaluated. The singular approach of combining a high number of various data sources in the applied research design provides an additional credibility to the research. Furthermore, the temporal coverage of integrated data underlines the applicability of the research outcome for managerial practice. This study revealed the several dimensions of applied strategy by eight competitive logistics MNEs and points out the most relevant success factors for a prosperous development of their Chinese investments.

There has been a call to apply ambidexterity in corporate strategy within VUCA environments, for example in the technology sector (Du & Chen, 2018). For MNEs, ambidexterity in the specific context of the Chinese logistics market means safeguarding and exploiting their current market position while at the same time exploring new development paths in order to extend their business in one of the most important emerging markets.

In the following and final section, the limitations of this study are discussed and additional opportunities for future research endeavours are outlined.

5.6 Limitations and Recommendations for Future Research

In order to foster future research on the topic of this study, recommendations for possible directions of additional investigations are outlined in this section.

Like any research, this study has some limitations that simultaneously include recommendations for future research on the topic under investigation. The limitations concern each phase of the research, from the literature review, the applied methodology and the evaluation of the empirical results. These limitations have been summarised as following:

1. The literature review in Chapter 2 mainly focused on the theoretical foundation by examining international business concepts. While the context of Chinese logistics has also been reviewed, this area of research could possibly be enhanced by applying less strict exclusion criteria. For example, the huge domestic mail and postal market has resulted in managerial research aiming to improving business practice. Considering the profound changes taking place in the worldwide postal, express and logistics business, an inclusive research relating to all these market sections may be recommended for the important Chinese market. A comprehensive view including all these aspects could be a sensible choice for future research because the borders between the previous logistics market sections are already blurred and can be expected to be further interlinked in the near future.
2. Chapter 3 explained the overall research design, which is based on a case study approach involving several triangulation steps. Future research could consider different sequences or another agglomeration of data sources. For example, an independent researcher who has not had to comply with corporate restrictions preventing the discussion of strategy with competitors could possibly enhance the number of personal logistics expert interviews.
3. As the definition of logistics is undergoing changes, further companies might be included in the scope of future research in addition to the current traditional logistics MNEs. As an example, Amazon should be named. While the company is generally seen as the world's leading online retailer, its logistics activities have grown considerably over the last few years. In April 2019, Amazon debuted in the American Journal of Commerce list of top fifty logistics companies worldwide, and even occupied the top slot. This means, the logistics business of Amazon is already considered bigger than that of DHL, UPS or FedEx. While Amazon doesn't position itself as a logistics company, market observers clearly consider the corporation as a major competitor (Field, 2019).

4. In addition, the quantity of secondary data sources could also be enhanced as the number of press articles, company publications as well as video statements on the Chinese logistics market is clearly growing. Furthermore, a stronger focus on the quantitative elements in the research might help to further evaluate the interactions between general economic determinants and the logistics market in China.
5. Since the research focused on eight logistics MNEs active in the Chinese market, the generalisability of the gained insights is limited. This means that the results are unlikely to be fully valid for smaller international logistics companies in China. Of particular interest for future research might be a comparison between logistics MNEs and domestic companies in the Chinese market. Another potential research area could be a comparison of the Chinese market with other mature or emerging logistics markets in order to identify similarities or differences in strategic choices.

To summarise the discussion of limitations and possible options for future research, it can be stated that the research area of logistics in China and the specific role of logistics MNEs provides ample scope for further investigation. It might be of specific interest to compare the insights gained in this study with those collected after several years in order to verify the success of the applied company strategies.

A competitive strategy in logistics – as in other sectors – needs to be dedicated and dynamic at the same time. With the changing regulatory rules owing to globalisation and the speed of technological innovation, successful logistics companies will be required to move faster than their competitors do. The accelerated flow of information even increases the urgency to keep up to speed with all relevant developments. These considerations may lead to another aspect to be considered for future research, which is the co-evolution of MNEs from developed countries with their fast-growing local rivals in specific emerging markets (Kumar, Gaur, Zhan, & Luo, 2018). While this study has already put some emphasis on competitive dynamics in the Chinese logistics markets, for example by examining and discussing voluntary

joint ventures, the area of dynamic interactions between competitors can be seen as a worthwhile area to explore in more depths.

In conclusion, this study sheds light on the phenomenon of logistics MNE strategy in the context of China. The depths of findings provide a significant contribution to both IB and logistics research. Further, the study contributes managerial recommendations to foreign operations in the Chinese logistics market and answers questions relating to strategic investment decisions. Being successful in one of the most competitive environments and considering the fast-changing global economic development in a VUCA world requires a certain tenacity in order to implement strategic measures that involve considerable risks. One interviewee in this study quite precisely stated: 'You have to be daring in China.' While this requirement mainly relates to a general business attitude, it is advisable for all MNEs operating in China to assess their risk exposure, actively review their previous investment as well as growth plans and hence expand their capabilities in order to successfully manage risks and uncertainties in their business. Applying ambidexterity in the business strategy involves continuously searching for new business opportunities and openings for risk sharing, for example by collaborating with local logistics companies.

So far, no considerable divestments by MNEs have been experienced in the Chinese logistics market. While some foreign companies have reconsidered their domestic strategies and concentrated on cross-border business instead, it seems very unlikely that these companies can afford to neglect the important Chinese market in the near future. Currently, China is either the origin or the target destination for the most valuable supply chains in the world. It will be interesting to track developments in the upcoming years in order to see whether the growing competition of domestic companies and global logistics newcomers as well as the changing determinants in the global economy will influence the future strategy and success of MNEs in the Chinese logistics market.

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Appendix I

Database Search Results incl. Hits and Extracted Literature

Bibliographic database	Date of search	Search terms and hits						Total no. of literature extracts
		1st run	Hits	In scope	2nd run	Hits	In scope	
www.oecd-ilibrary.org/ www.OECD.org	03.02.2019	China AND investment, filters: Title, English and German, articles, working paper series, working papers, pre 2004-2019	12	1	China AND logistics, filters: Abstract, English and German, articles, working paper series, working papers, pre 2004-2019	3	2	3
Business Source Complete	17.02.2019	China AND logistics, filter: Title, 2000-2019, English and German	293	28				28
ProQuest	24.02.2019	China AND logistics, filter: Title, 2000-2019, excl. newspapers and wire feeds	169	15				13
Emerald	03.03.2019	China AND logistics in Abstract; limited to Only content I have access to; years 2000-2019	45	1				0
ScienceDirect	04.03.2019	China AND logistics in title, abstract, keywords; years 2000- 2019	247	5				4
Web of Science	04.03.2019	TI=(logistics AND China); 2000- 2019; Open Access	35	2				2
EthOS - doctoral theses from the UK and Ireland	03.03.2019	China AND logistics	47	1	China AND logistics AND multinational	2	0	1
DART - European theses	03.03.2019	China AND logistics	15	0				0
Total								51

Appendix II

Applied Inclusion and Exclusion Criteria

Parameter	Criteria for literature	
	In scope	Out of scope
Timeframe	General research work: 2000-2019	Before 2000
Language	English, German	All other languages
Geography	Mainland China	Special studies on Hongkong, Taiwan
Type of literature	Books and book chapters; journal articles; PhD, Master or MBA theses	Book and literature reviews, undergraduate assignments
Foreign Direct Investment (FDI)	China	Other countries
	Inbound	Outbound
	Subsidiaries, Joint ventures	Pure financial investment
	FDI from business view	Political economy, Monetary Policy
	FDI by big corporations	FDI by SMEs
	Industry focus on logistics	Specific other industries
Logistics China	Nationwide, Cross-border	Logistics within chinese regions, single locations, with single countries, global comparisons
	General logistics services	Logistics for specific industries, tourism, public transport Specialized services, Reverse Logistics Service Parts Logistics Supply Chain Financing City Logistics e-Logistics
	Source: Developed by the author of this study	RFID, specific technologies Company internal logistics Specialized studies on Legal, Financials, IT topics
	3PL, 4PL, Outsourcing	Single branches, specialties (e.g. Transfer Pricing, Environment, Controlling, Marketing)
Multinational enterprises China	Overall strategy and managerial practice by logistics MNEs	Amina Zuk: A Study of Strategic Investments by Multinational Logistics Providers in China Specific HR and labour practices, cross-cultural management, expatriate policies, etc.

Appendix III

Details on Logistics Literature in Scope

No.	Author(s)	Title	Category	Main method applied	Bibliographic database
1	Davies, K. (2013)	China Investment Policy: An Update OECD Working Papers on International Investment, 2013/01	Qualitative/ quantitative	Narrative / data analysis	OECD.ilibrary.org
2	Molnar, M. and W. Wang (2015)	A Snapshot of China's Service Sector	Qualitative/ quantitative	Narrative / data analysis	OECD.ilibrary.org
3	OECD (2018)	Economic Outlook for Southeast Asia, China and India 2018 - Update: Promoting Opportunities in E-commerce	Qualitative/ quantitative	Narrative / data analysis	OECD.ilibrary.org
4	Chu, Z., Feng, B., & Lai, F. (2018)	Logistics service innovation by third party logistics providers in China: Aligning guanxi and organizational structure	Quantitative	Mail survey, data analysis	Business Source Complete, ScienceDirect, Web of Science
5	Huo, B., Wang, Q., Zhao, X., & Hua, Z. (2017)	Barriers to third-party logistics integration: empirical evidence from China	Quantitative	Mail survey, data analysis	Business Source Complete
6	Giuffrida, M., Mangiaracina, R., Perego, A., & Tumino, A. (2017)	Cross-border B2C e-commerce to Greater China and the role of logistics: a literature review	Qualitative	Narrative	Business Source Complete
7	Ding, M. J., Kam, B. H., Zhang, J. Y., & Jie, F. (2014)	Effects of human resource management practices on logistics and supply chain competencies – evidence from China logistics service market	Quantitative	Mail survey, data analysis	Business Source Complete
8	Liu, W., Liu, B., Tang, O., Chen, L., & Liu, X. (2014)	An empirical examination of the contents and evolution of the composing factors of logistics enterprise competitiveness: a perspective from China	Quantitative	Mail survey, data analysis	Business Source Complete
9	Knowler, G. (2014)	Logistics benefiting from China's rapid e-commerce growth	Qualitative	Narrative	Business Source Complete
10	Knowler, G. (2015)	China logistics reaps rewards of rising trade, domestic consumption	Qualitative	Narrative	Business Source Complete
11	Tan, A. W. K., Yifei, Z., Zhang, D. L., & Hilmola, O. P. (2014)	State of third party logistics providers in China	Qualitative/ quantitative	Focus group interviews, survey, data analysis	Business Source Complete
12	Liu, X. (2014)	China-based logistics research: a review of the literature and implications	Qualitative	Narrative	Business Source Complete
13	Hooi Lean, H., Huang, W., & Hong, J. (2014)	Logistics and economic development: Experience from China	Quantitative	Production function model	Business Source Complete
14	Burnson, P. (2013)	China Logistics: Build it and they won't leave	Qualitative	Narrative	Business Source Complete
15	Shi, Y., & Handfield, R. (2012)	Talent management issues for multinational logistics companies in China: observations from the field	Qualitative	Narrative	Business Source Complete
16	Liu, X. (2011)	Competitiveness of logistics service providers: a cross- national examination of management practices in China and the UK	Qualitative / quantitative	Interviews, survey and data analysis	Business Source Complete
17	Wang, Q., Huo, B., Lai, F. and Chu, Z. (2010)	Understanding performance drivers of third-party logistics providers in mainland China	Quantitative	Mail survey, cluster analysis	Business Source Complete, ProQuest, Emerald
18	Liu, X., Grant, D.B., McKinnon, A.C. and Feng, Y. (2010)	An empirical examination of the contribution of capabilities to the competitiveness of logistics service providers: A perspective from China	Quantitative	Survey and regression analysis	Business Source Complete, ProQuest
19	Chan, S. (2008)	China Carries for Logistics a Torch	Qualitative	Narrative	Business Source Complete
20	Wang, Q., Chu, Z., Zhou, Q. and Lai, F. (2008)	A Comparative Study of Third-Party Logistics in Mainland China and Hong Kong	Quantitative	Mail survey, data analysis	Business Source Complete
21	Hong, J. (2007)	Firm-specific Effects on Location Decisions of Foreign Direct Investment in China's Logistics Industry	Quantitative	Conditional logit model system	Business Source Complete
22	Armbruster, W. (2007)	Despite challenges, China is an attractive market for 3PLs, logistics expert says	Qualitative	Narrative	Business Source Complete
23	Hong, J. (2007)	Location Determinants and Patterns of Foreign Logistics Services in Shanghai, China	Quantitative	Nested logit models	Business Source Complete
24	Lai, F., Zhao, X. and Wang, Q. (2007)	Taxonomy of information technology strategy and its impact on the performance of third-party logistics (3PL) in China	Quantitative	Mail survey, cluster analysis	Business Source Complete
25	Pennington, J. (2007)	China's outsourced logistics market: the challenge for 3PLs	Qualitative / quantitative	Narrative / data analysis	Business Source Complete, ProQuest

Details on Literature in Scope (continued)

No.	Autor(s)	Title	Category	Main method applied	Bibliographic database
26	Hong, J. and Liu, B. (2007)	Logistics Development in China: A Provider Perspective	Quantitative	Mail survey, data analysis	Business Source Complete
27	Trunick, P.A. (2007)	The Many Faces of Logistics in China	Qualitative	Narrative, interviews	Business Source Complete
28	Lai, F., Zhao, X., & Wang, Q. (2006)	The impact of information technology on the competitive advantage of logistics firms in China	Quantitative	Mail survey, data analysis	Business Source Complete, Emerald
29	Wang, Q., Zantow, K., Lai, F. and Wang, X. (2006)	Strategic postures of third-party logistics providers in mainland China	Qualitative / quantitative	Survey and data analysis	Business Source Complete, ProQuest, Emerald
30	CILT (2005)	The China Syndrome: A minefield for logistics operators	Qualitative	Narrative	Business Source Complete
31	Goh, M. and Ling, C. (2003)	Logistics development in China	Qualitative / quantitative	Narrative, data analysis	Business Source Complete, Emerald
32	Lau, A., & Su, M. (2016)	China's e-commerce soft spot: Logistics	Qualitative	Narrative	ProQuest
33	Fu, B., Bentz, B. A., & McCalla, M. T. (2011).	Logistics in China: Thinking ahead	Qualitative / quantitative	Narrative, data analysis	ProQuest
34	Kerr, J. (2004)	China confronts logistics challenges	Qualitative	Narrative	ProQuest
35	The Economist (2009)	Business: Return to sender; Logistics in China	Qualitative	Narrative	ProQuest
36	Bolton, J. M. and Yan, W. (2003)	Distribution and Logistics in Today's China. (cover story)	Qualitative / quantitative	Narrative / data analysis	ProQuest
37	Byrne, P. M. (2006)	Five trends support logistics success in China	Qualitative / quantitative	Narrative / data analysis	ProQuest
38	Hong, J., Chin, A.T.H. and Liu, B. (2007)	Logistics service providers in China: Current status and future prospects	Qualitative / quantitative	Survey and data analysis	ProQuest, Emerald
39	Chin, A. and Hong, J. (2005)	The Location Decisions of Foreign Logistics Firms in China: Does Transport Network Capacity Matter?	Quantitative	Multinomial logit approach	ProQuest
40	Jiang, B. and Prater, E. (2002)	Distribution and logistics development in China: The revolution has begun	Qualitative / quantitative	Interviews and data analysis	ProQuest, Emerald
41	Tuerxun, G. (2017)	The Government Supports of People's Republic of China for Improving Logistics Sector	Qualitative	Narrative	ProQuest
42	Hook, L. (2017)	Amazon's China logistics push to pile pressure on rival shippers	Qualitative	Narrative	ProQuest
43	Liu, X. L. (2008)	The competitiveness of logistics service providers : an investigation in China and the UK	Qualitative/ quantitative	Interviews, survey, data analysis	ETHOS
44	Mahpula, A., Yang, D., Kurban, A., & Witlox, F. (2013)	An overview of 20 years of Chinese logistics research using a content-based analysis	Qualitative	Content-based analysis	ScienceDirect
45	Hong, J., & Chin, A. T. H. (2007)	Modeling the location choices of foreign investments in Chinese logistics industry	Quantitative	Nested logit model	ScienceDirect
46	Miao, Z., Cai, S., & Xu, D. (2012)	Exploring the antecedents of logistics social responsibility: A focus on Chinese firms	Quantitative	Survey and data analysis	ScienceDirect
47	Hong, J. (2007)	Transport and the location of foreign logistics firms: The Chinese experience	Quantitative	Conditional logit models based on census data	ScienceDirect
48	Yi, S., & Xie, J. (2017)	A study on the dynamic comparison of logistics industry's correlation effects in China	Quantitative	Input-output analysis	Web of Science
49	Gao, Y., Chang, D., Fang, T., & Luo, T. (2018)	The Correlation between Logistics Industry and Other Industries: An Evaluation of the Empirical Evidence from China	Qualitative/ quantitative	Narrative, linear regression model	Web of Science

Appendix IV

Units of Analysis - Key Figures for Logistics MNEs in China

Logistics MNC	Established in Mainland China	No. of Locations in China	No. of Customers in China	No. of Employees in China	No. of Fleet in China	Express China - Shipments p.a.	Airfreight China - tons p.a.	Oceanfreight China - TEU p.a.	Roadfreight China - tons p.a.	Supply Chain Solutions China	eCommerce China
DHL	1980/1986	467	84.731	13.300	4.327	34.139.872	480.000	723.000	635.500	offered	offered
UPS	1988	228	n/a	6.227	864	n/a	n/a	n/a	n/a	offered	offered
FedEx	1984	more than 100	n/a	9.000	2.800	n/a	n/a	n/a	n/a	offered	offered
DB Schenker Logistics	1979/1981	60	n/a	5.000	n/a	not offered	n/a	n/a	n/a	offered	offered
Kuehne & Nagel	1979	40		3.000		not offered		1.300.000			n/a
TNT*	1988	36		3.000							
CEVA Logistics	1988	35	n/a	1.700	700 trucks a day	not offered	n/a	n/a	6.25 mn pallets	offered	not offered
Panalpina	1976	19	n/a	1.600	n/a	not offered	n/a	n/a	n/a	offered	not offered

n/a ... no public data on country level available

TEU... Twenty-feet equivalent unit

* merger with FedEx Express in 2016

Source: Developed by the author of this study, data collected from company internet publications

Appendix V

Overview of Video Featured Managers of Logistics MNEs

No.	Year	Logistics MNE	Featured manager	Role	Media channel	Focus topic
V-1	2014	DP DHL Group	Dr. Frank Appel	Chief Executive Officer DP DHL	CNBC	Chinese economic development and logistics opportunities
V-2	2014	DP DHL Group	Roger Crook	CEO DHL Global Forwarding	McKinsey	Changing international trade lanes
V-3	2014	DP DHL Group	Kelvin Leung	CEO DHL Global Forwarding Asia-Pacific	Bloomberg	Outlook for global trade and logistics
V-4	2014	DP DHL Group	Oscar de Bok	CEO DHL Supply Chain Asia-Pacific	CNBC	Focus on Chinese supply chain market
V-5	2014	DP DHL Group	Dr. Frank Appel	Chief Executive Officer DP DHL	Bloomberg	Expansion in China
V-6	2017	DP DHL Group	Dr. Frank Appel	Chief Executive Officer DP DHL	Bloomberg	Strategy for China
V-7	2015	DP DHL Group	Jerry Hsu	CEO DHL Express Asia-Pacific	Bloomberg	Effect of intra-Asia trade and US Asia trade on Express business

Overview of Video Featured Managers of Logistics MNEs (continued)

No.	Year	Logistics MNE	Featured manager	Role	Media channel	Focus topic
V-8	2016	DP DHL Group	Jerry Hsu	CEO DHL Express Asia-Pacific	DP DHL Group	Expansion of Express business in China
V-9	2017	DP DHL Group	Jerry Hsu; Alan Liu	CEO DHL Express Asia-Pacific; Manager Shanghai hub	Deutsche Welle	Strategy for China, building of new Shanghai hub
V-10	2017	DP DHL Group	Ingmar Lorenz; Detlef Quellmalz; Thorsten Biebach	DHL cargo plane pilot; DHL Gateway manager; DHL logistics centre manager	Deutsche Welle	Growth in air cargo traffic for DHL in China, focus on imports from China to Germany
V-11	2015	DP DHL Group	Kelvin Leung	CEO DHL Global Forwarding Asia-Pacific	CNBC	Third rail service China - Europe
V-12	2015	UPS	David Abney	Chief Executive Officer UPS	CNBC	Business opportunities in China
V-13	2012	UPS	David Abney	Chief Executive Officer UPS	Bloomberg	International growth focus areas - China
V-14	2013	UPS	Bernard Jiang; Alan Amling	UPS China Supply Chain & Healthcare Logistics Director; VP Marketing – Global Contract Logistics & Distribution	UPS China	Opportunities of Chinese logistics market

Overview of Video Featured Managers of Logistics MNEs (continued)

No.	Year	Logistics MNE	Featured manager	Role	Media channel	Focus topic
V-15	2017	UPS	David Abney	Chief Executive Officer UPS	Bloomberg	UPS expands China ties in SF Holding joint venture
V-16	2017	UPS	Ross McCullough	President of UPS Asia Pacific	CNBC	Growth opportunities in China
V-17	2016	FedEx	Fred Smith	Chairman and CEO	CNBC	Trade with China, impacts on logistics development
V-18	2016	FedEx	Dr. Udo Lange	EVP and COO FedEx Trade Networks	JOC.com	International e-commerce opportunities
V-19	2017	FedEx	Fred Smith	Chairman and CEO	Fortune	New Trade Deal Should Open Up China Markets
V-20	2012	FedEx	Eddie Chan	Head of China, SVP FedEx China	Conference Airport Cities 2012, Denver	Positioning of FedEx in China, Guangzhou Hub
V-21	2017	FedEx	Fred Smith	Chairman and CEO	Fox Business Network	E-commerce with China
V-22	2010	FedEx	Jeff Smith	Director of Investor Relations	Morning Star	FedEx grows in China
V-23	2017	FedEx	Fred Smith	Chairman and CEO	Fortune	Effects of free-trade on China business
V-24	2018	Institution	Fred Teng	President of the America China Public Affairs Institute	CGTN America	China's logistics market

Overview of Video Featured Managers of Logistics MNEs (continued)

No.	Year	Logistics MNE	Featured manager	Role	Media channel	Focus topic
V-25	2016	DB Schenker	Christopher Smith	CEO of DB Schenker in Hong Kong and South China	Heute Logistik	DB Schenker's opportunities in the "One Belt, One Road" initiative
V-26	2011	DB Schenker	Axel Marschall	Chairman DB Schenker Rail Automotive GmbH	Deutsche Bahn	Delivery of BMW automotive parts to China
V-27	2013	DB Schenker	Dr. Rüdiger Grube; Ma Yi	CEO Deutsche Bahn AG; Mayor Zhengzhou	Deutsche Bahn	Rail connection from China to Hamburg
V-28	2016	DB Schenker; Fraunhofer IML	Michael ten Hompel	Managing Director - Fraunhofer IML	Deutsche Bahn	Exploring the future of logistics
V-29	2016	Kuehne + Nagel	Achim Glass	Head of Global Automotive Vertical (SVP) at Kuehne + Nagel Management AG	Automotive Logistics	Plans for expansion, effect of slowdown in China's economy on business
V-30	2013	Panalpina	Peter Ulber; Frank Hercksen; Joerg Twachtmann; Tommas Hammar; et al.	Chairman of the Board of Directors; Global Head of Ocean Freight; Global Head of FCL; Regional Head of Ocean Freight LCL, APAC	Panalpina	Ocean Freight Solutions to and from Asia and China

Overview of Video Featured Managers of Logistics MNEs (continued)

No.	Year	Logistics MNE	Featured manager	Role	Media channel	Focus topic
V-31	2013	Panalpina	Karl Weyeneth; Lucas Kuehner; Alastair Robertson; et al.	COO - Panalpina; Global Head of Air Freight; Chief Human Resources Officer; Manager OCN	Panalpina	Own controlled network for air freight supports the important trade lanes, e.g. China to US
V-32	2017	Panalpina	Andrew Lahy	Head of the R&I Centre, Panalpina	The Business Debate	China's role in circular, sustainable supply chains of the future
V-33	2013	CEVA Logistics	Marv Schlanger	CEO, CEVA Logistics	SupplyChain Brain	Future strategy of CEVA globally, demand impact on Asia and China
V-34	2015	CEVA Logistics	Dr. Christian Wurst	Chairman CEVA Logistics GmbH	DVZ	Global logistic challenges
V-35	2013	TNT	Søren Høegh	Director of Product Management and Development	TNT Communications	Market development in China

Source: Developed by the author of this study

Appendix VI

Overview of Interview Participants

Interview participant	Country	Topic expertise	Company / Business area	Role
I-1	China	Engages with multinational logistics companies and Chinese institutions, regularly publishes institutional views and strategic advice	A foreign Chamber of Commerce	General Manager
I-2	China	Contributes customer requirements towards multinational logistics providers in China, conference speaker on logistics strategy for China	Automotive tyre manufacturer	Director Logistics Automotive Asia/Pacific
I-3	China	Regional spokesperson of German logistics association, consults on industrial projects, several publications on Chinese logistics perspective	International logistics consultancy, university	Managing Director and Professor for Logistics
I-4	Germany	Specializes in international marketing for multinationals, publications on strategic automotive market development and logistics requirements in China	University	Professor for International Marketing
I-5	Germany	Specializes in Chinese logistics and future research for international supply chains, publications on Chinese logistics market strategy	University	Professor for Transport and Logistics
I-6	China	Advises multinationals on Chinese market requirements, specializes in tax regulations for logistics MNEs in China	International consultancy	Partner, Tax
I-7	China	Logistics business expertise from provider perspective, focuses on strategy for Freight forwarding business in China	DHL Global Forwarding	Senior Director Strategy, DHL
I-8	China	Logistics business expertise from provider perspective, specializes in logistics shared services strategy	DHL Global Business Services	Head of Sourcing Services, DHL

Overview of Interview Participants (continued)

Interview participant	Country	Topic expertise	Company / Business area	Role
I-9	China	Advises MNEs on Chinese Company Law for logistics companies, involved in setting up the railroad connection from China to Europe via Kazakhstan	International law firm	Partner, Company Law
I-10	China	Specializes in China strategy of logistics companies, published several studies and reports on Transport and Logistics practice	International accounting consultancy	Partner, Transport & Logistics
I-11	China	Logistics business expertise from provider perspective, focuses on Supply Chain business strategy	DHL Supply Chain	Managing Director, DHL
I-12	China	Provides expertise from independently engaging with Chinese logistics companies and MNEs, publishes network magazine	Logistics network	Founder & Executive Director

Source: Developed by the author of this study

Appendix VII

Basic Interview Guideline

Topic: "Strategic Investments by Multinational Logistics Providers in China"

Researcher: Amina Zuk, University of Gloucestershire

Note: The interview is planned in a semi-structured form, which means it is not limited to the pre-defined questions and further issues may be brought up by the interviewee throughout the course of the discussion. The interviewees may put a special focus on their areas of expertise, which means not every question needs to be addressed.

Chinese economy and FDI:

- (1) Current economic situation and business environment in China
 - a. Please explain the situation from your personal (company, institutional) experience.
 - b. Can you share some insight on specific Chinese markets? Which branches of industry do you consider as most relevant today?
 - c. Did this area face any specific changes in the last 1-2 years?
- (2) Inward Foreign Direct Investment (FDI)
 - a. How do the determinants of the economic environment affect the development FDI in China in general?
 - b. Are there any specific influential factors regarding the logistics sector?
- (3) International trade and China
 - a. What is the character of Export vs. import?
 - b. How is this affected by trade barriers, tariffs, bureaucracy?
- (4) Tax impacts on the logistics industry
 - a. Current situation and expected development?
 - b. What are Tax law requirements regarding Insurance Programs, transfer pricing, double tax treaty, etc.?
 - c. What are the implications of M&A tax, Corporate Income Tax and other effects by Indirect Tax for FDI?
- (5) Corporate Compliance
 - a. What is your view on the compliance situation overall?
 - b. What differentiates the Guanxi network vs. corruption in your view?
 - c. How do you see the relevance of compliance and risk management for FDI?
- (6) Expected future development
 - a. How do you see the Chinese economic development (GDP, exchange rate, trade and FDI law, etc.)?
 - b. What changes can be expected along the way?

Basic Interview Guideline (continued)

Logistics sector: (excl. classic postal areas and express document services)

(7) Situation of Logistics in China

- a. The World Bank Logistics Performance Index (LPI) ranks Hong Kong in second, but Mainland China in 26th place. Would you generally agree or not, and why?
- b. What can you say about key players and status of competition in Chinese Logistics?
- c. Could you name the major requirements on infrastructure and Logistics services?
- d. What is the involvement of governmental or non-governmental associations in the areas of business development in Logistics and infrastructure?

(8) Situation of Multinational Enterprises (MNEs) being invested in Chinese Logistics

- a. What are the key success factors for MNEs in the Chinese market (firm-specific advantages, core competencies, product portfolio, economies of scale etc.)?
- b. What are the present legal challenges, e.g. taxation, customs practices, statutory reporting?
- c. What are the strengths and weaknesses of Logistics MNEs? Global flexibility / agility vs. reliability / quality vs. safety vs. cost? Other factors?

(9) Trends in Chinese Logistics

- a. Worldwide Logistics growth is 2.5 times the growth of World GDP growth. How do you see the development in China? What are the most relevant indicators?
- b. Would you expect more outsourcing and extension of supply chain coverage by Logistics suppliers or rather going back to more warehousing, and why?
- c. Where do you assume a growing demand: for 3PL as a one-stop shop service / or rather for 4PL concentrating on consulting specialized in logistics, transportation, and supply chain management? Why?
- d. What is your view on the current development in air, sea and road freight, multimodal solutions, usage of railway systems?

(10) Projected development of the Chinese Logistics market

- a. What are the areas of expected growth, e.g. industrial specialization, geographies in China, trade lanes?
- b. What are the effects by urbanization and megacities, expected demand for Green Logistics services?
- c. Which technology is expected to mostly influence the Chinese market? (Electric mobility, RFID, etc.)?
- d. Which developments can be expected in the labour market for logistics experts, skills, war for talent, attrition?
- e. What do you name as the major opportunities and threats for logistics MNEs?

Basic Interview Guideline (continued)

(11) Business strategy for a logistics MNE

- a. How should a sustainable business strategy be determined?
- b. Which managerial practices can enhance competitiveness in China in the long term?

DHL business:

(12) What is the brand awareness of DHL in China – Multinational, US, German?

(13) DPDHL group-wide sector management, focus: Life Sciences & Healthcare, Technology, Energy

- a. How is this reflected in the Chinese DHL business?
- b. What are the implications for group-wide activities, e.g. strategic supplier development?

(14) DHL Global Forwarding business in China

- a. Please describe the development in the sectors: Technology, Automotive, Chemicals, Consumer, Retail (including Fashion & Apparel) and Energy.
- b. Please describe the customer base, i.e. multinationals, upcoming heroes, SMEs.
- c. What is the usage mode of containers, trucks, pallets, etc.? Multi-modality?
- d. How will the targeted growth in sea freight affect China?
- e. Could you describe the strategic direction of DGF in China, e.g. NFE transformation program?

(15) DHL Supply Chain (DSC) business in China

- a. How is the current situation in the six focus sectors: Consumer, Retail, Technology, Life Sciences & Healthcare, Automotive and Energy?
- b. What would you consider as core service offers in China? (e.g. end-to-end contract logistics, e.g. warehousing, distribution, managed transport and value-added services)
- c. What is the development in 4PL areas: business process outsourcing, supply chain management and consulting solutions?
- d. Please describe the customer base, i.e. multinationals, upcoming heroes, SMEs.
- e. Could you illustrate the general strategic direction of DSC in China?

(16) Future projection of DHL business

- a. How do you expect the development of DHL in China, i.e. geographical network coverage, sectoral scope?
- b. What are key strategic levers and dynamic capabilities to get there? (E.g. technology, operational excellence, process and systems standardization, security in IT and whole supply chain etc.)

Appendix VIII

Exemplary Video Transcript V-15

Q: Take us through this deal - the joint venture with S.F. Express. First of all, tell us about S.F. Express, what is it?

A: S. F. Express is the leading China express delivery company and they have just done an amazing thing over the last few years. They built up an incredible network and they are absolutely the type of company that we like to partner network with.

Q: You've been in China since 1988. Why Did you feel the need to joint venture with a Chinese company to expand your presence there?

A: Well you know, we were always looking for what's best for our customers. We have a significant presence in China, we are really proud of our operations. But if you take the mutual histories of the two companies, it just increases the value in the eyes of our customers. So, S.F. Holdings has an incredible presence as far as 13,000 access channels to small and mid-size Chinese companies. You combine that with our incredible express network where we deliver 19 million packages a day through 220 countries and territories. And one plus one equals a lot more than two in this case.

Q: Yeah, I've actually read in China Daily about this deal. They have said that S.F. Express delivered over 31 billion packages last year. That's not UPS' scale, but it's pretty darn big, I think that's worth to say. What initially will you be putting into this joint venture and what would they be putting into the joint venture?

A: We know this is going to be an equal joint venture and will both put somewhere around \$5 million into the joint venture. And this is phase 1 and we'll see where we go from there. But you know the China market is so important to us. It is the world's largest e-commerce market and it is just an incredible opportunity to provide customers even more benefit.

Q: So initially, according to your reports this will be focusing on transportation of packages from China to the United States. And what is phase 2, what is phase 3? How big could this become for you?

A: What we like, this is just the very beginning. And this could be very big to us but more importantly to our customers. But first is from China to the US. We are equally impressed and looking forward to US to China and then of course China to the rest of the world and back. So there's all kinds of potential here, this is a very big first step. Were really excited about it, but there's more to come. That's for sure.

Exemplary Video Transcript V-15 (continued)

Q: As you conceptualised this joint venture, will it be focused principally on business to business transportation, business to consumer or mix of the two?

A: You know, David, it is going to be a mix of the two. And where we really believe we had the additional benefit, it is to our small and mid-sized customers in China, that really have not had access to our network in the way that they will have now. So but it's B2B and B2C, that's for sure.

Q: In reading about S.F. Express, it strikes me, you talk about small to medium sized customers. And that they have really been in the triangle of Alibaba. A lot of their success and a remarkable growth pattern has been because of Alibaba, which focuses on small medium organisations. So to what extent is this really a way to start doing more business with Alibaba for UPS?

A: Well, that's of course any time you like to do business in China, Alibaba is a force to be recognised. And they just have significant presence. And we already have a good relationship with them and we will continue. In fact, next month Alibaba is having their first US conference with small and mid-sized customers and I will be one of the presenters of that conference. And we feel very good about their relationship.

Appendix IX

Exemplary Interview Transcript I-11

Researcher: Now, it's fine. Okay, good. Alright, thanks for participating. I would like to ask you a bit about the situation of logistics in China and your experience, your view on the current status? #00:00:15-3#

Interviewee: Yes, so actually it's quite a big topic because logistics as you know it's a very broad view. If you look at it overall, you know, in China I think the logistic cost is probably about 8 per cent of the GDP while in the US it's 3. #00:00:33-3#

Researcher: Yes. #00:00:32-9#

Interviewee: So, therefore it's very inefficient. On the other hand, it's largely -- outsourcing is still not as popular as the mature market. However, in the recent years we see there are more and more outsourcing trends and the market was from very fragmented to the very highly competitive and we see that there will be a trend of consolidation, especially in the domestic express business, in the forwarding as well as in contra logistic business. We all see the validation. E-business is a strong growing sector while they actually put a lot of pressure for logistic infrastructure for the home delivery so, therefore, you know, in the next year e-business will come, they're changing the whole logistic landscape, especially for the commercial consumer behaviours. #00:01:21-5#

Researcher: Okay, okay. #00:01:24-7#

Interviewee: So overall, I think it's very, very it's a very dynamic industry, China, a lot of the service innovations, service developments will be merging and I can project the next five to ten years you can see a lot of new modes of logistic services will be emerging in the China market. It will be driven, singularly driven by, you know, the dense population and the high growth of the domestic consumption market and also become a weak trading for export market because Chinese permits are going to change. #00:01:54-5#

Researcher: So you clearly also see the trend from former export orientated branches to internal consummation? #00:01:58-7#

Interviewee: That's definitely and that's actually got to continue. #00:02:04-5#

Researcher: Okay. I've put here for the question seven, question number 7, I've put here a bit thought-provoking information and I've just recently seen the World Bank Logistics Performance Index. #00:02:16-4#

Interviewee: Yes. #00:02:17-6#

Researcher: And they still had Singapore and a few other players as they usually have in those studies. Hong Kong in number second but China is still on the 26th place #00:02:26-7#

Interviewee: Yes. #00:02:28-1#

Researcher: I guess Germany was around 10 or 12. So, what would you say about this? Is this somehow giving the right picture? Are we comparing the right things here? #00:02:35-6#

Exemplary Interview Transcript I-11 (continued)

Interviewee: I think in terms of operating efficiency especially in Hong Kong was going as logistic centre for 100 years so I think the whole city actually is a logistic city for the transit for the distributions. So, I think the efficiency in Hong Kong is definitely a whole lot higher than the overall efficiency in China. Where in this case I tend to agree you know in China we still have a bit of efficiency and we still have a bit of a high kind of transactional cost the logistics and also for the domestic transportation road and it's actually more expensive than what we normally see in Hong Kong and other countries. So, in this case the logistics are now cheap in China and it was very fragmented. So, I generally agree with that. #00:03:24-1#

Researcher: Okay. Regarding logistics cost, do you see a differentiation between the coastal areas in the east and the western part? #00:03:30-7#

Interviewee: Definitely. I think coastal especially in Shanghai area I think is the most developed area and also they play more market games. Then they go to the Pu river delta come the second and then they go to the north, around Beijing / Tianjin area. Western still is on their way to catch up but in this thing the Chinese government has invested a lot in the infrastructure in the west. #00:03:55-1#

Researcher: Okay. Key players in logistics; you said it's quite a fragmented market so it's lots of local players. But how would you...who would you name a big player from multi-nationals and the local Chinese ones? #00:04:07-6#

Interviewee: Yes. Normally I think you have two dimensions to classify the players. On the one dimension you're talking about ownership structure, you have SOE and then you have the local private companies and then you have the international players, so this is one dimension. In the second dimensions you have to come to like they are the international freight forwarders in place, there are contract logistics players and there are express players and there are also domestic road carriers. So, under these dimensions you almost can draw like 12 boxes and each boxes actually we have a competition over there. So give you an example if you see them it's an Express, SOE and the major competitor actually was SOE, EMS the China Post but the private company for express is like a Yuantong, Shentong or also a Yuanda.

And internationals definitely, you know, you see UPS, FedEx over here, however they're more for international express and not for domestic. Then from the forwarding side you also see like you have SOE forwarders, like Sinotrans and shipping companies and postal orders and you also have international as normally, DGF, Kuehne & Nagel, Panalpina, Schenker. And local actually is a less player in this forwarding area and we are pretty much localised, like we are specialising into individual customer clearance or customer zone. For contract logistics where we are heading, so for SOE we are competing primarily on the China Post Logistics, China Merchant Logistics and international we are actually competing against Schenker and AC (correct?) and for local private we are competing against like a Sanjay (correct?) and a few others so these are the players. So, it's still a very fragmented market and you always can find different players in different boxes. #00:06:15-6#

Exemplary Interview Transcript I-11 (continued)

Researcher: Okay. And how many full service suppliers are there compared to DHL? It's the big ones only? #00:06:20-0#

Interviewee: Full service providers I think it's very, very limited. I think probably a hand-full like to try full service and most internationals will focus on like niche. They don't have a full service. #00:06:32-6#

Researcher: What are then the natural requirements? On the infrastructure and the logistics service from the market, mainly from the customers then? #00:06:39-1#

Interviewee: But for customer actually, you know, they actually want you to control your operation and in China there are a few ways you can control your operation and as you control people or control your subcontractor might be wrong way but if it's your own asset it may be another perceived value for people seeing the job operation. So it's really less matter about how many people or how many assets you have and more about how much you actually control and manage. So, that's the differentiation. It's a kind of simple perception can be if you have more asset you have more control. So, this is were the customer is actually driving you to have more asset. #00:07:19-4#

Researcher: Okay. #00:07:19-5#

Interviewee: But on the other hand, it's always matter how you really control things for yourself, your customer want delivery, service quality. #00:07:26-6#

Researcher: Okay. So it's about the network capabilities, the quality but then also the cost? #00:07:32-8#

Interviewee: The cost, exactly. #00:07:32-8#

Researcher: Is the cost the most important or is it somehow more balanced? #00:07:36-0#

Interviewee: Chinese people are very cost sensitive, although I think for logistics actually you don't have really long-standing cost items, a lot of costs are customised but cost still is a very sensitive part for that and now I think in the recent years we see the customers actually focus more and more on quality. Delivery liability, infrastructure, the facilities and things, so quality and also HSE, the health safety environment. Health and this kind of quality becomes more and more important but cost is still number one. #00:08:08-0#

Researcher: Okay. Yes, then dealing with associations both on the governmental and also non-governmental side. On the first part I had some questions regarding bureaucracy, are there any regulations you need to cope with, so what is the situation there? #00:08:27-0#

Interviewee: I think the / #00:08:27-8#

Researcher: Has it changed in the past years? #00:08:28-0#

Interviewee: / yes, except for the domestic documentary delivery which was regulated by the postal law / #00:08:35-2#

Researcher: Yes, I know. #00:08:37-5#

Exemplary Interview Transcript I-11 (continued)

Interviewee: / the majority of the logistic industry are now open and free competition. So, it's real and on the way to be open up. Talking about this regulatory body and, you know, there's no kind of logistics harmony in China which interface the public transport and they have the public commerce and others they are very scared to comment on the regulating those things. But on the other hand you know, the major impact for us really, you know, about tax policies / #00:09:09-4#

Researcher: Tax policies, yes. #00:09:07-7#

Interviewee: / especially where logistics becomes one of the important service industry as in our 12th 5-year plan in China, logistics is one key industry even more than service industry. And there are also the tax reform for this industry where we introduce VAT in the industry. #00:09:28-5#

Researcher: Yes, the business tax is not relevant anymore and now it's VAT/ #00:09:32-2#

Interviewee: It's VAT. #00:09:31-4#

Researcher: / which is somehow from the cost-side is an advantage but I heard it might be a bit more of a process requirement internally then? #00:09:40-8#

Interviewee: Exactly. And also VAT reform actually works more in favour of local assets or who would buy their assets it will become more deductible. It's still in pilot. So it was a pilot at the beginning of the year in Shanghai and a pilot in the middle of the year in Beijing so we will see, yes. #00:09:57-8#

Researcher: Okay, okay. Situation of the multinationals in the Chinese logistics industry; so what are then the key success factors, firm-specific advantages, you named already the capability, the assets. Is there anything more on the side of core competencies, specialisation and product portfolio and so on? #00:10:20-4#

Interviewee: I think in multinational they are doing the multinational customers, so they normally have a multi-relationship with the customer or the customer is here and then they offer them consistent experiences and products. We provide them in the home country or in other countries. And also the multi-nationals I think their general strengths including the solution they provide a kind of core ideas, solutions and practices for logistics. I think all of these are sort of the strengths. The weakness really is how to adapt to the local game and how to go into have a more optimised cost structure and how to understand local practices which is somehow difficult to articulate. #00:11:03-3#

Researcher: Okay. #00:11:05-0#

Interviewee: And so in that case, you know, I don't think - you know, I can see the multi-nationals doing okay in China but not brilliant, fantastic. And I think they're doing okay because they have stress and the reason why they are not brilliant or fantastic is because the local flavour piece is obviously a weakness for the multinationals. #00:11:25-2#

Researcher: Okay. #00:11:26-6#

Exemplary Interview Transcript I-11 (continued)

Interviewee: And the ability to making efficient, in a quick way and an agile way, is far slower in multinationals compared to the local ones. #00:11:37-2#

Researcher: Okay, okay. #00:11:35-9#

Interviewee: I can't say it's a weakness, it's just a kind of matter fact. #00:11:41-3#

Researcher: Okay, okay. You mentioned already challenges from the legal side, taxation, what about customs practices, what are the customs reporting. And also the reporting from the statutory side for the companies. So the customs is rather relevant for the customers, customs clearing and so on. What can be done internally and how is this somehow affecting our internal reporting? #00:12:08-0#

Interviewee: As a matter of fact I think to be fair I think custom clearance and the overall activity in customs has improved significantly than ten years ago and regardless of the system and of the way professionalism and also most customs are very service-oriented. They're able to cooperate with you in very complicated practices under normal operations. So, I think it's all kind of a positive side for customs. The challenge is still because the regulations and in the way how to practice regulations there are inconsistencies and this as a matter of fact is because the trading terms are so complex so there are inconsistencies. But in general I think processing time before was very much an issue and no longer an issue but on the other hand it is still very subjective to the government. For instance like a recent case in the Philippines there was a diplomatic dispute and they put the sanctions on other imports, increase inspections. That's sort of the subject of diplomatic policy but on the other hand, I think not compared to improve a lot. #00:13:20-5#

Researcher: Okay. But might this be an area of specialisation for the multinationals specifically or is it rather that you also need to have the local grip there? #00:13:29-1#

Interviewee: I think both ways, normally if you are there and you have been dealing with it long you have a track record on trust, it's based always on trust. #00:13:42-2#

Researcher: Okay. #00:13:40-4#

Interviewee: And sometimes the local players are more trusting with us and sometimes we're more trusting with them. So I mean we are one of the largest operation areas in Shanghai so we build up a lot of trust with our customers. We don't need to go and buy local, we can go directly to the customer and managing a lot of complications. #00:14:01-2#

Researcher: Okay. Yes, strength and weaknesses I think we covered already a bit but what about flexibility, agility, reliability and any other factor as well. Where would you see the strength and weaknesses? #00:14:16-2#

Exemplary Interview Transcript I-11 (continued)

Interviewee: Definitely I see flexibility and agility is much, much worse compared with the local ones and if they're good or bad because the good side is more sustainable, you know, it's more kind of a deep and soft process before kind of taking like additions. But on the other hand, you know, if you're not flexible enough you will lose a lot of opportunity because consumer behaviour is a little bit different. So, we do have a lot of emotional buyers and to stimulate the continuous emotion from buyers you need to respond to their needs. So you don't need to challenge whether these needs is justified or not but if you don't capture it this way, the next one is coming. #00:15:06-3#

Researcher: Okay, so you need to react very fast. #00:15:08-1#

Interviewee: Yes. #00:15:09-1#

Researcher: And also the market is moving fast, decisions for or against suppliers are taken quite quickly. #00:15:14-6#

Interviewee: I'll give you an example. Like if you google Rheinbrücke in Bonn when I was there I think it took like five or six years to add a little bit like two or three metres height and here in half-a-year you already see a big bridge over there, so, the infrastructure is very fast. However, the quality sometimes might be challenging but if you look at those business customers the annual growth is like 400 per cent or 500 per cent so it's not just 15 per cent what we would feel aggressive. So this is not on a scale or the speed of these activities that we are talking about, so on this kind of fast-going dynamic market development we see a lot of opportunity. #00:16:01-0#

Researcher: Okay, I see. What about the cost and price situation in the e-business sector? I learnt previously everything could be ordered without transportation costs for the customer but now the market is changing? #00:16:18-6#

Interviewee: Yes. #00:16:16-6#

Researcher: Did you see this in your areas as well? Was it affecting also the business? #00:16:21-1#

Interviewee: Yes, yes, of course they are heading and transportation is a cost, especially when you need to have this time definite delivery service and high kind of a last, a good experience for a last mile delivery there are costs of this. So although the price pressure is there we rely on that. #00:16:42-7#

Researcher: Okay, so the market is changing there as well. So, do you think that the customers will buy this then? #00:16:46-5#

Interviewee: I can give you an example, my experience with Amazon.com in China so I ordered in the morning around seven or eight o'clock for a few books and I modified the order about half-an-hour and then for each for my first order I immediately get an email confirmation that my order was there and then they tell me that the estimated delivery time is around two or three o'clock this afternoon. #00:17:12-6#

Researcher: Okay. #00:17:12-6#

Exemplary Interview Transcript I-11 (continued)

Interviewee: Then at the noon-time I got an email and tells me, "Dear customer, your order has been dispatched". Then at around two o'clock I receive the order, I sign the paper and in half-an-hour I receive another email that says thank you for buying this and if I have time I can fill in this survey form for them.

So, the whole shopping experience is so great and in that case the customer will generally be okay to pay like a 5 Yuan extra for shipping. Because you don't need to go to the bookstore, you don't have to wait in the queue, just press a button and you can get your books in the afternoon. And they're not only for books, now you can buy all the groceries for your home and all your home appliances. #00:18:01-9#

Researcher: It's already a big market, it's just starting in Germany. Of course Amazon we have this one is quite big, I also use the express service, but for groceries it's just a starting market. #00:18:12-5#

Interviewee: You can decide what you want and you decide sorry I don't want this, they take it back. So in this case it's like shopping they just bring the post up to you. #00:18:22-2#

Researcher: So customers are ready to pay for the convenience then, okay. #00:18:25-8#

Interviewee: The pay for the convenience and costs sometimes is cheaper. #00:18:30-1#

Researcher: Okay, and then some further trends in Chinese logistics. So we are seeing here the comparison of logistics growth towards the GDP growth. So, how would you see this in China and what are the indicators? Of course the GDP growth rate which is around 8 per cent currently will be entered maybe above 8 per cent? #00:18:51-2#

Interviewee: 14, 15 per cent would be normally the trade so double of the GDP, so no matter domestic or international. So we see the whole market will be like 15 per cent up each year. #00:19:01-9#

Researcher: Logistics market, 15 per cent plus? #00:19:04-0#

Interviewee: Yes. #00:19:05-6#

Researcher: Okay. Yes, regarding outsourcing I think we discussed already but general extension of supply channels also thinking about warehousing, I'm thinking about general taking over more of the supply chains. How far is this developing? I was hearing different opinions in this area, so what is your view? #00:19:28-5#

Interviewee: I think they are developing more and more with outsourcing and a good example is with manufacturing they're already having outsourcing. HP is no longer a manufacturing company, HP is a logistic company because they sell logistics. #00:19:41-7#

Researcher: But they do this internally, they have more or less build an own company then? #00:19:45-2#

Interviewee: No, HP has an outsource. #00:19:48-0#

Researcher: It has really outsourced but some others have built their own logistics companies. #00:19:53-3#

Exemplary Interview Transcript I-11 (continued)

Interviewee: Apple is a Computer Company so it means that in the broader way they outsource already. So, you will see that people are actually appreciating more and more that they can do more with income delivery and they see that this is part of the access to the market. So, in this case, you know, I actually have seen some powerful people outsourcing more and more complicated operations you know, core manufacturing or core marketing and I do have a feeling that we will outsource soon. #00:20:24-8#

Researcher: So the potential is there and it will be tackled over the next few years? #00:20:29-1#

Interviewee: Definitely, yes. #00:20:28-9#

Researcher: Okay. Yes, is it rather more for going into just in time or is it going to further keeping the warehousing, keeping the storing, what would you see? #00:20:41-4#

Interviewee: I think for manufacturing it's more or less JIT because manufacturers will be less and less concerned about the factory or the inventory. However, for sales, I think the key thing is the access to the market. So, if you look at the sales behaviour they all push consumers to destinations so therefore the sales revenue is really driven by how many geographic coverage you can access so that the people can buy your goods. #00:21:07-4#

Researcher: Okay, okay. Well, coming to the buzz words; demand for 3PL as a one-stop service or is there a real demand for a 4PL so going into consulting, logistics consulting, any further specialisation and supply chain management. I'm also thinking about third party procurement. So, is this something that is already relevant? #00:21:32-4#

Interviewee: It will come, it will come. Actually this year we start to get some opportunities we can do 3PL or 4PL just because we have the carrier-base, supplier-base that's still fragmented. If you see the customer is demanding this then you would have a huge capacity for managing, performance tracking and everything. Now they realise getting a professional company like us for them we have existing logistics processes than all those other carriers and also on the other hand there are some specific things like health and safety and quality control they don't want to do individual interfaces with all the carriers. So in that case, there is a market for us. #00:22:13-1#

Researcher: It could become this one-stop shopping idea, okay. #00:22:18-4#

Interviewee: Definitely. #00:22:20-3#

Researcher: Generally foreseen development, I'm thinking on air, sea, road, multi-modality and I've also been talking at the exhibition with some of the railway people from Kazakhstan and Russia. So, how do you see the development there on the transportation side? #00:22:34-9#

Exemplary Interview Transcript I-11 (continued)

Interviewee: The rail has a strength it's a kind of good combination of cost and it has benefits for the international rail, the key challenge actually is various customer regulations. Especially you go through this commonwealth independent commonwealth countries and each customer regulation is complicated. So if you can get this resolved there will be actually a good alternative for ocean freight. Although we are competing with the new ocean lines where they can go to this North Arctic line and for domestic rail I think there are discussions in the next four years to open this up. I think China put a lot of infrastructure investment because previously the passenger train and the freight line share one and we do have this big situation where there is a peak on the passenger trains / #00:23:38-0#

Researcher: I see, yes. #00:23:36-4#

Interviewee: / like the spring festival where there are 200 million people. So in that case once this infrastructure is there, you will have a much stable freight network over there. #00:23:49-4#

Researcher: Okay. But is this something you would see as a big potential and once this infrastructure is set up it might be really of use. And also to be used in a multi-model way in logistics? #00:24:00-4#

Interviewee: Yes, of course. And another challenge for getting this one is the road department itself. It's self-sustaining, independent system where you are a government, bureaucracies over there so unless this can be changed like our current rail department they have their own court, their own police station and their own everything. So, now they start to separate this and also which may open up the rail to these public services. So I just feel that before we do a similar thing like the US doing in railroad with different operators so then we can bring the market competition and then in that case then we can come to the service and innovation. #00:24:45-9#

Researcher: How would you see the development of the trucking market? Do we really need to enhance the capability or does it generally-speaking a multinational player or a general big 3PL player need to have an own trucking network? #00:24:58-6#

Interviewee: Yes, well the thing is the truck resources are always supplying the market for most of the time and the truck is easy to maintain so in that case it is really making less sense for the multinationals to invest in all the big trucks. #00:25:17-0#

Researcher: To invest there, it doesn't make sense, yes. #00:25:18-8#

Interviewee: Each time while you have already this trucking system. So the thing which you can do is actually the last mile, and the last mile being done in your own vehicles. This actually is a touch point with our customer with delivery experience in a market that is quite mature. There you can give the customer a delivery time window and things like that. #00:25:44-7#

Researcher: Yes. #00:25:46-0#

Interviewee: So the last mile is something which we can work on and invest. #00:25:50-3#

Exemplary Interview Transcript I-11 (continued)

Researcher: Okay, and also you have the branding and you have the reputation there.
#00:25:53-7#

Interviewee: Yes, exactly. #00:25:56-2#

Researcher: Okay. Thinking a bit further into the future. I am looking a bit into a scenario and how would you see then the areas of growth from an industry perspective regarding geographies. We have been talking about the west already. How would you see the future?
#00:26:16-6#

Interviewee: Yes, I think in the future from China perspective we would have like the manufacturing more or less from the western area, central western and consumption will be more or less on the east. So, you will see a lot of domestic lanes trading over this area and also the Chinese people are getting more and more rich and the currency is more and more appreciated so they will see a lot more of import volume on the domestic market and you will see the logistics and also there's a kind of a high-value goods which will constantly increase not only in the really big cities but also tier 2 and 3. So there will be further penetration so I really do see they are working on a transformation of the whole landscape and it will be still kind of a mixed manufacturing growth as well as domestic consumption.
#00:27:14-6#

Researcher: Thinking about industries, of course, consummation, retail area are there any other industries where you would see a definite growth? Is it rather in the automotive area, in the technical parts, production side or maybe something like health care? #00:27:31-9#

Interviewee: I think health care might be the interesting area because in terms of the aging population in China and our demand for the past year will be increased and also fashion industry and we see that getting fashion product in China will be more and more affordable and this will definitely kind of boost the fashion industry over there. The tradition of automotive technology will be still growing strongly and the technology because China is a manufacturing base and because it's kind of a like supporting pillar for the overall industrialisation so, you know, the supply chain for automotive actually is very mature right now. So they will keep their goals and their skills the size and availability of the automotive and technology manufacturing is probably nowhere in the world country can match, so in that case they will still grow. #00:28:32-3#

Researcher: And you also will see that more R&D will be placed in China. #00:28:37-1#

Interviewee: No, that's already here. #00:28:36-3#

Researcher: It's already there but it will still grow in your view? #00:28:40-5#

Interviewee: Yes, because the consumer market is here and its good to have R&D close to the consumer market. #00:28:45-1#

Researcher: Yes, yes, okay. Any other effects we will see? I'm thinking about urbanisation, we also touched the mega cities have procured something like re-logistics, electric mobility then thinking about retail, RFID and so on. Do you see a steady trend there? #00:29:02-8#

Exemplary Interview Transcript I-11 (continued)

Interviewee: Yes, urbanisation is definitely a trend because China has to - you know, we don't have enough land to sustain so many people, so we have to urbanise them and do that and in that case, you know, generating a new business model like city delivery, city logistics and we do city delivery because we have a high density of customers there. Green logistics definitely because China has already committed to a larger goal. Chinese government realised that the environment is now in kind of a sacrifice of the economic development and they're really fighting hard to improve the water quality, soil and so in that case a green technology, the carbon footprint is already right on the agenda of the government. #00:29:48-3#

Researcher: Would you say the customers of our company and other logistics companies would be ready to pay also for green? #00:29:55-3#

Interviewee: We have some leading customers who are in discussions with us and who are willing to pay a premium for green solutions. Although some of them probably only remaining for the marketing issue or other like that. And the result is strong government will subsidise this industry off-line. So like compared with Japan, like Japan put a lot of subsidy in the hybrid for the green vehicles. From our side, I think our government is being a bit slow in this area. #00:30:25-3#

Researcher: Okay. Thinking about the development in the labour market, especially in the logistics area. So, the situation right now what would you say there and do you see an on-going war talent or do you see the right skill level can be applied? You can see sufficient staffing for experts also in the future? #00:30:46-0#

Interviewee: No, logistic industry was generally perceived as a lower-end industry from the Chinese perception of cultures. So, if you look at the tension rates and turnover rates, we can easily come to 20 per cent. #00:30:58-9#

Researcher: 20 per cent for the year? #00:30:58-7#

Interviewee: For frontline staff. So getting talents, retaining talents is a challenge for us but in this industry the only way for the logistic industry to obtain talent is that you need to upgrade service, get a more value add and in that case you are able to climb up the value train and you are able to track the higher quality talents. So it will be on-going and also looking at the China population is actually downsizing because we have a very aging population and we have more and more like single-kid family. So the labour supply and people are thinking probably in 2020-ish, 30-ish we'll see the turning point that people, the population will become decreasing instead of increasing and within 100 years the China population will reduce by 50 per cent. So that was sort of the current forecast but in that case the automation, the efficiency, all these things would be on the agenda. And labour is no longer cheap and they are going to increase like 18 per cent, 20 per cent a year on salary compensation. So we have to look at how we can upgrade the labour quality and also do more automation. Like Foxconn wanted to introduce a million robots to replace the milling labour. #00:32:13-4#

Exemplary Interview Transcript I-11 (continued)

Researcher: Okay. #00:32:15-4#

Interviewee: So that's their plan. #00:32:16-9#

Researcher: What about logistics experts? I learnt already that partnership with the Tongji has ended and Bosch is jumping in? #00:32:26-1#

Interviewee: Yes, they will be. #00:32:27-0#

Researcher: Are there any ideas to proceed maybe with another school or business school or logistics academy? #00:32:35-2#

Interviewee: Yes, what we do is every year we hire directly from the university around 30 to 50 trainees, so we offer them a two-year programme and have them to go through the commercial position, operations position. #00:32:49-5#

Researcher: Internal training then, training on the job? #00:32:51-8#

Interviewee: Yes, because our China University I think still have a gap to leading international ones and primarily because of what they learn will not help much to what they do and generally speaking that is too much academic there isn't an opportunity for practice so they don't have like in Germany an apprenticeship but in China they don't have these structure programmes in place. So, again from the university we identify the good potential and high potential ones and get them to run through the different programmes and then we will see, you know, how they can go. #00:33:27-0#

Researcher: You would say that the current academic training is lacking a bit on the managerial side. What about project management skills? I guess this is important in the industry as well? #00:33:37-2#

Interviewee: It is but the logistic industry is very hands-on, so you probably can't learn too much from textbook but you can learn there is a theory of supply chain foundation or for financing. A lot of the work actually do the hands-on so in that case even for project management work there are no very specific training and certification or institution for that. #00:33:59-1#

Researcher: You need to learn at practice. #00:33:58-6#

Interviewee: And you need to know a lot of it so the general challenge we have here is we don't have this kind of like master and apprenticeship opportunity of doing things and normally we just kind of hire, fire or something like that. So we feel that the most sustainable way actually is, you know, trying to get more internal development and training and we have alike a school, or a logistic school already for the industry. If you look at our competitors, a lot of people actually come from DHL. #00:34:32-5#

Researcher: Yes, (laughing). #00:34:33-1#

Interviewee: So we can't do much more. #00:34:33-8#

Researcher: We educate them as well, okay. I think major opportunities and threats, we have seen already a bit but for further focus, further scope, is there anything new you can foresee in this area? #00:34:52-1#

Exemplary Interview Transcript I-11 (continued)

Interviewee: Yes, I think we have been focussing on the few sectors like they are emerging for the oil and energy sector where health safety is very important so that's what we focus on and the medical device and the pharmaceutical sector because China is doing a second round of medical reform so in this case there is a lot of room for independent players to develop in this industry. And the third one is definitely the e-business. #00:35:19-9#

Researcher: E-business? #00:35:19-1#

Interviewee: E-business, so we are very interested to see how e-business will develop and we are very interested to be part of that. #00:35:28-7#

Researcher: When would you see a peak? In five years, ten years for e-business? #00:35:33-8#

Interviewee: Yes, I think it would be. I think if you look at the US probably the biggest e-business portion, about 5 per cent or 10 per cent maximum from the total compared with traditional retailing, in China it might be like 20 per cent so therefore that's actually the size but it could be more. #00:35:50-7#

Researcher: Okay. Very, very interesting and let's see how the next 18 years will prove. #00:35:56-3#

Interviewee: I think it will, yes. #00:35:59-2#

Researcher: Last part and the general part, in your view, how can a sustainable business strategy for a logistics multinational be determined? What are the key factors generally speaking? Not only about DHL and what managerial practices should be applied in the long-term? Thinking about staff, thinking about also strategic decisions. #00:36:21-2#

Interviewee: I think the key things for - the best strategy for this is you need to make sure your growth is sustainable. So, it's fairly easy to get 100, 200 per cent growth in China market but if it's not sustainable then it's actually damaging more and not helping more. So for MNCs I think we just need to be a little patient and we need to develop a robust product, replicable and you can see management associates and make sure, you know, they glued to them and they are able to grow. It's more or less like a go slow and go faster, so theres a code on that one. So you need to have a solid base and grow and in that case, you know, in China you probably can't look at a two-year return you've got to look at a five or ten-year return in order to get something out of that. #00:37:07-7#

(Phone ringing, recording stopped)

Researcher: Okay, good. The fifth question was a question that was also addressed by me to Frank when I was attending smaller congress on Chinese business and Chinese investment. (Phone ringing). That's you again? #00:00:18-5#

Interviewee: Yeah. #00:00:06-5#

Researcher: Okay, that's fine. (Recording stopped)

Researcher: Question regarding the brand awareness of DHL in China. #00:00:05-9#

Interviewee: It's a German company. #00:00:05-5#

Exemplary Interview Transcript I-11 (continued)

Researcher: Is it German? #00:00:06-7#

Interviewee: Yes. #00:00:08-3#

Researcher: Everybody tells different. #00:00:09-1#

Interviewee: Yes, it's German. #00:00:08-6#

Researcher: Some people say it's rather European or it's US. It's really seen as German. Very good. And you see this also as an advantage in the view of the customer? #00:00:25-1#

Interviewee: Both. #00:00:26-6#

Researcher: Both. #00:00:28-0#

Interviewee: German is good in the quality and stability but is also notorious about the flexibility as they're big, they see both. #00:00:36-8#

Researcher: And does the brand name also carry the image of pricey? #00:00:40-7#

Interviewee: Yes, it's expensive. #00:00:42-5#

Researcher: Yes, and regarding branding and marketing, I've heard already it's mainly the view, people recognise DHL as DHL Express, DHL Express Sinotrans in China. #00:00:54-4#

Interviewee: Yes. Now they are gaining more and more because we are dealing more with B2B customers. So, if you're talking to the industry customer they actually can vary/ #00:00:59-1#

Researcher: The big ones can differentiate. #00:01:00-6#

Interviewee: / they can differentiate very easily the DGF and supply chain. #00:01:07-3#

Researcher: Okay, are there any ideas to proceed with the marketing regarding the business units? #00:01:11-8#

Interviewee: No, not really because we are doing B2B so we always want to be local / #00:01:15-4#

Researcher: You have direct contact, yes. #00:01:15-4#

Interviewee: / contact to the market, yes. #00:01:17-9#

Researcher: Okay, okay. That is so much about marketing, then regarding the sector management. We have discussed already a bit on the sectors here. #00:01:28-7#

Interviewee: Life science. #00:01:30-1#

Researcher: The technology and the energy because those have been named as a group-wide sector management. #00:01:38-2#

Interviewee: Managing the oil and energy sector for HSE is our focus we are developing it. Technology is 50 per cent of our business. #00:01:46-7#

Researcher: And you see this already well reflected in the current business set-up? #00:01:55-1#

Exemplary Interview Transcript I-11 (continued)

Interviewee: Yes. #00:01:52-9#

Researcher: And are there any further group-wide activities, meaning cross-divisional regarding strategic development on the supplier side but also on a customer side. #00:02:02-9#

Interviewee: There are the city logistics that we have as a group for leading the city logistics industry in this government, the last mile etc. #00:02:12-9#

Researcher: So this is one of the key joint projects then. Okay, okay. I'm talking with the guy again in Germany of the city logistics. And I don't know whether we want to touch on the forwarding business, I have already discussed further with Bruce. #00:02:29-3#

Interviewee: No, we don't need to. #00:02:30-0#

Researcher: Let's jump directly into the supply chain business which is then your area. And I have named here the six sectors and energy is also there. #00:02:43-8#

Interviewee: Yes. #00:02:45-7#

Researcher: This is complete what I have listed? #00:02:47-9#

Interviewee: This is the exact sector on which we are focused. #00:02:52-7#

Researcher: Okay, what would you then consider as a core service offer you are doing for China currently? #00:02:56-5#

Interviewee: It depends, like we are sectorised, for consumer for instance we do primary for the promotion materials and also for the kind of like attempt to control DC distribution like chocolate and for technology we do the high-end mobile phone distribution and the service logistics industry. But we're talking about is a solution, this is an end-to-end solution. So, for retail we do the high-end fashion and also we started doing some e-business. For automotive we do the spare parts, service parts and we have interest to enter this high to end manufacturer services. So we are going to offer a kind of separate solution identical to each sectors. #00:03:39-2#

Researcher: What do I have here. So, warehousing, how relevant is this still? It's a basic service? #00:03:49-6#

Interviewee: Yes, 50 per cent, warehousing is 55 and 40 per cent is the distribution and 10 per cent is the value of the services. And our transportation actually then, all managing transportation so I'll do the truck, do I do the managing. #00:04:03-0#

Researcher: Yes, I know, okay. Then regarding further value added services, thinking about supply chain areas maybe reverse logistics. Is this anything? #00:04:16-6#

Interviewee: Not really for service logistics, technical services this is something that needs to be done in conjunction with reverse logistics and spare part logistics and also, you know, how you can do the kind of last mile delivery, in a more efficient and effective way. It's really also again sticking to the sectors to see how a sector want to drive that. #00:04:38-9#

Researcher: But you also see a growth potential there? #00:04:38-4#

Interviewee: Yes, definitely. #00:04:41-9#

Exemplary Interview Transcript I-11 (continued)

Researcher: You put the value add and then extend the contribution to the customer.
#00:04:45-6#

Interviewee: Exactly, and this is normally like the cream of the thing so we get a good margin as well. #00:04:48-6#

Researcher: Yes, for sure, yes, okay. Yes, coming back to this development in the 4PL area. So, business process outsourcing, consulting in this area, is this something you offer under a general / #00:05:04-8#

Interviewee: We are starting, so we have a few opportunities and we are very anxious to see if we can win one or two of the deals because now the market is committed to this 4PL model and we are working on it. #00:05:18-5#

Researcher: Would you see a big potential already now or this is just a steady growing demand? #00:05:23-4#

Interviewee: No, we will see steady growing. So we will see if we can win the opportunity which we know the market is there. So, we're still trying we don't have real 4PLs in the market yet. #00:05:35-1#

Researcher: Yes, yes, but it might be an idea to be the first mover, one of the first movers there, yes? #00:05:39-4#

Interviewee: It could be, yes. #00:05:41-9#

Researcher: Okay. And the customer base? #00:05:43-9#

Interviewee: All multinationals. #00:05:47-9#

Researcher: All multinationals? #00:05:49-1#

Interviewee: Yes, yes. #00:05:46-8#

Researcher: What about the Chinese upcoming companies? #00:05:51-1#

Interviewee: Yes, we are coming up towards there already. They are higher like HTC is the local one and there are more global and local ones, so we're coming. So locally, XCMG is coming as well. #00:06:00-3#

Researcher: And what about the small and medium companies? #00:06:02-5#

Interviewee: No, no. #00:06:04-5#

Researcher: It's not relevant? #00:06:02-9#

Interviewee: For the DGF, but not for us. #00:06:06-5#

Researcher: Yes, okay, okay. So they require smaller services anyway and rather localised. Okay. #00:06:10-8#

Interviewee: Yes, we want to do it on a bigger scale. #00:06:15-5#

Researcher: Okay, okay, I see. Yes, how would you in general illustrate the strategic direction for DSC in China? #00:06:22-2#

Exemplary Interview Transcript I-11 (continued)

Interviewee: As I said it would be more focussed. We focus as a sector, focus where we're good at. Developing a solid product for each sector, invest in the people, in the system and find a smart way of dealing with facilities. I think these are the critical success factors for us to grow in China. #00:06:40-4#

Researcher: Okay. Again a question on future projection. Then rather from the DHL point of view and then also thinking about key strategic leavers and capabilities we need to go there. #00:06:54-2#

Interviewee: Yes. Well, I think you have listed all these and these are the major things. I think we need to have technology, we need to be the operations excellence and we need to have a process actually instead of standardisation but not optimisation. This is because kind of like a DHL way of doing things and it's important. IT we not only do for security, but for liability and flexibility for the IT solution. So, all these plus the soft factors like the people. The cultural factor if you can get people with more and more DHL culture people and more and more to do with people you will definitely see that we will become like an undisputed leader in China. #00:07:37-0#

Researcher: Alright. That's mainly it from my side. Anything you want to tell me as a wrap up? #00:07:50-3#

Interviewee: This was already quite an interesting view into your study. #00:07:55-7#

Researcher: But I think it's mainly catching a bit of a general view but we cannot dig too much into detail within a few minutes. It was also good from my side, so thank you very much.

Appendix X

Overview of International Media Publications

Media source	Date	Title	Publication
M-1	2010-11-30	Build infrastructure, demolish red tape	International Freightling Weekly online (UK)
M-2	2011-01-11	A Q&A with Ambrose Linn	International Freightling Weekly online (UK)
M-3	2011-01-13	FedEx takes on UPS with long-range China jets	Bloomberg.com (USA)
M-4	2011-01-26	DHL bolsters trade between China and Germany	Post & Parcel online (UK)
M-5	2011-02-07	FedEx add freight routes for China-India Prize	Bloomberg.com (USA)
M-6	2011-02-22	UPS adds ten Asia ports to its Preferred LCL Ocean Freight service	Logistics Management online (USA)
M-7	2011-02-25	Asien stiehlt Amerika die Show	Financial Times Deutschland (Germany)
M-8	2011-03-02	Kuehne&Nagel sonnt sich im China-Boom	Börsen-Zeitung (Germany)
M-9	2011-03-26	DHL teams up with the HK IVE to train logistics students	Shipping Gazette online (Hong Kong)
M-10	2011-04-02	Development boom is changing China's transportation infrastructure	Air Cargo World (USA)
M-11	2011-04-27	A singing CEO	Express Magazine (China)
M-12	2011-07-05	DHL gibt chinesisches Inlandsgeschäft auf	Handelsblatt (Germany)
M-13	2011-07-14	K & N China goes West	Flying Typers (USA)
M-14	2011-07-29	DHL handicaps China	Flying Typers (USA)
M-15	2011-08-08	DHL speeds up investment in Chinese supply chain market	CEP Research online (Germany)
M-16	2011-08-31	New intra-Asia Road service by Panalpina	Cargonews Asia online (Hong Kong)
M-17	2011-09-01	Carriers make a push to China interior cities	Air Cargo World (USA)
M-18	2011-09-09	China macht es Ausländern schwer	Die Welt (Germany)
M-19	2011-09-12	DHL to keep out of mainland domestic market	South China Morning Post (Hong Kong)

Overview of International Media Publications (continued)

Media source	Date	Title	Publication
M-20	2011-09-12	DHL to stay out of China domestic market	Cargonews Asia online (Hong Kong)
M-21	2011-09-13	DHL cannot afford price war	Sina Online (China)
M-22	2011-09-16	Global logistics companies focus on China's domestic needs	Transport Intelligence online (UK)
M-23	2011-09-19	TNT Express links up China, SE Asia road networks	CEP Research online (Germany)
M-24	2011-09-20	DHL global forwarding plan to quicken expansion pace in China	Dow Jones Newswires (USA)
M-25	2011-09-21	DHL expands service in West, central China	China Daily (China)
M-26	2011-09-21	DHL targets China €55 billion life sciences industry	CEP Research online (Germany)
M-27	2011-09-26	Opinion: Logistics companies should question China's future	Eye for Transport online (UK)
M-28	2011-09-30	BMW fährt auf der Transsib	Leipziger Volkszeitung (Germany)
M-29	2011-10-01	DHL taps into Chinese government's five-year plans	Aircargo Asia-Pacific (Australia)
M-30	2011-10-05	DHL immune to Asian drop	Cargo News online (UK)
M-31	2011-10-10	K+N banks on boom in intra-Asia trade	Cargonews Asia online (Hong Kong)
M-32	2011-10-12	Express delivery industry: Products, building efficiency and advantages of scale	Sina Online (China)
M-33	2011-10-27	Outsourcing bleibt unbeliebt	DVZ - Deutsche Verkehrs-Zeitung (Germany)
M-34	2011-11-02	China: Region Focus	Air Cargo World online (USA)
M-35	2011-11-04	DHL keeps Asia capacity coming, while others cut back	CEP Research online (Germany)
M-36	2011-11-10	Intra-Asia trade to grow as labour costs rise in China, says UPS survey	CEP Research online (Germany)
M-37	2011-12-02	DHL launches multi-modal China-Japan service	The Journal of Commerce online (USA)
M-38	2011-12-06	Schiffs-Transport rettet Schenker vor der Flaute	Die Welt (Germany)

Overview of International Media Publications (continued)

Media source	Date	Title	Publication
M-39	2011-12-07	Companies sign joint declaration for green freight in Asia	Supply Chain Asia online (China)
M-40	2011-12-09	Großes Potenzial in der Kontraktlogistik	VerkehrsRundschau (Germany)
M-41	2011-12-09	Ready for the big time in logistics industry	China Daily online (China)
M-42	2011-12-12	Global players' woe over logistics boom	South China Morning Post (Hong Kong)
M-43	2011-12-28	Panalpina expands air and sea logistics capabilities in China	Shipping Gazette online (Hong Kong)
M-44	2012-01-05	Beijing to foster local rivals to FedEx and UPS	South China Morning Post (Hong Kong)
M-45	2012-01-22	Foreign firms eye China's crowded express delivery market	Reuters online (USA)
M-46	2012-02-09	Boss who sings the praises of logistics to staff	China Daily (China)
M-47	2012-03-06	CEVA, DHL raise the bar on contract logistics efficiency	Cargonews Asia (Hong Kong)
M-48	2012-03-22	Chinas nächste Revolution	Financial Times Deutschland (Germany)
M-49	2012-04-21	DHL kämpft mit den Tücken des chinesischen Marktes	Wirtschaftswoche online (Germany)
M-50	2012-05-02	TNT Express to sell China domestic	CEP Research online (Germany)
M-51	2012-05-03	Asien sieht sich für eine Krise gewappnet	Frankfurter Allgemeine Zeitung (Germany)
M-52	2012-05-07	China's growing pains	The Journal of Commerce (USA)
M-53	2012-05-16	Chinas Süden gibt die Marschrichtung vor	Frankfurter Allgemeine Zeitung (Germany)
M-54	2012-05-24	Wir wollen Marktanteile hinzugewinnen	DVZ – Deutsche Verkehrs-Zeitung (Germany)
M-55	2012-06-13	DHL macht Shanghai zum Drehkreuz	Deutsche Welle online (Germany)
M-56	2012-06-22	DHL freight unit to set up fourth hub in Asia	Cargonews Asia online (Hong Kong)
M-57	2012-06-28	FedEx and UPS apply to Beijing for licences to penetrate mainland market	Shipping Gazette online (Hong Kong)

Overview of International Media Publications (continued)

Media source	Date	Title	Publication
M-58	2012-06-28	The pull of China's interior	Air Cargo World online (USA)
M-59	2012-06-29	2012-06-29 Der China-Kurier	Financial Times Deutschland (Germany)
M-60	2012-07-02	Rumours of Chinese domestic licences granted to FedEx and UPS prove false	Transport Intelligence online (UK)
M-61	2012-07-11	Deutsche Post DHL to invest €400 million in China infrastructure	CEP Research online (Germany)
M-62	2012-07-11	FedEx and UPS await news on China domestic expansion	CEP Research online (Germany)
M-63	2012-07-13	Der große Wachstumsschub bleibt aus	Wirtschaftswoche online (Germany)
M-64	2012-07-16	China's fashion trend	The Journal of Commerce (USA)
M-65	2012-07-16	Chinas stille Reserve	Frankfurter Allgemeine Zeitung (Germany)
M-66	2012-07-17	DHL Supply Chain eröffnet neuen Hauptsitz in Hongkong	myLogistics online (Germany)
M-67	2012-07-26	DHL spielt die China-Karte	DVZ – Deutsche Verkehrs-Zeitung (Germany)
M-68	2012-07-31	A big bet on warehouses in China	Wall Street Journal Europe Online (USA)
M-69	2012-08-01	DHL bullish on China growth	Payload Asia (Singapore)
M-70	2012-08-06	Kulturexport per Express	Wirtschaftswoche (Germany)
M-71	2012-08-24	Delivery industry's wings keep growing	China Daily online (China)
M-72	2012-09-01	Betting on China	Logistics Insight Asia (Singapore)
M-73	2012-09-11	UPS and FedEx wagen sich nach China	Financial Times Deutschland (Germany)
M-74	2012-10-10	Shanghai-Drehkreuz sichert besseren Service	China Contact (Germany)
M-75	2012-11-07	Talking Strategy with Frank	Logistics Insight Asia online (Singapore)
M-76	2013-01-03	Chinas preiswerte Provinzen	Handelsblatt (Germany)

Overview of International Media Publications (continued)

Media source	Date	Title	Publication
M-77	2013-01-31	Das China-Risiko	Handelsblatt (Germany)
M-78	2013-02-01	3D printing to change logistics industry	Air Logistics China (UK)
M-79	2013-02-04	Developing New Markets	Journal of Commerce (USA)
M-80	2013-02-27	Logistics infrastructure in China is under pressure	Supply Chain Brain online (USA)
M-81	2013-03-01	China tightens its connection with Europe	Inside Fashion (Hong Kong)
M-82	2013-03-11	Fortune Global Forum goes to Chengdu	China Daily USA (USA)
M-83	2013-03-12	Asien bleibt für Logistiker attraktiv	DVZ – Deutsche Verkehrs-Zeitung (Germany)
M-84	2013-03-26	Go-West Strategie in China stockt	DVZ – Deutsche Verkehrs-Zeitung (Germany)
M-85	2013-03-26	Nichts für schwache Nerven	Handelsblatt (Germany)
M-86	2013-03-26	TNT express says sale of its China business is 'imminent'	Financial Times Europe
M-87	2013-03-28	TNT express quits Chinese domestic market with sale of road transport business	CEP Research online (Germany)
M-88	2014-01-27	China-Westeuropa: Die neue (stählerne) Seidenstraße	LOGISTIK express online (Germany)
M-89	2014-08-14	UPS And FedEx Can Now Ship Packages In China Without Joint-Venture Partners	Business Insider online (Germany)
M-90	2014-01/02	Die neue Seidenstrasse	FM – Das Logistik-Magazin (Germany)
M-91	2015-05-21	Alibaba and partners look to lead in global express revenues	Transport Intelligence online (UK)
M-92	2015-05-22	Logistik-Chef Peter Ulber: Drohnen sind interessant für entlegene Gebiete	Basellandschaftliche Zeitung online (Switzerland)
M-93	2015-06-02	FTA could spur other deals: MOFCOM	Global Times online (China)
M-94	2015-06-15	DHL adds services to fast-growing China-Europe rail network	The Journal of Commerce online (USA)

Overview of International Media Publications (continued)

Media source	Date	Title	Publication
M-95	2015-06-29	How to enter the Chinese forwarding market	Air Cargo World online (UK)
M-96	2015-07-08	Mars packing process blasts off with DHL automation	The Journal of Commerce online (USA)
M-97	2015-07-21	DHL unveils China e-commerce expansion and partners with JD.com	CEP Research online (Germany)
M-98	2015-07-21	JD.com launches portal for made-in-US products	China Daily online (China)
M-99	2015-07-27	TNT Q2 revenues and profits improve as business picks up	CEP Research online (Germany)
M-100	2015-07-28	China-Europe rail has air cargo carriers in the crosshairs	The Journal of Commerce online (USA)
M-101	2015-07-28	DHL supports third runway for Hong Kong airport	CEP Research online (Germany)
M-102	2015-08-17	DHL launches enhanced Asian Road connection	Logistics Insight Asia online (Singapore)
M-103	2015-08-18	Delivery giant as SF Express to build airport in Central China	China Daily Hong Kong Edition (Hong Kong)
M-104	2015-08-21	Packing the right stuff at the right time	China Daily online (China)
M-105	2015-09-12	The wild, wild east	The Economist (UK)
M-106	2015-10-11	FedEx founder decries states' interference	The Commercial Appeal (USA)
M-107	2015-10-16	Cross-border trade pushes UPS expansion across Asia	The Journal of Commerce online (USA)
M-108	2015-10-19	FedEx chief unveils new strategy	China Daily Asia (China)
M-109	2016-02-22	DHL offers greener service for ocean freight	China Wuliu online (China)
M-110	2016-02-29	Signed, sealed, FedEx delivered	China Daily Asia (China)
M-111	2016-03-21	This is the future	The Journal of Commerce (USA)
M-112	2016-04-25	Making logistics hot for top talent	China Daily (China)
M-113	2016-05-02	Drone delivery not part of the flight plan for FedEx	South China Morning Post (Hong Kong)

Overview of International Media Publications (continued)

Media source	Date	Title	Publication
M-114	2016-06-23	DHL eCommerce expands in China with new distribution centre in Shenzhen	CEP Research online (Germany)
M-115	2017-05-26	Panalpina wächst stark auf der Schiene zwischen China und Europa	LOGISTIK express online (Germany)
M-116	2017-12-14	Kuehne + Nagel forces Asia	ITJ - International Transport Journal online (Switzerland)
M-117	2017-12-27	E-commerce is changing the way DHL Express thinks... and acts	Air Cargo News online (UK)
M-118	2017-12-29	Auch China senkt die Steuern für Unternehmen	Frankfurter Allgemeine Zeitung (Germany)
M-119	2018-01-17	GM, DHL use a Chinese plant to lead manufacturing change	Channel News Asia online (Singapore)
M-120	2018-02-02	Outlook for China trade 'positive but losing momentum'	South China Morning Post (Hong Kong)
M-121	2018-02-06	Die Neuvermessung des Welthandels	Die Welt (Germany)
M-122	2018-02-08	DB Schenker moves China's first fresh produce block train to Moscow	Asia Today online (USA)
M-123	2018-03-29	DHL's Global Trade Barometer shows gains	Logistics Management online (USA)
M-124	2018-04-16	Kommt China an die Weltspitze?	Frankfurter Allgemeine Zeitung (Germany)
M-125	2018-04-17	Handelsweg mit Hürden	Handelsblatt (Germany)
M-126	2018-04-21	Das IPO wird viele Türen öffnen	Finanz und Wirtschaft (Switzerland)
M-127	2018-05-03	Chinas Tor zur Welt	Frankfurter Allgemeine Zeitung (Germany)
M-128	2018-05-03	DHL Global Forwarding expands own-controlled freighter capacity	Lloyd's Loading List online (UK)
M-129	2018-05-05	DHL expands presence in China	China Daily (China)
M-130	2018-05-15	DHL and Rail Cargo Group extend 'Belt and Road' network with new Chengdu-Vienna direct route	Asia One online (Singapore)
M-131	2018-05-16	DHL implementiert IoT-Lösung für weiteren Autobauer in China	DVZ - Deutsche Verkehrs-Zeitung online (Germany)

Overview of International Media Publications (continued)

Media source	Date	Title	Publication
M-132	2018-05-24	China, Germany poised for stronger trade ties	China Daily (China)
M-133	2018-05-29	DHL eCommerce expounds in Hong Kong to target Chinese exports	CEP Research online (Germany)
M-134	2018-06-04	Boosting China's high-tech footprint	China Daily (China)
M-135	2018-07-06	Vom Gelben Fluss zum Rhein und an die Donau	VerkehrsRundschau (Germany)
M-136	2018-07-19	Along the New Silk Road - Bridging Eurasia	Geographical online (UK)
M-137	2018-07-23	China demonstrates grand trade ambitions through New Silk Road	World Finance online (USA)
M-138	2018-07-27	CEVA Logistics baut Schulden ab	Neue Zürcher Zeitung online (Switzerland)
M-139	2018-08-01	Erfolgsrezept Freihandelszonen	DVZ - Deutsche Verkehrs-Zeitung online (Germany)
M-140	2018-08-08	FedEx drives ahead with electric vehicles in China	CEP Research online (Germany)
M-141	2018-08-14	JD.com wins Unilever China logistics contract	CEP Research online (Germany)
M-142	2018-08-15	Courier firms expanding overseas	China Daily (China)
M-143	2018-08-15	China drückt bei der Entwicklung von Lieferdrohnen aufs Tempo	NGIN Mobility online (Germany)
M-144	2018-09-11	Logistics is booming in China but not where you think	Supply Chain Dive online (USA)
M-145	2018-10-03	Xavier Urbain, CEO CEVA Logistics, im Interview	MoneyCab online (Germany)
M-146	2018-10-08	Signs of Economic Growth in China Though RMB Slips and Trade War Escalates	CFO Innovation online (Hong Kong)
M-147	2018-10-08	Sonderzug nach Chongqing	Handelsblatt (Germany)
M-148	2018-10-15	UPS improves services in eight Chinese cities	CEP Research online (Germany)
M-149	2018-10-24	Chinas Logistiker im Vorteil	DVZ - Deutsche Verkehrs-Zeitung online (Germany)
M-150	2018-10-26	SF buys DHL Supply Chain China for €700m and partners in co-branded JV	CEP Research online (Germany)

Source: Developed by the author of this study

Appendix XI

Overview of Logistics MNE Company Publications

Company source	Year	Logistics MNE	Publication/Topic
C -1	2017	Deutsche Post DHL	Annual Report
C-2	2016	Deutsche Post DHL	Annual Report
C-3	2015	Deutsche Post DHL	Annual Report
C-4	2017	UPS	Annual Report
C-5	2016	UPS	Annual Report
C-6	2015	UPS	Annual Report
C-7	2017	FedEx	Annual Report
C-8	2016	FedEx	Annual Report
C-9	2017	DB Schenker	Annual Report
C-10	2016	DB Schenker	Annual Report
C-11	2017	Kuehne +Nagel	Annual Report
C-12	2016	Kuehne + Nagel	Annual Report
C-13	2017	CEVA Logistics	Annual Report
C-14	2016	CEVA Logistics	Annual Report
C-15	2017	Panalpina	Integrated Management Report
C-16	2016	Panalpina	Annual Report
C-17	2018	Deutsche Post DHL	Logistics Trend Radar 2018/2019
C-18	2012	Kuehne + Nagel	Integrated Logistics for China Brochure
C-19	2016	DB Schenker	Delivering Solutions – Green Logistics in China
C-20	2015	DB Schenker	The New Silk Road, Schenker's involvement

Source: Developed by the author of this study