



MNE liability of foreignness versus local firm-specific advantages: The case of the Chinese management software industry

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ABSTRACT

The theory of the multinational enterprise (MNE) suggests that the subsidiaries of MNEs possess firm-specific advantages (FSAs) that can overcome their liability of foreignness (LOF). It also suggests that subsidiaries can gradually decrease their LOF over time as they learn more about the host country environment and develop better connections to local business networks. Accordingly, subsidiaries should outperform local firms not only at point of entry but also (and increasingly so) in the long run as LOF decreases. This paper challenges this received wisdom by using case-study methodology to argue that LOF may not decrease over time and, meanwhile, the FSA gap between local firms and subsidiaries may narrow. We focus on two types of FSAs (asset and transaction ownership) and three sources of LOF (complexity, uncertainty, and discrimination) to develop a theoretical framework for analysing the dynamic relationships between LOF and FSAs and show how local firms can outperform foreign subsidiaries over time. We use the case of the Chinese management software industry to illustrate the framework. Our findings have important implications for MNEs competing abroad as well as helping to explain the emergence of strong competition from local firms.

1. Introduction

The theory of the multinational enterprise (MNE) suggests that firms investing abroad possess superior firm-specific advantages (FSAs) but also face additional costs compared to local firms (Caves, 1996; Hymer, 1976). Zaheer (1995) termed the additional costs that MNEs face “liability of foreignness” (LOF) arising “from the unfamiliarity of the environment, from cultural, political, and economic differences, and from the need for coordination across geographic distance, among other factors”. An MNE is able to compete if the higher costs associated with the LOF it faces are outweighed by its FSAs (Dunning, 1980; Rugman, 1981).

Neglected in this analysis are questions of how LOF and FSAs *change over time*. This dynamism can have an important impact on the evolution of MNEs’ competitiveness relative to local firms. This is not only because the power of initial LOF and FSAs may change over time as both MNEs and local firms learn. It is also because local firms may develop their own unique FSAs (Cuervo-Cazurra & Genc, 2008; Ramamurti, 2009; Zeng & Williamson, 2007). The evolution of these factors can alter the competitive balance in the industry.

In this paper we explore these dynamics and propose a theoretical

framework which enables us to analyse the following research question: How will the competitiveness of MNEs relative to local firms evolve over time, following entry into a foreign market? This question is of central importance in the LOF literature where it is widely believed that MNEs will gradually overcome their initial LOF as their foreign subsidiaries learn more about the host country environment and develop better connections to local business networks (Johanson & Vahlne, 1977; Kostova & Zaheer, 1999; Miller & Eden, 2006; Nachum, 2003; Sethi & Judge, 2009; Yildiz & Fey, 2012; Zaheer & Mosakowski, 1997). As a result, foreign firms can outperform local firms not only at point of entry due to FSAs, but can improve performance in the long-run because their LOF reduces over time. However, in studying the management software industry in China since the early 1990s, we have found evidence that is inconsistent with this received wisdom. SAP and Oracle (see the Appendix for the background and brief histories of these MNEs) both entered China in the early 1990s, attracted by market size and factor conditions. In the beginning, SAP and Oracle dominated the Chinese market. However, by 2014, local Chinese firms Yonyou and Kingdee were No. 1 and No. 3 in this industry, with SAP and Oracle slipping to No. 2 and No. 4 in terms of market share.¹ In this case, it seems that LOF has persisted over a long period of time. Meanwhile,

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¹ Source: China Internet and Software, Macquarie Research, April 2016.

local firms both replicated some of the MNEs initial FSAs and developed their own distinctive FSAs. These different trajectories have combined to reduce the competitive advantage of MNEs over time. This was despite the fact that the initial MNE FSAs were not static, but instead improved with further transfers from abroad and the development of new FSAs resulting from operating in the host country. In the context we studied, however, local firms were able to develop competing FSAs relevant to the market at a *faster pace* than MNEs. Although a single-industry case, we doubt that the Chinese management software market is an isolated case and so there is cause to re-examine the evolution of the relative competitiveness of MNEs versus local firms in host-country markets. Single-industry case studies have been used to great effect to advance the international business literature (see for example Sun, Mellahi, & Thun, 2010) and this study hopes to follow in that tradition.

Our study makes a number of important contributions. Theoretically, to the best of our knowledge, it is the first longitudinal case study in the LOF literature to focus on foreign subsidiary performance over time. In contrast to the conventional wisdom that foreign subsidiary performance increases over time, we develop a theoretical framework to suggest that in some contexts, the relative performance of foreign subsidiaries can decrease over time because they continue to face persistent LOF in host countries while local firms rapidly narrow the FSA gap with the MNEs. Managerially, our study demonstrates that the ability of emerging economy firms to catch up rapidly is changing the landscape of global competition dramatically and therefore overcoming LOF is more critical for MNEs in certain country and industry contexts than expected. MNEs have to increase efforts such as hiring local executives or collaborating with local firms to understand and capture local market opportunities.

This paper is structured as follows. We begin by reviewing the literature on LOF and FSAs for the purpose of building a framework for analysing our research question. We then propose the case study method as an appropriate way to illustrate the framework and detail its implementation. Next, we present the case of the Chinese management software industry. We conclude by stating the contributions of the study, implications for existing theory and practice, and suggest avenues for further research.

2. Literature review

MNE FSAs in a host country consist of non-location advantages transferred from other countries, including the home of the corporate parent, and subsidiary-specific advantages (Rugman & Verbeke, 2001). Rugman and Verbeke (2001) maintain that the FSA concept covers a very broad set of unique company strengths including competences and capabilities. As such, the FSA concept accords with the resource-based view (RBV) which argues that competitive advantage stems from valuable and rare resources that are unevenly distributed across firms and cannot easily be transferred from firm to firm (Barney, 1991; Priem & Butler, 2001; Wernerfelt, 1984). International Business (IB) research has shown that MNEs can achieve FSAs from resources such as technologies, strategic planning, organisational alignment, human resource management, trust, organisational culture, administrative skills, management skills, and brand name among others (Priem & Butler, 2001; Rugman & Verbeke, 2001). Dunning (2001) usefully disaggregates FSAs to distinguish two types of ownership advantage: asset ownership “Oa” advantage correlates to traditional FSAs (such as the brand names of SAP and Oracle, and their technologies in providing cutting-edge management software applications) while transaction ownership “Ot” advantage relates to the ability of the MNE to capture transactional benefits that minimise transaction costs (such as SAP and Oracle’s organisational and administrative skills in operating in a large number of foreign countries to achieve economic scale and efficiency).

Concurrently, IB researchers have long recognised that MNEs may face additional costs that adversely affect the performance and survival of their foreign subsidiaries compared to local firms (Hymer, 1976).

Zaheer and Mosakowski (1997) found that the exchange trading operations of foreign subsidiaries had a lower survival rate than those of local rivals. Mezias (2002) found that foreign subsidiaries faced more lawsuits than their local rivals and Bell, Filatotchev, and Rasheed (2012) report that foreign subsidiaries often suffer from investor’s “home bias”. Three key sources of LOF are theorised (Goerzen, Asmussen, & Nielsen, 2013; Zaheer, 1995): (1) costs arising from the overall complexity of operations that stem from the challenges associated with spatial distance and coordination over distance and across time zones; (2) firm-specific costs related to uncertainty, and based on the MNE’s lack of familiarity with the local environment; and, (3) costs resulting from discrimination within the host-country environment stemming from economic nationalism and lack of foreign firm legitimacy. Taking the example of SAP and Oracle, we found that they both faced complexity in operating in China because of the high communication cost between their subsidiaries in China and headquarters; they also faced more uncertainty in doing business in China because they lacked the local knowledge to access local distribution network and market opportunities; and they appeared to encounter discrimination because of difficulties in building close relationships with local organizations and government.

The problem of how to overcome LOF is central in the LOF literature where it is widely believed that initial LOF is gradually overcome as a foreign subsidiary learns more about the host country environment and develops better connections to local business networks. Johanson and Vahlne (1977) argue that knowledge of international operations can be accumulated through operations abroad, and the acquired knowledge enables the foreign subsidiary to make more informed decisions in a host country. Kostova and Zaheer (1999) suggest that, as time passes, a foreign subsidiary is likely to learn about the institutional environment and how to deal with it, and the local environment is also likely to accrue information about the particular subsidiary and begin to judge it more correctly. Miller and Eden (2006) contend that market experience is positively related to foreign subsidiary performance. Nachum (2003) argues that experienced foreign financial service firms operating in the City of London do not suffer the LOF to the extent suggested by theory.

Taken together, because foreign subsidiary performance is determined by the FSAs possessed by MNEs and the reducing LOF faced in the host country, this literature suggests that foreign subsidiaries should outperform local firms not only at point of entry but also (and increasingly so) in the long run as LOF reduces. However, related literature suggests that this basic picture is *incomplete*. We now detail how, beginning with LOF and moving on to FSAs.

The LOF MNEs face may not decrease over time because country, industry, and MNE strategy effects may *exacerbate* complexity, uncertainty and discrimination. Research has shown that LOF is higher if the host country is more distant and more different from the home country (Zhou & Guillen, 2015). This can result in government policies that favour local firms over MNEs (Aggarwal & Agmon, 1990), placing constraints on MNEs to overcome LOF. Such discrimination is especially significant in some emerging host countries that are characterised by imperfect markets, inefficient judiciary, unpredictable and burdensome regulations, heavy bureaucracy, political instability and discontinuity in government policies (Ghemawat & Khanna, 1998; Khanna & Palepu, 1997). If these policies do not change and the institutional distance persists, the LOF MNEs face will not decline over time.

Regarding industry effects, the LOF faced by foreign subsidiaries may be greater and more persistent in business-to-business (B2B) industries (Lilien & Grewal, 2012). This issue is neglected in the LOF literature. Foreign subsidiaries may face more LOF in B2B industries because purchasing decisions are likely to be based on entrenched company practices that can be difficult to change and long-standing relationships between suppliers and buyers which can be difficult to penetrate. Furthermore, there may be synergies between suppliers and buyers that would be lost with a change of supplier. LOF may also exist in business-to-consumer (B2C) industries, but is expected to exist to a

lesser extent as consumers are more likely to switch supplier when purchases are less regular, relationships are weaker, and there is less at stake if a poor decision is made.

Finally, regarding MNE strategy effects, scholars that have investigated the relationship between LOF and entry mode (Isobe, Makino, & Montgomery, 2000; Murray, Kotabe, & Zhou, 2005) have shown that MNEs fare better when choosing joint ventures and strategic alliances over wholly owned subsidiaries in a distant host country because local partners provide resources and connections that help MNEs to overcome LOF (Chen, 2006; Tse, Pan, & Au, 1997).

LOF is also likely vary depending on the different strategies adopted by MNEs. The LOF they face will tend to be more persistent for a simple market-seeking strategy than a more sophisticated resource seeking, efficiency-seeking, or strategic-asset seeking approach (Caves, 1996; Dunning, 1988; Zaheer, 1995). For market-seeking MNEs, subsidiaries are often replicas of each other crudely competing with local firms who operate on a local-for-local basis (Bartlett & Ghoshal, 1989). MNEs with more sophisticated strategic motives are likely to encounter less LOF because their subsidiaries are operating in less crowded competitive spaces with differentiated roles exploiting available global economies of scale or scope (Ghoshal & Nohria, 1989).

With respect to the competitive impact of FSAs, *dynamism* is generally neglected. That is, the fact that resource value will change over time in response to changes in firm competencies, capabilities, industry structure and the business environment more generally (Barney, 1991). As with LOF, FSA dynamism may be exacerbated by country, industry, and MNE strategy effects.

Given opportunities for organisational learning, skill acquisition, and the accumulation of intangible assets (Teece, Pisano, & Shuen, 1997), depending on country and industry, local firms may be able to replicate FSAs enjoyed by MNEs. If local firms can successfully do this while no new MNE Oa or Ot advantages emerge, the overall competitive advantage enjoyed by MNEs' foreign subsidiaries will be eroded (Curran & Keng Ng, 2018; Kim, 1998). A case in point is provided by Kim (1998) who explains how Hyundai Motor caught up with Western MNEs through organisational learning via acquisition, assimilation, and improvement of foreign technologies. With increasing globalisation, it is now easier for local firms to access technologies and know-how through new gateways opening up in the form of: outsourcing, modularisation, codification of knowledge, and more open markets for international talent and corporate control (Santos & Williamson, 2015; Williamson & Yin, 2009).

Organisational learning by local firms may also enable them to build new and distinctive FSAs that improve their overall competitiveness versus MNEs. Scholars have shown how local firms in certain emerging countries have developed unique FSAs across different industries, such as cost innovation capability in China (Wan, Williamson, & Yin, 2019; Zeng & Williamson, 2007), accelerated innovation capability, again in China (Williamson & Yin, 2014), optimising products and processes for local customers in BRIC countries and Mexico, South Africa, Israel, and Thailand (Ramamurti, 2009), and filling institutional voids in emerging countries generally (Cuervo-Cazurra & Genc, 2008). Wan et al. (2019) find that cost innovation is adopted not only by Chinese firms such as Huawei and Lenovo, but also Brazil's Embraer in regional jets, Russia's Gazprom in energy, Mexico's Cemex in cement, and Argentina's Tenaris in seamless tubes. A stunning example is the global smartphone market where Huawei surpassed Apple to move into second position in terms of market share, and continues to dominate the Chinese smartphone market with a record high market share of 27% in the 2nd quarter of 2018. The strong performance of Huawei stems from not only the release of its innovative "GPU Turbo" technology, but also huge sales promotion of its Honor models during the 2018 "6.18" mid-year shopping festival (China's "Black Friday" equivalent on 18th June every year) via online channels in China which Huawei has learned to exploit more effectively than its multinational competitors (IDC, 2018).

To summarise, developing received wisdom, a more complete

		FSA Change	
		Slow	Fast
LOF Change	Slow	1	3
	Fast	2	4

Fig. 1. Subsidiary Performance Framework.

understanding of the evolution of LOF and FSAs over time would require analysis of: (1) The rate at which MNEs' LOF declines over time; (2) The rate at which MNEs' initial FSAs decline in relevance as technologies or customer behaviour in the host country market changes; (3) The rate at which MNEs develop new Oa or Ot based FSAs relevant to the host country market; (4) The rate at which local firms can match, and hence neutralise, MNEs' FSAs over time; and (5) The rate at which local firms can develop new and distinctive FSAs. These five dynamics unpack the two forces influencing MNE performance in host countries that received wisdom provides. Dynamic 1 adds sophistication to analysing LOF, while dynamics 2–5 add sophistication to analysing relative FSAs.

The examination of interactions between the dynamics of LOF and FSA should facilitate a more complete understanding of how and why the *balance* of competitiveness between MNEs and local firms may change over time. Four different scenarios can arise depending on rates of change as depicted in Fig. 1. Cell 1: If the rates of local firms narrowing FSAs and MNE LOF decline are both slow, foreign subsidiaries are likely to outperform local firms because FSAs transferred from the home country can overcome LOF faced in the host country and the rise of local firms' FSAs. Cell 2: This case represents conventional wisdom in the literature. The rate of local firms narrowing FSAs is slow but the decline of LOF is fast. As a result, the dominance of foreign subsidiaries increases. Cell 3: If local firms are able to narrow FSAs faster than foreign subsidiaries reduce their LOF, local firms will outperform foreign subsidiaries. For this result we do not have to assume that MNE FSAs are static, but only that they are enhanced at slower rate than the FSAs of local firms. Our empirical case study focuses on this scenario. Cell 4: If the rates of local firms narrowing FSAs and MNE LOF decline are both rapid, the competition between foreign subsidiaries and local firms is likely to be intense and the winner uncertain.

The *dynamics* of foreign subsidiary performance is illustrated in Fig. 2. When MNEs enter foreign markets, as the theory of the MNE suggests, foreign subsidiaries outperform local firms as the FSAs possessed by MNEs overcome LOF faced in the host country. Over time, we suggest that foreign subsidiary performance is determined by the change of FSA differential between foreign subsidiaries and local firms, and the change of LOF faced by foreign firms in the host country. If the answer to the question "Over time, can local firms narrow the FSA gap faster than foreign subsidiaries decrease LOF?" is "Yes", then local firms can outperform foreign subsidiaries over time.

3. Research methodology

We draw from the case study method (Yin, 2003) to address the research question that we are interested in. This method is appropriate for addressing longitudinal "how" and "why" questions, and allowed us to investigate "a contemporary phenomenon within some real-life context" (Yin, 2003, p. 13). Research using case studies can usually get much closer to theoretical constructs and provide a much more

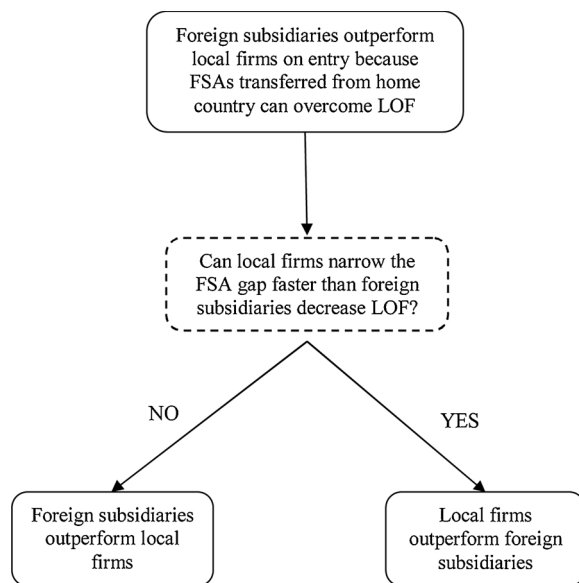


Fig. 2. The Dynamics of Foreign Subsidiary Performance.

persuasive argument about causal forces than conventional quantitative research (Siggelkow, 2007).

We focussed on the Chinese management software industry and an initial chronology of actions and events during the time period of interest was developed using secondary data generated from external and internal sources. External secondary data were in the form of journal articles, web pages, books, government reports, newspaper reports and investor reviews. Internal secondary data took the form of annual reports, meeting minutes, company records and employee newsletters and these were triangulated to improve the validity of the emerging explanation (Jick, 1979). Once this chronology had been generated, the emphasis shifted to the collection of primary data.

Our case studies are two MNEs with significant activities and experience in China (SAP and Oracle) and two leading local Chinese competitors (Yonyou and Kingdee) that were established in China by local entrepreneurs and have built their market position over several decades (Table 1). One of the co-authors has worked in the Chinese management software industry for six years, and this allowed observation of in-depth daily business and competition in the industry and access to rich primary data. Access was granted to colleagues with working experience in Oracle China, SAP China, Yonyou, and Kingdee,

including several who worked as senior managers in Kingdee and Yonyou in the 1990s. The co-author also attended several management software industry conferences during the period of interest, observing competitor activities and public speeches by corporate executives of Oracle China, SAP China, Yonyou, and Kingdee.

By the end of the primary data collection phase, two rounds of semi-structured interviews across all four companies had been conducted. The first round of interviews was conducted between June 2011 and May 2012 and a second round between December 2013 and March 2014. As themes emerged and conceptual relationships became established, discussions via telephone and email were used to fill in remaining gaps in the data and to explore contradictory or disconfirming evidence. The second round complemented the first by asking follow-up and clarification questions. In some cases, we were able to secure interviews with multiple individuals. Here, we tried to gain perspectives from employees drawn from different levels in the corporate hierarchy or multiple business units, making a total of 35 semi-structured interviews. We started the interviews by asking background questions such as the name of the informant, their role in their firm, and how many years have he/she worked with their firm. We encouraged informants to provide more detail when their descriptions were brief or when novel strands of narrative emerged (Martin & Eisenhardt, 2010; Strauss & Corbin, 1990). Interviews lasted between 30 min to two hours. Interview notes were written after each interview, normally within 24 h. Based on the primary data, further secondary data were collected in 2016 and the first draft of the study was produced in 2017. This was then presented to independent industry experts in 2018 and honed on the basis of feedback received.

Case study databases were created and maintained throughout the data collection process. Data analysis involved deconstructing and coding the data and then reconstructing the coded data to produce a conceptually referenced and ordered case stories. These stories were tested against the theoretical framework developed using the pattern-matching mode of analysis to identify differences and similarities. The results generated were used to refine the framework in an iterative manner.

4. Overview of the Chinese management software industry

To provide the competitive context we first briefly overview the Chinese management software industry over the twenty-year period from the early 1990s to early 2010s. The Chinese market for integrated management software started to pick up when leading MNEs entered China in the early 1990s, attracted by the potentially large market and other positive factor conditions. The industry has witnessed rapid

Table 1
Overview of Focal Firms.

Company	Foundation date	Revenue (2014) ^a	Interviews	Public speeches
Yonyou	1988	USD 1.09 billion (23%)	9: Corporate executive: 1 Directors and managers: 3 Business unit informants: 5	2 (CEO)
SAP China	1995	USD 522 million (11%)	5: Directors and managers: 2 Business unit informants: 3	1 (Country president)
Kingdee	1993	USD 380 million (8%)	10: Corporate executive: 1 Directors and managers: 6 Business unit informants: 3	2 (CEO)
Oracle China	1991	USD 237 million (5%)	11: Corporate executives: 2 Directors and managers: 6 Business unit informants: 3	5 (Country president)
Total			35	10

^a Source: China Internet and Software, Macquarie Research, April 2016.

growth since early 1990s with the market size reaching US\$ 3.68 billion in 2008, an increase of 13.9% from 2007². The revenue of the Chinese management software industry further increased to US\$ 4.73 billion by 2014.³

Oracle entered the Chinese market in 1991, establishing a wholly-owned subsidiary in Beijing. SAP setup a wholly-owned subsidiary in Beijing in 1995. In the beginning, SAP and Oracle dominated the industry as no Chinese firms were able to provide integrated management software. Initial clients in China were subsidiaries or the joint ventures of Western MNEs, as well as some large Chinese MNEs. Oracle's client list included Motorola China, Ford China, Huawei, and Baidu; while SAP's included Procter & Gamble China, Kodak China, Lenovo, and Haier. In early 2000s, both SAP and Oracle started to customise their Enterprise Resource Planning (ERP)⁴ products to meet the needs of SMEs in China.

Following a surge of market demand for integrated management software in the mid-to-late 1990s, local firms started to develop ERP products. Yonyou began to develop ERP products in 1996 and released their first ERP product called U8 (targeting SMEs) in 1997, based on Microsoft technology. In 1998, Yonyou began developing another ERP product, its NC (New Century) system targeting large enterprises. Kingdee started to develop their ERP product K/3 in 1997, also based on Microsoft technology. The efforts of local firms were successful in gaining market share and by 2002, SAP and Oracle were the only two foreign firms ranked in the top eight ERP vendors in China, holding only 24.4% of the Chinese market compared to the 51.6% share held by six local ERP companies (Liang, Xue, Boulton, & Byrd, 2004). By 2014, Chinese firms Yonyou and Kingdee were No. 1 (23%) and No. 3 (8%) in this industry, with SAP and Oracle slipping to No. 2 (11%) and No. 4 (5%) respectively in terms of market share.⁵

Based on leading positions in China, both Yonyou and Kingdee became MNEs by penetrating new markets, especially in Asian countries. Yonyou has established subsidiaries in Japan, Singapore, Thailand, Hong Kong, and Macao. In 2007, Yonyou contracted Lionbridge Technologies, a leading provider of translation and offshoring services, to localise its enterprise software applications to reach new English-speaking customers. Kingdee has established subsidiaries in Singapore, Taiwan, and Hong Kong, and sells its ERP systems in Malaysia, Indonesia, and Thailand.

5. The competitive dynamics of the Chinese management software industry

In terms of technological knowledge, SAP and Oracle are the global leaders (Scott, 2018). Starting with almost no technological knowledge, how did local firms surpass these foreign MNEs so quickly in the Chinese management software industry? Our case study analysis firstly suggests that the LOF faced by foreign firms did not decrease significantly because of complexity, uncertainty, and discrimination that were exacerbated by country, industry and MNE strategy effects. Secondly, the balance of FSAs changed significantly as the initial FSAs of the MNEs became less relevant as technologies and customer behaviour in the host country market changed and, because the rate at which MNEs developed new FSAs was slow, initial FSAs were not substituted. Meanwhile, Chinese firms replicated MNEs' initial FSAs rapidly and developed unique FSAs such as optimised ERP systems that met the specific needs of local customers in terms of fast and dedicated

customer services at low cost. These five dynamics of the LOF and FSA forces are now discussed.

5.1. Changes in LOF over time

5.1.1. Complexity

MNEs face complexity in the host country because of the geographic distance between corporate headquarters and subsidiaries, a challenge that is usually not shared by local firms although it is acknowledged that in large host countries like China, where culture varies by region, even multi-plant local firms can face distance-based liabilities, although these are likely to be lower within countries than between countries. Geographic distance has been shown to inhibit trust and personal relationship-building in a cross-cultural setting, causing significant problems of information asymmetry (Luo, 2001). As a result, communication and coordination costs for MNEs are higher than their local rivals (Zaheer & Mosakowski, 1997).

The role of country presidents at SAP and Oracle was different to that of CEOs in the Chinese firms. In the latter, Chinese CEOs were in charge of everything from R&D to sales and so their strategic responses were informed by an overview of the whole business. When the sales divisions of local firms sensed new opportunities in the market and reported these to the CEO, the R&D division was promptly directed to develop specific products to address customer needs. In Oracle China, by contrast, the head of their sales unit reported to the president of Oracle China while its R&D centres in China reported directly to the R&D division in their headquarters located in the USA. As a result, the country president could only change the marketing strategies of the sale team and faced difficulty if trying to guide R&D priorities in response to local customer needs because of the complexity faced when communicating with the R&D division in the headquarters. As a senior manager at the Oracle R&D centre in Beijing related:

We report to our R&D headquarter in the USA and follow their R&D strategies closely. If there is any development requirement from Oracle China, this often has to report to our R&D headquarter in the first place and we follow the decision from our headquarter in the USA.

This organisational structure did not evolve during the period of analysis and partly explains why MNE LOF did not decline as predicted in the literature.

5.1.2. Uncertainty

MNEs encounter uncertainty in the host country because of their unfamiliarity with, and lack of roots in, the host business environment (Zaheer, 1995). Uncertainty may incur additional search costs because of limited access to local distribution networks or local infrastructure, especially in emerging markets (Goerzen et al., 2013). Uncertainty may also cause a failure to comply with legal and cultural norms. For example, it has been shown that foreign firms face significantly more labour lawsuit judgements than local firms (Mezias, 2002).

Yonyou and Kingdee had better local knowledge, such as where best to locate sales offices and an understanding of the business models of local distributors. This complementary knowledge enabled them to establish wider and more effective distribution networks than their MNE competitors. By 2002, Yonyou and Kingdee had established dozens of offices in major cities in China, compared to only a few offices (and only in first-tier cities such as Beijing and Shanghai) established by SAP and Oracle. Furthermore, based on their superior knowledge of the geographic distribution of potential customers, both Yonyou and Kingdee extended and strengthened their distribution networks by establishing strategic alliances with hundreds of local firms, covering not only first-tier cities, but also second and third-tier cities. By 2010, Oracle had expanded to 20 offices in China; while SAP had 7 offices. They had also expanded their partnerships with a few hundred local firms. However, Yonyou and Kingdee had established around 100

² Source: The ERP industry in China, China Computer World, 2009

³ Source: China Internet and Software, Macquarie Research, April 2016.

⁴ ERP is a suite of integrated management software applications, including components such as accounting and finance management, human resource management, distribution management, manufacturing management, customer services management, and procurement management.

⁵ Source: China Internet and Software, Macquarie Research, April 2016.

offices in major cities across China and extended and strengthened their distribution networks by establishing strategic alliances with thousands of local firms. The much larger distribution reach of Yonyou and Kingdee allowed them to better access and understand local market demand, allowing them to respond faster to local customer requirements and provide prompt customer service.

SAP China and Oracle China followed global standards when establishing strategic alliances. These included provisions that their partners should have the ability to enhance the value of the products/services (such as developing plug-in components); that their partners had to make a minimum investment in buying their ERP products; and were restricted to serving clients in a prescribed industry. Yonyou and Kingdee, by contrast, had the knowledge required to adjust to the needs and aspirations of local distributors and applied rules more flexibly when these threatened to impede the formation of potentially valuable distribution relationships in new industries. Moreover, Yonyou and Kingdee attracted and motivated local partners by allowing outstanding partners to become their local subsidiaries (with the CEO of the partner becoming the general manager of the subsidiary), something that corporate policies within SAP and Oracle made impossible. Our foregoing case study evidence suggests that SAP China and Oracle China's global standards remained static while local firms used their superior knowledge to evolve standards in response to changing customer needs. Again, this situation partly explains why MNE LOF did not decline as predicted in the literature.

5.1.3. Discrimination

The discrimination MNEs incur in host countries may result from their lack of legitimacy and economic nationalism in the foreign market (Zaheer, 1995). Discrimination can take two forms: formal discrimination can stem from different rules and regulations applying to foreign firms, which do not apply to local firms (Kostova & Zaheer, 1999); informal discrimination can result from a preference of local customers and employees to deal with local firms (Zaheer & Mosakowski, 1997). Consequently, it can be difficult for MNEs to develop close relationships with local government and other market participants.

In the Chinese context, SAP and Oracle faced difficulties building "guanxi" (the system of social networks and influential relationships that underpins Chinese society) because of their "outsidership" (Redding, 1990). Guanxi can act as a substitute for formal institutional support (Xin & Pearce, 1996). Such personal connections are particularly important for managers in countries without a stable legal and regulatory environment (Zucker, 1986). It is difficult for outsiders to become insiders due to the exclusiveness of guanxi networks (Gao, Ballantyne, & Knight, 2010; Wang, 2007). In contrast, co-development with Chinese manufacturing industry allowed Yonyou and Kingdee to design a unique Manufacturing Management component in their ERP system that precisely met the needs of Chinese customers. As a senior manager in Yonyou put it:

Our CEO, Mr. Wang, has a close "guanxi" with our customers and visit their factories frequently. The findings by Wang during his frequent field trips helped the company to develop the Manufacturing Management component meeting the specific needs of Chinese manufacturing companies.

In some cases, this outsidership is reinforced by more formal discrimination in the form of regulations that prohibit MNEs from accessing certain markets because of local government's discrimination against foreign firms. For reasons of security and the protection of the local computer software industry, the Chinese government had a policy that favoured local software over that produced by foreign firms. In 2004, the Chinese government published a regulation to restrict foreign software purchases and in 2015 the Chinese government dropped some of the world's leading technology brands from its approved state purchase lists, while adding thousands of locally made products, as a

response to reports of widespread Western cyber surveillance.

Overall, rather than decreasing over time, our analysis suggests that discrimination actually increased post-entry and so contributed significantly to the observation that MNE LOF did not decline as predicted in the literature.

5.1.4. LOF and country, industry and MNE strategy effects

It is apparent that in the case of the Chinese management software industry, levels of complexity, uncertainty and discrimination were particularly high and context contributed to the level and persistence of LOF. High levels of complexity existed and persisted because of a strong country effect brought about by the considerable distance between MNE country of origin in the West and host country in the East. Uncertainty was also exacerbated by a strong country effect in that investing MNEs were new to, and very unfamiliar with, the host business environment. An MNE strategy effect was also at play in that investing MNEs had chosen rigid approaches to joint ventures or strategic alliances when more flexibility would have facilitated better access to market knowledge. Discrimination was exacerbated by a strong country effect in that investing MNEs were outside country-level "guanxi". A further MNE strategy effect was also at play in that the impact of discrimination was higher in this B2B market where government was an important buyer. Here, government policy that switched to favour local producers increased MNE LOF and so reduced their market share.

5.2. Changes in FSA over time

5.2.1. MNEs' initial FSAs

The relevance of the initial Oa and Ot based FSAs of SAP and Oracle declined because of evolving customer needs in China. The key reason that SAP and Oracle led ERP solutions suppliers in the world was that their very complicated, comprehensive and expensive products met the demands of the world's biggest enterprises. Most of SAP's and Oracle's customers were in the top 10 in their industry, including over 80% of the Fortune Global top500. The number of employees in those enterprises were usually tens of thousands, their revenue exceeded hundreds of millions US dollars, their IT infrastructure was highly developed, and their staff were highly educated. Whilst this offer suited the first tranche of local customers which were typically other MNE subsidiaries or the joint ventures of Western MNEs, as well as some large Chinese MNEs, it did not suit the rapidly growing number of Chinese SMEs with undeveloped IT infrastructure and a large percentage of less educated employees. As a result, the FSAs embodied within the ERP systems offered by SAP and Oracle declined in overall relevance as market penetration increased over time.

5.2.2. New FSAs developed by MNEs

In the face of the evolving customer needs in China, MNEs have been trying to develop new Oa and Ot based FSAs relevant to the host market aiming to produce new ERP systems specifically for Chinese SMEs. However, these products deviated little from their mainstream relatives and were often differentiated via only additional simple plugins. This customisation was insufficient to address the very different finance and human resource management systems that exist in the Chinese economy. For example, unlike Western accounting standards, Chinese accounting standards are less focused on measuring profit and loss and more directed to measuring the inventory of assets available to a company (reflecting their roots in record keeping during the planning orientated socialist period). A Chinese balance sheet does not include the debts that a corporation owes, and is more suitable for management control than for tax purposes. Similarly, payroll and social insurance practices in China differ greatly from those in the West. Because of the integrated nature of ERP systems, optimising can be a difficult and resource-intensive task. Finance and human resource routines, for instance, are deeply embedded in the complicated enterprise application software so that changing the functionality in these necessitates

Table 2
Product Development History of Local Firms.

	Yonyou	Kingdee
1988	Released their first accounting software UFO (User Friendly Office) based on DOS.	
1995		Released their first accounting software Kingdee V1 based on Windows.
1997	Released first ERP system U8 for SMEs.	Released first ERP system K/3 for SMEs.
1998	Released their first ERP system NC for large enterprises.	
2003		Released their first ERP system EAS for large enterprises.
2004	Released U860, a bestselling ERP system for SMEs in China.	
2006	Released a new version of NC 5.0, which was implemented in more than 2500 large enterprises, including 60% of the top 500 Chinese enterprises by 2008.	
2008		Released a new version of EAS 6.0, which was implemented in several hundreds of listed Chinese enterprises by 2010.

changes in many parts of the ERP software. As a senior development manager in Oracle noted:

All the management software developed by Oracle are targeting the global market. The different needs of local customers in different countries are supported by adding functionalities as plugins to the software system [while the main functionalities do not change]. When customers [no matter in which country] buy products from Oracle, they get exactly the same products including all the plugins.

Thus adaptation alone was not enough to meet the needs of local customers and the rate of the new FSAs developed by MNEs relevant to the Chinese market was slow.

5.2.3. Local firm replication of MNEs' initial FSAs

Starting from the late 1990s, Chinese firms have been replicating MNEs' initial FSAs through rapid local innovation and learning from leading IT firms. Table 2 provides a summary of the product development history of each of our focal Chinese firms. In 1997, Yonyou released its first ERP system called U8 (targeting SMEs), based on technological architecture from Microsoft. However, some components, such as Manufacturing Management, were not well developed in U8. Therefore, in 2001, Yonyou acquired Hankang, a leading ERP firm based in Taiwan. This helped Yonyou to absorb best practices in the Taiwanese industry, which served one of the most advanced manufacturing centres in the world. The acquisition came with a strong R&D team based in Nanjing, China. By learning and absorbing best practices and technologies from Hankang and Microsoft, in November 2004 Yonyou released U860, which smoothly combined comprehensive front and back office business management functions including Manufacturing Management, Financial Management, System Platform, and Supply Chain Management. U860 soon became a bestselling ERP system for SMEs in the Chinese market.

In addition to U8, in 1998 Yonyou started to develop another ERP product: the NC (New Century) system targeting large enterprises. The industry at that time was dominated by SAP and Oracle. In late 1998, the first version of NC was released, which was the first large ERP system developed by a Chinese company. In 2002, Yonyou established a partnership with Baan, a leading ERP firm from the Netherlands with more than 15,000 customers in 60 countries. This partnership enabled Yonyou to learn and absorb advanced technologies and best practices from a leading Western ERP firm. Yonyou also established a strategic alliance with IBM. NC 5.0 was released in 2006 and the performance was dramatically improved by working side-by-side with IBM's HiPODS (High Performance On Demand Solutions) team and technical experts at IBM's China Development Lab. NC 5.0 was able to provide flexibility and options for companies of various sizes and organisational structures. By 2008, after 10 years of continuous research and development, NC had been implemented in more than 2500 large enterprises, including 60% of the top 500 Chinese enterprises.

Kingdee has also been developing optimised ERP systems for local customers by locally appropriate innovation efforts. Similar to Yonyou,

Kingdee started to develop the ERP system K/3 in 1997. K/3 was aimed at SMEs. In 2001, soon after Kingdee IPO'd on the Hong Kong Stock Exchange, the company acquired CASE, a leading ERP firm established in 1990 in Beijing. CASE had accumulated experience in the ERP field for 10 years and their products TEEMS (Total Enterprise Electric Management Solutions) had been implemented in many mid-large enterprises in China. Kingdee also formed a strategic alliance with Microsoft to help solve technological problems. By learning from CASE and Microsoft, the performance of K/3 improved dramatically and it became a leading ERP system in China.

Kingdee has also been developing a large ERP system named EAS (Enterprise Application Suite) with Mr Yuan as its chief architect. Mr Yuan was recognised as one of the "top 20 most influential people in the Chinese software industry"⁶. EAS was developed based on TEEMS acquired from CASE. Kingdee started to develop EAS in 2003, and by 2010 EAS had been implemented in hundreds of large Chinese enterprises, many of which were listed in the Shanghai Stock Exchange or the Shenzhen Stock Exchange.

5.2.4. Local firm development of new FSAs

Chinese firms have also developed unique FSAs such as optimised ERP systems, fast and dedicated customer services at low cost, and product cost leadership. The ERP systems offered by Yonyou or Kingdee were optimised to meet the specific needs of local customers. As already mentioned, China's finance and human resource management systems are different from those found in the West. The financial reports application in the financial management component of the ERP developed by Yonyou or Kingdee is certified by the Chinese government, thereby meeting a specific need of local customers. In contrast, it was difficult for SAP or Oracle to offer similar financial components because of their roots in Western systems.

As another example, the main advantage of Yonyou's NC ERP system, compared to SAP or Oracle, is its superior performance in managing conglomerate structures (especially conglomerates formed through unrelated diversification). Because many large Chinese companies are highly diversified (often across unrelated businesses), they needed ERP systems that could manage the processes and finance of their numerous unrelated diversification business units. The ERP systems offered by SAP or Oracle, however, do not have similar functionality because conglomerates of unrelated businesses are rare in Western countries.

Our data and data analysis suggest that another FSA developed by Chinese firms was fast and dedicated customer services at low cost. Firstly, the price charged by Yonyou and Kingdee for customer service was much lower than SAP and Oracle because of lower cost software engineers. SAP and Oracle charged 15–20% service fees annually, while Yonyou and Kingdee offered free customer services and only charged

⁶ The top 20 list includes Mr Kaifu Li (ex-CEO of Google China), Mr Lei Ding (CEO of NetEase; NASDAQ: NTES), and Mr Tianqiao Cheng (CEO of Shanda; NASDAQ: SNDA).

service fees if customers asked for additional services. As a sales manager at Yonyou related:

The price charged by SAP and Oracle is so expensive –the annual service alone would frighten many Chinese customers. This was the key reason that the first Chinese client of SAP – Shanghai Machine Tools Works – stopped the contract with SAP in 2005 and signed a new contract with Yonyou to supply ERP solutions.

Secondly, customer service engineers in Yonyou and Kingdee were located in about 100 offices across China, and they were able to provide a fast and dedicated service to local customers upon request. In contrast, one customer service engineer in SAP or Oracle was often responsible for several projects, and his/her response was much slower if the client was located in a far-away second or third tier city. At the extreme, some customer services were provided by engineers based in headquarters abroad. A senior engineer at Yonyou states:

In 2004, Shanghai Tobacco looked for an ERP vendor to provide dedicated and comprehensive IT services including the ERP solution. After analysing the report from our Shanghai subsidiary, we decided to establish a dedicated team for Shanghai Tobacco. Our foreign competitors are unlikely to provide such dedicated services because of their small number of software engineers and high prices.

In addition to the 15–20% annual service fees, compared to free service (except additional services) offered by Yonyou or Kingdee, SAP and Oracle also charged more for their ERP products. An SAP or Oracle ERP application usually cost more than 5 million RMB, compared to as little as 700,000 RMB offered by Chinese vendors (Liang et al., 2004). Although SAP and Oracle are leading brands with “high quality” images in China, it is difficult for them to compete with local firms, especially in the market for small- and medium-size companies with low IT budgets.

These “non-traditional” FSAs (such as optimised ERP systems, fast and cheap customer services, and low-cost products) developed by Yonyou and Kingdee are different from the traditional FSAs (such as fundamentally new technologies) possessed by established MNEs (Williamson & Wan, 2018). Non-traditional FSAs can be disruptive (Christensen, 1997) and challenge incumbents by introducing new value propositions and business models (Wan, Williamson, & Yin, 2015). Emerging market environments can stimulate disruptive innovation because changes to product design and business models that drastically lower costs and improve value for money are often a prerequisite for unlocking mass-market segments of customers with limited disposable income in these economies (Wan et al., 2015). Research suggests that established MNEs find it difficult to respond to this type of disruptive innovation because they focus too much on the needs of existing customers and strategic pre-commitments (Christensen & Raynor, 2003; Ghemawat, 1991; Lieberman & Montgomery, 1988).

To summarise, in the Chinese management software industry over the twenty-year period from the early 1990s to early 2010s, while local firms narrowed the FSA gap between themselves and their foreign rivals, the subsidiaries of foreign MNEs faced persistent LOF in the host country. In terms of traditional FSAs such as technological knowledge, SAP and Oracle are still ahead of local firms as they remain the global leaders today but their overall competitive advantage in the Chinese market has diminished.

5.2.5. FSAs and country, industry and MNE strategy effects

Similar to LOF, it is apparent that in the case of the Chinese management software industry, context contributed to the rapid convergence of FSAs over time. At the industry level, the relevance of the initial FSAs of SAP and Oracle declined because Chinese SMEs formed a large part of the growing market and these were not well served by the investing MNEs' product. Country level effects, particularly unique accounting standards and approaches to human resource management, made it difficult for the investing MNEs to develop compelling new

FSAs. Country level effects, reflected in the ability of local rivals to replicate MNEs' initial FSAs and then develop new non-traditional FSAs via rapid learning and absorbing of best practices, also contributed to the improving competitive advantage of local firms over time.

6. Discussion and conclusion

Based on the Chinese management software industry over a twenty-year period from the early 1990s to the early 2010s, this study has enabled an in-depth and longitudinal investigation into foreign subsidiary competitiveness relative to local firms. SAP and Oracle dominated the Chinese management software industry at point of entry because there were no local competitors producing ERP systems. However, over time, Yonyou and Kingdee surpassed SAP and Oracle in terms of market share as they managed to develop competing FSAs to narrow the competence gap. At the same time, foreign firms faced persistent LOF in China.

The theory of the MNE has recognised that MNEs can build and transfer FSAs from their home country to overcome LOF in host countries (Dunning, 1980; Hymer, 1976; Rugman, 1981). It is also argued that MNEs can decrease initial LOF over time (Miller & Eden, 2006; Nachum, 2003). Challenging this conventional wisdom, our study unpacks the two forces of LOF and FSAs that influence MNE performance in host countries into five dynamics to show that MNEs can face persistent LOF, while local competitors develop competing FSAs greater and faster than MNEs do in host country, which narrow the competence gap with foreign firms. As a result, local firms can outperform foreign firms over time because they are able to narrow FSAs faster than foreign firms decrease LOF. The context of our study plays an important part of the explanation. We have shown that context, in terms of country, industry and MNE strategy effects, contributed to the observed pattern of persistent LOF and converging FSAs.

Overall, our study augments received MNE theory by unpacking two forces into five dynamics and showing that in certain contexts, particularly in B2B markets in large, distant and complex emerging countries, where hundreds of local service sites, internal adaptation, and adjustment to strong local and national institutions are necessary, successful entry can be followed by longer term mediocrity, particularly when MNE strategy is rigid and slow to adapt to changing market conditions. Our study shows that unique non-traditional FSAs such as the ability to develop products tailored for local demand, the ability to offer services tailored for local demand, and the ability to do all this faster and at lower cost than foreign firms can mitigate traditional scale and experience based FSAs enjoyed by foreign entrants.

Our study contributes to the global strategy literature (Bartlett & Ghoshal, 1989; Bartlett, 1991; Rugman, Verbeke, & Yuan, 2011) which argues that MNEs need to find the appropriate trade-off between global integration and local responsiveness to compete in the global market (Bartlett & Ghoshal, 1989). This means that the potential to overcome some LOF in local markets is surrendered in order to exploit global FSAs. Our results suggest that the costs of failing to decrease LOF can be high. It may be better to focus on trading off local integration (and its benefits in reducing LOF) against the costs of greater global responsiveness (adjusting the processes, routines and rules that embody global FSAs to meet the needs of local conditions) as suggested by Santos and Williamson (2015).

Our study has implications for practitioners. The first is that foreign firms can benefit from paying more attention to formulating strategies and building complementary capabilities and knowledge to help them reduce LOF in host countries. Although foreign firms may face LOF as a result of lower local knowledge, outsidership and the constraints associated with HQ-imposed strategies, they can counteract these and improve their competitive strength by actions to reduce LOF including hiring local executives who better understand local market opportunities. They may also need to give more power to country presidents in host countries including oversight responsibilities for various

departments such as marketing, R&D, and sales so their foreign subsidiaries can respond to local market opportunities more rapidly and efficiently. Moreover, they need to adopt initiatives to generate new FSAs, potentially including non-traditional FSAs being amassed by local competitors, by developing (not just customising) new products for local customers. To create and maintain competitiveness it may also be essential to establish close partnerships with local firms to access their distribution networks. These actions and capabilities to overcome LOF and develop relevant FSAs may be becoming a more important factor in global competition.

If foreign firms are to outperform local firms in spite of LOF, one of two conditions must hold: (1) LOF does not confer much disadvantage; or (2) the FSAs that the foreign firms bring are so great that they overwhelm LOF. However, with increasing globalisation, it is easier for local firms to access technologies and know-how through new gateways in the form of: outsourcing, modularisation, codification of knowledge, and creating more open markets for international talent and corporate control (Santos & Williamson, 2015; Williamson & Yin, 2009). This trend means that the distinctive advantages that MNEs have traditionally enjoyed when transferring resources and capabilities across the world are becoming relatively less powerful as local firms access them from alternative sources. This fast catch up by emerging economy firms has changed the landscape of global competition dramatically and therefore improved capabilities to overcome LOF will become ever more critical to maintain MNEs' relative competitive advantage.

This study has two important limitations. Firstly, the augmented theory is based on data from a specific context: the management software industry in the large emerging market that is China. Further research could assess the extent to which it applies in other industry, geographic and development stage contexts. Secondly, our study analyses the entry strategies of MNEs based in advanced economies. Further research could assess the extent to which the entry strategies of MNEs based in emerging economies compare. It could be the case that such MNEs are better equipped to reduce LOF and develop new FSAs in other familiar emerging economy contexts.

Appendix A

SAP and Oracle: Background and Brief Histories

SAP

Established in 1972 in Germany by five former IBM engineers, SAP is the global market leader in enterprise applications in terms of software and software-related services. SAP's products focus on Enterprise Resource Planning. The company's main product is SAP ERP. Its previous name was R/3. The "R" of SAP R/3 stood for real-time; the number 3 is related to their 3-tier architecture: database, application server, and client. R/2, which ran on a Mainframe architecture, was the predecessor of R/3. While SAP ERP is typically used by large enterprises such as Fortune 500 companies, SAP also targets SMEs with smaller ERP systems such as SAP Business One and SAP Business All-in-One. The revenue of SAP in 2018 was 24.70 billion Euro according to their annual report.

In 1995 the company setup a fully owned subsidiary in Beijing, China. Mr Klaus Zimmer, a German citizen, was appointed president of SAP China in 1997, after working with Siemens China as a sales director. Zimmer was fluent in Chinese and worked with SAP China for 10 years until 2007. During that period he initiated several important business plans for penetrating the Chinese market. In the 1990s, most Chinese firms had limited knowledge of ERP systems and SAP. Zimmer started a plan named "Beacon" to educate Chinese customers and promoted the SAP brand by selling R/3 to some of the biggest and most influential firms in China. The first clients were subsidiaries or joint ventures of leading multinationals, such as P&G China, Kodak China, and First Automotive Works (joint venture with Volkswagen). The client list extended to some of the biggest Chinese firms including

Haier, Lenovo, and Changhong. SAP gradually established their brand name after many industry leaders in the Chinese market became their clients. In the early 2000s, Zimmer initiated another business plan, "Fire", in order to sell their products to SMEs in China. SAP did not develop a new ERP system for the Chinese customers - they customized SAP Business One and SAP Business All-in-One.

Oracle

Oracle was established in 1977 in the USA, developing and marketing database management and ERP systems. It is currently the global market leader in database systems. The company went public on March 15, 1986, one day after Microsoft's initial public offering. Larry Ellison, a co-founder of Oracle Corporation, has served as Oracle's CEO throughout its history. By acquiring many leading multinationals such as BEA, PeopleSoft, and Sun, Oracle is able to provide both hardware systems and enterprise applications software, and is the second largest ERP system supplier in the world, behind SAP. Oracle's ERP system, named Oracle E-Business Suite, includes software to perform various enterprise functions related to finance, manufacturing, customer relationship management and human resource management. Its revenue was US\$ 39.83 billion in 2018 according to Oracle Corporation annual report.

Oracle entered the Chinese market in 1991, establishing a fully owned subsidiary in Beijing. In the late 1990s and early 2000s, Oracle China was the second biggest ERP supplier in the Chinese market, behind SAP. Oracle's client list in China included Motorola China, Ford China, Huawei, and Baidu. Facing competition from local ERP suppliers, Oracle established R&D centres in Beijing and Shenzhen in 2002, aiming to provide customised products for the Chinese market. Similar to SAP, Oracle only managed to customize their ERP products to some extent, instead of developing new products for Chinese customers.

References

- Aggarwal, R., & Agmon, T. (1990). The international success of developing country firms: Role of government-directed comparative advantage. *Management International Review*, 30, 163–180.
- Barney, J. (1991). Firm Resources and sustained competitive advantage. *Journal of Management*, 17, 99–120.
- Bartlett, C. A. (1991). Global strategic management: Impact on the new frontiers of strategy research. *Strategic Management Journal*, 12, 5–16.
- Bartlett, C. A., & Ghoshal, S. (1989). *Managing across borders: The transnational solution*. Boston: Harvard Business School Press.
- Bell, R. G., Filatotchev, L., & Rasheed, A. (2012). The liability of foreignness in capital markets: Sources and remedies. *Journal of International Business Studies*, 43, 107–122.
- Caves, R. E. (1996). *Multinational enterprise and economic analysis*. Cambridge: Cambridge University Press.
- Chen, T. (2006). Liability of foreignness and entry mode choice: Taiwanese firms in Europe. *Journal of Business Research*, 59, 288–294.
- Christensen, C. M. (1997). *The innovator's dilemma: When new technologies cause great firms to fail*. Boston, MA: Harvard Business School Press.
- Christensen, C. M., & Raynor, M. (2003). *The innovator's solution: Creating and sustaining successful growth*. Boston: Harvard Business School Press.
- Cuervo-Cazurra, A., & Genc, M. (2008). Transforming disadvantages into advantages: Developing -country MNEs in the least developed countries. *Journal of International Business Studies*, 39, 957–979.
- Curran, L., & Keng Ng, L. (2018). Running out of steam on emerging markets? The limits of MNE firm-specific advantages in China. *Multinational Business Review*, 26, 207–224.
- Dunning, J. H. (1980). Toward an eclectic theory of international production: Some empirical tests. *Journal of International Business Studies*, 11, 9–31.
- Dunning, J. H. (1988). The eclectic paradigm of international production: A restatement and some possible extensions. *Journal of International Business Studies*, 19, 1–31.
- Dunning, J. H. (2001). The eclectic (OLI) paradigm of international production: Past, present and future. *International Journal of the Economics of Business*, 8(2), 172–190.
- Gao, H., Ballantyne, D., & Knight, G. A. (2010). Paradoxes and guanxi dilemmas in emerging Chinese-Western intercultural relationships. *Industrial and Marketing Management*, 39, 264–272.
- Ghemawat, P. (1991). Market incumbency and technological inertia. *Marketing Science*, 10(2), 161–171.
- Ghemawat, P., & Khanna, T. (1998). The nature of diversified business groups: A research design and two case studies. *The Journal of Industrial Economics*, 46, 35–61.
- Ghoshal, S., & Nohria, N. (1989). Internal differentiation within multinational corporations. *Strategic Management Journal*, 10, 323–337.
- Goerzen, A., Asmussen, C., & Nielsen, B. (2013). Global cities and multinational enterprise location strategy. *Journal of International Business Studies*, 44, 427–450.
- Hymers, S. (1976). *The international operations of national firms*. Cambridge, MA: MIT Press.

- IDC (2018). "Smartphone rankings shaken up once again as Huawei surpasses Apple". available at: <https://www.idc.com/getdoc.jsp?containerId=prUS44188018> (Accessed 5 April 2019).
- Isobe, T., Makino, S., & Montgomery, D. (2000). Resource commitment, entry timing, and market performance of foreign direct investments in emerging economies: The case of Japanese international joint ventures in China. *The Academy of Management Journal*, 43(3), 468–484.
- Jick, T. D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly*, 24, 602–611.
- Johanson, J., & Vahlne, J. (1977). The internationalization process of the firm—a model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, 8, 23–32.
- Khanna, T., & Palepu, K. (1997). Why focused strategy may be wrong for emerging markets. *Harvard Business Review*, 41–51.
- Kim, L. (1998). Crisis construction and organization learning: Capability building in catching-up at Hyundai Motor. *Organization Science*, 9(4), 506–521.
- Kostova, T., & Zaheer, S. (1999). Organizational legitimacy under conditions of complexity: The case of the multinational enterprise. *The Academy of Management Review*, 24, 64–81.
- Liang, H., Xue, Y., Boulton, W., & Byrd, T. (2004). Why Western vendors don't dominate China's ERP market. *Communications of the ACM*, 47, 69–72.
- Lieberman, M. B., & Montgomery, D. B. (1988). First-mover advantages. *Strategic Management Journal*, 9(S1), 41–58.
- Lilien, G. L., & Grewal, R. (2012). Business-to-business marketing: Looking back, looking forward. In G. L. Lilien, & R. Grewal (Eds.). *Handbook of business to business marketing* (pp. 3–14). Cheltenham, UK: Edward Elgar.
- Luo, Y. (2001). Antecedents and consequences of personal attachment in cross-cultural cooperative ventures. *Administrative Science Quarterly*.
- Martin, J. A., & Eisenhardt, K. M. (2010). Rewiring: Cross-business-unit collaborations in multibusiness organizations. *The Academy of Management Journal*, 53, 265–301.
- Mezias, J. M. (2002). Identifying liabilities of foreignness and strategies to minimize their effects: The case of labor lawsuit judgements in the United States. *Strategic Management Journal*, 23, 229–244.
- Miller, S. R., & Eden, L. (2006). Local density and foreign subsidiary performance. *The Academy of Management Journal*, 49, 341–355.
- Murray, J., Kotabe, M., & Zhou, J. (2005). Strategic alliance-based sourcing and market performance: Evidence from foreign firms operating in China. *Journal of International Business Studies*, 36, 187–208.
- Nachum, L. (2003). Liability of foreignness in global competition? Financial service affiliates in the City of London. *Strategic Management Journal*, 24, 1187–1208.
- Priem, R. L., & Butler, J. E. (2001). Is the resource-based 'view' a useful perspective for strategic management research? *The Academy of Management Review*, 26(1), 22–40.
- Ramamurti, R. (2009). What have we learned about emerging market MNEs? In R. Ramamurti, & J. Singh (Eds.). *emerging multinationals in emerging markets* (pp. 399–426). Cambridge, U.K: Cambridge University Press.
- Redding, S. G. (1990). *The spirit of chinese capitalism*. New York: de Gruyter.
- Rugman, A. (1981). A test of internalization theory. *Managerial and Decision Economics*, 2, 211–219.
- Rugman, A., & Verbeke, A. (2001). Subsidiary-specific advantages in multinational enterprises. *Strategic Management Journal*, 22, 237–250.
- Rugman, A., Verbeke, A., & Yuan, W. (2011). Re-conceptualizing Bartlett and Ghoshal's classification of national subsidiary roles in the multinational enterprise. *Journal of Management Studies*, 48, 253–277.
- Santos, J., & Williamson, P. (2015). The new mission for multinationals. *MIT Sloan Management Review*, 56, 44–54.
- Scott, T. (2018). *SAP vs. Oracle: Clash of the tier 1 ERP titans*. Accessed 11th July, 2019 <https://technologyadvice.com/blog/information-technology/sap-vs-oracle/>.
- Sethi, D., & Judge, W. (2009). Reappraising liabilities of foreignness within an integrated perspective of the costs and benefits of doing business abroad. *International Business Review*, 18, 404–416.
- Siggelkow, N. (2007). Persuasion with case studies. *The Academy of Management Journal*, 50(1), 20–24.
- Strauss, A., & Corbin, J. M. (1990). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Newbury Park, CA: Sage.
- Sun, P., Mellahi, K., & Thun, E. (2010). The dynamic value of MNE political embeddedness: The case of the Chinese automobile industry. *Journal of International Business Studies*, 41, 1161–1182.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.
- Tse, D., Pan, Y., & Au, K. (1997). How MNCs choose entry modes and form alliances: The China experience. *Journal of International Business Studies*, 28, 779–805.
- Wan, F., Williamson, P., & Yin, E. (2015). Antecedents and implications of disruptive innovation: Evidence from China. *Technovation*, 39–40, 94–104.
- Wan, F., Williamson, P., & Yin, E. (2019). Enabling cost innovation by non-traditional organizational processes: The case of Chinese firms. *Technological Forecasting and Social Change*, 139, 352–361.
- Wang, C. (2007). Guanxi vs. relationship marketing: Exploring underlying differences. *Industrial Marketing Management*, 36, 81–86.
- Wernerfelt, B. (1984). A Resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180.
- Williamson, P., & Wan, F. (2018). Emerging market multinationals and the concept of ownership advantages. *International Journal of Emerging Markets*, 13, 557–567.
- Williamson, P., & Yin, E. (2009). Racing with the Chinese dragons. In I. Alon (Ed.). *China rules: Globalization and political transformation* (pp. 69–100). New York: Palgrave Macmillan.
- Williamson, P., & Yin, E. (2014). Accelerated innovation: The new challenge from China. *MIT Sloan Management Review*, 55, 1–8.
- Xin, K., & Pearce, J. (1996). Guanxi: Connections as substitutes for formal institutional support. *The Academy of Management Journal*, 39, 1641–1658.
- Yildiz, H., & Fey, C. (2012). The liability of foreignness reconsidered: New insights from the alternative research context of transforming economies. *International Business Review*, 21, 269–280.
- Yin, R. K. (2003). *Case study research: Design and methods* (3rd ed.). Newbury Park, CA: Sage.
- Zaheer, S. (1995). Overcoming the liability of foreignness. *The Academy of Management Journal*, 38, 341–363.
- Zaheer, S., & Mosakowski, E. (1997). The dynamics of the liability of foreignness: A global study of survival in financial services. *Strategic Management Journal*, 18, 439–463.
- Zeng, M., & Williamson, P. J. (2007). *Dragons At your door: How Chinese cost innovation is disrupting global competition*. Boston, MA: Harvard Business School Press.
- Zhou, N., & Guillen, M. F. (2015). From home country to home base: A dynamic approach to the liability of foreignness. *Strategic Management Journal*, 36(6), 907–917.
- Zucker, L. (1986). Production of trust: Institutional sources of economic structure. In B. M. Staw, & L. L. Cummings (Vol. Eds.), *Research in organizational behavior: Vol. 8*, (pp. 53–101). Greenwich, CT: JAI Press.