

**Rethinking the Eclectic Paradigm: Explaining MNE E-Commerce Corporations'
Activity in China**

ABSTRACT

We use the eclectic paradigm as an analytical framework to explain the MNE e-commerce company's activities in China. Grounded in the rich data, we argue that the dynamic interplay between the ownership advantage and local institutional context that have emerged—particularly in the information age—plays a significant role in explaining the trajectory of MNE e-commerce companies in China. We propose On, Ln and In by embedding network-based advantages within the OLI paradigm. With the acceleration of technological change and non-ergodic uncertainty, such a network-embedded eclectic paradigm will lead to MNE e-commerce companies' sustainable development in the emerging economy.

INTRODUCTION

Since China opened up its market in the late 1970s, multinational enterprises (MNEs) from developed economies in a plethora of sectors, ranging from automotive and retailing to consumer goods and professional services, have all achieved various level of success in China. However, one peculiar observation is that no MNE e-commerce companies (ECCs), from AOL, Yahoo, eBay, Google to Amazon and Groupon, thus far have been able to replicate such successes in China. ECCs have been defined differently by various studies (Achrol & Kotler, 1999; Chesbrough & Teece, 1996; Singh & Kundu, 2002). For the purpose of this paper, however, we adopt the definition of ECCs are suggested by Singh & Kundu (2002): *'organisations that from inception are engaged in electronic commerce, and derive significant competitive advantage from the use of network resources resident in virtual networks of commercial collaborative alliance'* (p. 680). This includes, for example, internet content providers (Yahoo), online product and service providers (Amazon), online intermediary, which brings buyers and sellers together by aggregating information, such as search engines, namely Google, and market makers, including Groupon and eBay, for example.

Yahoo was one of the early pioneers to have ventured into China, which it did in 1998. Its business reached a peak in the early 2000s; however, soon, its market share began to decline. Yahoo China was acquired by a local ECC Alibaba, and stopped providing news and community services in September 2013. eBay and Google entered China in 2002 and 2006, respectively, but, despite their early successes, their market shares declined rapidly to 6.2% and 19.2% by the time they exited China in 2006 and 2010. Others, such as Amazon and Groupon, continue to struggle with their current market shares, which reach only single digits in China. Compared with other MNEs in China, we have never witnessed such systematic failure. With the resources and capabilities available to these MNE ECCs, the performance displayed in China is unexpected. A prevalent argument holds that government censorship is the main reason for the failure of MNE ECCs activity in China; however, similar government censorships were found in other countries, such as Indonesia, Thailand and Saudi Arabia, whilst MNE ECCs, such as Google, are still able to dominate more than 95% market share in these countries. Whilst this phenomenon has been subject to much speculation and debate, there remains paucity in systematic analysis based on comprehensive empirical data.

Many scholars have engaged in the debate on the extent that new forms of organisations challenge existing international business (IB) theories in general and, in particular, the Ownership-Location-Internalisation (OLI) or eclectic paradigm (Collinson & Rugman, 2007; Dunning, 2006; Narula, 2006). An increasing number of ECCs are now MNEs, and have internationalised. Some researchers have attempted to integrate e-commerce with various IB theoretical frameworks with the aim of extending the framework's explanatory power. However, few such attempts grounded in comprehensive empirical data (Singh & Kundu, 2002; Dunning & Wymbs, 2001) are specific to ECCs *per se* (Dunning & Wymbs, 2001), and are particular to transition economies and emerging markets (Oxley & Yeung, 2001), with the majority of them lacking a robust underpinning theoretical framework (Wang & Ren, 2012). The rapidly growing importance of the internet and ECCs calls for a corresponding shift in the discussion of internationalisation. Accordingly, it is our aim in this paper to respond to this call from both a theoretical and an empirical perspective. This paper investigates how the OLI paradigm can be employed with the objective to explain the trajectory of MNE ECCs in China. OLI is utilised as the overarching analytical framework for this research owing to its versatile (Narula, 2006) and robust (Dunning, 2001; Eden & Dai, 2010) nature, which can be applied when explaining various industries and business activities in the field of international business (Cantwell & Narula, 2001).

In the next section, Dunning's OLI paradigm will be critically reviewed in relation to the unique characteristics of ECCs. Following this, the empirical work for this paper will be discussed, and key factors affecting the performance of MNE ECCs in China will be identified and examined. In the final section, the implication of our analysis for MNE ECCs will be highlighted.

LITERATURE REVIEW

The Characteristics of ECCs

ECCs are characterised by high network externality and connectivity, and low marginal costs of production (Hidding, Williams & Sviokla, 2011; Shapiro & Varian, 1999). Network externalities are *positive consumption externalities* where the consumer benefits from using a product or service increases with the number of other users of the same or similar good (Katz

& Shapiro, 1986). Prominent examples of industries that exhibit network effects include PC hardware and operating systems, games and ECCs. Market imperfections attributed to information asymmetry, such as price determinism and information transfer, are reduced or altogether eliminated on the internet (Singh & Kundu, 2002). ECCs also have unprecedented reach (Amit & Zott, 2001), highly networked in alliances and partnerships, and are more recognised as more susceptible to demand-side economics (Dunning & Wymbs, 2001; Singh & Kundu, 2002; Shapiro & Varian, 1999). The role of the customer is largely enhanced owing to the fact that the internet allows them to play an active role in creating and competing for value (Watson, Pitt, Berthon & Zinkhan, 2002).

Value-creation in ECCs takes place along four different dimensions, namely efficiency, complementarity, lock-in and novelty (Amit & Zott, 2001). In addition to transaction efficiency and novelty, value-creation is largely dependent on *complementarities*, which include vertical complementary goods (e.g., supporting service that facilitate and encourage online transaction) and horizontal complementary goods (e.g., one stop shopping) provided by partners (Amit & Zott, 2001; Dunning & Wymbs, 2001). ECCs are able to *lock customers and partners in* through high switching costs and positive network externality (Amit & Zott, 2001). The large customer base and complementary goods are two reinforcing mechanisms, creating a *virtuous cycle* (Hill, 1997), which is crucial for MNE ECCs' sustainable development (Shapiro & Varian, 1999). As a result, ECCs' value-creation is not exclusively dependent on endogenous firm transaction efficiency, but rather on the exogenous relational assets ECCs possess with vertical and horizontal complementary partners, and a large customer base.

ECCs deliver information and services that are instantly available to a vast number of customers with significantly reduced search and transaction costs, and which heavily rely on network externality (Malone, Yates & Benjamin, 1987). As ECCs demonstrate a unique set of characteristics, one thus might expect that the traditional guiding logic underpinning traditional industry, and traditional intermediary business and information brokers may only be partially applicable to ECCs. ECCs are also subject to two main sources of uncertainty, namely process uncertainty arising from unfamiliarity and the newness of the medium (Liang & Huang, 1998), and demand uncertainty arising from short product lifecycles and rapid technological obsolescence on the internet (Jones, Hesterly & Borgatti, 1997). Such value-creation processes redefine a firm's boundary, and create significant uncertainties, which present a fundamental challenge to conventional IB theory.

Ownership Advantage

IB scholars have long acknowledged the centrality of firm-specific-advantages (FSAs) to an understanding of the *raison d'être* of MNCs. Inspired by internalisation theory, from its historical antecedents in Coase (1937), McManus (1972) and Williamson (1985) to Buckley and Casson (1976), Rugman (1981) and Hennart (1982), FSAs have been asset-based, taking on the firm as a unit of analysis to explain the endogenous efficiency aspects of MNEs (Rugman, 2010). Underpinned by the resource-based view, FSAs include tangible and intangible assets, such as technology, patents (Eden, Levitas & Martinez, 1997), resources, such as knowledge, skilled employees and efficient procedures (Hunt, 2000; Wernerfelt, 1984), brand image, reputation and marketing competence (Knight & Kim, 2009; Kotha, Rindova & Rothaermel, 2001).

The OLI paradigm adds Hymer-type advantages (1960) to the efficiency-based FSAs theory. As stated by Dunning (2001, 1988, 1980), FSAs can be subdivided into three distinct types of ownership advantage: *Oa* advantage involves the exclusive possession of tangible and intangible assets; resources, such as superior technology, scale economies, product differentiation; and distribution networks, which have the propensity to increase firm transaction efficiency. Path-dependent knowledge has been regarded as a critical ownership advantage that is a valuable, unique and difficult-to-imitate resource in global competition (Boisot, 1998; Peng, 2001). Other scholars argue that such path-dependent knowledge may be hinged upon the characteristics of the host location (Buckley, 2004; Erramilli, Agarwal & Kim, 1997). *Ot* refers to a firm's ability to coordinate distinct value-added activities across national boundaries and their capacity to reduce environmental and foreign exchange risk through intra-firm and inter-firm transaction activities.

Dunning & Lundan (2008a, 2008b) further add institutional ownership advantage (*Oi*), which spans the range of formal and informal institutions that govern value-added processes within and across firms; thus, it may be stated that *Oi* complements asset ownership advantage (*Oa*) and transactional ownership advantages (*Ot*) in the '*form of a triumvirate of O: Oa + Ot + Oi*' (Eden & Dai, 2010: 26). The dynamic aspect of ownership advantage, such as the development of new organisational routines and business models, have also been highlighted, emphasising the institutional origins of dynamic capabilities in MNEs (Dunning & Lundan, 2010). Cantwell, Dunning & Lundan (2010) indicate that MNEs' capabilities, such as firm

level creativity and institutional entrepreneurship, may lead to co-evolution with the environment.

MNE ECCs possess ownership advantages: for example, Oa, such as tangible assets (e.g., property right based on technology standards, preferred customer interface) (Dunning & Wymbs, 2001), intangible assets (e.g. knowledge, reputation, web traffic and innovation) (Kotha *et al.*, 2001; Singh & Kundu, 2002), and high accessibility, information-based resources and capabilities (Amit & Zott, 2001), and Ot, such as verticals and horizontal alliance advantages and business district (Dunning & Wymbs, 2001). Compared to firms in traditional sectors, MNE ECCs' ability to access and conduct harmonious value-adding activities with exogenous partners and customers is becoming a more critical advantage (Dunning, 2001). The value-creations of MNE ECCs become increasingly network- rather than firm-specific, meaning the traditional ownership advantage, which mainly focuses on firm-level efficiency, falls short in explaining the development of MNE ECCs.

The Location Factor

The institution-based view has been a pivotal theoretical lens in international business (Peng, Wang & Jiang, 2008; Wan & Hoskisson, 2003). The institutional view is defined as formal rules (e.g., constitutions, laws and regulations), informal constraints (e.g., norm of behaviour, conventions) and changes in these institutions over time that shape firm behaviour and performance in a society (North, 1990). Similarly, Scott (1995) defines institutions as '*regulative, normative and cognitive parameters*' that influence organisation in various ways (p. 33).

Many IB scholars approach institutional theory as the supply side of the economy, examining the way in which institutions shape the supply of input collectively available to firms (Aoki, 2001; Jackson & Deeg, 2008). Rugman (1981) constructed a matrix highlighting FSAs and country-specific advantages (CSAs). CSAs, such as the availability of natural resources, access to market, production-factor costs and knowledge-intensive assets, such as skilled labour, were all regarded as one of the key sources determining in which specific country MNEs should invest (Makino, Isobe & Chan, 2004). Location advantages, as part of the OLI paradigm, focus on four different types of institutional-related advantages: natural resources, such as raw materials; economic conditions, such as infrastructure development,

communication cost and size of the local market; political, local and national policies, which favour or disfavour Foreign Direct Investment (FDI); and social advantages, such as culture, labour laws and pay level (Dunning, 1980, 1988, 2001). The asset bundling between MNEs' internally owned resources and complementary exogenous local asset that can increase MNEs' efficiency in the host market was also perceived as location advantage (Hennart, 2012; Verbeke, 2009; Wei & Liu, 2006).

Dunning (1998) stimulated the revival interest of locations owing to major changes in the economic environment, such as the rising significance of knowledge as the key wealth-creating asset, the increase in the globalisation of economic activities, and the emergence of alliance capitalism. Dunning & Lundan (2008a) proposed that the institution-based view is crucial in advancing our understanding of the different forms of contemporary MNEs. L (i), as institutionally related location advantages is highly situational and differs between developed and developing countries (Cantwell, 2009; Dunning & Lundan, 2008a).

Drawing on an institution-based view, IB scholars have studied institutions in terms of how different *rules of the game* impact on MNEs' transaction costs (Brouthers, 2002) in exposing firms to culturally, politically and economically related endemic market conditions (Delios & Henisz, 2000; Hofstede, 1991), creating uncertainty and risk owing to institutional distance (Kostova, 1986) between home and host country institutions, and/or between developed and emerging economies (Meyer & Rowan, 1977; Peng *et al.*, 2008).

Institutional distance leads to the liability of foreignness where MNE face certain unavoidable costs arising from the unfamiliarity of the environment due to cultural, political and economic differences, and from the need for coordination across geographic distance (Hymer, 1960; Zaheer, 1995). The impact liability of foreignness becomes more salient when institutional distance becomes more pronounced—especially between developed and emerging economies (Cantwell, 2009; Eden & Dai, 2010)—because the emerging markets will not always follow the same evolution path as the developed West (Child & Tse, 2001; Dixon, Meyer & Day, 2010). This uncertainty is further exacerbated as a result of diverse and dissimilar subnational institutional environments (Mudambi & Navarra, 2002). Many scholars emphasised that the subnational difference is critical in their explanatory power for MNEs' performance in emerging economies, such as China (Ma, Tong & Fitza, 2013; Beugelsdijk & Mudambi, 2013; Park, Li & Tse, 2006).

Owing to the interconnectedness of globalisation and information technology, many researchers recognise the dynamic nature of the institutional view. North (2005) proposes a non-ergodic uncertainty, where firms are unable predict the future by extrapolating from their past experiences; therefore, the dynamic interaction between the institutional environment and firm activity is crucial when striving to advance our understanding of MNE activities in different institutional environments (Cantwell & Narula, 2001; Cantwell *et al.*, 2010; Kostova, Roth & Dacin, 2008).

Location advantage for MNE ECCs can arise from the infrastructure (e.g. telecommunications), cost efficiency of access, government policies and agglomerative economies associated with financing and technology (Dunning & Wymbs, 2001). Many scholars argue that internet firms may experience liability of foreignness to a lesser degree when compared with traditional firms because they do not impose the logistics, cultural and regulatory demands associated with international commerce and foreign investment in physical goods and service (Luo, Zhao & Du, 2005). However, Oxley & Yeung (2001) argue that e-commerce activity largely depends on local *rule of law* and physical supporting infrastructure, such as the availability of credible payment channels. The imperfect endemic market condition in emerging economies, non-ergodic uncertainties, coupled with intense local industry-based competition, as a result of low entry barriers in the e-commerce sector (Porter, 2001), exerts significant locational challenges on the activities of MNE ECCs in China.

Internalisation Advantage

Internalisation is underscored by MNE economist Ethier (1986: 805) as the ‘*Caesar of the OLI triumvirate*’. Internalisation is a general principle explaining the boundaries of organisation—and especially explaining where boundaries lie and how they shift in response to changing circumstance. Drawing on Buckley & Casson’s (1976) internalisation theory, internalisation advantage refers to MNEs’ ability to efficiently transfer their ownership advantages across national borders within their own organisation in an attempt to avoid market failure rather than sell them (Dunning, 1988). Based on orthodox internalisation theory, MNEs need to internalise their cross-border activities if the transaction and coordination cost of using arm-length markets exceed those costs incurred by internal hierarchies. Heavily relying on the logic of Transaction Cost Economics (TCE) theory,

proponents of internalisation theory focus exclusively on the way in which market imperfections affect MNEs' performance (Buckley & Casson, 1976; Delios & Henisz, 2000). A wide range of market failure has been identified by the previous literature, ranging from risk and uncertainty, information asymmetry to bounded rationality, externalities and economies of scale (Buckley & Casson, 1976; Dunning & Rugman, 1985; Hennart, 1989).

The centrality of internalisation theory focuses on hierarchical control, optimising and protecting ownership advantages with the aim of circumventing market imperfections (Hymer, 1960; Rugman, 1980; Vernon, 1971); however, many scholars argue that the firm is a *nexus of treaties* as opposed to a *repository of knowledge and capabilities* (Kogut & Zander, 1993; Dunning, 2000: 180), meaning it requires complex coordination if the firm is to achieve optimal benefits (Zanfei, 2000; Dunning, 2000). Alliance capitalism emphasises the importance of efficiency-seeking and strategic asset-seeking investment, which makes merger and acquisition, and strategic alliance with local indigenous firms critical to asset augmentation (Dunning, 1995, 2000; Hagedoorn & Lundan, 2001). Chesbrough (2003) proposes *open innovation*, highlighting the importance of external actors in assisting firms to achieve and sustain innovation; thus, the previous modes, focusing on full internalisation, are not always desirable for MNEs where innovation activities are concerned (Cantwell & Narula, 2001).

Another main criticism indicates the static nature of internalisation theory where it offers limited explanation on the way in which firms organise their ownership assets in the generation of future assets rather as opposed to optimising them (Dunning, 2000; Kogut & Zander, 1993). Kogut & Zander (1993) argue that that internalisation theory relying on bounded rationality and opportunism may act as a constraint on individual and organisational behaviour: overemphasis on protecting the profitable exploitation of FSAs could lead to the neglect of the development of new ones (Kogut & Zander, 1993). This is echoed by many business practitioners proclaiming that the '*twentieth century MNE model is no longer optimal for innovation, and the focus has begun to shift from protecting intellectual property... to maximising intellectual capital... based on shared ownership*' (Palmisano, 2006: 131, 134; Rangan and Sengul, 2009).

The rapid advancement and employment of information and communication technology by firms have compelled scholars to revisit the internalisation theory (Rangan & Sengul, 2009). Market imperfections attributed to information asymmetry, such as price determinism and

information transfer, for example, are diminishing on the internet (Singh & Kundu, 2002). Part of ECCs' value-creation is dependent on vertical and horizontal complementary goods, large customer base and innovation, thus meaning complete internalisation would be a *non sequitur*. The redefined boundary of ECCs, significantly reduced transaction and search costs, combined with the rising importance of knowledge and innovation, have called into question our basic conception of how the changing organisation form challenges the 'I' (internalisation) as part of the OLI paradigm.

CONTEXT AND METHODS

Research Context and Design

This research is designed with the aim of investigating the way in which the OLI paradigm can be employed in an effort to explain the trajectory of MNE ECCs in China. We adopt a ‘naturalistic inquiry’, which applies inductive logic to obtain insight (Garud, Jain & Kumaraswamy, 2002; Lincoln & Guba, 1985). For this particular research, multiple case studies were adopted in an effort to create the opportunity to triangulate information collected and to augment external validity, help guard against observer bias, and allow for replication logic (Eisenhardt, 1989; Miles & Huberman, 1994; Yin, 2009). This approach will allow us to extend existing theory and accordingly develop new theoretical explanations for the observed phenomena (Lee, 1999; Locke, 2001).

We adopted a theoretical sampling method (Eisenhardt, 1989; Miles & Huberman, 1994) and considered several factors in selecting the cases. First, we limited our study to those MNE ECCs that have successfully established their business in their home country and in many other foreign countries, and have officially set-up their subsidiaries in China. Second, as we proceeded, our sampling took the form of seeking maximum variation (Lincoln & Guba, 1985; Patton, 2002). We followed Eisenhardt’s guidelines (1989) in selecting cases from different ECCs sub-sectors, ranging from content provider to online intermediary. MNE ECCs, including Google, Yahoo, Amazon, eBay and Groupon, were selected as our sample cases. In an attempt to facilitate our investigation, we identified the five local Chinese firms deemed to be the main competitors of the five MNE ECCs; these Chinese firms were Baidu (China’s equivalent to Google), Sohu (Yahoo), 360.com (Amazon), TaoBao Marketplace (eBay) and 55tuan (Groupon). Local Chinese ECCs were used primarily as a reference point in order to gain more in-depth understanding of the themes and patterns emerging from the interviews of MNE ECCs’ participants, and were not selected to be directly compared to MNE ECCs as cross-case studies. In this sampling approach, our case selection enhances the potential to assess the emerging theoretical relationship with cases to either support or offer divergent explanations.

Table 1 goes about here

Data Collection

Data for this study were collected through the adoption of both interviews and secondary sources. As Google and eBay no longer have physical operations in China, former senior managers of these firms in China were contacted. All 35 participants interviewed were Directors and Senior Managers, usually one level subordinate to the CEO, and had played, or are still actively playing, important senior roles in their company and therefore are considered knowledgeable about their respective firm's business. Each interview began with our assurances of the anonymity of their name and position, as well as the provision of a brief explanation concerning the purposes and nature of our research. Each interview lasted between 90 and 150 minutes. All interviews were conducted between April 2012 and February 2013. We followed a semi-structured interview protocol, with participants encouraged to provide concrete examples to support their commentary. Additional questions were often added in order to probe emergent themes or to take advantage of special opportunities during the interview (Eisenhardt, 1989).

The interview data was supplemented by secondary sources in the form of published news and articles. We also had access to background papers from some of these companies that are not publicly available. These data allowed us to validate and confirm the chronology of events, giving details to issues emerging from interviews and providing textual accounts of debates and discussions. In addition, a 'content-checking' discussion was carried out with some of the interviewees, which involved sharing and discussing our initial findings with participants, and accordingly incorporating their feedback (Lee, 1999). This exercise enriched our understanding of the themes and dimensions, and helped us to refine the data and findings.

Data Analysis

Analysis of the data was undertaken immediately after the first interview, adhering to the guidelines consistent with naturalistic inquiry and constant comparison techniques (Lincoln & Guba, 1985; Strauss & Gorbun, 1990). The analysis procedure closely followed the analytical guideline and established the work of others in the grounded theory (e.g. Isabella, 1990; Suddaby, 2006). A three-step analysis procedure was followed for this research.

1. Creating provisional categories and first order codes: We started the open coding process by analytically and systematically breaking down the data. We adopted a

joint coding approach involving coding the interviews individually sentence by sentence in order to document and evaluate the degree and breadth of support for particular themes across informants. We then compared the coding scheme with one another. Differences of opinion invariably took us back to the interview script for clarification of the text and metaphors comprised in our categories. As we discerned codes that were similar, these were grouped into first-order categories. In an effort to achieve theoretical saturation (Glaser, 2004), we continued coding interviews until we could not identify any additional distinct patterns shared amongst our participants.

2. **Creating theoretical categories:** With the development of the first-order categories, we began to identify the relationships amongst the categories, which we then consolidated into second-order themes. This analysis process not only enabled us to compare and contrast the similarities and differences within and across interviews, but also helped us to make sense of the complex emerging practice, and often pointed to areas where the further analysis of the complete sample was needed (Strauss & Gorbin, 1990). In an effort to enhance construct validity, we relied on the triangulation of our primary and secondary data.
3. **Aggregating theoretical dimensions:** Once the theoretical categories had been generated, we moved away from axial coding to look for dimensions underlying these categories in an effort to understand how different categories fitted together into a coherent picture. This enabled us to develop a grounded theoretical framework that linked the various concepts emerging from the data. At this stage, it became apparent that the linkage and process between different constructs began to emerge. We analysed how such themes related to one another, and accordingly established different conceptual frameworks that captured these links. Once we had identified a possible framework, we re-examined the data's degree of fit with our emergent theoretical understanding (Becker, 1970; Glaser, 2004). In an iterative fashion, we analysed the data by continuously revisiting the consistency between the data and an emergent structure of theoretical arguments (Locke, 2001; Miles & Huberman, 1994).

Table 2 goes about here

Institutional E-Commerce Industry Setting in China

The e-commerce industry in China began to grow in 1993 when the Chinese government undertook a series of 'Golden Bridge Projects' aiming at building the technical infrastructure and regulatory framework for e-commerce in China. Chinese e-commerce revenue growth (2009–2012) topped 70%, compounded annually, and projects that it will reach CNY3.3 trillion (USD\$543 billion) by 2015 (McKinsey & Company, 2013). According to CINIC, Chinese internet users reached 618 million (including 302 million shoppers) in January of 2014, with the internet penetration rate reaching 45.8%, of which the number of mobile internet users had reached 500 million and is set to continue growing. Chinese internet users are made up of approximately 30% high–middle income, white collar city dwellers, and 70% from low-income, less educated populations, comprising low-spending users, consisting mainly of students, migrant workers and the unemployed.

Due to the low entry barriers, the Chinese e-commerce market is becoming an extremely competitive space. E-commerce in China is mainly dominated by intermediary market makers, search engines, content providers, online games, social network sites, and many other websites offering a wide range of heterogeneous services. From early 2000, the local 'big four'—Sohu, Sina, Wangyi and Tencent—started taking the lead in e-commerce development. Tencent and Alibaba are currently the two largest ECCs in China due to their diversified product and service offerings, which attract most of China's 618 million internet users (Gittleston, 2014). Globally, Chinese ECCs are as formidable as their US counterparts. In terms of capitalisation, Tencent (USD136bn), Alibaba (USD120bn) and Baidu (USD57bn) are ranked 4th, 5th and 7th respectively behind Google (USD407bn), Facebook (USD176bn) and Amazon (USD120bn), with eBay (USD73bn) in 6th place, just ahead of Baidu (Clover, 2014).

Although the on-going improvement in online credibility, payment service and express delivery method together stimulate the growth of the e-commerce industry, the legal framework of e-commerce in China remains imperfect. The Chinese government, as the prime regulator, has strict censorship rules. Internet censorship is conducted under a variety of laws and administrative regulation in China, all of which have been implemented by provisional branches of state-owned and private-owned internet service providers. Such regulations include the monitoring of chat rooms and online content, the blocking of websites

and the promotion of self-censorship. Applicable law and regulations, such as intellectual property and dispute resolution mechanisms, are also far from comprehensive in China.

FINDINGS AND RESULTS

In this section, we present the four main themes that have become apparent through reviewing the collected data. We then provide theoretical insight and research propositions based on our analysis of the data.

The Local Institutional Context

The Rules of the Game and Market Deficiency

There is general recognition amongst all participants that the local *rules of the game* have a significant impact on MNE ECCs' performance. Formal rules, such as intellectual property rights and government censorship—and specifically the importance of informal constraints, such as culture—were highlighted during our interviews.

'It (censorship) definitely puts constraints on our operations. But we had the same censorship in other countries, such as Thailand, because we were able to dominate the market so that censorship was never an issue. It was a clever distraction. I am not suggesting that censorship doesn't matter at all—of course, it does—but people shouldn't be distracted from the much more important reasons. We assumed that customers are homogeneous everywhere; that culture and norms didn't matter. Well, how wrong were we?' (MNE, search engine).

'People always immediately associated China with IP rights and censorship. What about culture, the supporting mechanism and the level of competition? Chinese customers have their own preferences when it comes to their online activities. Two things are important here: what you can deliver and how you can deliver it. We were not good at either of them in China' (MNE, market maker).

The limitations of China's supporting market mechanisms include the fact that infrastructure constrains the type of products/services MNE ECCs may be able to offer in China. The technological environment and supporting market mechanism also shape Chinese online consumers' expectations and habits.

'They (Chinese users) were not comfortable with completing transactions online during this time. There were too many "what if?" uncertainties: What if the seller is a scam? What if product quality is poor? In the US, we had a well-established system to tackle these problems, but here, the relevant financial, logistics services and regulations are rather limited. And they (Headquarters) completely ignored these issues that have fundamental impacts on our customer experience' (MNE, market maker).

Subnational Differences

Our data show that market support mechanisms, such as inconvenient online payment system, the availability of banking services, mistrust and fundamental concerns relating to online security, underdeveloped infrastructure and unreliable delivery services varied significantly across provinces in China.

'There is not much difference between developed country and the first-tier cities in China, Beijing and Shanghai, etc.; however, you are mistaken if you think China is one country, one standard. The differences between provinces are huge; the standards (infrastructure, living standards) can be stretched to different extremes' (MNE, market maker).

Whilst MNE ECCs are able to break the physical barriers and reach approximately millions of Chinese internet users simultaneously, heterogeneous differences amongst provinces have meant a bespoke approach should have been adopted. Our data reveal that internet users' education levels, purchasing power, personal preferences and tastes are significantly different between provinces, thus posing a significant challenge to MNE ECCs' ability to attract and retain a large customer base.

'The customer segments in China are extremely divergent. We have to deal with customers from various backgrounds. We often overlooked the differences among provinces in China. We tend to project that the tastes of the low end customers are tacky, but they constitutes the majority of our market share' (MNE, content provider).

Subnational institutional differences in China are significant in terms of culture, internet penetration and the level of economic development. It was repeatedly highlighted across our data that MNE ECCs failed to recognise the diversity of the Chinese customers; many MNE ECCs, such as Groupon, were out-manoeuvred by local competitors who understood that people from different provinces have significantly different tastes and preferences, and these local firms tailored their offerings to suit those preferences in different cities and regions.

Institutional Uncertainty

One of the main themes to have emerged from our interviews is that the uncertainties in the local institutional context, especially in the information age, pose a significant challenge to MNE ECCs' performance in China.

'It was like shooting in the dark. Everything is so unpredictable. You are fool if you think what you have today will guarantee your success next week. Things change so fast

in our sector, there are too many uncertainties. We learned it in a hard way' (MNE, group buying site).

Low entry barriers have resulted in the rapid proliferation of domestic players in China. It is evident from the interviews that the intensity of local competition exerts a significant challenge on MNE ECCs activities in China.

'We were pretty confident at the beginning—it worked well everywhere else, right?—but things were falling apart—and it was fast. The competition level we face in China was much more intense than we had in other countries, and this created many uncertainties and challenges on our performance' (MNE, market maker).

The Interplay between Ownership Advantage and Local Institutional Context

Our data highlights that the transferability of intangible and tangible assets across national boundaries was constrained by the local institutional environment. China's *rules of the game* significantly impinge upon ownership advantages. Technology is perceived as a key part of Oa advantages; however, the applicability of technology is subject to local customer requirements. Coupled with China's cultural differences with the West, Chinese internet users' behaviours are significantly different when compared to users in the West.

'If you search "rain" on Google China, the weather forecast information would come up. When the Chinese search "rain", they want to see the results about a very popular South Korean singer called "rain". Yes, we do have more advanced technology than Baidu, but Baidu better understands its customers so that they can deliver much more precise results to suit Chinese customers' needs' (MNE, search engine).

'Yes, we have a much better logistic system than our local competitors. Our rivalries offered much more competitive price to our customers. Chinese customers are very price-sensitive, and we lost our customers to them, and again, without customers, nobody wants to use our site to sell stuff. So we were sitting on our technology and waiting to be used' (MNE, market maker).

Knowledge and experience, as part of the ownership advantage, manifest themselves in organisational routines that form the blueprint for the firm's future actions, and which, more importantly, serve as an important source of ownership advantage. However, from our data, it was highlighted by all MNE ECCs' interviewees that the applicability of path-dependent knowledge is subject to great uncertainty.

'They (senior management) presented us with a five-year strategic plan, but it was a waste of time as the majority of the planning did not fit in with the Chinese condition. The pace of change is a lot more rapid and more dynamic. Five years? We don't even know what it was going to happen in five months' time!' (MNE, content provider).

There is consensus that, although emerging economies appear to present dynamic and challenging environmental conditions for all ECCs, the propensity for organisations to refocus and restructure in this setting is crucial.

'The old routine clearly didn't work in China. They (MNE ECCs) need to figure out a new business model that works in China and they have to do it fast' (MNE, market maker).

Our data shows that almost all Chinese ECCs began their operations by copying the business ideas or models from the US; however, this is where the similarities typically end. Local ECCs were persistent in not only changing and altering their businesses model/routine, but also in developing business innovation. It was highlighted amongst all interviewees that MNE ECCs' ability to respond to local ECCs' competition attack is crucial in China.

'We were hit by a double whammy in China. One is the business environment in general. We definitely underestimated the challenge. Another one is the local competition level. The local ECCs are real contenders. We might have some unique advantages, but things change so fast and you need to be fast to respond this competition. The ability to retaliate is extremely important' (MNE, market maker).

The Limitations of Internalisation

The data shows that the transaction costs between a firm's internal market and external market are gradually diminishing owing to the low cost of information production. The data suggests that hierarchical control underpinning internalisation results in a long gestational period involving months for authorisation. The findings suggest that Chinese subsidiaries are all uniformly centralised. It was emphasised amongst all the interviewees that such singularly hierarchical and uniformly centralised structures constrain local subsidiaries' performance.

'It took us nearly 6 month to respond to the threats posed by Taobao, and, to be honest, the solution they (Headquarters) came up with didn't really solve the problem. By the time we responded, the customers had already gone. 6 months in e-commerce time is like 3 years in cyber time' (MNE, market maker).

Our data shows that relational assets cultivated through strategic alliance, merger and acquisition have had limited impact on MNE ECCs' activities in China. Our data indicates that a closed network with only direct business partners isolate MNE ECCs with their local environment, thus creating a significant barrier for asset augment and innovation.

'It is very difficult to maximise our advantages when you have a closed network. We were focusing on purely what we can do with a limited number of alliances and forgot

about the importance of other networks that can add value to our company and customers (MNE, group buying site).

The Importance of Network-based Advantages

We note that, in all cases, the importance of the customer was repeatedly highlighted. According to our interviews, the customer is an essential part of the company's offering and fundamentally changes the dynamics of the market place.

'I think they (MNE ECCs) overlooked the role of customers playing in our industry. They are the fundamental mechanism to our success. You need to have a sufficient customer base, otherwise no partner (complementary) would be interested in your website. It was a nasty fight, without customer, our website worth nothing' (Chinese, market maker).

It is apparent from all interviews that the importance of local network embeddedness is crucial for MNE ECCs' development. Our data highlights the importance of subsidiaries of MNE ECCs to establish relational assets—not only with direct partners, but also with supporting organisations, such as logistics providers and banks.

'We need to be more connected with local customers and partners. I think they (MNE ECCs) need to understand that interaction doesn't just end on the website. We need to be more open to get ideas and inspiration from the untraditional partners, such as local communities and the supporting industries, such as logistics companies—even our customers' (MNE, market maker).

The importance of the boundary of the network was repeatedly emphasised during the interviews. The network boundary has a direct impact on network externality effect, which is crucial for MNE ECCs' development. A *'flexible'* and *'shared'* network is crucial for MNE ECCs to generate future asset and innovation.

'If nobody uses your product/service, no matter how advanced your business is, it means nothing. The more people use your site, the better. They (MNE ECCs) heavily focused on protecting their capital... Well, when you in China, the IP law is not always effective. It's not about how big your company is: we were competing with how big your network is. You need external forces to help you to maximise the value of it through continuous learning and innovation' (Chinese, search engine).

DISCUSSION

Four major insights emerged from our findings. Firstly, our data shows that the importance of traditional location advantages, which could increase an organisation's efficiency and effectiveness, is gradually diminishing in China's e-commerce sector. This is consistent with Dunning (1998) and Cantwell (2009), both of whom argue that the institutionally related location advantages of countries are highly situational and differ between developed and developing countries.

Our results are in-tune with Oxley & Yeung (2001), who indicate that e-commerce activity largely depends on local *rules of the game*. Our data shows that the formal rules, such as government censorship—often highlighted as the main mechanism responsible for MNE ECCs' activities in China—only played a limited role in affecting MNE ECCs' performance; in actuality, the informal constraints, such as culture, norm and the deficiencies of the local market conditions, created much more significant challenges in MNE ECCs' value-creation activities. Moreover, a lack of understanding concerning local customers was highlighted throughout the interviews as a major factor in negatively affecting MNE ECCs' performance in China. Our data also reveal that the '*taken for granted*' market-supporting mechanisms, such as infrastructure, which are held as being '*invisible*' in developed economies, emerged as significant barriers to MNE ECCs in China.

Some scholars argue that MNE ECCs may experience liability of foreignness to a lesser degree when compared with more traditional firms (Kotha *et al.*, 2001). However, our findings suggest that MNE ECCs face the great '*liability of foreignness*' because the challenge for MNE ECCs not only lies on how they are able to cope with local formal and informal rules, but also on whether or not they are well-positioned to overcome market inefficiencies that are inherent in serving diverse markets. Our analysis echoes Dunning & Lundan (2008a, 2008b), who highlight that the institutional view is crucial in advancing our understanding of the new organisation form in an internalisation context.

This leads to our first proposition:

The greater the institutional distance between the home country and the host country in terms of rules of law and market-supporting mechanisms, the greater the negative impact it will have on MNE ECCs' value-creation activities in the emerging economy.

The market deficiencies and diversified customer preferences are further exacerbated owing to subnational differences. Our data points out that MNE ECCs experienced a '*liability of subnational foreignness*' where MNE ECCs have limited understanding of subnational economic development, market-supporting mechanisms and customer preferences in China. Although MNE ECCs were able to secure a large market share from more developed cities, such as Beijing and Shanghai, nonetheless, they failed to obtain market share from less developed cities in China. Importantly, China is recognised as being home to a fragmented and diverse market as different cities have subcultures with their own unique practices and habits; therefore, overlooking the subnational difference within China exert significant challenges for MNE ECCs in securing a large customer base. This is in-tune with previous studies indicating that subnational differences are critical in explaining MNEs' performance in emerging economies (Ma *et al.*, 2013; Beugelsdijk & Mudambi, 2013; Park *et al.*, 2006).

This leads to our second proposition:

The greater variability of market-support mechanisms and customer preferences within subnational contexts, the more difficulty MNE ECCs will experience in gaining a large customer base in the emerging economy.

Our findings also highlight the dynamic nature of the institutional view that has emerged, especially during the information age. Our data highlights that path-dependence has experienced '*path uncertainty*' where the local institutional environment is significantly subject to three uncertainties, namely uncertainties in institutional evolution process between home and host country, uncertainties in the business environment and uncertainties specific to the e-commerce industry. This notion is similar to those detailed by scholars who have highlighted the different evolution path between developed and emerging economies (Child & Tse, 2001; Dixon *et al.*, 2010), the non-ergodic uncertainty (North, 2005) and demand process uncertainty derived from the internet (Jones *et al.*, 1997; Liang & Huang, 1998).

This leads to our third proposition:

The greater the institutional uncertainties, the greater the risk these will have on MNE ECCs' value-creation activities in the emerging economy.

The second key finding is that ownership advantage is significantly constrained by the local institutional context. Ownership advantage '*lockout*' has been identified, in which MNE ECCs were unable to competitively deliver their services in the host country due to a recognised incompatibility between ownership advantages and local institutional context.

Our data reveals that more advanced technologies do not always outcompete with ‘*good enough*’ technologies on the basis of getting the job done. MNE ECCs’ transaction efficiency is heavily dependent on whether or not it is able to deliver services that meet customer requirements; however, the way in which value is perceived by Chinese customers is based on factors such as skill levels (sophistication), preferences, subnational conditions and the availability of substitutes. Network externality occurs when the value of a product or service to a consumer is contingent upon the number of other people using it (Katz & Shapiro, 1986). Therefore, if firms are unable to understand and meet customers’ requirements, an insufficient customer base will lead to technology ‘lockout’.

This leads to our fourth proposition:

The value of technology, as part of MNE ECCs’ ownership advantage, will decrease if it is unable to deliver value to satisfy customer demands in the emerging economy.

Our data points to path-dependent knowledge as part of ownership advantage, which experienced a ‘*lockout*’ due to different institutional environment and uncertainties. Our data suggests that the *ex-ante* knowledge MNE ECCs possess can only be applied to China to a limited extent due to different institutional conditions. This is in line with scholars emphasising that path-dependent knowledge is hinged upon the characteristics of the host location (Buckley, 2004; Erramilli *et al.*, 1997). The value of *ex-post* knowledge and the experience MNE ECCs possess is also limited for future asset augment due to non-ergodic uncertainty (North, 2005), and the process and demand uncertainty derived from the internet (Jones *et al.*, 1997; Liang & Huang, 1998).

This leads to our fifth proposition:

The applicability of the path-dependent knowledge of MNE ECCs from developed economies will decrease in emerging economies due to 1) path trajectory differences between the home and host countries, 2) process and demand uncertainty over the internet, and 3) non-ergodic uncertainty.

Our data suggest that MNE ECCs’ ability to reconfigure their business models and routines to make them more suited in the local institutional environment is crucial in China. However, simple localisation and adaptation is no longer sufficient. Our data emphasise that MNE ECCs’ ability to continuously respond to the local competition attack and unpredictable institutional demand is key for MNE ECCs to achieve success in the context of China. This is consistent with many scholars’ views, many of whom highlight the dynamic interaction

between firm activity and its institutional environment as being a key to driving co-evolution (Cantwell *et al.*, 2010; Kostova *et al.*, 2008).

This leads to our sixth proposition:

The dynamic aspects of MNE ECCs capabilities will be positively associated with MNE ECCs success in the emerging economy.

The third finding indicates that, owing to the nature of ECCs, where transaction costs and product costs are significantly lower than traditional industry, the difference in costs occurred between internal hierarchies and arm-length market transaction diminishes. The evidence suggests that MNE subsidiaries have not been provided with much autonomy. Such centralised decision-making has had a major impact on firms' subsidiaries' responsiveness to local market demands, as well as to the threats posed by local competitors. This is consistent with scholars, who indicate that hierarchical control may act as a constraint imposed upon organisational behaviour (Kogut & Zander, 1993).

Our findings suggest that, although some MNE ECCs established merger and acquisition strategic alliances with Chinese partners, this did not guarantee a large customer network owing to copious substitutions in the market. The findings indicate that building a closed network with limited business partners focusing on internalising their operations and protecting their ownership advantages will isolate MNE ECCs from their institutional environment, thus impeding asset augment and innovation. This view is in a similar vein to the perspective adopted by Cantwell & Narula (2001), who suggest that hierarchical control and full internalisation are not always desirable to MNE for innovation.

This leads to our seventh proposition:

Hierarchy control and a closed network will be negatively associated with MNE ECCs' local responsiveness and innovation in the emerging economy.

Our fourth finding highlights that network-based advantages have an integrating role in the electric paradigm. The role of network theory in the eclectic paradigm was theoretically highlighted by Singh & Kundu (2002). We are not focusing narrowly on the network theory *per se*; rather, network-based advantages are loosely defined here in an effort to understand MNE ECCs' activity in China.

Dunning (1995, 2000) indicates the Ot factor as highlighting the advantages firms can garner through intra-firm and inter-firm transaction activities for vertical and horizontal

complementarities. Our data show that MNE ECCs overlooked the pivotal role of *customers*—the agent directly contributing to ECCs’ value-creation activities and also fundamentally changing the dynamics of the marketplace in the e-commerce sector, characterised by demand-side economies (Dunning & Wymbs, 2001; Shapiro & Varian, 1999).

MNE ECCs’ ability to conduct harmonious value-creation activities with exogenous partners and customers is crucial in explaining their competitive strength. We propose that ownership network advantage (On) refers to ‘*the ability of firms to establish a large customer network to stimulate network externality*’. A large customer network broadens the range of a user’s network and attracts more developers of complementary service/product providers, thus increasing the number of options available to users (Katz & Shapiro, 1986); therefore, a large customer network (On) and the availability of complementary product/service providers (Ot) has the capacity to create a *virtuous cycle*, acting as an isolating mechanism that not only helps MNE ECCs to take advantage of network externality, but also ensures the uniqueness of MNE ECCs and protects MNE ECCs from imitation, preserving its rent streams (Rumelt, 1984). Thus, On completes other ownership advantages and forms a quadrilateral control of O: $Oa+Ot+On+Oi$ to cover the holistic view of MNE ECCs’ value-creation activity in emerging economy.

Our data point to the institutional distance between the home and host countries, non-ergodic institutional uncertainty, and the ever-increasing importance of knowledge-compelled MNE ECCs to look beyond the traditional locational advantages. We propose a locational network advantage (Ln) that network-bundling between ownership advantage and local network partners can assist MNE ECCs in overcoming local market inefficiency and galvanising institutional learning. Although Dunning (1995, 2000) championed alliance capitalism, we argue that alliance capitalism needs to be broadened in order to facilitate more open, flexible and direct/indirect relationships with customers, partners and their supporting cluster companies. The network interaction between indigenous partners and MNE ECCs’ activity will stimulate local knowledge spillovers, which is crucial for MNE ECCs in the creation of location-bound assets.

Our data indicates that hierarchical control and full internalisation are no longer viable for MNE ECCs’ value-creation activities in China. We argue that internalisation still has an important role to play—albeit in a different way—as internalisation’s function has shifted

from the one defining the '*boundaries of the firm*' to that defining the '*boundaries of the network*'. We propose internalisation network advantage (In) that network advantages generated by firm flexibility and openness to local institutional environment. Our data emphasise the external actor, namely customers and local partners, as having a significant impact in terms of contributing to ECCs' innovation. Rather than protecting intellectual capital value, our data highlight that MNE ECCs should engage in a shared ownership to use network externality to maximise the value of MNE ECCs' ownership advantages, such as technology and intellectual property. This is seen to be in line with practitioners who advocate the importance of shared ownership in the 20th Century (Palmisano, 2006). By establishing a flexible and shared ownership network with direct and indirect stakeholders, MNE ECCs' innovation and network externality will be infused.

CONCLUSION

The paper contributes to the on-going debates amongst researchers and practitioners in the area of ECCs' internationalisation in four different ways. First, we have highlighted that MNE ECCs' value-creation is largely dependent on local '*rule of game*' and market support conditions; thus, the importance of location as a variable affecting MNE ECCs' performance in emerging economies should not be underestimated in the OLI paradigm. We also accentuated the dynamic nature of the institutional view that has emerged especially during the information age. Whilst the traditional neo-perspective of institutional view has worked well in the past, we need to approach this from a broader and more dynamic perspective.

Second, we contribute to the IB theory by identifying the changing nature of the ownership advantage in ECCs context. The static aspect of ownership advantage is no longer sufficient for MNE ECCs in securing success in China. We argue that ownership advantage is not only heavily context-dependent in regard to the local institutional context, but also dependent on its dynamic interaction with local institutional environment; therefore, the dynamic interplay between institutional context and MNE ECCs' ownership advantages need to be fully recognised by the OLI paradigm.

Third, we argue that I (internalisation), underpinned heavily by TCE, needs to undergo a shift from focusing on the '*boundaries of the firm*' to the '*boundaries of the network*'. A flexible and shared network will assist MNE ECCs in maximising intellectual capital and generating future assets. Our fourth contribution involved the identification of network-based advantages playing a significant and integrating role in the OLI paradigm, based on empirical research. We proposed On, Ln and In advantages by embedding network-based advantages into the OLI paradigm. Through the acceleration of technological change and non-ergodic uncertainty, such a network-embedded OLI paradigm will lead to MNE ECCs' sustainable development in the emerging economy.

The findings presented in this paper should be interpreted with caution for several reasons. For instance, the restrictive nature of our sample, focusing on only 5 MNE ECCs and 5 Chinese ECCs, can introduce unknown selection biases, thus restricting the overall generalisability of our findings; however, we were limited by the number of MNE ECCs

undertaking internationalisation in China, meaning this restricted our ability to increase the sample size.

Nonetheless, our study raises some interesting questions on the IB theory. For example, due to non-ergodic uncertainty, how can MNE ECCs strategically position themselves in the fragmented and diverse institutional organisational field? What are the specific dynamic capabilities enabling MNE ECCs to co-evolve with their institutional environment? Does the same level of institutional uncertainty apply to other industries? It should be noted that the setting of our empirical study was conducted in China only. Importantly, this raises the question of findings generalisability when removed from country settings.

We consider that future research should investigate MNE ECCs in other transition economies and emerging markets in order to evaluate whether the findings in this study are replicated in other countries. The rapid diffusion of ECCs in an international context provides a fertile research field for the development of new theoretical frameworks and the testing of extant theories of internationalisation. Irrespectively, however, new research is urgently needed in order to address such emerging issues.

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APPENDICES

Table 1: A summary of the major characteristics of firms

The characteristics of MNE ECCs						
Sub sector	Company	Year of entry	Mode of entry	Current status	\$ Sales/revenue as a whole (2013)	Number of interviewees
Content provider	Yahoo	1999	Merger and acquisition (3721.com)	Yahoo sold 40% stake to local Alibaba, and 20% more in 2012. It stopped providing news and community services in September, 2013	4.68 billion	4
B2C retailer	Amazon	2004	Merger and acquisition (joyo)	Amazon currently holds 2.2% market share in 2013	74.45 billion	4
C2C retailer	eBay	2003	Merger and acquisition (eachnet.com)	eBay's market share dropped to under 10% in 2006 and it sold to Tom online in 2007.	16.05 billion	3
Search Engine	Google	2006	Wholly owned subsidiaries	Google's market share dropped to 19.2% and exit the Chinese market in 2006	59.73 billion	5
Group buying site	Groupon	2011	Joint venture (Tencent)	Groupon holds current market share of 2.5%. in 2013	2.57 billion	5
The characteristics of Chinese ECCs						
Type	Company	Year of establishment	Ownership	Current status	\$ Sales/revenue in China (2013)	Number of interviewees
Content provider	Sohu	1998	Chinese ownership	Sohu held more than 30% content provider market share in China.	1.4 billion	3
B2C retailer	JD.com	2004	Chinese ownership	JD held more than 50% of the B2C market share in China.	11.29 billion	2
C2C retailer	Taobao (Alibaba group)	2003	Chinese ownership	Taobao held more than 90% of the C2C market share in China.	129.4 billion	3
Search engine	Baidu	2000	Chinese ownership	Baidu had more than 70% of the search engine market share in China	5.2 billion	4
Group buying site	55tuan	2010	Chinese ownership	55tuan held more than 60% of the group buying market share in China	0.7 billion	2

Table 2: First order, second order and aggregate dimensions

First order categories. Statements concerning...	Second-order themes	Aggregate dimensions
Government censorship, low intellectual property protection, local laws and legislation.	Local 'rules of game' and market deficiency	Location institutional context
Chinese unique internet user behaviour, value and preference shaped by culture and environment		
Limitation of local banking system, telecommunication system, internet accessibility and speed.	Subnational differences	
Limitation of local infrastructure system, logistics system, online security concern due to insufficient regulation		
Diversity in customer demographics, customer expectations, behaviours and preferences from different tier cities	Institutional distance and uncertainties	
Diversity in subnational infrastructure system, telecommunication accessibility, internet speed		
Low entry barriers, number of competitors and intensity of rivalry, uncertainties associated with intense competition		
Level of competition in securing supply input: skilled labor, complimentary service provider		
The difference evolution process between home and host country		
The different institutional environment between home and host country		
The uncertainty in the E-commerce industry: the quick technology change over, the number of competitors, the changing taste of customers		
The uncertainty in the future development in general due to high connectivity, globalization and fast information technology development		
Reputation, brand name and web design match with first tier cities: Beijing, shanghai, etc. only	Limitation of static ownership advantage	The interplay between ownership advantage and local institutional context
The difficulties of gaining market share due to lack of complementary service providers and partners		
The difficulties of gaining market share due to lack understanding of the local customers from various backgrounds		
Technology mismatch with level of infrastructure development in sub tier cities: Henan, Hubei etc.		
Technology unable to deliver value to Chinese customers due to lack of understanding of local customers and availability of the substitutes		
The limitation of transferability of MNE ECCs know-how knowledge in China due to different local context		
The limitation of transferability of MNE ECCs know-how knowledge in China due to uncertainties		
The (in)ability to reconfigure its business model, reallocate its resources, and the flexibility of changing business component in China	Lack of dynamic capabilities	
The (in) ability to respond to local competition attack and unpredictable demand		
The reduced benefits (costs) of internal transaction and external arm length transaction	Reduced benefits of internalization	The limitations of internalization
The information and decision making delay cost through internal market and hierarchical control		
Uniformity standard and centralized structure. Lack of autonomy and bargaining power for MNE subsidiary in China		
Limitation of focusing on limited formal business partners : strategic alliance, merger acquisition	Limitation of a closed	

Firm (in)ability to create more location bound asset with a closed network	network	
Gaining more understanding of local and subnational customer expectations	Customer network size and strength	The importance of network-based advantages
The importance of developing relationships with customers to increase network size and strength		
The importance of creating online partnerships with vertical and horizontal complementary product/service providers	Local network embeddedness	
Developing non transaction related relationships with supporting companies and local communities to facilitate online and offline transaction. Developing relationships and good will through alliance and gaining knowledge by being part of networks.		
The importance of creating co- competition relationship with competitors to increase the network size		
Adopting and developing the modality of explorative (rather than exploitative) learning through relational assets		
The importance of maximizing intellectual property and company's website though open network	Flexible and shared network	
Importance role of customers, partners in contributing to firm 's innovation		
The importance of flexible and shared network to attract more customers and complementary service providers		