



The Effect of Institutional Capabilities on E-Business Firms' International Performance

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Abstract

Despite the growing trend of internationalisation in e-business, academic research in this area is sparse. This study develops and tests a theoretical framework of the drivers of international performance for emerging market e-business firms. Specifically, we focus on the role of institutional capabilities in terms of socio-political networking and business model innovation in shaping emerging market e-business's international performance. Based on a unique sample of Chinese e-business firms, our empirical findings indicate that these firms' institutional capabilities are positively associated with their performance in foreign markets, and that the relationship is stronger when the firms face more intense domestic institutional hostility and when the institutional environments between the home and host countries are similar. However, the relationship is weaker for firms with better reputations. The paper discusses the theoretical and managerial implications.

Keywords E-business · Institutional capabilities · Emerging markets · China

1 Introduction

E-business companies operate online and provide products/services/platforms to customers using the Internet (Amit and Zott 2001).¹ Examples of e-business companies include on-line markets/platforms makers, on-line portals, and on-line product/service providers (Mahadevan 2000). E-business companies create values using business models that differ from those of traditional manufacturing firms, and play an increasingly important role, not only in the developed world but also in emerging markets. According to research from Accenture and

¹ There are inconsistent definitions for Internet firms in the literature. In this paper, we use e-business and e-commerce interchangeably.

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Ali-research (2015), China will become the world's largest business-to-consumer (B2C) e-commerce market by 2020. In addition, e-business internationalised rapidly given the cross-border interconnectedness of the Internet. E-commerce giants such as Alibaba started cross-border e-commerce operations in the last decade. Forrester Research forecasts that worldwide B2C cross-border e-commerce will reach \$424 billion by 2021, making up 15% of all online commerce. However, cross-border e-commerce is difficult and subject to the liabilities of foreignness and newness. A case in point is Uber, which recently suffered significant losses in China due to fierce local competition and significant institutional challenges (Salomon 2016). Hence, understanding how e-business can succeed in international markets is a critical issue for management scholars and practitioners in the modern economy.

Despite the growing trend of e-business internationalisation, academic research on this area is sparse. Few academic studies examine this phenomenon. For example, Brouthers et al. (2016) investigate the key success factors of German e-business internationalisation. Luo et al. (2005) examine the drivers of the internationalisation speed of US e-business. While this recent line of work improved our understanding of e-business internationalisation, the empirical evidence is based on developed countries such as Europe and the US. Despite the increasingly active internationalisation of emerging market-based e-business firms, few works study their performance. Further, the unique business model of e-business, which quickly connects different ecosystem partners such as customers and suppliers through digital platforms or networks, means that their internationalisation approach may differ significantly from those of traditional manufacturing multinational enterprises (MNEs). Boston Consulting Groups' recent report shows that e-business offers a new business model and services that can break through trade barriers and financial resource constraints. Gabriellsson and Pelkonen (2008) find that internet and media service firms can internationalise rapidly to more distant countries. Brouthers et al. (2016) argues that e-business firms may face a lower liability of foreignness, such as risks in making significant investment in foreign markets than do manufacturing MNEs. However, little is known about the unique capabilities of emerging market e-business firms and how these capabilities can drive their success in international markets. Further, service firms have increasing expanded into international markets (Merchant and Gaur 2008). However, previous work shows that success of service firms' internationalization requires unique capabilities and strategies compared with manufacturing firms (Kundu and Lahiri 2015). However, little work has examined how the effect of unique capabilities of service firms from emerging markets affect international performance.

To address these gaps, this study develops and tests a theoretical framework of the drivers of international performance for emerging market e-business firms. Specifically, we focus on the role of institutional capabilities in shaping emerging market e-business firms' international performance. Institutional capabilities are a firm's knowledge, relationships, and skills that enable the firm to succeed in an environment characterised by the absence or underdevelopment of market-supporting institutions (Khanna and Palepu 1997). The notion of

resources and capabilities as a firm's competitive advantage is the focus of the resource-based view (RBV) of the firm (Barney 1991). However, previous work on the RBV in international business largely ignores how firms can develop special institutional capabilities through interactions with their home market institutional environment. The institutional environment is the central notion of institutional theory (Khanna and Palepu 2013; Peng et al. 2008; Scott 1995), which argues that different institutional environments, including the regulatory, normative, and cognitive environment, may shape a firms' strategy and success. However, few studies developed from institutional theory discuss how firms create this type of institutional advantage and why they differ in their ability to do so (Landau et al. 2016).

Integrating the RBV and institutional theory, institutional capabilities are important resources that serve as a firm's source of competitive advantage in emerging economies, given that emerging economies have substantial institutional voids (Barney 1991). Firms develop institutional capabilities in response to the weak institutional frameworks at home and the significance of institutional capabilities to firms' performance at home is well understood; however, it is not clear whether such capabilities also matter for e-commerce firms' performance abroad. A recent case study of a family multinational firm from Indonesia (Carney et al. 2016) reports that the institutional capabilities of political networking, relationship contracts, and business model innovation can be successfully transferred abroad. Borrowing from this insight, the current study investigates the effect of institutional capabilities on e-business's international performance. We develop and test theoretically grounded arguments on whether institutional capabilities improve e-business firms' performance in foreign markets. In addition, like other resources and capabilities, institutional capabilities may lose some value when applied abroad (Cuervo-Cazurra et al. 2007). We examine several boundary conditions, including reputation, domestic institutional hostility, and institutional difference on the effect of institutional capabilities on international performance for Chinese e-business firms. Figure 1 illustrates our proposed conceptual framework.

The empirical context of this study is e-business firms in China. Chinese e-business firms offer an excellent setting for this study for several reasons: (1) China is the world's largest and fastest growing e-commerce market (Wang et al. 2016). Further, cross-border e-commerce is rapidly growing in China. Based on a recent report, China is projected to become the world's largest cross-border e-commerce market by 2020. (2) China is the largest emerging market globally. Its unique institutional environment and consumer readiness for new technologies led to the development of many new e-commerce business models (Wang et al. 2016). In particular, Chinese e-business firms have to develop capabilities to cope with the significant institutional voids in China. For example, Alipay, the largest online credit and payment e-commerce company in China, provides a third-party certification service and serves to enhance credibility, which helps mitigate financial fraud in business transactions. (3) Chinese e-business firms actively internationalised their services and ecosystems abroad. For example, Alipay and WeChat expanded to many international markets, such as the US and Asian countries in recent years. Hence, Chinese e-business firms provide a good opportunity to examine how

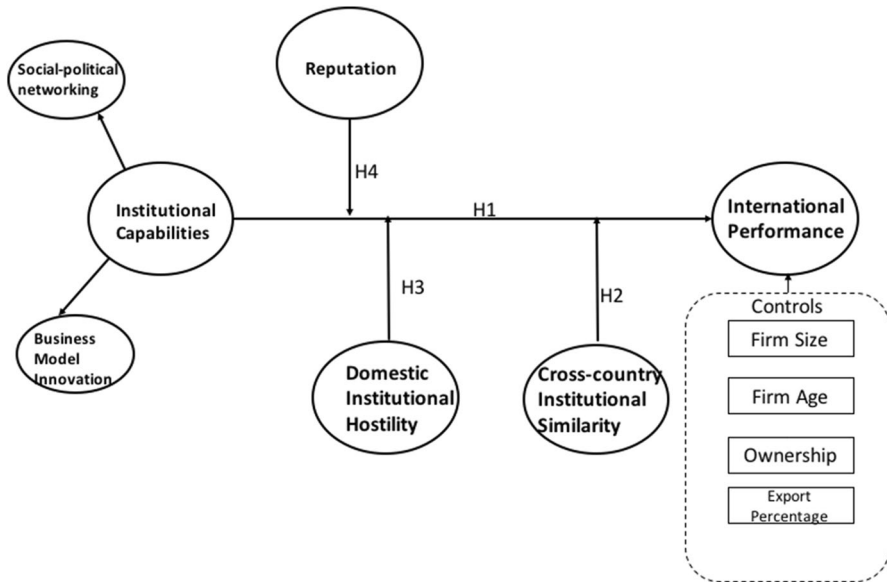


Fig. 1 Conceptual framework

emerging market firms' institutional capabilities will shape their international performance.

This study offers several contributions. First, we investigate the effect of institutional capabilities on e-business firms' international performance in the Chinese context. Hence, this study provides a theory-grounded framework to investigate the internationalisation of e-business from emerging markets. Specifically, this research contributes to the emerging literature on institutional capabilities and how firms can transfer these capabilities across borders (Carney et al. 2016; Landau et al. 2016). Most studies on institutional capabilities are conceptualised or based on a single case study and lack large-scale empirical evidence (Carney et al. 2016; Landau et al. 2016). In addition, we examine different moderating effects on the relationship between institutional capabilities and international performance. Hence, this study responds to the call for more research on the boundary conditions of how institutional capabilities transfer across national boundaries (Carney et al. 2016). Furthermore, our study advances the research on the internationalisation of service firms by focusing on an emerging industry, e-business. Previous empirical evidence on service internationalisation focus mainly on industries such as banking and retailing (Merchant and Gaur 2008; Pla-Barber and Ghauri 2012). Advanced Internet technology offers abundant opportunities for firms engaging in e-business to create new services. Despite the increasing importance of e-business in service industries, few studies examine the strategy implications using this unique context (Hazarbassanova 2016). Our study addresses this gap by offering theoretically grounded empirical evidence based on Chinese e-business firms.

2 Theory and Hypotheses

2.1 Institutional Capabilities and Their Value in Emerging Markets

International business scholars suggest that institutions are an important variable that explains firm behaviours and performance in emerging markets with weak institutional frameworks (Khanna and Palepu 2013; Meyer et al. 2009). Institutions are “the humanly devised constraints that structure political, economic and social interaction” (North 1991, p. 87). Specifically, emerging markets are characterised by the absence or underdevelopment of institutions such as market intermediaries that enable and support market activities (Khanna and Palepu 1997). Such institutional voids may be in the form of insufficient and dysfunctional product and factor markets, underdeveloped physical and social infrastructures, absent or inefficient of market intermediaries, inefficient contract enforcement, and uncertain rule of law (Khanna and Palepu 1997, 2013). These factors create costs for buyers and suppliers in transactional relationships. Institutional voids create significant challenges for firms operating in emerging markets, but they may also offer business opportunities for entrepreneurs who can devise novel ways to bypass or even take advantage of the voids (Doh et al. 2017; Gao et al. 2017; Khanna and Palepu 2013).

Prior research suggests that firms require the ability to address the challenges and opportunities associated with institutional voids to operate successfully in weak institutional environments. For example, Boisot et al. (2011) argue that firms operating in emerging markets require specific institutional competence which refers to the integration skills that help them deal with business systems. Cuervo-Cazurra and Genc (2008) argue that managers from emerging market MNEs possess specific skills and abilities to deal with institutional voids. Carney et al.'s (2016) recent work argues that family business MNEs have certain heuristics, skills, and routines that enable them to cope with institutional difficulties both at home and in host countries. Landau et al. (2016) develop the concept of institutional leveraging capabilities, which refer to a higher-order construct formed by the four components of awareness, access, adoption, and adaption of institutional benefits. Marquis and Raynard (2015) propose that firms can use relational, infrastructure-building, and socio-cultural bridging to survive and gain a competitive advantage in emerging markets. All of these studies suggest that the ability to deal with institutional voids is an important strategic resource for firms in emerging markets.

We draw on this recent line of work and conceptualise institutional capabilities as a firm's knowledge, relationships, and skills in creating competitive advantages in the context of institutional voids. Institutional capabilities consist of two key dimensions: social-political networking capabilities and business model innovation (Carney et al. 2016). Social-political networking capabilities are an institutional capability because ineffective market-supporting institutions increase the costs of making arms-length transactions; consequently, firms rely on relational contracting to reduce their uncertainty in conducting transactions (Sheng et al.

2011). Specifically, high contractual hazards and scarce business intelligence in weak institutional environments lead firms to rely heavily on external networks to identify trustworthy business partners, technology trends, and new business opportunities abroad (Ellis 2000; Peng 1996). E-business firms with greater social networking capabilities are better able to identify reliable business partners and can thus secure the quality of their business partners' products and services. In addition, in weak institutional environments, government decision-making typically does not follow a clear set of rules and is subject to the preferences and discretion of political leaders and legislators. E-business firms with greater political networking capabilities can reduce the regulatory uncertainties associated with export licenses and customs and may even obtain government subsidies (Kotabe et al. 2014; Sun et al. 2015). They can also gain access to different market and political resources that are not available to other firms, and thus reduce competitive uncertainty. Therefore, social-political networking is an important dimension of our conceptualisation of institutional capabilities.

Business model innovation capabilities are also part of the institutional capabilities that enable firms to succeed in weak institutional environments (Carney et al. 2016; Puri et al. 2015) because firms that can create innovative business models can bypass or even take advantage of institutional voids with novel ways of doing business. A business model is "the content, structure, and governance of transactions design so as to create value through the exploitation of opportunities" (Amit and Zott 2001). Previous work on business models shows that e-business entrepreneurs can use innovative business models to create competitive advantages (Amit and Zott 2001, 2007). In institutional environments with no or ineffective market-supporting institutions and infrastructure, business model innovation capabilities are even more important for e-business firms. Conducting e-business requires market-supporting institutions including intermediaries for products, inputs and, information; transaction facilitators such as credit cards; and adjudicators that resolve transaction-related disputes. The lack of effective market-supporting institutions creates uncertainty among customers toward e-business firms' services, and thus limits the growth of e-business firms. However, e-business firms with business model innovation capabilities can bypass such difficulties with novel ways of doing business. For example, to reduce customers' uncertainty about financial fraud and unreliable delivery systems, some e-commerce firms offer options for customers to collect products and to make payments in franchised convenience stores. E-business firms with business model innovation capabilities can also take advantage of institutional voids by providing the missing market-supporting functions (Khanna and Palepu 2013; Puri et al. 2015; Zott and Amit 2007). For example, Taobao in China serves as an effective online platform that facilitates transactions between rural, resource-scarce sellers and foreign buyers. An innovative business model can also be an effective infrastructure building mechanism that helps facilitate commercial activities or substitutes for absent or marginally developed market intermediaries in emerging markets. For example, the UK-based Vodafone solved the scarcity of banking services in Africa by developing a secure, low-cost online mobile money-transfer service (Eyring et al. 2011). Hence, given its importance in facilitating transactions in the

context of institutional voids, we consider a firm's ability to develop innovative business models as a dimension of institutional capabilities.

In line with the RBV arguments highlighting that firms' resources and capabilities can be a source of competitive advantage (Barney 1991), we argue that institutional capabilities are firm-specific and they are rare and difficult to imitate. Some firms can accumulate institutional capabilities through experiential learning in conducting institutional work and by exercising institutional skills (Carney et al. 2016; Landau et al. 2016). Hence, firms with institutional capabilities that are rare, valuable, and inimitable can help them create competitive advantages in emerging markets.

2.2 The Effect of Institutional Capabilities on International Performance

Institutional capabilities are important for emerging market firms doing business at home. However, are the capabilities useful when these firms expand abroad? Carney et al. (2016) confirm this is the case with their finding that a family MNE from Indonesia successfully transferred its capabilities of political networking, relationship contracting, and business model innovation to Vienna. Next, we discuss how institutional capabilities matter for emerging market e-commerce firms doing business abroad.

E-business firms increasingly engage in cross-border activities. Ali-research shows that Chinese cross-border e-commerce accounted for more than 30% of the import/export value in 2016. Further, it shows that most Chinese cross-border e-commerce is based on exports (more than 80%). Firms face challenges from both home and host countries when conducting cross-border e-commerce via exporting. In the host markets, they need to deal with difficulties such as obtaining licenses, under-developed local infrastructure, different local payment systems, local logistics partner selection issues, and so on. Simultaneously, they face threats from the weak institutional environment at home. For example, customs or logistics issues at home may create long delays in product delivery.

E-business firms with institutional capabilities can navigate institutional challenges in emerging markets and can, thus, better handle cross-border e-commerce businesses in different foreign markets. As we discussed above, a key dimension of institutional capabilities is socio-political networking capabilities. E-commerce business itself is an emerging industry in many countries, with the supporting institutions and intermediaries for the industry still under development. Socio-political networking capabilities enable firms to identify business opportunities in foreign markets and trustworthy local service providers in the absence of effective business intelligence. In addition, social-political networking capabilities help firms gain access to different foreign market regulatory information and required licenses, which helps them alleviate difficulties in dealing with foreign governments, local infrastructure, and payment and logistics issues. Furthermore, e-business firms' political ties at home enable them to reduce the regulatory uncertainty associated with export licenses and customs. Their political networking experience at home may also provide them with a general understanding of how governments formulate and implement policies, and thus enables

them to develop skills in dealing with foreign governments, particularly in environments with weak institutional frameworks (Cuervo-Cazurra and Genc 2008). Further, social-political networking helps firms' gain legitimacy in local markets, which helps alleviate various difficulties in conducting cross-border e-commerce for e-business. Customers shopping via e-commerce do not have an opportunity to inspect the products in person and thus face greater uncertainty in their purchasing decisions. In this case, e-commerce firms from emerging markets may encounter a greater liability of foreignness due to the potentially negative image of their country of origin. Firms with greater socio-political networking capabilities may better develop institutional strategies, such as corporate social responsibility (CSR), or even use alliances with local partners to signal or build trust with local customers. Previous research shows that emerging markets entrepreneurs' social networks help alleviate the liabilities of newness and foreignness and facilitate its internationalisation (Zhou et al. 2007).

Business model innovation is another key dimension of institutional capabilities. Firms with better business model innovation capabilities can fill the voids associated with the absence of market intermediaries (Puri et al. 2015) and they have lower transaction costs with their exchange partners (Amit and Zott 2001). E-business firms face various challenges associated with institutional deficiencies, such as collecting payments when credit card systems are subject to substantial financial fraud, delivering products in locations with poor logistics infrastructure, and so on. E-business firms with superior business model innovation capabilities can develop unconventional and novel ways to address these challenges. For example, e-commerce firms in Taiwan offer options to customers to receive products and to make payments in franchised convenience stores, reducing customers' concerns about financial fraud and unreliable delivery systems. In addition, one of major barriers to e-business firms' internationalisation is gaining trust and minimising the liabilities of outsidership in foreign markets (Brouthers et al. 2016). Business model innovation can be an effective signal that reduces transaction costs between exchange partners and builds trust for e-business entrepreneurs. Hence, an innovative business model can help reduce the liability of outsidership in foreign markets.

Based on the arguments above, we predict that emerging market e-business firms possessing greater institutional capabilities including social-political networking and business model innovation will have better international performance.

Hypothesis 1: Institutional capabilities are positively related to international performance for emerging market e-businesses.

2.3 The Boundary Conditions of Institutional Capabilities on International Performance

H1 suggests that emerging market firms' institutional capabilities can enhance their international performance. We next discuss the conditions in which institutional capabilities have greater impacts on e-commerce firms' performance abroad.

2.4 Cross-Country Institutional Similarity

We contend that emerging market e-business firms' institutional capabilities have greater impacts on their international performance when the home and host countries have similar institutional environments. Cross-country institutional similarity refers to the extent to which institutional environments in the home and host markets are similar (Xu and Shenkar 2002; Yang et al. 2012). Emerging market firms develop institutional capabilities in response to the idiosyncratic characteristics in their home institutional environment. These capabilities are more applicable when firms expand to environments similar to their home countries. Prior research shows that a firm's resources and capabilities at home can remain a source of competitive advantage abroad if it is easy to transfer and/or adapt to the host market (Cuervo-Cazurra et al. 2007).

Specifically, institutional capabilities consist of social-political networking and business model innovation capabilities. Both are valuable and yield greater competitive advantages only when firms operate in weak institutional environments. In strong institutional environments, full-fledged market-supporting institutions can facilitate arms-length transactions and there is less need for relational contracting. While business model innovation capabilities may still confer advantages, firms with strong market-based competitive advantages (such as R&D and marketing competencies) can still succeed using conventional business models supported by well-developed institutions (Peng and Heath 1996). In other words, for emerging market e-business firms that operate weak institutional environments, their institutional capabilities will be less applicable when they conduct business in strong institutional environments. The similarity between the home and host institutional environments may strengthen the effect of e-business firms' institutional capabilities on international performance. Thus,

Hypothesis 2: Cross-country institutional similarity positively moderates the effect of institutional capabilities on international performance for emerging market e-businesses.

2.5 Domestic Institutional Hostility

We predict that institutional capabilities have greater impacts on emerging firms' international performance under high levels of domestic institutional hostility. Domestic institutional hostility refers to the extent to which legal and regulatory enforcement at home is problematic, as reflected by unlawful or unethical corporate behaviours (Sheng et al. 2011). Domestic institutional hostility poses greater challenges to e-business firms because it is difficult for them to follow normal legal processes to gain protection against dysfunctional competition, such as illegal counterfeiting of new products (Doh et al. 2017). Institutional capabilities will be more valuable in such a context (Huang et al. 2016; Sheng et al. 2011) because social-political networking capabilities can help firms gain market and government resources to help them circumvent unlawful actions from competitors (Huang et al. 2016). Social-political networking capabilities enhance legitimacy and can serve as

an alternative enforcement mechanism (Zhou et al. 2014). In addition, firms with greater business model innovation capabilities can use innovative ways to alleviate institutional hostility (Marquis and Raynard 2015). For example, online credit services can help firms enhance their credibility and reduce transaction costs through third-party certificates when intellectual property protection is insufficient.

In addition, firms accumulate and develop institutional capabilities in daily operations when they learn how to address the various challenges and opportunities in weak institutional environments, which is essentially experiential knowledge. The greater and more challenging the home environment is, the greater the repertoire and skills that the firm will have in dealing with similar issues. In other words, domestic institutional hostility helps to shape and cultivate a firm's institutional capabilities so the firm is better prepared to adapt to hostile institutional environments. Thus, we expect that when domestic institutional hostility is intensive, e-business firms' institutional capabilities become more useful in dealing with foreign institutional barriers, which can in turn enhance international performance. Hence, we predict:

Hypothesis 3: Domestic institutional hostility positively moderates the effect of institutional capabilities on international performance for emerging market e-businesses.

2.6 Reputation

For e-business firms that expand into foreign countries, one critical challenge is to reduce customer uncertainty. Specifically, customers can be sceptical about new and foreign e-business firms due to potential transaction fraud and failures. Customers have uncertainties about the product and service quality from such firms, such as whether the e-business firm will deliver the goods and services and on time, and if they are of the advertised quality. We earlier proposed that e-business firms with greater institutional capabilities can better reduce customers' uncertainty because they can use their socio-political networking capabilities to establish legitimacy or use innovative business models to signal credibility.

Corporate reputation can be a substitute for institutional capabilities because it signals the firm's credibility and thus reduces customer uncertainty (Bergh et al. 2014). Corporate reputation is a collective representation of perceptions based on a firm's past actions and perceived capacity to meet expectations (Rindova et al. 2005). Previous work on signalling theory shows that a good reputation, by signalling a firm's ability and credibility, can help reduce opportunism and enhance trust between exchange parties (Reuer and Ragozzino 2014). Reputation is particularly important for e-business firms due to the anonymous nature of the online trading environment (Standifird 2001). Prior research finds that the reputation of e-business firms can enhance customer loyalty (Caruana and Ewing 2010). An emerging body of research also indicates that reputation can help reduce the transaction costs for entering foreign markets (Stevens and Makarius 2015). Reuter and Fischer's (2009) work also shows that reputation is critical for firms' success in international online markets. Hence, e-business firms' reputation can signal trustworthiness in foreign markets and help them to attract local partners and customers.

Given that corporate reputation can substitute for institutional capabilities in reducing customers' uncertainty, we expect that firms with a good corporate reputation will rely less on institutional capabilities to attract business partners and build a market presence in host markets. In other words, institutional capabilities are less valuable for e-business firms with a good corporate reputation. We therefore predict that the positive relationship between institutional capabilities and international performance is less salient for e-commerce firms with better reputations.

Hypothesis 4: Reputation negatively moderates the effect of institutional capabilities on international performance for emerging market e-businesses.

3 Method

3.1 Survey Development and Sample

Our study focuses on Chinese e-business firms. We chose senior managers and CEO/executives from e-business as the key informants for this study and used a survey methodology to collect the data. The questionnaire was originally developed in English based on existing literature. We then used the translation-back-translation method to ensure a conceptually equivalent Chinese version (Mullen 1995; Zhang and Li 2010). The development of the questionnaire was based on an extensive review of the previous literature.

Our definition of e-business follows Amit and Zott's (2001) approach, in which the firm must derive a significant proportion (at least 30%) of its revenues from transactions conducted over the Internet. It covers different types of e-business models including e-business platforms/market makers, e-business product/service providers, and e-business portals (Amit and Zott 2001; Mahadevan 2000). The sampling frame consisted a list of Chinese technology entrepreneurial firms that generate at least 30% of their revenues from the Internet. We selected a random sample of 1500 firms from the sampling frame. All firms in the sampling frame were contacted to assess their eligibility and to determine the appropriate informants for the study.

We collected data in two stages. During 2012 June and July, we first conducted in-depth interviews with ten senior managers of e-business firms in Beijing in China. This initial qualitative and exploratory approach provided valuable inputs to refine the questionnaire and adapt key constructs to the industry context. These interviews served as an a priori test of the key constructs with respect to their usefulness and appropriateness. In the second stage, we hired a local business research company to collect the relevant survey data through different approaches, including mail, telephone, and face-to face interviews during 2012 August–2012 December.

Of the 1500 firms contacted, we received 250 useable questionnaires, resulting in an effective response rate of 16.0% (250/1500). Among the 250 firms, only 115 firms conducted cross-border e-commerce. Thus, we obtain a final sample of 115 firms. Of these firms, 20% of the sample firms have state ownership, the average firm has 110 employees, and 80% are less than eight years old. The firms' average

foreign sales ratio is 30%. In terms of location, 20% are in Beijing, with 11.3% from Guangdong, 9.6% from Jiangsu, 13% from Shandong, 19.1% from Shanghai, and 7% from Zhejiang.

We assessed non-response bias by classifying the responses into two groups, early respondents and late respondents (Armstrong and Overton 1977). We checked for the possibility of non-response bias by comparing the respondents to the non-respondents in terms of the number of employees, sales volume, and age. The results of the ANOVA show that there are no statistically significant differences between the respondents and non-respondents on any of these aspects ($F=0.63$, $P>0.10$; $F=0.92$, $P>0.10$; $F=0.77$, $P>0.10$).

A reliable assessment of non-response bias can only be achieved via feedback from the non-respondents themselves. Therefore, we identified a selection of non-respondents and called them to obtain explanations for their lack of response. In all cases, the reasons were related to time pressures in filling out the questionnaire, the general notion that the questionnaire was too demanding, and that other requests for feedback had to be prioritised. These findings imply that non-response bias does not pose a significant threat to the study.

According to our initial qualitative interviews, we checked the competency of the senior managers. The results show that senior managers are the most competent to answer our survey questions.

3.2 Measurement

We used multi-item scales and a seven-point response format to operationalise all constructs and variables in the study. The questionnaire was developed in English and translated into Chinese, then back-translated into English by a third party to confirm that it was an equivalent translation. The measures were adapted from existing studies and refined based on feedback from experienced researchers and practitioners in the area of inquiry.

We assessed all constructs using multiple items on a 7-point Likert-type scale. The scales were adopted or adapted from previous studies or by our qualitative interviews. Table 1 summarises the scales.

We operationalised institutional capabilities as a second order reflective construct, including social political networking and business model innovation. We used a three-item scale was used to measure social-political networking. The scale captures the extent to which managers in the firms rely on business and political ties and were adapted from Peng and Luo (2000). We used four items to measure business model innovation on a scale adopted from Zott and Amit (2007) and Khanna and Palepu (2013). The scale was conceptualised to capture the extent to which the firm's innovative business model helps address institutional voids such as the lack of intermediaries, poor market infrastructure, and regulations.

We used a three-item scale to measure firm reputation adapted from Lai et al. (2010) to fit our context. Domestic institutional hostility was conceptualised to assess the extent of unlawful behaviours such as privacy and counterfeiting and adapted from Li and Atuahene-Gima (2001). To measure cross-country institutional

Table 1 Measurement and confirmatory factor analysis results

Construct	Composite Reliability: CR)
Item (Loading)	
Social-political networking	($\alpha = 0.778$, $CR_{\eta} = 0.811$) (1 = strongly disagree; 7 = strongly agree)
	Compared with our competitors, our company has better ability in dealing with government regulations and red tapes (0.819)
	Top managers at our firm have maintained good personal relationships with officials in various levels of government (0.874)
	Top managers at our firm have built good connections with managers at customer firms (0.854)
Business model Innovation	($\alpha = 0.787$, $CR_{\eta} = 0.823$) (1 = strongly disagree; 7 = strongly agree)
	Our business model links customers to transactions in novel ways (0.873)
	Compared with our competitors, our business model finds a new way in obtaining business licences (0.834)
	Our business model finds a new way to deal with unlawful competitive practices such as piracy of new products/trademarks (0.866)
	Our business model finds a new way to deal with insufficient infrastructure (such as electricity, water, road) (0.861)
Reputation	($\alpha = 0.887$, $CR_{\eta} = 0.930$) (1 = strongly disagree; 7 = strongly agree)
	Our company has been ranked as one of the top/better companies by newspaper/magazines/mass media (0.876)
	Our company has been widely regarded as one of the top/better/most reliable companies in the business (0.900)
	Newspaper/magazines/mass media has coverage on our company (0.931)
Domestic Institutional Hostility	($\alpha = 0.862$, $CR_{\eta} = 0.960$) (1 = strongly disagree; 7 = strongly agree)
	Our company has experienced some unlawful competitive practices such as illegal copying of new products, counterfeiting of our firm's own products and trademarks by other firms (0.924)
	Our company has experienced increased unfair competitive practices by other firms in the industry (0.922)
	Our company has experienced ineffective laws to protect our company's intellectual property (0.781)
International Performance	($\alpha = 0.891$, $CR_{\eta} = 0.932$) (1 = much worse; 7 = much better)
Relative to your major competitors in terms of	
	Growth in international sales (0.940)
	Market shares in international markets (0.924)
	Profitability from international markets (0.834)

similarity, we divided a firm's major international market into two groups, Asian (coded as 1) and non-Asian (coded as 0) markets. Previous research indicates that China shares greater similarities with other Asian countries than with non-Asian ones in terms of institutional environments (Yang et al. 2012). In the sample, 46 firms reported that their major markets for internationalisation are Asian countries, while 48 firms had their major foreign markets in non-Asian countries, and 21 firms did not report their major foreign markets. We used a three-item scale adapted to our context to measure a firm's international performance from He and Wei (2011).

We also include firm age, size, export experience, and ownership as control variables. Firm size and age are well-recognised factors in a firm's strategic choices and

Table 2 Institutional capabilities: second order construct

First-order construct	Loadings
Social-political networking	0.919
Business model innovation	0.925

Average variance extracted = 0.616; composite reliability = 0.906

performance. We measured firm age by the number of years since establishment. To prevent skewness, we measured firm size by the natural logarithm of the number of employees. We classified firms' ownership into two categories: purely privately owned enterprises (coded as 0) and firms with state ownership (coded as 1). Export experience was measured by export ratio. Previous research shows that export experience can influence e-business firms' international performance (Morgan-Thomas and Bridgewater 2004).

4 Analysis and Results

4.1 Measurement Assessment

We used partial least squares (PLS)-based structural equation modelling to test the measurement and structural model. The Smart PLS software (3.2.1 version) was used to assess the measurement and structural models (Hair et al. 2012). We adopted a bootstrapping estimation procedure to examine the significance of the scale factor loadings in the measurement model and that of the path coefficients in the structural model. PLS is similar to LISERL in that both examine the structural relationships among the latent variables and allow us to model the relationships between latent and observed variables. PLS, however, provides two important advantages for this study. First, it is suitable to analyse relatively small samples. Second, it provides a superior test of moderation because it analyses moderated relationships using continuous integration terms by multiplying the indicators of the interacting factors, rather than through a comparison of dichotomised groups (Chin et al. 2003).

We employ Cronbach's alpha and composite reliability to assess the reliability of all constructs (Table 1). For an exploratory study or construct, a Cronbach's alpha value above 0.6 is acceptable. As Table 1 shows, all Cronbach's alpha values are acceptable. The composite reliability values show that all values are above the recommended threshold value of 0.70 (Nunnally and Bernstein 1994), suggesting that all constructs are reliable.

Subsequently, we assessed the validity of the second-order construct by first examining the loadings of the two dimensions of institutional capabilities for convergent validity. As Table 2 shows, the loadings were 0.919 for social-political networking and 0.926 for business model innovation, indicating a good level of convergent validity. For discriminant validity, we examined the AVEs and shared variances. The shared variances ranged from 0.02 to 0.30, which is much less than the AVE of 0.65 for institutional capabilities, showing a good level of

Table 3 Intercorrelations and shared variances of measures (n = 115)

Variables	1	2	3	4	5
1. Social-political networking	<i>0.849</i>				
2. Business model innovation	0.701	<i>0.858</i>			
3. Reputation	0.449	0.384	<i>0.903</i>		
4. Domestic institutional hostility	0.262	0.238	0.221	<i>0.878</i>	
5. International performance	0.224	0.227	0.275	0.220	<i>0.913</i>

The correlations are shown in the lower triangle of the matrix. Numbers on the diagonal shown in italic denote the square root of the average variance extracted

discriminant validity for institutional capabilities as a second order construct. The composite reliability of institutional capabilities was 0.906, which is greater than the 0.70 level suggested in the literature (Nunnally and Bernstein 1994). These results suggest good construct validity for institutional capabilities as a second-order construct.

Further, we examined the validity of the other constructs. A Table 3 shows average variance extracted (AVE) values are above the recommended value of 0.50, indicating adequate convergent validity for the constructs (Fornell and Larcker 1981). Discriminant validity is assessed by comparing the square root of each construct's AVE to its correlation coefficients with other constructs. A square root higher than the correlation with other constructs suggests a satisfactory discriminant validity. Table 3 shows that the square root of each constructs' AVE ranged from 0.849 to 0.913, while the correlations among the constructs ranged from 0.220 to 0.701, as reported in the upper triangle of Table 3. However, no correlation coefficients were greater than the AVE of the respective construct, thereby demonstrating a good level of discriminant validity between the study constructs (Fornell and Larcker 1981).

4.2 Common Method Bias

For a survey-based study in which dependent and independent variables came from the same respondent, common method bias may be a potential threat.

After collecting the data, we evaluated the common method bias statistically. Following Podsakoff et al. (2003) and Liang et al. (2007), we ran a PLS model with a common method factor and calculated each indicator's variances explained by the principal construct and the method. This method calculates the amount of variance from each item that belongs to the common method (Podsakoff et al. 2003). The results show that the average variance of the indicators explained by the construct is 79.9%, while the average variance explained by the method is only 1.14%, indicating a minimal common method bias.

Further, we employed Kock's (2015) full collinearity test to check the common method bias. The AVIF value obtained from analysis is less than 3.3, thus indicating no common method bias problem in this study.

Table 4 Path coefficients, t-statistics, and R-square of Model 1 and Model 2

Variable	International Performance Model 1	International Performance Model 2 (main)
	B (standardized)	B (standardized)
Institutional capabilities	0.136 [†]	0.105 [†]
Reputation	0.233**	0.272**
Domestic institutional hostility	0.137 [†]	0.146*
Cross-country institutional similarity	-0.011	0.022
Firm size	-0.051	-0.036
Firm age	0.07	-0.013
Ownership	-0.018	0.009
Export percentage	0.236***	0.195***
Institutional capabilities × Reputation		-0.167*
Institutional capabilities × Domestic institutional hostility		0.269**
Institutional capabilities × Cross-country institutional similarity		0.134*
R-square	0.176	0.255

$N = 115$ [†] $p < 0.1$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.005$ (one-tailed)

4.3 Hypothesis Testing

Assessing PLS models involves estimating the path loadings and R^2 values. The former indicates the strength of the relationships between independent and dependent variables, and the latter indicate predictive power by showing the amount of variance explained by the independent variables (Peng and Lai 2012). Table 4 reports the results of the structural model. Since the objective of PLS is to maximise the variance explained, we used R^2 as a prediction-oriented measure to evaluate the PLS model. The model explains 24.5% of the variance in international performance. We used standardised root mean square residual (SRMR) to measure the goodness of model fit, which assesses the average magnitude of the discrepancies between the observed and expected correlations as an absolute measure of the model fit criterion (Henseler et al. 2009). Henseler et al. (2009) suggest that SRMR is a goodness of fit measure for PLS-SEM. Our fit index is 0.070, which is below the criterion of 0.08.

Table 4 shows the results of hypotheses test. In hypothesis 1, we state that institutional capabilities are positively related to e-business firms' international performance. The resulting coefficient is positive and significant, with $b = 0.136$ ($p < 0.1$), thus providing weak support for hypothesis 1. The effect of size of this relationship is $r = 0.132$, which according to Cohen's (1988) standards, are small to medium. Effect sizes in this range are reasonable because successful international performance depends on many factors. We selectively focus on only a small subset of those factors. Hypothesis 2 states that institutional similarity has a positive moderating effect on the relationship between institutional capabilities and international performance. The results lend support to this hypothesis, with $b = 0.134$ ($p < 0.05$).

Regarding the moderating role of domestic institutional hostility, hypotheses 3 suggests that domestic institutional hostility has a positive moderating effect on the relationship between institutional capabilities and international performance. The results lend support to this hypothesis, with $b=0.267$ ($p<0.01$). In hypothesis 4, we propose that the firm's reputation has a negative moderating effect on the relationship between institutional capabilities and international performance. The results lend support to this hypothesis, with $b=-0.167$ ($p<0.05$).

In addition, for the control variables, we find that export experience has a positive and significant effect on international performance, with $b=0.228$ ($p<0.01$). However, we do not find that firm age, size, and ownership have significant effects on international performance.

5 Discussion

With the increase in digitalisation and globalisation, e-business firms from emerging markets have emerged and conducted their business across national borders (Brouthers et al. 2016). However, these firms still face significant challenges when entering international markets. Extending the previous literature on e-business firms' internationalisation (Brouthers et al. 2016), we investigate whether and under what conditions e-business firms' institutional capabilities can improve their international performance. We conceptualise and operationalise institutional capabilities as a second-order construct that includes social-political networking and business model innovation. Further, we investigate the boundary conditions of the effect of institutional capabilities on international performance by looking into the moderating effects of reputation, domestic institutional hostility, and cross-country institutional similarity. The results show that e-business firms' institutional capabilities indeed have positive impacts on their performance in international markets, but the extent of the positive impact is contingent on a number of variables. This study broadens and deepens our understanding of how e-business firms can successfully venture into international markets. Below, we discuss the results of this study.

5.1 The Effect of Institutional Capabilities on International Performance

Prior research on the impact of institutional capabilities is mostly based on case studies and focuses on MNEs (Carney et al. 2016). Little research discusses how institutional capabilities can facilitate entrepreneurs' internationalisation. Based on a large-scale survey of Chinese e-business firms, our findings show that institutional capabilities reflected in firms' social-political networking and business model innovation abilities can alleviate e-business firms' liabilities of foreignness and enhance international performance. Hence, the findings extend recent work on institutional capabilities based on MNEs' contexts (Carney et al. 2016) and suggest that the institutional capabilities of e-business firms from emerging markets can also transfer across national borders.

The finding also extends the previous work on whether and to what extent resources and capabilities can apply across borders (Cuervo-Cazurra et al. 2007; Jensen and Szulanski 2004). This body of research suggests that due to their stickiness and locational specificity, some resources and capabilities are difficult to transfer and even lose value across national borders (Cuervo-Cazurra et al. 2007; Jensen and Szulanski 2004). One of them is institutional capability, since it refers to the knowledge and relationships required to deal with a particular institutional environment and is likely to be location-specific. Our finding shows that e-business firms' social-political networking and business model innovation capabilities can be transferred across borders and help reduce the liability of newness and outsidership in international markets. This provides firm-level empirical explanations for Cuervo-Cazurra and Genc's (2008) finding that developing market MNEs experience less disadvantages in less developed countries, in that the emerging market firms' skills in dealing with the weak institutional environment at home can be useful in other institutional environments similar to their home country (i.e., environments that are also characterised by substantial institutional voids).

Our conceptualisation of institutional capabilities incorporates social-political networking and business model innovation, which offers some theoretical contributions. First, prior works discuss business and political networking as important resources and capabilities that enhance a firm's internationalisation. The results show that social-political networking in the home market also plays an important role in international online markets. E-business firms' ties to domestic customers and the government helps the firm access the market and governmental resources, which reduces the liability of foreignness and enhances international markets (Zhou et al. 2007). This finding is consistent with Wentrup's (2016), which highlight the importance of the online-offline network balance for online service providers' internationalisation.

Second, emerging research has focused on strategies of business model innovation (Markides 2013; Puri et al. 2015; Velu 2015). However, little work has discussed how innovative business models shape firms' internationalization. Extending this stream of research, the finding shows that business model innovation is an important source of emerging market E-business firms' institutional capabilities. Innovation business model can help deal with different institutional voids both in domestic and foreign markets, which in turn enhance emerging market e-business firms' international performance.

5.2 Boundary Conditions of Institutional Capabilities

The results of this study show that the effect of institutional capabilities on e-business firms' international performance is contingent on different boundary conditions, including reputation, domestic institutional hostility, and foreign institutional similarity. The results are consistent with Cuervo-Cazurra et al.'s (2007) arguments that successfully transferring resources and capabilities depends on complementary resources and institutional differences between the home and foreign markets. While their empirical analysis is largely based on country-level data, this study extends their work to the firm-level context of e-business entrepreneurs' internationalisation.

In terms of the moderating effect of reputation, the results show that a firm's reputation has a negative moderating effect on the relationship between institutional capabilities and international performance. This implies that when an e-business firm lacks a strong corporate reputation, institutional capabilities can serve as an effective signal that helps to reduce transaction costs in foreign markets and overcome the liability of foreignness. In contrast, if an e-business has a good corporate reputation, institutional capabilities may not enhance international performance. The results are consistent with signalling theory, which highlights the potential substitution for firms' multiple signals due to resource constraints (Connelly et al. 2011; Reuer and Ragozzino 2014; Riley 2001). Recent work uses signalling theory to suggest that a good reputation as a signal helps service firms reduce transaction costs in foreign markets (Stevens et al. 2015). Our result adds to this stream of research by showing that institutional capabilities can compensate for the lack of a good reputation in reducing transaction costs in foreign markets.

On the moderating effect of domestic institutional hostility, the results show that domestic institutional hostility has a positive moderating effect on the relationship between institutional capabilities and international performance. The results indicate that the more severe the institutional voids are in the home market, the greater is the transferability of the institutional capabilities in international markets. The results are consistent with the dynamic capabilities perspective, which argues that dynamic capabilities that firms learn in response to turbulent environments are valuable and can confer a competitive advantage (Teece et al. 1997; Zollo and Winter 2002).

In terms of the moderating effect of foreign institutional similarity, the results show that institutional similarity has a positive moderating effect on the relationship between institutional capabilities and international performance. The results are consistent with the institutional distance perspective, which suggests that normative, regulatory, and cognitive institutional distances create barriers to effective knowledge and resource transfer across borders (Schwens et al. 2011; Yang et al. 2012).

5.3 Managerial Implications

This research has important implications for practitioners. We demonstrate that e-business firms' institutional capabilities can help alleviate the liabilities of foreignness and outsidership in foreign markets and enhance international performance. Hence, managers of emerging market e-business firms should accumulate skills, relationships, and knowledge to deal with institutional difficulties and respond to institutional voids in home markets. Our results show that institutional capabilities developed at home can also be useful in foreign markets.

However, managers need to be cautious about the contingent effects on the relationship between institutional capabilities and international performance. Specifically, institutional capabilities are more valuable in enhancing international performance when the firm has a weak reputation. Hence, e-business firms can develop institutional capabilities to complement their weak reputation when entering international markets. In addition, domestic institutional hostility may strengthen the effect of institutional capabilities on international performance. Hence, managers in

a hostile institutional environment should be motivated to accumulate better skills and knowledge about how to deal with institutional challenges. Further, when entering foreign markets, managers should apply and adapt their institutional capabilities in more similar institutional environments, which may in turn create better value.

6 Limitations and Future Research Directions

The results of this study should be interpreted in light of several inherent limitations. First, we focus on only two types of institutional capabilities, namely social-political networking capabilities and business model innovation. Future research may examine other types of institutional capabilities. Further, future research may investigate other contingent factors, such as technological uncertainty and market dynamism, which may also shape the relationship between institutional capabilities and international performance. Another limitation of this study is its cross-sectional design. Although the results reveal the drivers and performance outcomes of political ties, the results only imply their causality. Future studies could overcome this limitation by using longitudinal data, even over relatively short periods. In addition, although we achieved a response rate of 16% (250/1500), a substantial proportion of our respondents did not have cross-border e-commerce activities at the time of our survey (i.e., they were conducting e-commerce locally), yielding a real response rate of under 10% (115/1500). Part of the low rate is because a significant portion of our population of firms (i.e., the 1500 firms) conducted only local e-commerce. It is also difficult to conduct business surveys in China due to sensitivity of the research issue. Fortunately, our follow-up tests indicate that non-response bias does not pose a significant threat. Nevertheless, future research should examine whether our results are generalisable to other contexts. Furthermore, our international performance scale focuses only on the financial aspect of performance by assessing the extent of their growth in international sales, market shares in international markets, and profitability from international markets. While these three dimensions are the most common and popular measurements in research on international new ventures (De Clercq et al. 2012), future studies should re-examine our hypotheses using different performance indicators such as objective and perceptual performance measures. In addition, while our post hoc analysis shows that common method variance is not a significant issue, we use only a single respondent for our survey research. Future research may use multiple respondents and thereby reduce common method variance ex-ante. Finally, since our empirical context is China, the results may not be applicable to other emerging markets. Future research may extend and replicate the results of this study to other emerging markets.

7 Conclusions

Digitalisation is a mega trend transforming business' international operations. With new and different business models and ecosystems, e-business may be able to internationalise early and quickly to different international markets. However, different

institutional environments may still constrain e-business development in local markets. Our study shows that the institutional capabilities of business model innovation and social-political networking developed in the home market play an important role in shaping an e-business firm's international performance. Further, domestic institutional hostility and different foreign environments may strengthen or weaken the effect of institutional capabilities on international performance. Further, reputation decreased the effect of institutional capabilities on international performance. Overall, this study provides a strong theoretical and empirical foundation for understanding how e-businesses can enhance their international performance. However, the field is still relatively new and we recommend further research in this promising area of international business.

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