

Digital Orientation for Emerging Multinationals and the Location Strategies in Internationalization: The Chinese Experience*

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Abstract

Purpose - Despite the ongoing digital transformation, it is not clear whether emerging market firms follow their manufacturing FDI path in the emerging digital industries. This paper examines how digital orientation affects the location strategies in internationalization and how the existing innovation capacities moderate the link between digital orientation and the location strategies.

Design/methodology/approach - This study chooses the Chinese setting for research design because digital transformation is already prevalent in the society and the cases of outward expansion are salient among the emerging markets. It uses the panel dataset of 976 Chinese listed firms that consists of 6,648 observations spanning from 2007 to 2017. Ordinary least square regression is used for the statistical approach with a one-year lag in the model.

Findings - Digital orientation increases a likelihood of emerging multinationals' entries in developed countries, and a high level of innovative capacities strengthens the link. Two groups seem to prefer entries in developed countries: firms with a high level of digital orientation with a high level of innovative capacities and firms with a low level of digital orientation, if with a low level of innovative capacities. The former reflects the context of digital transformation and the latter hints at the tax avoidance or interests in real estate.

Research implications or originality - While emerging multinationals are known to prefer entries in developing countries for capacity arbitrage, our results forecast that their FDI strategies may have a drastic change as digital transformation deepens.

Keywords: Digital Orientation, Internationalization, Location Choice, Innovation, China

JEL Classifications: F1, M1, O1, P4, Z1

I. Introduction

Emerging market-related research assumes differences in doing businesses between developed countries and emerging markets, commonly known as developing countries with high growth potential (Buckley & Munjal, 2017; Kang, 2018). In practice, emerging markets are

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characterized with state intervention and consequently strong and extensive political ties (Poynter, 1982; Wang et al., 2021), industrialization drive and thus large demand for natural resources (Wilson, 2015; Wu et al., 2017), or weak protection for intellectual property right and accordingly lower tendency for radical innovation (Yang & Sonmez, 2013; Brandl et al., 2019). Based on this notion, scholars have questioned whether emerging-market firms (hereafter emerging multinationals) possess core competence, which is supposed to be the source of internationalization (Hymer, 1960; Dunning, 1977).

Mathews (2002; 2006) has proposed the LLL (learning, linkage and leverage) model for emerging multinationals' internationalization, a need-based internationalization model. He has argued that, unlike their counterparts in developed countries that go overseas with core competence, emerging multinationals go overseas to seek knowledge in developed countries (learning), to network with both developed and developing markets (linkage) (Li et al., 2018), and to ride on the acquired foreign brands in developed countries to promote home brands with lower reputation or to arbitrage capacity gap and better lobby in developing countries (leverage) (Cuervo-Cazurra & Genc, 2008).

In this sense, the LLL model is a catch-up strategy as well as a manner to respond to domestic economic policies, as almost all emerging multinationals pursue both outward expansion and inward growth (Lu et al., 2017). For example, China is renowned as a big buyer for natural resources, real estates, and infrastructure firms (Kolstad & Wiig, 2012; Salidjanova, 2011). Indian firms invest in the overseas financial industry, linking to domestic tertiary industry (The Hindu Business Line, 2022). Thus, the location choices for emerging multinationals have naturally reflected these motivations.

The fourth industrial revolution has been perceived in emerging markets as a window of opportunity (Lee et al., 2020) and the emerging multinationals endeavor in taking the technology and market leadership (Matthews, 2009). By promoting digital industries, such as Internet of Things (IoT), artificial intelligence (AI), big data, smart cities, or smart health care, the governments in the emerging markets have tried to connect industrial deepening and economic development. While there have been clear rationales to enter developed countries (or developing countries for different rationales), digital industries where no country is technologically dominant present a prospect that emerging multinationals may lead in a new technical paradigm.

Following the preceding research, this study defines digital orientation as “an organization's guiding principle to pursue digital technology-enabled opportunities to achieve competitive advantage” (Kindermann et al., 2021; Bendig et al., 2023). It is a type of strategic orientation with a digital domain, built upon market orientation, entrepreneur orientation, and learning orientation (Quinton et al., 2018; Kindermann et al., 2021). Due to the conceptual novelty, not much research has been conducted to reveal determinants or antecedents (Kindermann et al., 2021), not to mention the context of emerging multinationals. Although digital orientation is broadly a type of strategic orientation, there are distinctions between digital orientation and other types of strategic orientation in technical scope, necessary capabilities, ecosystem coordination or architecture configuration (Kindermann et al., 2021; Bendig et al., 2023), so strategies of emerging multinationals should be affected by digital orientation. Therefore, it is necessary to investigate how digital orientation influences on the internationalization strategies for emerging multinationals, specifically on their location choices. Further, since digital orientation has

a crucial element of technical newness and thereby learning, we posit that innovative capabilities will strengthen the relationship between digital orientation and the location choice.

In this study, we propose hypotheses about the relationship between digital orientation and the location choices of emerging multinationals. In particular, we note the characteristics of digital orientation and argue that they would lead emerging multinationals to the location choices that prioritize fulfillment of the knowledge-seeking motivation. We select the Chinese multinationals because they are a visible group of outward foreign direct investors. Our dataset includes 6,648 overseas entries by 976 firms listed in Shanghai or Shenzhen during 2007-2017. Ordinary least square (OLS) analysis is conducted to test hypotheses.

This paper is structured as follows. The next section explains the concept of digital orientation and hypothesizes the effects of digital orientation on foreign expansion for emerging multinationals, as well as the moderating effects of the innovative capacities. Subsequently, we introduce our methodologies, including research setting, data collection and measurements. Empirical findings are presented and discussion follows. Our research ends with a concluding remark and a summary.

II. Literature Review and Hypothesis Building

1. Digital Orientation and Location Choices

As digitalization transforms businesses in multiple ways which pave the way for new frontiers in strategic research, the concept of strategic orientation has been extended to include this new area. At the outset of digital technologies, digital orientation was referred to a set of guiding principles that provide strategic direction to an organization in fostering and implementing specific digital strategies and initiatives (Nambisan et al., 2019; Kindermann et al., 2021). Over time the conceptualization became established upon the foundation of resource-based theory, integrating market orientation, entrepreneurship, and learning (Kindermann et al., 2021; Bendig et al., 2023). Hence, digital orientation is different from technology orientation, which is frequently mistaken for digital orientation but a distinct and separate concept. Digital orientation emphasizes the willingness of implementing “digital” technologies for a quicker response to market dynamics and adapting to changes in technological competitive landscapes (Chavez et al., 2022), while technology orientation focus on the intention of organization to automatize and computerize the manufacturing process (Gatignon & Xuereb, 1997). It is also different from entrepreneurship or learning in that entrepreneurship identifies business opportunities in general (while digital orientation focuses on the digital opportunities) and digital orientation includes digital utilization and adoption than learning (Quinton et al., 2018).

Despite the practical importance and the actual prevalence, there is very little empirical evidence to substantiate the effects of digital orientation. The existing studies are convergent at the notion that firms with greater digital orientation are more competitive in adaptation at the environmental change (Kindermann et al., 2021; Hervé et al., 2020), more willing to apply new method to the internal organization units (Kane, et al., 2015), or possess greater commitment in conducting R&D (Hult et al., 2005).

Discussions over digital orientation in the field of International Business (IB) literature is

relatively recent. A few anecdotes stress that digital orientation is advantageous particularly for small and middle-sized enterprises in improving performances overseas (Hervé et al., 2020) or in speeding up foreign market entries (Ruokonen & Saarenketo, 2009). Another evidence indicates that, since digital technologies enable global service mobility, firms with digital orientation prefer overseas markets to avoid strong business regulations in domestic market (Vecchia & Brennan, 2022; Yin et al., 2019).

The LLL model illustrates the dilemma surrounding emerging multinationals and their consequent choices in internationalization (Mathews, 2002; 2006). Emerging multinationals desire to catch up with the advanced forerunners, so they need to access frontier technical knowledge (learning). At the same time, their firm-specific advantages (FSA) are not strong enough to compete the forerunners, so that they have tried to generate positive externalities with the networking activities. Commonly, they connect the home countries to the foreign businesses, lowering production costs to maintain the FSA. By doing so, emerging multinationals concurrently pursue two strategic goals of differentiation (by the subsidiaries in developed countries) and cost leadership (by headquarters or the subsidiaries in developing countries) (Awate et al., 2015; Ramasamy et al., 2012). Thus, depending upon the weight between differentiation and cost leadership, emerging multinationals decide on the location for the foreign direct investment (Kedia et al., 2012; Liang et al., 2012).

Extending the framework, we note that how the LLL model fits with the digital orientation-driven foreign expansion. Regarding the learning element, we note availability of digitalization infrastructure and digital eco-system that digital orientation-based foreign expansion fundamentally requires. In most developing countries, digitalization is in its nascent or even pre-nascent stage and thus the relevant policies are not yet articulated. Also, given that the learning opportunities are more abundant in developed countries, indicated by 83 percent of the total top-quality AI patents in developed countries (Korea JoongAng Daily, 2021), developed countries present better locational advantages for learning.

For the linkage element, digital industries have 'connection' as a key nature, which requires data openness and data security (Luo, 2022). However, due to the strong role of government in politics and economy, emerging-market governments tend to regulate the cyberspace and the digital businesses for the national security reason (Kabanda et al., 2018; Potrafke, 2015). In order to fully utilize data and stay free from censorship, which is restricted in the home countries, emerging multinationals may prefer developed countries vis-a-vis developing countries for a location choice. In more transparent and freedom-guaranteed environment, emerging multinationals can network with more reliable or more legitimate partners to join the global competitive eco-systems (Wu & Ang, 2020).

Finally, the leverage element originally assumes that emerging multinationals exercise competitiveness in the lower-income countries where the local competitors have lower capabilities or free ride on the foreign brands with high reputation in developed countries. However, the assumption was based on the premise that emerging multinationals are latecomers where original technologies are owned by the forerunners under the established technical paradigm. Yet in digital industries, technical paradigm is not yet established, therefore, emerging multinationals do not have to avoid competition with firms from advanced countries. Instead, completing tests in developed countries can raise technical credibility during the R&D racing with the high technical complexity and uncertainty.

In short, we propose that emerging multinationals with greater digital orientation are more likely to prefer entries in developed countries. Hence, we propose as follows:

H1: Upon going overseas, emerging multinationals with a high level of digital orientation are likely to choose a location in developed countries over developing countries.

2. Moderating Effects of Innovative Capacities

The benefits derived from digital orientation may not be equally accessible to all firms (Kindermann et al., 2021). Given that digital orientation is related to awareness of and commitment to development of the novel technologies, we note the innovative capacities to understand and further develop them.

Existing studies have theorized that innovative capacities facilitate the market entry process due to the incentives to maximize the value of the innovative outcomes already owned by the entrants (Barney, 2001; Knight & Cavusgil, 2004). While it is already well-known that innovative capacities help firms swiftly identify potential market opportunities (Cohen & Levinthal, 1990), their roles have been even more salient in the digital industries (You & Brahma, 2023). It is reported that research-aggressive multinational enterprises which prioritize a digital focus have a competitive advantage in terms of internationalization (You & Brahma, 2023).

The process of developing innovative digital products and services demands inputs of substantial resources in terms of human capital, financial investment, and time commitment (Benner & Tushman, 2003; Sheng & Chien, 2016; Wu et al., 2019). Due to the higher costs associated with complex innovative processes, including the expenditure related to protection and manufacturing, firms are compelled to pay more attentions to safeguard their innovative outcomes in order to ensure satisfactory returns (Yang, 2012). Thus, when emerging multinationals with digital orientation enter foreign markets, they are inclined to enter developed countries if they possess a higher level of innovation capacities.

During developing upfront digital technologies such as algorithms, strict confidentiality is essentially maintained within a firm. Even less upfront digital technologies, such as utility model patents or design patents, needs elaborate and systemic protection because they are more prone to opportunistic replication due to their high commercial appeal and relatively lower technical complexity. Without strong enforcement of copyright and trademark laws, opportunistic or free-riding behaviors can happen. This concern may cause digital-oriented emerging multinationals with greater innovative capacities to find entries in developed countries for fear of infringement on the intellectual property rights (Maskus, 2000; Suthersanen, 2006).

Based on the argument, we hypothesize the moderating effects of innovative capacities on the link between digital orientation of emerging multinationals and their entry choices.

H2: As emerging multinationals have a higher level of innovation capacity, the effects of digital orientation on their preference to developed countries for a location choice are strengthened.

III. Methodology

1. Data Source and Model

This study selects China for hypothesis testing because China emphasizes digital transformation and the Chinese firms have been active in internationalization (Yu, 2017). Table 1 below shows that China is the most active outward investor country. Given this background, we obtain a list of 976 firms listed in China Stock Exchanges in Shanghai and Shenzhen, and download their digital orientation, the foreign market entry-related data, and other information from China Stock Market Accounting Research (CSMAR) database. CSMAR is a database widely utilized for the economics and business papers about China (Du & Boateng, 2005). The patent data is based on the database of Chinese Patent Office (CPTO). Our finalized dataset consists of 6,649 firm-year observations by 976 firms that span over 2007-2017 (before the trade dispute between United States and China).

Table 1. FDI Outflow from Emerging Markets (Unit: Billion USD)

	2017	% of GDP	2012	% of GDP	2007	% of GDP
Brazil	21.3	1.0%	2.0	0.1%	17.0	1.2%
China	138.3	1.1%	64.9	0.8%	17.1	0.5%
India	11.0	0.4%	8.5	0.5%	17.0	1.4%
Indonesia	2.0	0.2%	7.4	0.8%	4.6	1.1%
Malaysia	5.6	1.8%	16.8	5.4%	11.8	6.1%
Mexico	3.0	0.3%	18.7	1.6%	8.3	0.8%
Thailand	14.1	3.1%	14.2	3.6%	1.5	0.6%

Source: World Bank Database (data.worldbank.org)

2. Measurement

- **Dependent variable:** Our dependent variable is the propensity for developed country entries. We measure it with a ratio of the number of subsidiaries located in developed countries over the total number of subsidiaries (%). The division between developed countries and developing countries follows classifications at World Bank (2022).
- **Independent variable:** Digital orientation is a firm-level index measure, provided by CSMAR. The index is based on a hit frequency of digital-related key words mentioned in the firm's annual report. This approach is a standard in organization literature for measuring strategic orientation (Grawe et al., 2009). A set of 71 key words are pooled, including artificial intelligence technology, big data technology, blockchain technology, or digital technology applications. Most key words are technology-related, and some business-related. The index is constructed based on the hit frequency about the 71 key words in the financial statement. It ranges between 0 and 544. A high number means the firm appeals to the shareholder with the ongoing involvement in digital technology development.
- **Moderators:** We have three variables to measure different types of innovative capacities. While parent is a common form of innovative capacity (Zhang et al., 2023), China acknowledges three categories for patents: invention, utility model, and design patents.

Generally, invention embodies new and novel technologies, while a design patent applies on modifications to the product's appearance with a low level of the technical contents (Chen & Zhang, 2019; Zhang et al., 2023). Hence, we regard invention, utility model, and design corresponding to radical/significant innovation and incremental/petty innovation, and technical improvement, respectively (Beneito, 2006; Hu, 2010; Koh & Lee, 2022). They are measured with the number of registration (100 cases) held by the applicant firm.

- **Control Variables:** Several firm-level characteristics that affect internationalization process are controlled. We include the firm size (*size*), measuring with the logarithm value of total asset, because size represents knowledge and resources (Helpman et al., 2004) Return on assets (ROA) is also considered since financial status affects internationalization (Buckley et al., 2014). It is measured with the ratio of total income divided by total asset. Besides, firm age proxies experiences and thus the number of years since establishment is included in the model. The model also incorporates the R&D expenditure ratio which reflects the extent to which firms invest for innovation. It is calculated as the ratio of R&D expenses to firms' revenues. In addition, we control the assets-liability ratio (leverage) to assess the risk resilience level, and also include capital expenditure measured in million RMB (*capital expenditure*) because significant capital investments and fixed costs are needed to better utilize their assets through entering foreign markets (Yan et al., 2018). Finally, the total number of subsidiaries (*number of subsidiaries*) established by the firms is also taken into consideration in order to control the overall international strategy of the firm.

3. Analytical Method

We use ordinary least square model. All explanatory variables are lagged by one year, considering a possible delay from the effects of digital orientation to foreign expansion.

IV. Findings

The descriptive statistics, including the mean, standard division, maximal and minimal value and correlation matrix are presented in (Table 2). Most correlations of the variables are lower than 0.6 except for the one between the number of utility model patent and design patent. The relatively higher correlation relationship is not difficult to understand, as firms that prioritize incremental innovation often possess both utility model patents and design patents simultaneously. The VIF mean value indicating at 3.95 shows that multicollinearity is not a serious problem in our study.

(Table 3) shows the statistical results. Due to the correlation among patent types, we differentiate the models that each model has only one moderating variable. Model 1 is the baseline model in which the coefficient of the digital orientation is statistically significant and positive (Coef.=0.039, $p < 0.01$), indicating that firms with a higher level of digital orientation are more likely to enter developed countries. In Model 2 to Model 5, the coefficients of digital orientation remain consistently significant and positive (Coef.=0.032, $p < 0.05$ in Model 2; Coef.=0.028,

$p < 0.05$ in Model 3; Coef.=0.03, $p < 0.05$ in Model 4; Coef.=0.027, $p < 0.05$ in Model 5). Thus, H1 is supported. Firms with a high level of digital orientation are likely to increase the number of subsidiaries in developed countries.

Model 2-4 examine the moderating effects, and Model 5 include all variables. For a moderator, Model 2 adds invention, Model 3 includes utility model, and Model 4 incorporates design. To test hypotheses regarding the moderation effect of the innovation outcomes, we focus on the coefficients on the relationship between digital orientation and the specific type of intellectual property rights. In Model 2, findings show a statistically significant and positive coefficient on invention X digital orientation (Coef.=0.025, $p < 0.01$). However, this effect is not consistent with Model 5 due to the correlations. It is highly reasonable that firms with many invention patents are likely to have many utility model patents because both cases presume a high level of innovation capacity and orientation.

Model 3 and 5 present significantly positive coefficients on Digital Orientation X Utility Model (Coef.=0.025, $p < 0.01$ in Model 3; Coef.=0.023, $p < 0.05$ in Model 5). Model 4 also presents a significant positive interaction between the number of design patent and digital orientation on proportion of subsidiaries in developed countries (Coef.=0.081, $p < 0.01$). The finding means that for firms with digital orientation, a high level of intellectual property rights drives them into developed country entries. Firms regard developed countries as the markets where greater value and profitability are achieved. (Figure 1) plots the moderating effects for three types of intellectual property rights. Overall, the findings support H2.

In addition, some interesting results are found. Across Models 2 to 4, it is notable that the coefficients for three patents are consistently negative and significant. The significance and the direction do not change in the full model (M5). The results mean that Chinese firms with patents generally tend not to enter in developed countries. In other words, they prefer opportunity seeking in developing countries. We think that the result was obtained because we used Chinese Patent Office database. It is reasonable that Chinese firms that patented at the local office are local market-oriented or local market-optimized. Among those firms, only firms with digital orientation seem to be interested in entering developed countries.

Table 2. Descriptive Statistics and Correlation Matrix (N=6,649)

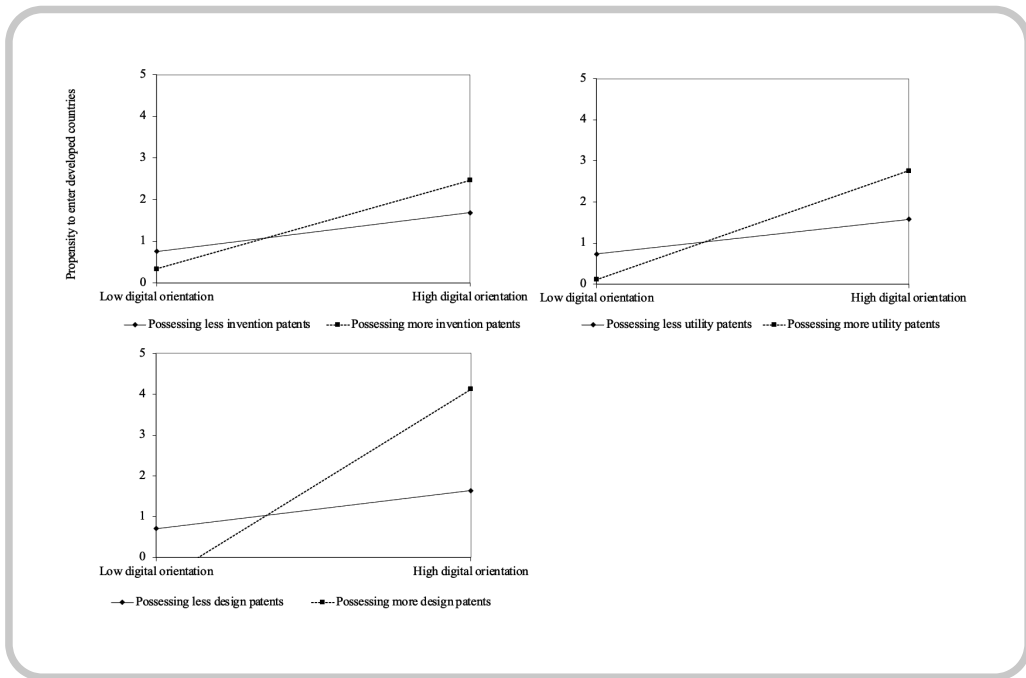
Variables	Mean	Std. Dev.	Min	Max	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Developed Country Entry	0.88	0.257	0	1	1.000										
(2) Digital Orientation	10.583	28.895	0	544	0.047*	1.000									
(3) Invention	181.973	1307.362	0	58020	-0.041*	0.056*	1.000								
(4) Utility Model	425.301	1858.836	0	94248	-0.072*	0.008	0.425*	1.000							
(5) Design	100.169	449.949	0	17424	-0.080*	0.023	0.310*	0.672*	1.000						
(6) Size	22.013	1.286	17.879	28.857	-0.116*	0.013	0.222*	0.348*	0.208*	1.000					
(7) ROA	0.051	0.062	0	1.202	0.047*	0.022	-0.021	-0.021	0.037*	-0.095*	1.000				
(8) R&D	4.603	5.354	0	151.61	0.065*	0.236*	0.032*	-0.022	-0.019	-0.221*	0.030*	1.000			
(9) Leverage	0.391	0.202	0.008	0.999	-0.170*	-0.049*	0.092*	0.157*	0.089*	0.564*	-0.390*	-0.285*	1.000		
(10) Capital Expenditure	0.675	4.784	0	237.004	-0.010	-0.011	0.217*	0.345*	0.057*	0.342*	-0.030*	-0.058*	0.120*	1.000	
(11) Number of Subsidiaries	3.116	4.646	0	83	-0.121*	0.033	0.060*	0.113*	0.101*	0.308*	-0.011	-0.036*	0.177*	0.052*	1.000

Note: an asterisk mark denotes a significance level at p<.01.

Table 3. Results of OLS Regression

	Model 1	Model 2	Model 3	Model 4	Model 5
Digital Orientation	0.039*** (0.012)	0.032** (0.013)	0.028** (0.013)	0.030** (0.013)	0.027** (0.013)
Size	-0.001 (0.003)	0.001 (0.003)	0.003 (0.003)	0.002 (0.003)	0.003 (0.003)
ROA	-0.107* (0.058)	-0.107* (0.058)	-0.108* (0.058)	-0.093 (0.058)	-0.096* (0.058)
R&D	0.035 (0.062)	0.047 (0.063)	0.056 (0.063)	0.044 (0.062)	0.055 (0.063)
Leverage	-0.200*** (0.023)	-0.202*** (0.023)	-0.201*** (0.023)	-0.200*** (0.023)	-0.201*** (0.023)
Capital Expenditure	0.001 (0.001)	0.001 (0.001)	0.001** (0.001)	0.001 (0.001)	0.001 (0.001)
Number of Subsidiaries	-0.005*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)
Invention		-0.013*** (0.005)			-0.005 (0.005)
Digital Orientation X Invention		0.025*** (0.008)			0.010 (0.010)
Utility Model			-0.010*** (0.002)		-0.005 (0.003)
Digital Orientation X Utility Model			0.025*** (0.007)		0.023** (0.011)
Design				-0.037*** (0.007)	-0.024** (0.009)
Digital Orientation X Design				0.081*** (0.028)	-0.001 (0.049)
Constant	0.977*** (0.130)	0.947*** (0.130)	0.895*** (0.131)	0.919*** (0.130)	0.893*** (0.131)
Control year	YES	YES	YES	YES	YES
Observations	6,648	6,648	6,648	6,648	6,648
R2	0.042	0.043	0.046	0.046	0.047

***p < 0.01, **p < 0.05, *p < 0.1

Figure 1. Moderation Effect of Innovation Capacity

V. Discussion and Conclusion

Emerging multinationals have been visibly active in going overseas. While classical theories assume possession of core competence as a pre-condition of foreign expansion (Hymer, 1960), it is difficult to assure that core competences on emerging multinationals are strong enough to go overseas. This intriguing phenomenon has been explained by the perspectives competing with the core-competence theory. One of them is the LLL (learning, leverage, linkage) model (Mathews, 2006), which stresses the aspect opposite to the firms in developed countries. The LLL model explains that the emerging multinationals go overseas in order to gain knowledge (learning), to free ride on the established brands and reputation (leverage), and to connect developed countries with home countries (linkage).

This study has examined internationalization in relation to digital orientation. Digital orientation represents willingness and proactive commitment for competitiveness building in the digital industry. Because the digital industries recently burgeoned, several digital sectors do not have a market or technology leader. While firms in emerging markets are still latecomers in the manufacturing sector, some firms have demonstrated technical excellence under the digitalization wave, a window of opportunity. Firms with digital orientation are therefore entrepreneurial, finding new market for opportunities, and learning for complex digital technologies. With this theoretical background, we hypothesize that digital orientation might boost emerging multinationals' internationalization initiative and thus promote their entries in

developed countries because they may want to explore new market where the infrastructure is already established and the relevant policies lower the unnecessary business risk.

We next have examined the effects of innovative capacities on the link between digital orientation and the location choice. The innovative capacities, represented by types of patents, facilitate learning for technical deepening and exploration for new business opportunities but need strong protection against infringement. Thus, the innovative capacities are expected to strengthen the relationship between digital orientation and entries to developed countries.

The research setting of this study is China, where digital industries grow fast and digital transformation already started in the society. The dataset consists of 6,648 observations spanned by 976 public firms during 2007-2017. We have found that a higher level of digital transformation leads the Chinese firms to the entry in the developed countries and the link is strengthened by the number of patents possessed by the entrants. Statistical results demonstrate that digital orientation increases emerging multinationals' entries in developed countries, and innovative capacities strengthen the relationship.

This study has several contributions. First, digital orientation is a novel construct that affects strategies and performances of firms since digitalization has unique features. It is different from the IT orientation, the IT usage, or the IT proficiency. Studying digital orientation enables scholars and practitioners to forecast the global business leadership in the future. Based on the empirical findings, we argue that, as digital transformation deepens, more emerging-market firms will expand into developed countries to become early movers in the digital market. While the emerging markets take a protectionist stance to demand local server location and ban data transfer overseas, they may change the protectionist policy when the national firms become visibly strong in global digital market.

Second, this study shows a dilemma of emerging multinationals between knowledge seeking in developed countries and knowledge arbitrage in developing countries for an FDI location choice. According to our empirical findings, emerging multinationals with greater innovation capacities tend to focus on developing countries, nevertheless, the result was opposite with digital orientation. This finding contrasts the argument of Cazorra and Genc (2008) that emerging multinationals would prefer the least developed countries because their management fits more with the least developed countries. However, our study shows that there is heterogeneity among the emerging multinationals even within a same country. We argue that one factor to generate the heterogeneity is digitalization.

The finding demonstrates that emerging multinationals perceive digitalization as a new pressure for innovation. It also presents a clear-cut divergence in the internationalization patterns that emerging multinationals with a high level of digital orientation and a high level of innovation capacities as well as firms with a low level of digital orientation and a low level of innovation capacities are likely to enter developed countries. The latter seems to be the direct investors in real estate development, natural resources, agriculture products, or leasing and business service sectors that emerging multinationals have traditionally invested for own needs: tax avoidance, solution for the food shortage problem, resource procurement, or asset value investment. It means that, while Chinese firms are known to be balanced over the location choices or to prefer developing countries, they have promoted the competitiveness and now behave different in digital industries from what they were perceived.

The research also offers empirical contributions for practitioners. It is clear that the Chinese

firms are eager to learn and commercialize in advanced countries. The Korean firms are kindly advised not to stay in domestic market but to actively explore the market in the advanced countries and to invest more in R&D. Also, the behavior of Chinese digital firms implies that they may have a conflict with Chinese government as the government is sensitive with cross-border data transfer as well as capital outflow. The recent withdrawal of Didi Chuxing from the U.S. stock market (NYSE) is a typical example. Making strategic alliances with the Chinese firms out of China may involve such risk.

This study has some limitations. The Chinese firms that this study focuses on may not represent all samples and aspects in emerging multinationals. In addition, there may be sectoral variations among digital industries regarding the location choices. For example, Chinese government emphasizes the belt and road initiative (BRI) and calls for participation of domestic digital firms. We hope that future researchers conduct sectoral specific studies.

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