

**International Orientation of Chinese Internet SMEs:
Direct and Indirect Effects of Foreign and Indigenous Social Networking Site Use**

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Abstract

We examine how international orientation (IO) of small and medium sized enterprises (SMEs) in China is influenced by foreign and indigenous Social Networking Site (SNS) use. Existing international business theory does not explain how SNS use by emerging market SMEs underpins IO. Combining knowledge-based theory, International Entrepreneurship literature and insights from Information Management, we test a model of opposite effects for the use of foreign and indigenous SNS. Analysis of data from 117 Chinese SMEs provides strong support to the central argument that indigenous rather than foreign SNS helps this new breed of firm to become more internationally-oriented.

Key words: International orientation; foreign knowledge acquisition; social networking; internet SME; China.

1. Introduction

In Knight and Kim's (2009) work on internationalization in small and medium sized enterprises (SMEs), international orientation (IO) was one of four critical dimensions¹ of international business (IB) competence that helps the SME overcome constraints of fewer financial and other tangible resources compared with larger organizations. In Knight and Kim's words, having an "aggressive, entrepreneurial approach to international markets" (2000: 260) is what constitutes an IO in an SME and this is part of a higher order IB competence that allows SMEs to survive early internationalization and achieve positive performance outcomes in international markets (Coviello, 2015). In essence, having an IO is a key foundation stone for subsequent internationalization of SMEs.

But how does an IO come about in the first place? Literature suggests IO is representative of the prevailing mind-set of the firm (Dimitratos, Voudouris, Plakoyiannaki and Nakos, 2012; Knight and Cavusgil, 2004), this itself being guided by what the firm has learnt about foreign markets. Leaders who establish and maintain IO in the firm will encourage communications to employees that stress international markets, encourage behaviours amongst employees to pursue opportunities in international markets, and provide feedback to employees on what the firm has learnt about what it takes to succeed in international markets (Knight and Kim, 2009; Zhou, Wu and Luo, 2007). IO comes about because the firm's leaders have gained knowledge about foreign markets that can be used to justify the IO (Musteen, Datta and Butts, 2014). Without this, leaders will find it difficult to rationalize an emphasis on IO and convince stakeholders of the need to build a strategy for the firm based on IO.

¹ The other dimensions being international marketing skills, international innovativeness and international market orientation.

Nonetheless, scholars have identified under-researched themes and enduring gaps in the IO literature (Cavusgil and Knight, 2015; Coviello, 2015) including: (1) how IO comes about in SMEs in China, and (2) the influence on IO of the modern digital context in which SMEs operate. Firstly, China is the world's largest emerging economy and is culturally and geographically distant from many of the world's developed markets. Given the emphasis on knowledge acquisition from overseas markets as a basis for establishing an IO, a question arises about how resource-disadvantaged SMEs in China can interpret and make sense of incoming foreign knowledge to use as a basis for an IO. Secondly, organizations of all shapes and sizes – including SMEs – use the internet to acquire and interpret external knowledge (Coviello, Kano and Liesch, 2017). However, and despite a recent emphasis on the digital context amongst IB scholars (Alcácer, Cantwell and Piscitello, 2016; Coviello et al., 2017), we know little about the effect of internet-based social networking in Chinese SMEs as they acquire and make sense of knowledge about international markets to use as a basis of IO. More specifically, we do not know how internet-based SNS use based on foreign platforms versus SNS use based on indigenous Chinese platforms will influence the firm's IO.

The growing literature on internationalization and outward FDI of Chinese firms, despite stressing the importance of learning about foreign markets and of being more attracted to markets with a greater level of cultural proximity, has not addressed this (e.g., Buckley, Clegg, Cross, Liu, Voss and Zheng, 2007; Zhou et al., 2007). Furthermore, China is a country that has witnessed government control and censorship of internet companies and content (Creemers, 2017; Jiang, 2012), providing a potential boundary condition for existing internationalization theory as it applies to the very early stages of a firm's internationalization in this context. Established internationalization theory (Johanson and Vahlne, 1997; 2009) and more specifically the work on the role of social networks (Zhou et al., 2007) says little about how *internet-enabled* social

networking (i.e., Social Networking Site² (SNS) use) – and in particular the differential effects of foreign versus indigenous SNS use - may help Chinese SMEs to become more internationally-oriented. The literature is limited on how this might happen in firms located in a country in which the use of the internet has been shaped by an emerging governance system characterized by increasing levels of censorship and order (Creemers, 2017; Jiang, 2012).

In general, internet-based SNS use has become a highly popular channel for corporate communication, allowing knowledge to flow into and out of the firm (El-Haddadeh, Weerakkody and Peng, 2012; Moen, Endresen and Gavlen, 2003). Given that the development of an IO is essentially a knowledge creating process for the firm (Cavusgil and Knight, 2015; Michailova and Wilson, 2008), we expect IO to be influenced by the firm's use of SNS. Indeed, gaining information has been reported as a key motivation for using SNS (Chang and Zhu, 2012) and research has shown how firms can even change their policies and practices as a result of intelligence gained through SNS (Sinclair and Vogus, 2011). However, the link between foreign and indigenous SNS use and IO has not been examined in prior work, a notable gap especially in the Chinese context where the country is top of the world in SNS usage (El-Haddadeh et al., 2012).

Using Nonaka's seminal theory on knowledge creation (Nonaka and Takeuchi, 1995), and combining this with insights from the International Entrepreneurship and Information Management literatures, we develop hypotheses asserting opposing direct and indirect effects of a Chinese SME's use of foreign and indigenous SNS on its IO. Our theory emphasizes differences in the effects of using foreign (global) SNS versus using Chinese SNS. An analysis of data from a unique survey of 117 Chinese internet SMEs provides strong support to our hypotheses. While foreign knowledge acquisition is a strong predictor of IO, SNS use by these firms has strong

² We use the definition of SNS as platforms that support the establishment of virtual relations not only between individuals, but between firms (Martins, Goncalves, Pereira, Oliveira and Cota, 2014)

moderating roles on this relationship. Foreign SNS use has a negative impact on IO and on the relationship between foreign knowledge acquisition and IO. Indigenous Chinese SNS use has a positive impact on IO and on the relationship between foreign knowledge acquisition and IO.

The results provide a new contribution to the literature on the determinants of IO in SMEs and to our understanding of how IO comes about through SNS use by firms in a large, emerging economy. The results suggest theory of early firm internationalization (Cavusgil and Knight, 2015; Knight and Kim, 2009; Musteen et al., 2014) needs to be updated in order to account for the use of different types of SNS as firms seek to learn by interacting in social networks on the internet. The findings also contribute to debates on SNS and internet policy in China, specifically on the question of whether the Chinese approach has been a good thing as far as the IO of the country's emerging internet SMEs is concerned. While there has been criticism of China's authoritarian role in controlling foreign internet companies and censoring content in favour of promoting Chinese SNS services, our findings illustrate a positive outcome of this in terms of the role that Chinese SNS plays in helping the country's SMEs become more internationally-oriented.

2. Literature review and theory

2.1 International orientation and foreign knowledge acquisition

An extensive literature points to a strong positive association between a firm's knowledge of foreign markets, foreign institutions and technological know-how in other countries and its international orientation (IO). Without an understanding of the opportunities and risks in foreign markets, a small firm is unable to confidently position itself as an international player. We see this emphasized in internationalization theory (Johanson and Vahlne, 1977, 2009), in the international entrepreneurship and born global literature (Cavusgil and Knight, 2015; Etemad and Wright, 2003; Knight and Kim, 2009; McDougall, Shane and Oviatt, 1994), as well as in various studies

examining firm performance in foreign markets (Autio, Sapienza and Almeida, 2000; Musteen et al., 2014; Zhou et al., 2007; Zou and Cavusgil, 2002).

In the original Uppsala ('stages') model of internationalization, the firm's increasing international commitment is reinforced by its learning in foreign markets (Johanson and Vahlne, 1977). In the revised network model, Johanson and Vahlne (2009) discuss how knowledge of – and from – network partners in foreign markets allows the firm to overcome liability of outsidership. According to Leyden, Link and Siegel (2014) an entrepreneur is someone who constantly searches for knowledge “and that key to the acquisition of knowledge is access to social networks” (Leyden et al., 2014: 1158). Whether internationalizing in a staged approach in order to overcome psychic distance or in a socially-networked manner in order to maximize opportunities in multiple markets, knowledge of conditions for competing in those foreign markets influences the overall stance taken by the firm with respect to those markets. Likewise, studies and reviews in international entrepreneurship consistently raise the importance of knowledge acquisition from foreign sources for firms internationalizing at or near their founding (Etemad and Wright, 2003; Musteen et al., 2014). Michailova and Wilson (2008) argued that socialization tactics (the process by which newcomers learn appropriate behaviors) moderate the relationship between experiential knowledge and SME internationalization. In Musteen et al.'s (2014) study of first international venture performance in SMEs, foreign market knowledge (itself influenced by the nature of the SME's international networks) has a positive and significant influence on performance abroad.

Indeed, empirical studies of firm performance in foreign markets have drawn attention to the need for knowledge, learning and awareness to guide the firm's stance on internationalizing. For instance, Dichtl, Koeglmaier and Mueller (1990) showed a link between foreign orientation and export performance of SMEs, spotlighting the role of export promotion by home country governments. Such promotion brings new knowledge into the firm; knowledge of the business

conditions in foreign markets. Autio et al.'s (2000) work showed a direct effect on sales growth in international markets of the firm's knowledge intensity (i.e., the tangible and intangible resources the firm has been able to amass). Zhou et al. (2007) showed how accessing foreign knowledge through social networks helps to mediate the relationship between internationalization and firm performance in Chinese SMEs. Zou and Cavusgil (2002) showed how a global market strategy – embodying an IO – leads to higher global market performance, and that international experience is an important firm resource for competing in international markets. Collectively, this literature underpins our baseline hypothesis:

Hypothesis 1.

Ceteris paribus, the greater the level of foreign knowledge acquisition by a firm, the greater will be the firm's level of international orientation.

2.2 SNS use, foreign knowledge acquisition and IO

The organizational mechanisms by which foreign knowledge enters the firm, gets processed by the firm, and is subsequently used by the firm's leaders as they set the firm's IO has received some attention by researchers. Scholars have highlighted language skills and cross-cultural competence of the firm's employees who deal with actors in foreign markets and seek to understand business conditions in those markets (Johnson, Lenartowicz and Apud, 2006). Indeed, common language between the CEO of an SME and international ties has been shown to result in a faster pace of internationalization for the SME; linguistic closeness makes learning easier and entry mode decisions to be better informed (Musteen, Francis and Datta, 2010). Others suggest the interaction between a firm's managers and home country export promotion agencies will allow knowledge of foreign markets to be internalized by the firm (Dichtl et al., 1990).

While these studies emphasize face-to-face inter-personal interactions, efficient communications and relationships as building blocks for tacit knowledge transfer, little work has been done on how the internet can be used by the firm to enhance or facilitate the flow and

interpretation of foreign knowledge into the firm. In one sense, the internet can clearly be used as a source of hard data on conditions in foreign markets (Cavusgil and Knight, 2015). Reports containing explicit, codified information on absolute and relative metrics at various levels (regional, national, sub-national) are readily available. Firms have access to these. However, firms also are able to use internet-enabled social networking (i.e., SNS) to gain knowledge, including knowledge that helps them make sense of foreign markets (Sinclair and Vogus, 2011). Firms increasingly use SNS in their corporate communications with a wide range of external stakeholders. Firms use of SNS as part of their usual business activities is ubiquitous and as a consequence of their SNS use knowledge flows into and out of the firm (Chang and Zhu, 2012; Martins et al., 2014). Internet-enabled SNS allows discussion and reflection on information gathered about foreign markets, and for assumptions to be articulated and tested. McEvily and Marcus (2005:1035) noted how “firms vicariously learn from the insights, experiences, or abilities previously accumulated by linked organizations.” SNS links firms by bridging distance and providing a platform in which knowledge transfer is facilitated by interaction. It provides “a forum for observation, experimentation, and demonstration” (McEvily and Marcus, 2005: 1034). In Sinclair and Vogus’ (2011) study, the authors even showed how companies are likely to change their policies and practices according to intelligence gained through SNS. This literature strongly suggests top managers in SMEs do not necessarily have to meet face-to-face in distant locations in order to gain knowledge that might then influence the firm’s IO and that SNS use for this purpose is highly beneficial. After-all, the internet makes it easier for SMEs to operate in international markets (Moen et al., 2003). The literature also highlights potential problems in how to manage SNS use at an organizational level: how to manage social media given the shift in power towards consumers (Sinclair and Vogus, 2011), how to avoid over-standardizing communications with clients over the internet (Moen et al., 2003), and how to overcome problems of virtuality,

including establishing trustworthy relationships with other virtual users such that effective knowledge flows can take place (Gibson and Gibbs, 2006).

Nevertheless, despite these insights the link between SNS use and IO does not feature in recent summaries of early internationalization of firms (Cavusgil and Knight, 2015). It also does not feature in studies examining internationalization of Chinese firms (e.g., Buckley et al., 2007; Zhou et al., 2007). Coviello (2015), however, does pose the question of how the internet-enabled experience of next-generation founders might influence internationalization outcomes. We argue internet-enabled experiences are highly likely already to have influenced SME founders and top managers, and they almost certainly feature in the mindsets of leaders of today's internet SMEs in China. Lu, Zhou and Wang (2009), for instance, showed how a wide range of younger generation Chinese users (ranging from high school students to undergraduates and professionals) have favorable attitudes towards instant messaging (IM) applications if they perceive it to be useful and enjoyable. As far back as 2002, research reported 34% of sampled Chinese SMEs making use of the internet (Riquelme, 2002). As a foundation stone for globalization, the internet has made it possible for a firm to market its products or services practically anywhere on the planet (Cavusgil and Knight, 2015). But the extent to which internet-based social networking allows internationalizing firms to become part of a broader social group in order to gain and make sense of foreign knowledge has not been determined.

2.3 Differences between indigenous and foreign SNS use in the Chinese context

Literature from the field of Information Management informs on how internet-enabled SNS is used by people from different countries and cultures. While indigenous and foreign SNS platforms are technically very similar, for instance with similar features (Eslami and Yang, 2018; Li and Chen, 2014), how they are used by Chinese users – as shown in Table 1 - differs markedly. Li and Chen

(2014) find that when Chinese use Renren they maintain strong home country social capital, an effect that is not present when they use Facebook. Qiu, Lin and Leung (2013) report that the Renren online culture (online culture is defined in terms of the “shared practices, expectations, and structures that members choose to follow [when engaged] with...networked computer technology”, p. 107) is more collectivist than Facebook, this resulting in more benevolent sharing of information on Renren compared to Facebook. Jackson and Wang (2013: 919) concur with Qiu et al. (2013), concluding that “online culture reflects the offline culture in which it is embedded”. This is also reinforced by Li (2014) who describes Renren as a platform that exclusively fosters Chinese culture. From the point of view of disseminating information, Chu and Choi (2010) show that Chinese SNS users are more likely than US SNS users to ‘show’ their knowledge and competence on SNS platforms. From the point of view of seeking information, Tian (2016) reports that practical information seeking is *often* a motive for Chinese to use Renren, while it *rarely* is with Facebook. In addition to these comparative studies, others have noted the learning benefits of Chinese SNS use. For instance, continuance of engagement in social networking is beneficial for learning as it provides enduring opportunities for reflection, seeking further clarification and progressively developing knowledge stocks. Sun, Liu, Peng, Dong and Barnes (2014) show that the shared norms, tie strength and trust experienced in Chinese SNS social networks by Chinese users all have a positive influence on continuance intention. Wang, Zhang and Zeng (2019) note how Chinese SNS use by Chinese users leads to both online and offline forms of social support for those users.

Collectively, these studies from the field of Information Management are important because they highlight contrasting differences in how SNS use supports a socialized learning environment for users. The evidence suggests overwhelmingly that when Chinese use Chinese SNS they will be engaging in a more homophilous forum for knowledge sharing (Prashantham,

Dhanaraj, and Kumar, 2015) and will experience a higher sense of social status (obtaining encouragement, support and more favourable access to information and resources) than when they use foreign SNS. Social status can be seen in terms of centrality in a social network and is something that affords advantages due to “standing, worth, esteem or prestige” (Guler and Guillén, 2010: 393). Importantly, it is an attribute that once gained by a firm *in its home country*, will enhance the proclivity of the firm to internationalize (Guler and Guillén, 2010).

Insert Table 1 about here

2.4 Direct and indirect effects of SNS use by a Chinese SME

We argue that the relationship between this SNS use, foreign knowledge acquisition and international orientation can be informed by Nonaka and colleagues’ socialization – externalization – combination – internalization (SECI) model of knowledge creation (Nonaka et al., 2000; Nonaka, Toyama and Nagata, 2000). In the SECI model, the organization is seen as a knowledge-creating entity in which knowledge is continually converted within and between tacit and explicit forms. From the IB literature we know that the development of an IO in a firm is itself a knowledge creation process; outside knowledge about foreign markets is received, internalized and acted upon (Musteen et al., 2014). The SECI model – which places an emphasis on the concept of ‘ba’ or context³ - helps us understand how SNS use can influence Chinese SME IO in both direct and indirect ways.

Firstly, managers are able to access tacit knowledge held by others through the rich media aspects of SNS, such as video/audio transmissions, instant messages and blogs (Chatti, Klamma,

3 According to Nonaka et al. (2000: 8): “‘ba’ is where “information is given meaning through interpretation to become knowledge”

Jarke and Naeve, 2007; Lee and Kelkar, 2013; Panahi, Watson and Partridge, 2013). This leads to the possibility of a *direct effect of knowledge acquisition through SNS use on IO*. There is real-time interaction and communication of messages in bilateral communications and within groups (or forums) and SNS allows voice (VoIP) and file sharing of video and audio clips. These formats allow tacit knowledge from others to be recreated as tacit knowledge of the receiving manager as an SNS user (i.e., a socialization (S) process). On the other hand, when other users articulate (i.e., type into the SNS) their thoughts and experiences using messaging tools within SNS, they are essentially converting their own tacit knowledge to explicit knowledge (i.e., an externalization (E) process). This explicit knowledge is then read by the receiver (i.e., the SME manager) within the SNS.

According to SECI logic, these S and E processes for accessing knowledge will be beneficial for the receiver as long as the nuanced situational context of the receiver is understood and internalized by senders. In Nonaka et al.'s (2000) unified model of knowledge creation, context takes a prominent position. Shared context becomes important as it provides the basis for knowledge conversion. The shared context in our study is that of Chinese SME internationalization; the challenges the focal firm faces overcoming resource constraints due to home country, age and size when considering whether to adopt an aggressive international stance. If this shared context is transferable from the receiving manager (i.e., the manager of the SME on the cusp of internationalization) to the sender (i.e., other SNS user(s) who may influence the decision by managers of the focal firm to adopt an IO), then this would support knowledge dissemination that is useful and relevant to the receiver given the receiver's specific situation. Following Nonaka et al. (2000), if context is not easily transferable, knowledge conversion through the SECI process is hindered.

When using a *foreign SNS* to seek knowledge through S and E processes, a Chinese SME manager will effectively be engaging in an environment where others are less likely to show their abilities, performance and qualifications (Chu and Choi, 2010), where the online culture is more individualistic (Qiu, Lin and Leung, 2013; Jackson and Wang, 2013), where unique personal experiences are emphasized over collective experiences and where members rarely seek practical information (Tian, 2016). We can reasonably expect the likelihood that there will be a range of low context and high context cultures (Hall, 1976) is increased with foreign SNS use⁴. This will mean a reduction of homophily – the tendency to associate with similar ethnicities and build strong social capital based on common language and cultural heritage (Prashantham et al., 2015) – as well as contribute to a lower social status (Guler and Guillén, 2010) within the SNS environment. Consequently, it is more likely that a Chinese SME manager would receive mixed or even conflicting messages about how to pursue opportunities and manage risk in foreign markets from senders that are less likely to have understood and internalized the nuanced situation in which the Chinese SME finds itself (Zhou et al., 2007). In Nonaka et al.'s (2000) words, the platform for S and E knowledge conversion is less likely to provide the quality needed for actual knowledge conversion. The effect of this would be to dampen any appetite for internationalization by the SME and reduce the Chinese SME manager's proclivity to adopt an IO. Hence:

Hypothesis 2.

Ceteris paribus, the greater the use of foreign SNS by the Chinese SME, the lower will be the firm's level of international orientation.

On the other hand, when using a *Chinese SNS*, a Chinese SME manager more likely will be engaging in a knowledge-sharing environment where others want to show their abilities (Chu and Choi, 2010), where in-group sharing is more benevolent (Qiu et al., 2013) and collectivist (Jackson

⁴ Non-Chinese SNS tend to support multiple languages; for example, Facebook is available in over 100 languages

and Wang, 2013), where there is stronger home country social capital (Li and Chen, 2014) and subsequently greater continuance intention (Sun et al., 2014). Due to Chinese SNS being predominantly hosted in the Chinese language, we can reasonably expect lower language translation issues (Musteen et al., 2010) and higher levels of homophily (Prashantham et al., 2015) between users. The stronger home country social capital will contribute to a higher home country social status (which Guler and Guillén (2010) show to be linked with proclivity to internationalize) and altruistic conduct between participating users.

In SECI terms, when a Chinese SME engages in a Chinese SNS, the nuanced situational context facing the receiver of knowledge (i.e., the Chinese SME manager) would be clearly understood and internalized by senders of knowledge. Chinese SNS use will provide a higher quality knowledge conversion platform for S and E; an efficient environment for knowledge to be converted and for information to be interpreted and take meaning (Nonaka et al., 2000). Consequently, there will be lower uncertainty about the relevance of knowledge received and perceptions of the trustworthiness of the knowledge shared will be higher. The collectivist context of a Chinese SNS will re-assure and provide encouragement to the Chinese SME manager about the concerns facing them (such as how they can use their limited resources to overcome perceived risks in foreign markets) when considering an aggressive IO. Hence:

Hypothesis 3.

Ceteris paribus, the greater the use of indigenous Chinese SNS by the Chinese SME, the greater will be the firm's level of international orientation.

Secondly, we expect a firm's SNS use to play an important role in terms of helping it to make sense of previously received knowledge from foreign sources and markets. This constitutes an *indirect effect of SNS use* and differs from the direct effects because it relates to the engagement of the Chinese SME within the online SNS environment in order to resolve issues and concerns about foreign market knowledge already received, such that IO can be better informed. SECI helps

address this question: the use of the SNS environment to resolve, validate and annotate knowledge is possible through combination (C) and internalization (I) processes. Through C, explicit knowledge (e.g., messages and reports containing information on foreign market opportunities) is integrated with other explicit knowledge to generate “more complex and systematic sets of explicit knowledge” (Nonaka et al., 2000: 9). Nonaka et al. (2000) note how computerized communications networks (such as modern day SNS) support this mode of knowledge conversion. Revised insights on how to deal with opportunities and risks in foreign markets can emerge. Through I, explicit knowledge is converted into tacit knowledge; *why* and *how* previously acquired foreign knowledge can be used to formulate an IO. When these C and I processes are effective, we would expect the Chinese SME to enjoy a positive boost to the way its foreign knowledge acquisition impacts its IO.

However, in the case of the Chinese SME using foreign SNS to make sense of previously acquired knowledge from foreign sources, the Chinese SME will be confronted by a more individualistic online environment (Jackson and Wang, 2013; Qiu et al., 2013) characterized by a lower proclivity of members to show their abilities, performance and qualifications (Chu and Choi, 2010) and where it is less common that members seek practical information in the first place (Tian, 2016). The expectation of lower homophily (Prashantham et al., 2015) and a reduced social status for the Chinese SME (Guler and Guillén, 2010) will add to the challenge of using this environment to guide the Chinese SME in C and I processes. Because the foreign SNS environment is one in which any attempt to share the situational context of the focal SME with others in the social network (Nonaka et al., 2000) is more difficult, it is less likely that senders will provide knowledge relevant to the SME and its already acquired knowledge. We argue this will make it more problematic for the Chinese SME to combine and internalize explicit knowledge forthcoming over SNS with previously acquired knowledge related to foreign markets. Given these issues:

Hypothesis 4.

The relation between foreign knowledge acquisition and international orientation of the Chinese SME will be moderated by the firm's use of foreign SNS such that under high levels of foreign SNS use (as opposed to low use), the positive relation will be weaker (as opposed to stronger).

On the other hand, when using a Chinese SNS, a Chinese SME will find itself in a socialized learning environment that will support it in making sense of acquired knowledge from foreign sources and markets. The transporting of context between receiver and sender will again be more effective, meaning that knowledge provided by senders will be more relevant and useful to receivers. There will be higher in-group sharing within a more collectivist online culture (Qiu et al., 2013), greater home country social capital (Li and Chen, 2014) and other Chinese SNS users will be more willing to show competence on Chinese SNS (Chu and Choi, 2010). Such a learning environment will help the Chinese SME make sense of previously acquired foreign market knowledge, namely, with combination (C) and internalization (I) processes. In addition, the greater continuance intention that arises from shared norms, trust and tie strength in a Chinese SNS setting (Sun et al. 2014) will mean that C and I processes involving previously acquired knowledge will be supported by SNS users who will endure in their social ties with the SME. The result of this will be a sustained and clearer picture of how to make sense of previously acquired knowledge of opportunities in foreign markets, in how to pursue them successfully, and of how to overcome any risks. Hence:

Hypothesis 5.

The relation between foreign knowledge acquisition and international orientation of the Chinese SME will be moderated by the firm's use of indigenous SNS such that under high levels of indigenous SNS use (as opposed to low use), the positive relation will be stronger (as opposed to weaker).

Our hypothesized model is shown in Figure 1.

Insert Figure 1 about here

3 Methodology

3.1 Sample

High-tech internet SMEs have developed rapidly in China over the last two decades and have been the focus of various studies, particularly in the field of innovation (Gu, Wan and Wang, 2016; Xiao and Ramsden, 2016). We conducted a questionnaire survey on internet SMEs in China in order to test our model. The questionnaire was originally developed in English and translated / back translated from Chinese by bilingual speakers in order to check the accuracy of the translation (Brislin, 1986). We initially contacted several SMEs in Beijing to participate in a pre-test. These early informants provided feedback on language issues and wording of items on the questionnaire. After minor modifications to aid clarity and understanding we conducted a pilot study through convenience sampling of our contacts in media and internet industries in Beijing. 20 questionnaires were returned during the pilot study and the data was deemed to be of acceptable quality. Respondents all could answer the questions and we saw acceptable variation on the key variables of interest. The final target frame was taken from companies listed by the Beijing Zhongguancun High-Tech Enterprise Association. This list included companies in electronic information, biomedicine, energy and environmental protection, new materials, advanced manufacturing, aerospace engineering, R&D and services. The survey was set-up and administrated online and the link to the survey was sent to a random sample of 1000 companies competing in internet industries on the list. We offered local support - in Chinese - to respondents filling out the questionnaire. These companies were randomly selected from the list, and reminder emails were sent after a 4-week interval. In a separate exercise, questionnaires were also distributed to 100 participating internet companies at two industrial events for high-tech SMEs organized by the Chinese governments in Beijing in 2016. These were the 19th China Beijing International High-Tech Expo

(CHITEC) and 2016 Beijing Global Network Technology Conference. In total we received 150 questionnaires, a response rate of 13.4%. After removal of observations with missing values against our main variables and control variables, the final sample was n=117, an effective response rate of 10.6%.

The data represented diverse characteristics of Chinese internet SMEs. All of the observations in the final sample had a reported size of between 10 and 500 employees, thus omitting micro-sized firms (<10) and in line with the definition of SME (Knight, 2000). The sample had a mean age of 5.55 years and the average size as 91 employees. 94 of the firms in the sample reported themselves to be privately-owned. Respondents' roles included founder, CEO, VP, general manager, deputy general manager, product director, marketing manager and operation manager. Among them, 11.97% (14) were female while 88.03% (103) are male. Regarding respondent education level, 0.17% (2) held an EMBA, 24.79% (29) held a master's degree/ MBA, 80.35% (76) held Bachelor degrees, and 8.55% (10) had diplomas. Educated individuals are ardent users of social networking sites as they move to industrial jobs and we expect such educated employees in Chinese internet companies to rely on internet-based social networking for their knowledge networks. Regarding respondent age, 5 were under 25 years old, 60 between 25 to 35 years, 45 between 35 to 45 years old, 5 between 45 to 55 years old and 2 were above 65 years old.

3.2 Operationalization

We used the following measurements on the survey to capture our variables of interest. For the *dependent variable*, IO, we included all eleven items from Knight and Kim's (2009) established IO scale. In subsequent model refinement and factor analysis to establish discriminant validity with our scale for foreign knowledge acquisition, five of the eleven items were used ($\alpha = 0.80$). These are shown in Table 2. This refinement of the IO operationalization does not affect the pattern

of coefficients in the regression analysis when using all items but is preferable because it establishes IO and foreign knowledge acquisition as orthogonal constructs. For the *independent variables*, firstly, we built a scale for foreign knowledge acquisition from six items ($\alpha = 0.93$) relating to the acquisition of knowledge about foreign competition, sales channels, and managerial techniques, technology, technical manuals from foreign sources. We intentionally used a mix of market know-how as well as managerial techniques appropriate for foreign markets as these types of knowledge have the potential to influence the firm's orientation towards becoming more aggressive in international markets (Williams and Du, 2014; Yli-Renko, Autio and Sapienza, 2001). The item loadings for the rotated solution are shown in Table 2. For both scales, Cronbach's α exceeds the recommended level (Nunnally, 1978).

For foreign SNS use and Chinese SNS use we used a single seven-point Likert scale for each, with a question asking to what extent the company uses foreign and Chinese SNS respectively. During our pre-test and pilot phases we established that respondents were able to distinguish between foreign and Chinese SNS use. Foreign SNS included Facebook, LinkedIn and Twitter; Chinese SNS included Renren Net, Kaixin Net, Weibo. Answers could range from "not at all" to "a great deal". We also captured and applied six *control variables* that have the potential to explain IO in a Chinese SME. Firstly, we captured the international experience of the founder in terms of time working and living outside of China. This has the potential to influence a young firm's stance towards international markets (Coviello, 2015; Nielsen and Nielsen, 2011). Secondly, we controlled for Beijing as the location of the firm. This was the most represented location in the sample ($n=69/117$, i.e., 59%) and Beijing is a Tier-1 city in China with a growing international reputation as a technology hub. Being present in this location could explain a firm's IO. Thirdly, we controlled for ownership of the firm as this has the potential to influence overall innovativeness in Chinese firms (Choi, Lee and Williams, 2011) and the degree to which an

outward mentality is adopted by the firm. We used four categories: private, state, collective or joint venture with foreign company. Fourthly, we captured age of the firm, and this was log transformed in subsequent models. Fifthly, we captured firm size, again log transformed. Age and size can impact IO through experience effects and a wider scope for employees themselves to have had international experience (Child et al. 2017). Finally, we controlled for prior performance (previous three years). It is possible that high levels of performance provided the firm with resources and confidence to become more aggressive in international markets. We used a three item, seven point Likert scale for this, capturing the extent to which market share, sales growth and return on investment were above or below expectations for the previous three years.

Insert Table 2 about here

3.3 Data quality and robustness

Due to concerns about common method variance in the self-reported instrument (Podsakoff and Organ, 1986), we took a number of steps when designing and administering the survey. It would not have been viable to have captured the dependent variable from a separate data source. Publically available and reliable data sources for the companies in our sample were not available. Firstly, we randomly positioned all main questionnaire items on the survey instrument to limit the risk of question context and item embeddedness effecting responses (Podsakoff et al., 2003). We do not believe the respondents could have predicted our model specification or anticipated results given the random and non-sequential positioning of the questionnaire items. Secondly, using Harmon's single factor test (Podsakoff and Organ, 1986) we found the loading for the first factor was 44.4%, i.e., less than 50% of the total variance. Thirdly, as we administered the questionnaire we encouraged respondents to answer as accurately as possible, and through the face-to-face approach and support given to respondents by a local native Chinese speaker we were able to

answer any queries the respondents had during the filling out of the questionnaire. In addition to these precautions, we also conducted a late response bias check (Armstrong and Overton, 1977) using T-tests on IO, foreign knowledge acquisition and prior performance. None of these were statistically significant. We also checked for bias between male and female respondents and those who self-reported as having prior international experience. Again, we found no significant differences.

We expected a high correlation between foreign knowledge acquisition and IO and it is possible that circular or reverse causality between IO and foreign knowledge acquisition will be present in linear regression modeling. To account for this we identified and introduced an instrumental variable (Arellano and Bover, 1995) for foreign knowledge acquisition and ran a series of instrumental variables tests using two-stage least squares (2SLS) in Stata 14.0. This procedure allowed for the possibility that foreign knowledge acquisition was endogenous and that this would bias estimators in linear regression. We ran tests for endogeneity and inspected first stage statistics following each 2SLS test. The instrumental variable we chose was symmetrical communication (Huang, 2004; Roper, 2005), a scale made up of the following four items captured on a seven-point Likert scale where 1 = “Strongly Disagree” and 7 = “Strongly Agree”. The items were “Most communication between employees can be said to be two-way communication”, “This organization encourages differences of opinion”, “The purpose of communication in this organization is to help management be responsive to the problems of employees”, and “This organization informs employees about major changes in policy that affect employees before they take place” (mean = 3.74, standard deviation = 0.96, $\alpha = 0.61$). Symmetrical communication occurs where there is two-way communication between an organization and its constituencies (Huang, 2004). Our operationalization using internal two-way reciprocity in knowledge exchanges is an ideal instrument as it does not specify international orientation while its presence will make it more

likely that foreign knowledge will flow throughout the organization. A requirement for 2SLS is instrument relevance, a strong correlation between the instrument and the endogenous variable; this was the case: $r=0.57$ ($p<0.001$). We conducted endogeneity tests and instrument relevance tests which are reported below.

4 Results

Bi-variate correlations are shown in Table 3. While IO is strongly positively correlated with foreign knowledge acquisition, multicollinearity will not affect our interpretation of the results as all variance inflation factors in direct effects regression models were under 2, within acceptable levels (Hair, Anderson, Tatham and Black, 1995). IO is positively and significantly correlated with sample firms in Beijing ($r=0.25$, $p<0.01$) and with older firms ($r=0.20$, $p<0.05$). However, larger firms tended to have a lower IO in our sample ($r=-0.17$, $p<0.1$). Age and size themselves were correlated as expected. Older firms were associated with higher use of foreign and Chinese SNS ($r=0.36$, $p<0.001$ and $r=0.23$, $p<0.05$ respectively), while size was correlated only with Chinese ($r=0.27$, $p<0.01$) and not foreign SNS. We note that smaller firms were more likely to be in Beijing ($r=-0.24$, $p<0.01$) and firms in Beijing appeared to be the best performers over the previous three years ($r=0.28$, $p<0.01$). Interestingly, we see that the founder's international experience is negatively associated with the ownership type of the company ($r=-0.25$; $p<0.01$); privately owned companies had a lower categorical value and this sign is as expected.

Insert Table 3 about here

Regression results with robust standard errors to test the hypothesized model are shown in Table 4. Model 1 contains control variables only, Model 2 includes the effect of foreign knowledge acquisition, Model 3 then includes the direct effects of foreign and Chinese SNS use, and Model

4 includes the interaction terms. In terms of control variables, international experience of the founder has a positive and significant effect in Models 3 and 4 on IO, as we expected. Similarly, firm age has a consistently positive and significant effect on IO, expected as the older firm has had more time to receive and makes sense of foreign market knowledge. Also as expected, prior performance has a strong and positive effect on IO. Hypothesis 1, our baseline hypothesis, receives strong support in all models. The direct effects of foreign and Chinese SNS use are hypothesized in Hypotheses 2 and 3 and these also receive support, albeit at the 10% level in Model 3. After controlling for a range of variables that we expect to impact IO (note the adj. R2 of 0.4 in Model 1), and after including the effect of foreign knowledge acquisition, SNS use still matters: positively for Chinese SNS and negatively for foreign SNS use. Model 4 shows we also find support for the interaction effects. There is a negative sign on the coefficient for the indirect effect of foreign SNS use ($p < 0.01$) and a positive sign for the indirect effect of Chinese SNS use ($p < 0.001$). Figures 2 and 3 show the interaction plots for Hypothesis 4 and 5. High foreign SNS use dampens the positive relationship between foreign knowledge acquisition and IO while high Chinese SNS use amplifies this relationship. Figure 4 shows the three-way effects and reinforces the main finding that the strongest positive relation between foreign knowledge acquisition and international orientation of Chinese internet SMEs occurs when their use of foreign SNS is low while their use of Chinese SNS is high.

Insert Table 4 about here

Insert Figures 2, 3 and 4 about here

Table 5 shows the results of instrumental variables testing using 2SLS and robust standard errors. Test 1 included just the instrumented variable. Test 2 added the six control variables. Test 3 then

included foreign and Chinese SNS use. Test 4 included only the instrumented variable and foreign and Chinese SNS use. In each test foreign knowledge acquisition instrumented as symmetrical communication yielded a positive and significant coefficient ($p < 0.001$) echoing the result in Table 4. Importantly, in tests 3 and 4 the significance levels for foreign and Chinese SNS use improved over the linear regression models and the negative sign for foreign SNS use and the positive sign for Chinese SNS use were retained. Tests of endogeneity allowed us to reject a null hypothesis that variables were exogenous (Durbin = 20.21 – 22.82, $p < 0.001$; Wu-Hausman $F = 23.39 - 26.17$, $p < 0.001$). Additional first stage tests allowed us to reject a null hypothesis that the instrument was weak as the first stage minimum eigenvalue was larger than all critical values in all tests.

Insert Table 5 about here

5 Discussion and conclusion

Our study finds that use of Chinese SNS is beneficial for the development of IO in Chinese internet SMEs, while foreign SNS use is detrimental. Our theoretical argument is supported in the empirical tests that control for a number of variables that have the potential to influence IO, including the international experience of the founder. Foreign SNS use has a negative impact on a young Chinese tech-firm's IO and dampens the relationship between foreign knowledge acquisition and IO. Indigenous SNS use provides important knowledge and support to the firm in a socialized learning environment that allows it to bolster its IO. These findings support our assertion that relevant and useful knowledge is easier to access on a Chinese SNS for a Chinese SME because the context for knowledge conversion (Nonaka et al., 2000) is more effectively shared between sender and receiver when a Chinese SME uses a Chinese SNS (Li and Chen, 2014). The logic is reinforced by recent studies in the Information Management literature, including: the self-presentation argument (Chu and Choi, 2010) that Chinese SNS users are more willing and

able to share competence and knowledge than Western SNS users, that continuance intention will be higher because of shared norms amongst Chinese users (Sun et al., 2014) aiding progressive learning over time, that Chinese online culture is more collectivist than Western online culture, supporting more benevolent in-group sharing (Jackson and Wang, 2013; Qiu et al., 2013;) and that Chinese SNS is indeed often used for practical information seeking (Tian, 2019). These points are all pertinent to the differential effects of SNS use for a Chinese SME on the cusp of internationalizing.

While established internationalization theory (Johanson and Vahlne, 1977, 2009) and a broad literature on knowledge networks and international performance of entrepreneurial companies and SMEs (Knight and Kim, 2009; Musteen et al., 2014; Zhou et al., 2007; Zou and Cavusgil, 2002) argues knowledge acquisition from abroad will underpin a firm's aggressive stance towards international markets, it says little to nothing on the role of the firm's internet-enabled social networking in this process. To our knowledge, the present study is the first to address this in the setting of SMEs in China. While scholars recently have called for work on the impact of internet-enabled experiences on the orientation of firms (Coviello, 2015), and there has been a concerted effort to raise the profile of the digital context amongst IB scholars studying the internationalization process (Alcácer et al., 2016; Coviello et al., 2017), to date no research has looked at this in order to explain IO in firms that are set to internationalize. Our study addresses this gap by showing, firstly, that SNS use does matter to IO, and, secondly, how it matters in the interesting context of China. This is the first area of contribution of the current study.

The second area of contribution is our use of Nonaka's SECI model to conceptualize the relationships between different types of SNS use (indigenous versus foreign) and IO. When Nonaka's work on SECI was first published, SNS use was in an early stage of adoption globally. Research in the field of knowledge management since Nonaka's work makes use of the SECI

model when studying ICT and internet-enabled environments. For instance, Lee and Kelkar (2013) uncover different communication modes (e.g., email, voice, IM), showing how ICTs, including internet-enabled technology, are useful in all phases of SECI. Chatti et al.'s (2007) work describes Web 2.0 as an ideal fit with the SECI approach; knowledge acquisition and learning are social processes – they are about people and the technology is an enabler of collaborative knowledge creation. In terms of the 'S' part of the SECI model, Chatti et al. (2007) make the point that “Social media provide great opportunities to build [spaces for social interaction] and hand on tacit knowledge from one person to another” (Chatti et al., 2007: 2). Walsham's (2001) work on the benefits and limitations of computer systems for knowledge management make some very useful points about the anticipated role of the internet in inter-organizational knowledge management. These include the importance of sense-reading and sense-giving aspects of knowledge sharing, of dealing with cross-cultural issues when using these systems, of having computer-supported systems that enable or overcome these issues at the inter-organizational boundary.

Our study adds to this literature by shedding new light on the knowledge-creation process that firms go through as their managers use SNS; there is a link between what they experience in internet-enabled forums with the strategic posturing of their firms. In particular, Chinese SNS use by Chinese SMEs allows them to benefit from the experiences of other SNS users who understand their context, who are motivated to share their competence on the SNS platform, and who will more likely intend to continue to use the platform. Our theory argues that the socialization (S) and externalization (E) processes of knowledge conversion are particularly useful for understanding the direct effects of SNS usage on IO. They provide a basis for understanding the receipt and processing of previously-held tacit knowledge concerning foreign markets held by other users taking part in social interactions using SNS. Where there are higher levels of homophily, i.e., Chinese SMEs with indigenous Chinese SNS use, altruistic and helpful social interactions as

highlighted by Prashantham et al. (2015) will reinforce the S and E knowledge-creating process that can directly reinforce an IO. With greater homophily such SNS interactions are helpful: useful knowledge is unlocked between sender and receiver because context is shared (Li and Chen, 2014) and senders are more willing and able to share compared with foreign SNS (Chu and Choi, 2010).

Likewise, the combination (C) and internalization (I) processes within the SECI model can be used to frame the indirect impact of SNS use on the relationship between previously received explicit knowledge about foreign markets and IO. The distinction between indigenous and foreign SNS use in terms of how the context of the Chinese SME (i.e., the context surrounding the ‘receiver’ of knowledge in our model) is understood by non-physically collocated members of the social network is shown to matter. Our theory asserts with Chinese SNS use this transporting of context is more effective for a Chinese SME compared to non-Chinese SNS use (Li and Chen, 2014), that other users will want to share their competence and that other users continuance intention is higher (Sun et al., 2014). While this is similar to the homophily effect (Prashantham et al., 2015) in the direct effects hypotheses, this does speak to the centrality of context (the concept of ‘ba’) as espoused by Nonaka and colleagues, but applied in a digital environment. Consequently, we argue, the benefit to the internationalizing SME is a higher level of insight on how to exploit opportunities and deal with risks in the foreign market, this insights being sustained and annotated over time with continued use. With foreign SNS use, this transporting of context is more difficult. Overall, this constitutes a new application for Nonaka’s SECI model and one that sheds light on the firm as a knowledge creating entity (Nonaka, Toyama and Nagata, 2000) within the internet era.

Thirdly, our study adds to the literature on internationalization of Chinese firms, especially tech-firms. A large and growing stream of literature looks at motives for outward FDI, the effects of home country institutions on this process, the role that state and private ownership plays in

encouraging Chinese enterprises to internationalize (e.g., Buckley et al., 2007; Ning and Sutherland, 2017). Buckley et al. (2007) refer to knowledge acquisition as a basis for foreign investment decisions and also discuss cultural proximity in the form of ethnic Chinese as a percentage of the host country's population. However, their model does not consider the role played by internet-enabled technology in facilitating new insights on foreign markets to be received and internalized by the Chinese firms. As a predecessor to outward FDI, IO is influenced by the cultural proximity of knowledge sources within indigenous – as opposed to foreign – SNS. This is a subtle but important extension of how we view cultural proximity during internationalization, and is arguably more important for Chinese SMEs considering internationalization, given the transitional and emerging nature of their economy. Ning and Sutherland (2012) did include internet companies in their sample but did not look at the actual use of the internet by the internet companies to refine their knowledge in order to prepare for internationalization. In general, work on the factors that lead smaller and younger Chinese SMEs to develop an international orientation in the first place are rare and our work makes an important step forward on this question. Zhou et al. (2007) examined the mediating effect of social networks on the relationship between Chinese SME internationalization and performance, but did not consider whether those networks were facilitated by Chinese or foreign SNS. Our work fills these gaps and focuses attention on the role played by internet-enabling technologies at allowing resource-constrained (mostly) private and highly entrepreneurial firms in China to adopt an orientation that would support their development of a broader international business capability. We think scholars interested in understanding how the digital context influences theory of internationalization (Alcácer et al., 2016; Coviello et al., 2017) can benefit from examining these very early stages of internationalizing and that China provides a particularly interesting context in which to do this.

The findings also have implications for government policy and for managers of SMEs in China and other emerging economies. In terms of Chinese government policy aimed at encouraging Chinese SMEs to become more internationally-oriented, the findings suggest policy makers should encourage use of indigenous SNS to support firms with their assessment of foreign market knowledge. Specifically, regulators should support firms' use of Chinese SNS in addition to individuals' private use. Potential changes to SNS platforms could be encouraged by regulators to help this. These could include raising the maximum capacity for a group chat on WeChat (currently set at 500 users, compared to 20,000 on LinkedIn), relaxing rules related to the posting of public news through a corporate account (e.g., making it possible for firms to post more than once per day), finding new ways to promote homophilous dialogue within SNS based on 5G networks, and regulators themselves being proactive on Chinese SNS forums to help firms gain and make sense of foreign market knowledge. When promoting internationalization of SMEs in off-line forums (e.g., trade shows, export facilitation workshops, including those at provincial level), policy makers could explicitly include agenda items with SMEs to discuss how Chinese SNS can help SMEs alleviate concerns about foreign market knowledge. Policy makers in other emerging economies interested in promoting IO in SMEs will also note these findings when considering how their indigenous SNS platforms can play a role at supporting the IO of their SMEs. Similarly, for SME managers in China and other emerging economies, our findings will help guide them when making decisions about SNS use. For instance, SMEs should be 'self-aware' of how their employees (including senior managers) actually use SNS to gain and make sense of foreign market knowledge. SMEs will need to allow managers to devote time to indigenous SNS use for the purpose of international orientation, whilst being wary of over-excessive foreign SNS use.

There are a number of limitations to the current study. Firstly, our data was from SMEs in China, the world's largest emerging economy. Results may be different in other types of economies, including developed economies and other, smaller emerging economies. Secondly, we did not perform an in-depth case study on how any of our sample firms developed their IO over time. A longitudinal case study on this would be useful as it has the potential to identify emerging themes that we did not capture. Thirdly, while we believe our sample size was adequate for the current analysis, a larger sample size could have catered for other types of SME, including those not in high-tech industries, such as those in manufacturing or other forms of services. Fourthly, we did not explicitly look at different types of networks within the SNS forums and how different characteristics of the networks influence foreign knowledge acquisition and IO. There has been some debate (and contrasting findings) in the literature on how different types of network ties (bridging versus bonding) play out in SNS (Chang and Zhu, 2012; Chu and Choi, 2010). Future work could combine the questionnaire items from Chang and Zhu's (2012) scales for bridging and bonding social capital (Chang and Zhu (2012: 998) alongside Knight and Kim's (2009: 264) questionnaire items for international orientation. Fifthly, we did not examine the richness of specific social media formats that were used and how these supported varying degrees of tacitness in exchanges (Panahi et al., 2013). We think these would be very useful avenues for future work to build on the present study. Also, what are the situations in which foreign SNS use acts to promote positive outcomes during the internationalization process and conversely, situations in which purely indigenous SNS use has a detrimental effect? As the firm moves beyond establishing an IO, and intensifies its efforts to export, licence, joint venture or establish one or more wholly-owned subsidiaries abroad, does the effect of foreign SNS use - and conversely, purely indigenous SNS use - change? How does IO evolve in an SME as it accesses different types of network with different characteristics, such as SNS and non-SNS networks being used concurrently by the SME,

or large numbers of smaller SNS networks? We hope future work can build on the current findings and examine these new types of questions on the topic of early internationalization of tech-firms in the modern internet era where SNS use has become ubiquitous.

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FIGURES

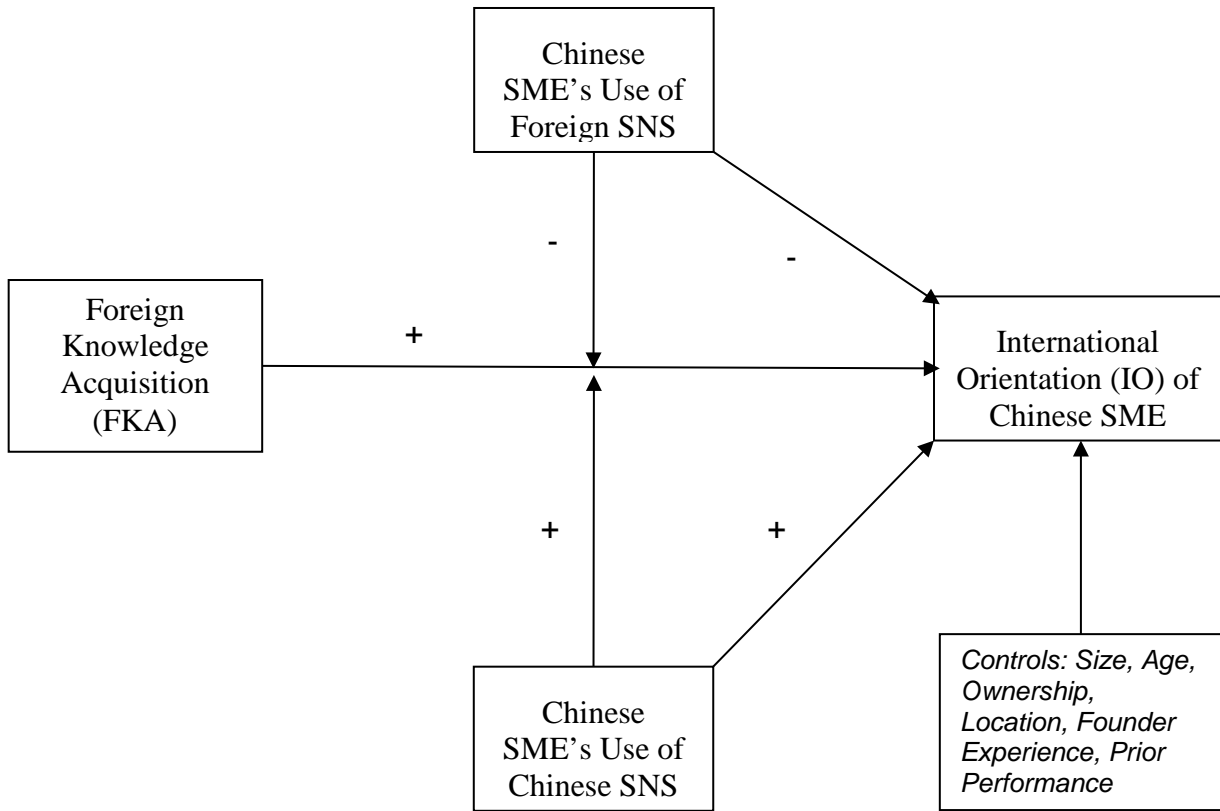


Figure 1. Conceptual model.

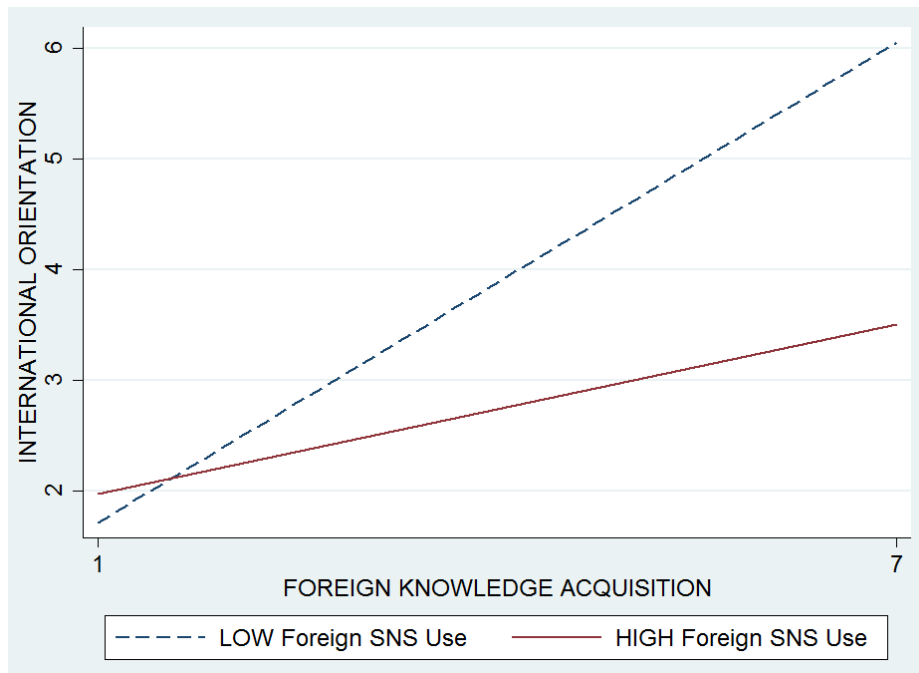


Figure 2. Moderating effect of foreign social networking site use (F-SNS) on the relationship between FKA and IO

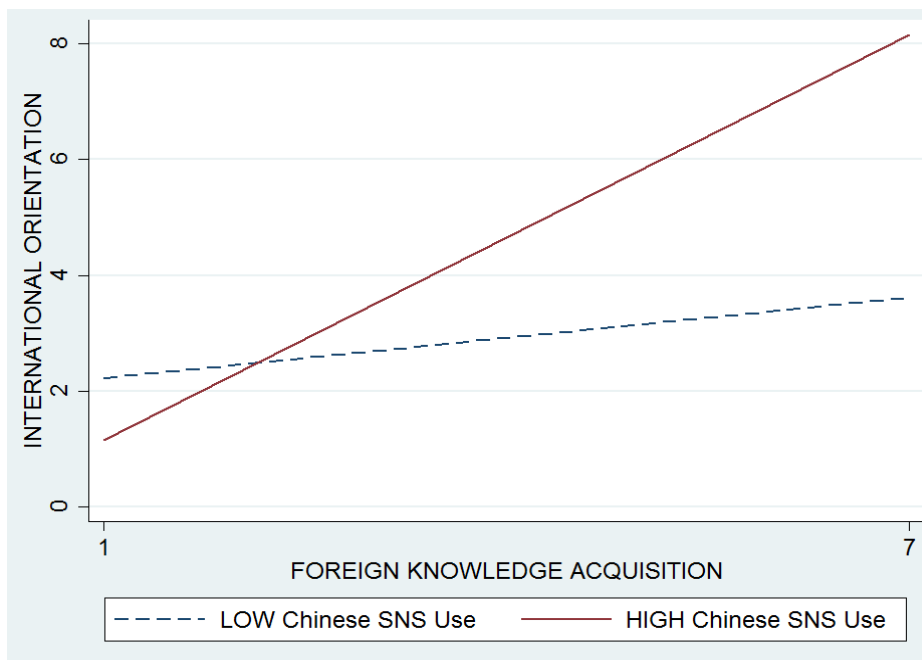


Figure 3. Moderating effect of Chinese social networking site use (C-SNS) on the relationship between FKA and IO

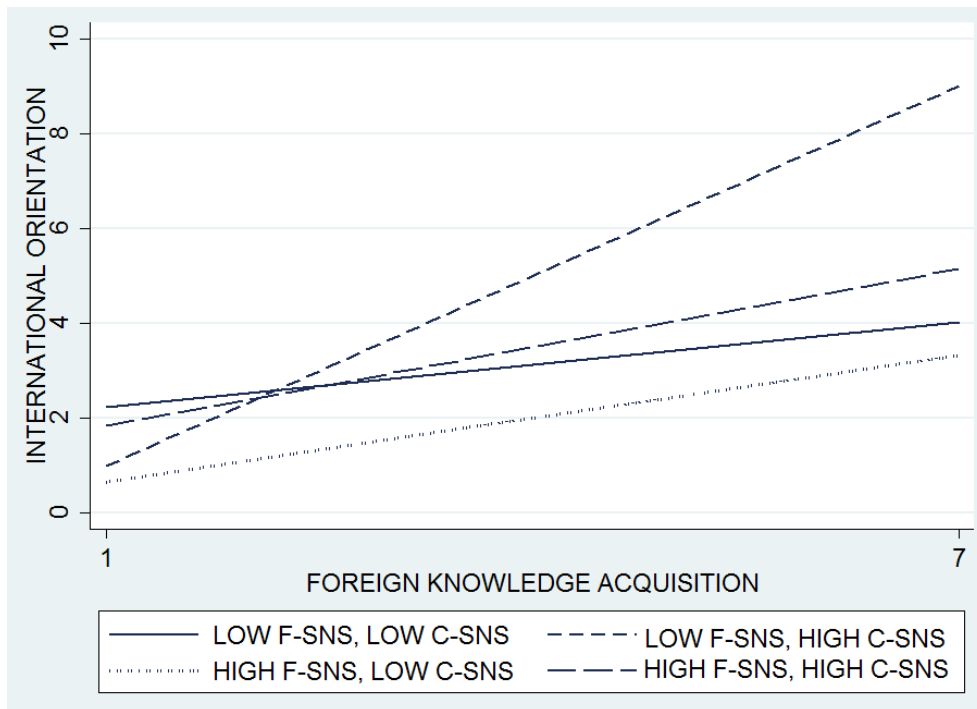


Figure 4. Three-way interaction between FKA, F-SNS and C-SNS

TABLES

Table 1. Selected studies comparing SNS use involving Chinese users

Key insights	Theoretical underpinning	Authors
Chinese users (using Chinese SNS) and US users (using US SNS) adopt different online self-presentation strategies; Chinese are more likely to show their abilities, performance and qualification on SNS	Social capital /self-presentation theory	Chu and Choi (2010)
Online Renren culture is more collectivist than Facebook; in-group sharing behaviors switch according to the SNS community; more benevolent in-group sharing in Renren compared to Facebook	Cultural processes / behavioral switching	Qiu, Lin and Leung (2013)
Facebook use has a stronger relationship with bridging social capital than Renren use; Renren use has a positive relationship with home country (China) social capital, while Facebook use does not	Social capital	Li and Chen (2014)
Usage of SNS reflects cultural orientation; more intensive Renren linked to Chinese product cultural alignment	Acculturation theory	Li (2014)
Practical information seeking on Facebook is rare, while on Renren it is often the motive; Facebook use emphasizes unique personal experience, while Renren focuses more on common experience shared by the many	Social capital / network structures	Tian (2016)
Role of culture in online engagement: Social media evaluation (social media important for engaging in political or civic issues) strongest positive predictor of online expression in a low uncertainty avoidance / high collectivist country (China); social capital second strongest predictor	Social exchange theory / cultural values	Wang and Liu (2019)

Table 2. Scale Construction and Discriminant Validity for IO and FKA (rotated factor loadings)

Item	International Orientation (IO)	Foreign Knowledge Acquisition (FKA)
	Alpha = 0.80	Alpha = 0.93
Top management tends to see the world as our firms' market place.	0.641	
The prevailing organizational culture is conducive to active exploration of new business opportunities abroad.	0.843	
Management continuously communicates its mission to succeed in international markets	0.717	
Top management are experienced in international business	0.518	
Management communicates information regarding successful and unsuccessful customer experience abroad	0.652	
Knowledge about foreign competition flows effectively through the organization to the top management team.		0.852
Knowledge about foreign sales channels flows effectively through the organization to the top management team.		0.817
Our company acquires new managerial techniques from foreign sources.		0.743
Our company acquires written knowledge about technology from foreign resources		0.728
Our company acquires procedural or technical manuals from foreign sources.		0.859
Our company acquires written knowledge about management techniques from foreign sources.		0.757

Note: Loadings <0.5 not shown

Table 3. Correlations and Descriptive Statistics (n=117)

	1	2	3	4	5	6	7	8	9	10
IO 1										
FKA 2	0.73***									
F-SNS 3	0.36***	0.36***								
C-SNS 4	-0.07	-0.28**	0.42***							
Founder exp 5	0.02	-0.10	0.13	0.05						
Beijing 6	0.25**	0.28**	-0.05	-0.12	-0.10					
Ownership 7	-0.05	-0.11	0.10	0.001	-0.25**	0.05				
Age (ln) 8	0.20*	0.03	0.36***	0.23*	0.01	-0.01	0.03			
Size (ln) 9	-0.17+	-0.28**	0.10	0.27**	0.11	-0.24**	0.26**	0.43***		
Perf. 10	0.62***	0.55***	0.54***	0.07	-0.05	0.28**	0.07	0.33***	0.00	
Mean	2.86	3.04	2.15	3.58	0.22	0.59	1.31	1.27	3.77	3.82
Standard Dev.	1.32	1.62	1.95	1.51	0.42	0.49	0.66	0.94	1.31	1.62

***p<0.001; **p<0.01; *p<0.05; +p<0.1

Table 4. Regression Models (n=117)

	Model 1	Model 2	Model 3	Model 4
Founder exp.	0.21 (0.29)	0.33 (0.22)	0.44* (0.22)	0.36+ (0.22)
Beijing	0.15 (0.21)	0.04 (0.16)	-0.04 (0.16)	-0.01 (0.16)
Ownership	-0.06 (0.17)	0.07 (0.13)	0.15 (0.15)	0.15 (0.14)
Age (ln)	0.13 (0.11)	0.18* (0.08)	0.22* (0.10)	0.22* (0.10)
Size (ln)	-0.19* (0.09)	-0.08 (0.08)	-0.11 (0.08)	-0.12 (0.07)
Performance	0.47*** (0.05)	0.21*** (0.05)	0.23*** (0.06)	0.20*** (0.05)
FKA		0.47*** (0.06)	0.54*** (0.08)	0.63*** (0.07)
F-SNS			-0.11 (0.08)	-0.11+ (0.07)
C-SNS			0.13 (0.09)	0.14+ (0.08)
FKA x F-SNS				-0.25*** (0.07)
FKA x C-SNS				0.38*** (0.08)
Constant	1.55*** (0.37)	-0.03 (0.51)	-0.03 (0.51)	-0.01 (0.41)
R2	0.43	0.63	0.64	0.70
F	19.40***	41.44***	35.30***	42.23***

***p<0.001; **p<0.01; *p<0.05; +p<0.1

Robust standard errors in parenthesis

Table 5. Instrumental Variables Regression Results (Two-Stage Least Squares) (n=117)

	Test 1 Instrumented variable: FKA = Symmetrical Communication	Test 2 Instrumented variable: FKA = Symmetrical Communication	Test 3 Instrumented variable: FKA = Symmetrical Communication	Test 4 Instrumented variable: FKA = Symmetrical Communication
Founder exp.		0.51* (0.24)	0.86*** (0.24)	
Beijing		-0.11 (0.20)	-0.35+ (0.21)	
Ownership		0.25 (0.17)	0.51* (0.20)	
Age (ln)		0.26+ (0.14)	0.36* (0.16)	
Size (ln)		-0.08 (0.09)	-0.04 (0.10)	
Performance		-0.16 (0.11)	-0.03*** (0.09)	
F-SNS			-0.38*** (0.10)	-0.19* (0.08)
C-SNS			0.46*** (0.09)	0.36*** (0.09)
Instrumented variable	0.94*** (0.10)	1.13*** (0.17)	1.29*** (0.19)	1.06*** (0.14)
Constant	0.02 (0.27)	-0.98 (0.52)	-2.7*** (0.73)	-1.25* (0.50)
Wald statistic	80.06	136.53	205.95	177.94
R2	0.36	0.23	0.26	0.35
Durbin statistic	20.99***	22.82***	22.32***	20.21***
Wu-Hausman F	24.94***	26.17***	24.99***	23.39***
First stage minimum eigenvalue	55.03	20.24	19.23	42.97
First stage minimum eigenvalue > critical values	Yes	Yes	Yes	Yes

***p<0.001; **p<0.01; *p<0.05; +p<0.1; Notes: Robust standard errors in parenthesis; interaction terms omitted