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Information diversity and innovation for born-globals

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Abstract

Does being a born-global make a startup more or less likely to quit before launch, and how do innovativeness and information diversity affect the decision to start or stop a born-global venture? Born-globals, new ventures that are global from the start, simultaneously create new businesses and enter new markets, whereas firms that do not choose to start as born-globals face only the challenges of creating a new business. We examine how new ventures, both born-globals and non-born-globals, address these challenges in the earliest stages, when the idea of the company is still being formed. We predict that information diversity (i.e., using many sources of information) and pursuing an innovative venture make a born-global strategy more likely, and that being born-global reduces the likelihood of early failure in an emerging economy. Further, we propose that information diversity and innovativeness moderate the relationship between born-globals and new venture disengagement. Using data from 321 Chinese nascent startups, we find general support for these hypotheses.

Keywords Born-global · Information diversity · Innovation · China

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Does being a born-global make a startup more or less likely to quit before launch (i.e., "the cessation of efforts to develop the new venture;" Delmar & Shane, 2003: 1165), and how do innovativeness and information diversity affect the decision to start or stop a born-global venture? Doing many new things at once, such as starting a new business in an emerging economy, entering a new market, and creating a new product, is difficult (Yamakawa, Peng, & Deeds, 2008; Yamakawa, Khavul, Peng, & Deeds, 2013). Despite this, China and other emerging economies continue to shift toward business practices that compete globally with home-grown technology (Jiang, Branzei, & Xia, 2016). Research on *born-globals* – new ventures that are global from the start – in emerging economies is thus growing in importance (Ahlstrom & Ding, 2014; Ma, Ding, & Yuan, 2016).

However, two gaps in our understanding of how born-globals survive the pre-launch process have yet to be addressed: (1) what factors contribute to the nascent venture's decision to start as a born-global; and (2) whether born-global startups are more or less likely to quit the new venture creation process, and what factors influence that decision. Knowledge resources and competencies arguably affect both these decisions because born-globals typically have few capital resources but face many uncertainties (Coviello, 2015; Cavusgil & Knight, 2015; Knight & Cavusgil, 2004; Zander, McDougall-Covin, & Rose, 2015). The greater the newness and uncertainty the nascent venture faces, the more critical the process of collecting knowledge becomes, as it is with this knowledge that they are able to identify the international opportunities that will allow them to grow and succeed (Mathews, 2006).

International entrepreneurship studies have identified two factors that appear to be important to this process: (1) *information diversity*, the degree to which firms draw information from multiple sources in the decision-making process, affecting the quality and quantity of available knowledge (Fiet & Patel, 2008; Gielnik, Krämer, Kappel, & Frese, 2014; Heirati & O'Cass, 2016), and (2) *innovativeness*, the tendency to introduce new products or services, which reflects how accumulated knowledge is applied (Cavusgil & Knight, 2015; Knight & Cavusgil, 2004). Entrepreneurial information is available in an increasing number of channels as information technology advances, making the range of sources broader and more significant (Liu, Hull, & Hung, 2017). Being innovative can help firms develop capabilities (e.g., conducting market research with new potential customers) they need to compete in a foreign market (Cavusgil & Knight, 2015; Knight & Cavusgil, 2004; Mathews, 2006).

Previous research argues that many born-global studies examine *survivors* of the earliest stage rather than the born-global phenomenon itself, suggesting a survival bias may skew their findings (e.g., Aguinis et al., 2017; Coviello, 2015). In order to address this concern, in the current research, we focus on embryonic Chinese firms, using a final sample size of 321. In particular, we study born-globals in the process of creating new ventures, and examine how their innovativeness and information diversity impact their born-global status, whether born-globals are less likely to fail the startup process, and how innovativeness and information diversity affect the odds of born-globals quitting. Our study thus addresses the question of what determines the scope of the firm as it is forming in the mind of the founder, both in terms of products and in terms of geography (Peng & Delios, 2006). In addition, exploring how information diversity and innovativeness affect similarly nascent domestically-focused firms in the same study helps us better understand how these factors affect born-globals in particular by contrasting their

effects on born-globals with their effects on non-born-global nascent new ventures. Our research responds to previous calls for more investigation of born-globals (Jones, Coviello, & Tang, 2011; Keupp & Gassmann, 2009; Zander et al., 2015), and will advance our understanding of the increasingly important born-global phenomenon (Cavusgil & Knight, 2015; Chandra, Styles, & Wilkinson, 2015; Coviello, 2015). As our study focuses on nascent businesses in China, we also hope to shed light on the questions surrounding firms in the Chinese context (Ahlstrom, Chen, & Yeh, 2010; Tang, 2010). Following Ahlstrom (2015, 2017), we have tried to use this introduction to make clear our research question and focus: Does being a born-global make a startup more or less likely to quit before launch, and how do innovativeness and information diversity affect the decision to start or stop a born-global venture? Thus, we will look at born-globals and non-born-globals in studying what makes nascent entrepreneurs choose the born-global path, and then we will focus on the born-globals in addressing how innovativeness and information diversity affect the decision to quit (or not quit) a nascent born-global.

Figure 1 presents our theoretical model.

Literature review and hypothesis development

Born-Globals and likelihood to quit

Entrepreneurship is risky. Starting as a born-global is particularly risky (Knight, 1921; Zahra, 2005). Born-globals face two liabilities at once (Li, Bruton, & Filatotchev, 2016): newness (Stinchcombe, 1965) and foreignness (Miller & Parkhe, 2002; Zaheer, 1995; Zaheer & Mosakowski, 1997). But these liabilities are surmountable if the right strategies are adopted (Cavusgil & Knight, 2015; Knight & Cavusgil, 2004; Li et al., 2016; Mathews, 2006). Foreignness and newness can offer advantages if well-managed (Chinta, Cheung, & Capar, 2015; Nachum, 2003). They may cancel one another, or combine into an advantage (Chinta et al., 2015). The liability of newness can, for example, be outweighed by the cachet of foreignness (Nachum, 2003). A new venture with a global vision may discover more available markets and opportunities (Mathews, 2006; Sarasvathy, 2001) and thus be less vulnerable to home-market conditions than are domestic ventures.

Differences in information used, and the limits of available information are critical to the choices new ventures make (Mainela, Puhakka, & Servais, 2014). Ignorance of overseas opportunities may keep new ventures from noticing or exploring international

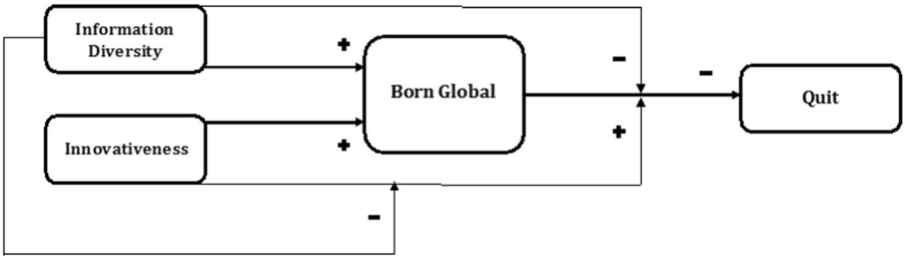

Fig. 1 Theoretical model

options (Bruton, Ahlstrom, & Wan, 2001; Grégoire, Barr, & Shepherd, 2010; Heirati & O'Cass, 2016; Mainela et al., 2014; Simon, 1997; Tang, Kacmar, & Busenitz, 2012). But, noticed or not, the options are there (Alvarez & Barney, 2007). Domestic ventures may focus on the domestic market without considering global options. Also, while competing internationally may offer advantages, it presents challenges too, and challenges such as unfamiliarity with foreign markets may discourage entrepreneurs from pursuing an international option. Pursuing a born-global option may thus require more determination than pursuing a domestic one. Born-global ventures *must* have weighed the international option and had the intelligence and courage needed to pursue it – a born-global mindset oriented toward international markets (Jiang et al., 2016). The diversity of opportunities in the global market (Mathews, 2006; Sarasvathy, 2001) is likely to encourage such mindsets more than the more limited domestic opportunities, particularly in emerging economies such as China (Li-Ying & Wang, 2015; Mathews, 2006; Tang & Hull, 2012). In China, businesses face the constant possibility of having their legitimacy challenged by the government, making legitimacy-building activities a necessary part of business (Ahlstrom, Bruton, & Yeh, 2008; Ma et al., 2016). To the extent that entering international markets confers legitimacy, starting as a global company may earn legitimacy and political capital (Ahlstrom & Ding, 2014; Ma et al., 2016). Thus, because the global market contains more opportunities and because choosing to go global is a conscious choice to evaluate and select a less-obvious option that requires greater determination and commitment than the more-obvious domestic option (Child, 1972, 1997; Grégoire et al., 2010; Mainela et al., 2014; Simon, 1997), we expect that making the choice to enter the global market will encourage continuing the venture creation process. Therefore, we hypothesize:

Hypothesis 1 Born-globals are less likely than non-born-globals to quit.

The role of innovativeness

Companies with strong innovative cultures are more likely to internationalize early (Knight & Cavusgil, 2004). This is not the same as starting as a born-global (Coviello, 2015), but nascent businesses pursuing innovation may also tend to go global. Firms use the same decision-making approach for many issues (Grégoire et al., 2010; Mainela et al., 2014; Simon, 1997), so those with a new product may deem a global entry with an innovative product to be the best way to grow internationally and establish a competitive advantage (Mathews, 2006). They may find that the skills needed to start an innovative company are those needed to start a global company (Cavusgil & Knight, 2015; Knight & Cavusgil, 2004). Or by virtue of their willingness to try new things, they may choose to develop the skills needed to become born-globals.

Chinese businesses are wary of innovating domestically because of weak intellectual property rights. If an innovative product is successful, the novel technology may be appropriated by rivals (Tang & Hull, 2012). In domestic competition in China, innovation is not as effective as a composite strategy of imitation and low price (Tang & Hull, 2011; Zhu, Wittmann, & Peng, 2012). For firms using an innovation strategy, a global approach is often necessary (Li-Ying & Wang, 2015). Thus, innovative

businesses may see starting internationally as a way to improve the odds of success. Accordingly, we hypothesize that:

Hypothesis 2 Innovativeness is positively associated with born-globals.

In emerging economies, where businesses must be paranoid to survive dysfunctional competition and government activity (Tang & Hull, 2012), less-hostile foreign markets may appeal to them. But willingness to pursue innovation in a global new venture, and even the skills developed for the innovation that may transfer to the project, may not make innovating in a *born-global* a good idea. New ventures may be able to overcome the liability of foreignness by shaping themselves to fit into the foreign environments in which they compete. But this success through isomorphism calls for *similarity* to existing companies, rather than for a new technology on top of organizational newness and foreignness (DiMaggio & Powell, 1983). Introducing new products while entering new markets can be done, but it is challenging, particularly for new ventures (Mayer, Stadler, & Hautz, 2015). Developing new markets and developing new products both absorb resources, including the time of the top management team. In new ventures, a focus on entering global markets *or* on developing an innovative product may make sense. Trying to focus on both may be distracting and confusing, increasing the chance of failure (Mayer et al., 2015). The mindset that leads nascent entrepreneurs to wisely choose a born-global option may also unwisely lead them (c.f., Simon, 1997) to lose focus by pursuing both an innovative strategy and a born-global one.

In China in particular, going international in partnership with a foreign company appears to discourage new ventures from developing their own products (Jiang et al., 2016), suggesting again that Chinese startups that intended to be both global and innovative may have trouble as they move from idea toward reality. Entrepreneurial companies in China are quicker to identify threats than their Western counterparts (Tang & Hull, 2012); the businesses quick enough to recognize global innovation opportunities may also be quick to recognize insurmountable threats and move on to something else. Thus, we expect that pursuing a new venture that is both global and innovative is more likely to end in quitting, and hypothesize:

Hypothesis 3 Born-globals with high innovativeness are more likely to quit than are born-globals with low innovativeness.

The role of information diversity

Entrepreneurs need appropriate information to start a new company. For example, an early understanding of the formal and informal institutions the new venture is likely to face is important to its success (Ahlstrom et al., 2010; Bruton, Ahlstrom, & Yeh, 2004; Ma et al., 2016). How new businesses gather information can affect the amount and the quality of opportunities they recognize and assess (Tang, 2010). Information in the entrepreneurial world is more compartmentalized in emerging economies such as China than in Western settings (Bruton et al., 2004; Heirati & O'Cass, 2016), suggesting that using multiple sources of information is particularly important to Chinese businesses seeking to establish, legitimize, and fund their new ventures (Ahlstrom et al., 2008;

Bruton et al., 2004). Opportunities may arise through interactions with various actors and sources of inspiration (Chandra et al., 2015; Heirati & O'Cass, 2016; Mainela et al., 2014; Mathews, 2006), and firms who take advantage of these opportunities are more likely to make well-informed decisions based on the diversity of their information interactions.

New ventures are more likely to successfully identify valuable opportunities if they systematically scan multiple channels (Tang et al., 2012). Relying on just one source of information when generating new ideas leads to limited vision and poor decisions (Fiet & Patel, 2008). Limited access to information constrains managerial thinking, while broader access to information increases the chances that firms will successfully identify and pursue global opportunities (Mathews, 2006). In fact, early-stage global firms are often aggressive information collectors (Vasilchenko & Morrish, 2011). Multiple diverse sources of information rather than a single one are more likely to provide the new venture a better picture of foreign opportunities, hence increasing the possibility for the new venture to be a born-global. Therefore, we hypothesize:

Hypothesis 4 Information diversity is positively associated with born-globals.

Knowledge accumulates continuously (Mainela et al., 2014), and firms can increase the flow and variety of that accumulation by choosing to draw on more channels (Fiet & Patel, 2008; Gielnik et al., 2014; Tang et al., 2012). Part of the liability of foreignness is due to a lack of knowledge of the target market (Miller & Parkhe, 2002; Zaheer, 1995; Zaheer & Mosakowski, 1997). Accumulating knowledge is also necessary for gaining an understanding of opportunities, of foreign and domestic informal and formal institutions (including those influencing the venture capital industry), of the competition and of outsourcing partners (Ahlstrom, Bruton, & Yeh, 2007; Ahlstrom & Ding, 2014; Bruton et al., 2004; Ma et al., 2016; Mathews, 2006). This knowledge is particularly important for Chinese global ventures facing institutional pressure very different from those at home (Bruton et al., 2001; Ahlstrom & Ding, 2014; Tang & Hull, 2012). Thus, a broad, rich flow of knowledge to the nascent business should lead to better odds of success (Gielnik et al., 2014; Heirati & O'Cass, 2016) when attempting the challenging feat of creating a born-global company. Based on the reasoning above, we hypothesize:

Hypothesis 5 Born-globals with high information diversity are less likely to quit than are born-globals with low information diversity.

Discovering entrepreneurial opportunities is a function of gathering and interpreting information (Mainela et al., 2014) to find gaps related to markets, needs or technologies (Cohen & Winn, 2007; Ozgen & Baron, 2007). For ventures both global and innovative, information diversity is particularly important, as they face the daunting task of selling a new product in a new market. More channels of information increase the firm's access to information relevant to global markets and to innovation, making it easier to identify opportunities to exploit (Fiet & Patel, 2008; Gielnik et al., 2014; Mathews, 2006; Mayer et al., 2015). New ventures that rely on external partners for information rather than pursuing other channels for themselves are at a disadvantage when trying to innovate (Jiang et al., 2016). Information diversity, while perhaps of

value to any type of venture, can thus be expected to improve the odds of success more among born-globals that pursue an innovative venture than among ventures which are not engaged in simultaneously starting as an international business and introducing an innovation. Domestic ventures, innovative or not, or born-global ventures that are not innovative – all are less dependent on information diversity than the born-global venture that faces both challenges at once. However, because the focus of this study is on nascent born-globals, our hypothesis concerning the three-way interaction is likewise limited to born-globals. We predict that information diversity will do more to reduce the odds of born-globals quitting when the born-global is also innovative, and hypothesize:

Hypothesis 6 High information diversity combined with innovativeness makes born-globals less likely to quit.

Method

Sample selection and data collection

In order to test the relationships between information diversity, innovativeness, born-global status, and new venture quitting, we collected data from nascent entrepreneurs in China. A large body of prior literature suggests that for startup firms, various entrepreneurs' individual level characteristics such as their values, personalities, behaviors, and decisions determine what the new venture will look like because entrepreneurs can pass on their values and decisions to firm employees and "imprint" their firms with their own characteristics in the process of creating the business (Tang, Tang, & Cowden, 2017). Entrepreneurs' decisions and behaviors will become institutionalized and serve as guidelines for future business development. Therefore, entrepreneurs' decisions and behaviors very well represent firm decisions and behaviors, which is more salient in the new venture creation process (Delmar & Shane, 2003, 2004).

We conducted our first pretest in Beijing, Shenyang, Tianjin, and Hangzhou, the largest cities in the northern, eastern, northeastern, and southeastern regions of China, using random sampling. The results indicated that roughly 4.5% of the population above the age of 18 were nascent entrepreneurs, in the process of starting a new venture. Ten of these, selected randomly, were interviewed and the interview protocol was then revised to improve its validity and accuracy. The next pretest was conducted in four cities: Beijing, Guangzhou, Shenyang, and Wuhan. We kept Beijing and Shenyang for the second round of pretest to maintain continuity for cross-validation. The other two cities, Guangzhou and Wuhan, were added to represent the southern and central areas of China. Among 2341 randomly selected adults, 42 nascent entrepreneurs were identified and interviewed. The interview protocol was then further revised and improved.

The final sample was selected through a stratified sampling method of the adult population in eight major cities: Beijing, Tianjin, Hangzhou, Guangzhou, Shenyang, Wuhan, Chengdu, and Xi'an, representing all major regions in China. In each city, interviewees were selected through random dialing – the telephone penetration rate in all eight cities was above 75%, with more than half of the cities above 90%. A total of

69,990 households were contacted and 20,424 people were interviewed, with 974 (4.8%) of them identified as nascent entrepreneurs. Of these nascent entrepreneurs, 601 finished the first-round telephone interview. The geographic sample distribution was Beijing (18.6%), Chengdu (14.8%), Tianjin (13.8%), Guangzhou (13.6%), Wuhan (11.0%), Shenyang (9.7%), Xi'an (9.3%), and Hangzhou (9.2%).

A year later, the 601 interviewees were re-contacted; 333 finished the second round of interviews. Excluding missing-value cases, we had 321 cases in our final sample. Test-retest reliability was assessed: MANOVA analyses revealed no significant differences between our final sample and the original sample of nascent entrepreneurs in key variables such as born-global, innovativeness, and information diversity. Thus, the reliability of the data appears to be acceptable, and we do not expect missing-value bias to influence our conclusions.

Measures

Quit *Quit* was a dummy variable recorded in the second-round interview. The nascent entrepreneurs were asked whether they were still in the process of creating their new ventures or had given up the effort in the past year. Among the 321 cases, 118 nascent entrepreneurs had quit. These quitting cases were coded as "1" and the rest as "0."

Information diversity These variables were collected in the first-round interview. Consistent with Fiet and Patel (2008), we asked nascent entrepreneurs to identify the information channels they had used to collect relevant information in developing their ventures. Such channels included the Internet, newspaper/television, friends, self-observation, and others. The number of channels used indicates how broadly a nascent entrepreneur seeks information in exploring opportunities, and thus is used to measure *information diversity.*

Innovativeness To determine if the nascent entrepreneurs were engaging in *innovativeness*, we asked if their ventures involved research and development, hiring employees focused on research and development activities, and providing high-tech products and services. "1" was assigned if the answer was "yes," indicating an innovation-oriented venture, and "0" if not.

Born-global The nascent entrepreneurs were asked in the first-round interview whether they planned to enter the global market with their products and/or services. This was coded "1" if the answer was "yes" and "0" if not.

Control variables We controlled 12 covariates at the individual, business, and regional levels to account for potential impacts on our hypothesized relationships. At the individual level, we controlled three variables. *Gender,* coded "1" for male and "2" for female entrepreneurs, was controlled because there may be a gender difference in innovation and management strategies (Zhu, Konrad, & Jiao, 2016). *Age* was controlled as younger entrepreneurs are generally more inclined to innovative products or services (Bradley, McMullen, Artz, & Simiyu, 2012). *Education* – "1" if the respondent held a bachelor's degree or above and "0" if not – was controlled because entrepreneurs with more education tend to be less intimated by the thought of going global (Brouthers & Nakos, 2005).

At the business level, we controlled two variables. Chinese businesses are known to be good at the *mimicry* strategy (Tang & Hull, 2011), so we controlled for whether the same product or service was on the market five years earlier, which indicates that it is not a novel offering ("1" if "yes" and "0" if "no"). The *industry* in which the new venture intended to compete was also controlled, with "1" standing for manufacturing industries and "0" for service industries. Finally, at the regional level, to control for location, seven dummy variables were created: *Beijing*, *Shenyang*, *Guangzhou*, *Xi'an*, *Tianjin*, *Hangzhou*, and *Wuhan*; Chengdu was the default location.

Analysis & Results

Table 1 shows the means, standard deviations, and Pearson correlations of the variables in our model. It shows that born global has a negative correlation with quit ($r = -.07$, $p > .05$), which is in the direction we hypothesized, but this correlation is not significant, indicating a more refined analysis is needed to investigate this relationship. Both innovativeness ($r = .24$, $p < .001$) and information diversity ($r = .16$, $p < .01$) have a significantly positive correlation with born-globals, consistent with Hypotheses 2 and 4. Thus the correlation matrix offered preliminary support to our hypothesized main effect.

We adopted multiple methods to examine our hypotheses. Probit regression fits the cumulative distribution function of the standard normal distribution to specified data, i.e., binomial distributions where the data of interest have two states (0 or 1) (Hoetker, 2007). Probit was thus suitable to test Hypotheses 2 and 4 that included born-global, a dummy variable, as the dependent variable.

The PROCESS method was used to test the remaining hypotheses. Developed by Preacher and Hayes (2008) and subsequently refined by Hayes (2013, 2018), this approach is a widely used, refined method for examining moderation effects. The model we used to test Hypotheses 1, 3, 5 and 6 is a straightforward application of Model 3 (c.f., Hayes, 2013, 2018), testing the direct effect of an independent variable and two moderator variables, all two-way interaction effects, and a three-way interaction between the independent variable and the moderator variables, specifying a model estimation that includes all covariates in the model of the outcome variable only, an approach which has been in use for over five years (c.f., Hayes, 2013, p. 428, p. 444).

PROCESS is also particularly useful when dealing with unequal sample sizes across moderator-based categories. When examining how moderators (i.e., innovativeness and information diversity) affect the relationship between the independent variable (i.e., born-globals) and the dependent variable (i.e., quit), PROCESS reduces the likelihood of parameter bias and enables a comparison of the magnitudes of the hypothesized effect versus other effects imposed by covariates. PROCESS also corrects possible homoscedastic estimation errors in ordinary least squares (OLS) models commonly used in the traditional multi-step, hierarchical test (Hayes, 2013, 2018; Preacher & Hayes, 2008). Further, with dichotomous dependent variables (e.g., quit), PROCESS can automatically apply the logistics analysis and generate more accurate results than the OLS method. Following previous studies and guidelines (e.g., Aguinis, Edwards, & Bradley, 2017; Hayes, 2018; Holland, Shore, & Cortina, 2017; Preacher & Hayes, 2008; Williams & MacKinnon, 2008), we estimated the moderation effects using

Table 1 Means, standard deviations, and correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
M.E.	.36	.15	.40	2.71	31.89	2.95	1.29	.76	.07	.22	.09	.11	.09	.17	.09	.10
S.D.	.48	.36	.49	1.11	10.72	1.08	.45	.43	.26	.41	.29	.31	.29	.37	.29	.30
1.Quit																
2.Born-Global	−.07															
3.Innovativeness	−.21***	.24***														
4.Information Diversity	.04	.16**	.03													
5.Age	−.10†	.11*	.21***	−.06												
6.Education	.09†	.04	.06	.16**	−.14*											
7.Gender	.23***	.07	−.09	.06	−.10†	.06										
8.Mimicry	.01	−.13*	−.20***	−.07	−.07	−.08	.00									
9.Industry	−.12*	.11**	.27***	.01	.29***	−.02	.00	−.09†								
10.Beijing	−.08	.01	−.01	−.04	.06	.11†	−.05	.02	−.01							
11.Shenyang	−.04	−.07	−.08	−.23***	.00	−.08	.01	−.06	−.09	−.17**						
12.Guangzhou	−.05	.11†	−.01	.12*	−.05	−.06	.03	.00	.02	−.18***	−.11†					
13.Xi'an	−.04	.01	.09	.04	.07	.02	.03	−.12*	.11	−.17**	−.10†	−.11*				
14.Tianjin	.05	.05	.03	−.02	.02	−.03	.05	.03	.07	−.23***	−.14*	−.15**	−.14*			
15.Hangzhou	.05	.01	.04	.04	−.08†	.02	−.04	−.05	−.01	−.17**	−.10†	−.11*	−.10†	−.14**		
16.Wuhan	−.01	−.08	−.08	.09	−.05	−.07	.02	.06	−.06	−.17**	−.11†	−.12*	−.11†	−.15**	−.11†	

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$, two-tailed test

unstandardized coefficients from the full model and used bootstrapping procedures with 10,000 resamples to place 95% confidence intervals around the estimates of the moderation effects.

Model 1 in Table 2 shows that innovativeness has a significant, positive relationship with born-globals (B = .42, $p < .01$), and so does information diversity (B = .18, $p < .01$), supporting Hypotheses 2 and 4. Model 2 in Table 2 indicates that born-globals negatively affect quit (B = −6.18, $p < .05$). So Hypothesis 1, predicting that born-global ventures are less likely to quit, is supported. Model 2 also shows that innovativeness has a positive moderating effect on the negative relationship between born-globals and quit (B = 8.69, $p < .01$). Hypothesis 3 predicting that pursuing innovative ventures while going global increases the odds of quitting is thus supported. Hypothesis 5 proposes that born-globals with high information diversity are less likely to quit the new venture creation efforts. Table 2 indicates that information diversity has a significant positive effect on the negative relationship between born-globals and quit

Table 2 Hypothesis test results

	Model 1 Born-Global	Model 2 Quit
Born-Global		−6.18*
Innovativeness	.42**	−.64
Information Diversity	.18**	.07
Born-Global * Innovativeness		8.69**
Born-Global * Information Diversity		1.77*
Innovativeness * Information Diversity		−.13
Born-Global * Innovativeness * Information Diversity		−2.56*
Control Variables		
Age	.02*	−.00
Education	.05	.07
Gender	.24†	1.13***
Mimicry	−.15	−.31
Industry	.31	−.74
Beijing	.15	−.01
Shenyang	−.25	−1.33*
Guangzhou	−.11	−1.22*
Xi'an	−.10	−1.26*
Tianjin	−.26	−.57
Hangzhou	−.03	−.40
Wuhan	−.32	−1.15*
Fitness Indices		
−2 log likelihood	434.17***	364.74***
McFadden	.08	.13
Nagelkerke	.12	.22

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$, two-tailed test

(B = 1.77, $p < .05$). Thus Hypothesis 5 was *not* supported and the results indicate that the opposite effect exists: information diversity *increases* the odds of a born-global venture quitting.

To present our results visually, we plotted moderation effects with the Sibley (2008) method. Figure 2 shows that when a nascent business is non-innovative, the negative relationship between born-globals and quit becomes more negative, but intending to start an innovative new venture turns this effect slightly positive, highlighting the risk of starting an innovative, born-global venture. Figure 3 shows that high information diversity turns the negative born globals-quit relationship slightly positive, while low information diversity enhances the negative main effect. This illustrates that information diversity also increases the odds of a born-global venture being disbanded.

Hypothesis 6 predicts that information diversity reduces the likelihood of quitting more among innovative born-global ventures than among other types of ventures. The three-way moderating effect involving born-global, innovativeness, and information diversity was significant and negative on the negative relationship between born-global and quit (B = −2.56, $p < .05$), providing initial support for Hypothesis 6. To better understand the three-way interaction, we adopted the subsample approach (c.f., Ganster, Mayes, & Fusilier, 1986). We divided the sample according to whether the nascent businesses planned to enter the global market (i.e., born-globals vs. non born-

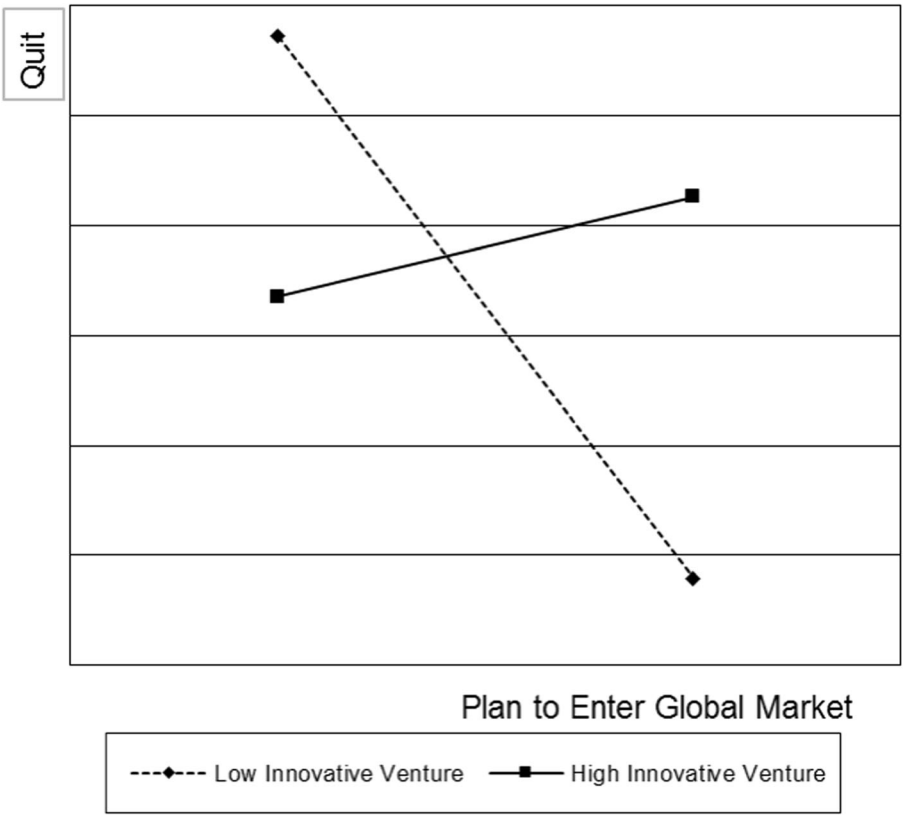

Fig. 2 The moderating effect of innovativeness

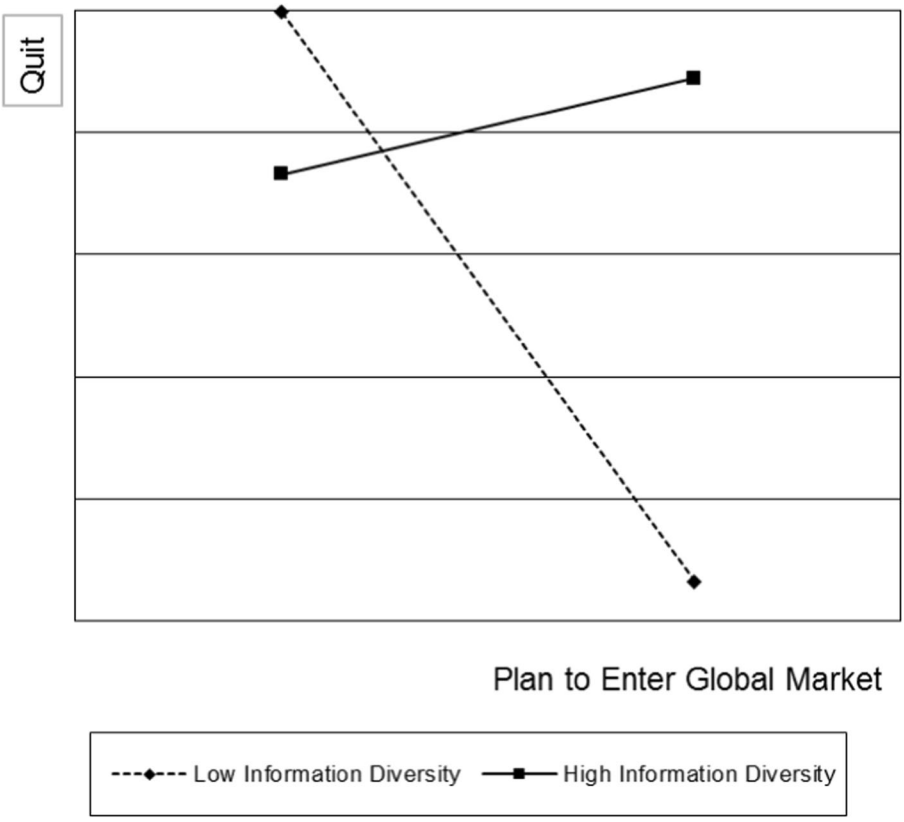

Fig. 3 The moderating effect of information diversity

globals). Subsample 1 contained 49 cases of born-globals, and Subsample 2 had 272 cases of non-born-globals. In Subsample 1, innovative ventures had a significantly positive relationship with quit (B = 13.59, $p < .05$), as did information diversity (B = 3.87, $p < .05$). Their interaction had a negative relationship with quit (B = −4.46, $p < .05$), indicating that for innovative born-globals, information diversity indeed reduced the likelihood of quitting, and thus Hypothesis 6 was supported in Subsample 1. In Subsample 2, we observed no significant effect of innovativeness (B = −.77, $p > .05$), information diversity (B = .03, $p > .05$), or the interaction between innovativeness and information diversity (B = −.11, $p > .05$) on quitting. Because no relationship was observed in Subsample 2, but the predicted relationship was observed in the born-global subsample, the subsample tests indicate that the Hypothesis 6 findings are driven by effects in the born-global population, offering further support to Hypothesis 6.

We plotted Figs. 4 and 5 to visualize the above moderating effects. Figure 4 shows that in the born-global group, high information diversity reduces the effect of innovativeness on quitting. Fig. 5 shows that for non-born-globals, information diversity has little effect on the relationship between innovativeness and quitting. Figure 4 also indicates that the combination of low innovativeness and low information diversity enhances the negative impact of born-globals on quitting. Thus among born-globals,

high information diversity makes quitting less likely among innovative ventures but *more* likely among non-innovative ventures. This makes the expected "more positive" relationship for innovative ventures predicted in Hypothesis 6 more dramatic – the relationship is not just more positive, but changes from negative to positive.

Fitness indices We used multiple ways of evaluating the goodness of fit of the models. The deviance, or − 2 log likelihood statistic, was 434.17 for Model 1 (testing Hypotheses 2 and 4) and 364.74 for Model 2 (testing Hypotheses 1, 3, 5 and 6). Both of these −2 log likelihood statistics were found to have *p*-values of less than .001, indicating that the models are good predictors of the outcome variables. The McFadden Rsquare approximation values for the models were .08 and .13, respectively, while the Nagelkerke approximation were .12 and .22 (see Table 2). These results suggest that the model has significant explanatory power, but that considerable more work is needed to explain the remaining variance in quit rates in nascent born-globals.

Robustness checks We used the multi-method, multi-measure approach to examine if any of the above findings were generated by the specific analysis technique and measures adopted in the analysis. Although PROCESS is a more refined moderation analysis technique than traditional ones (Hayes, 2013, 2018; Preacher & Hayes, 2008; Williams & MacKinnon, 2008), we retested the moderating effects with both Probit and Logit analyses, as both have been widely used to examine causal relationships when the dependent variables are binary. Both the Probit and Logit regression results largely

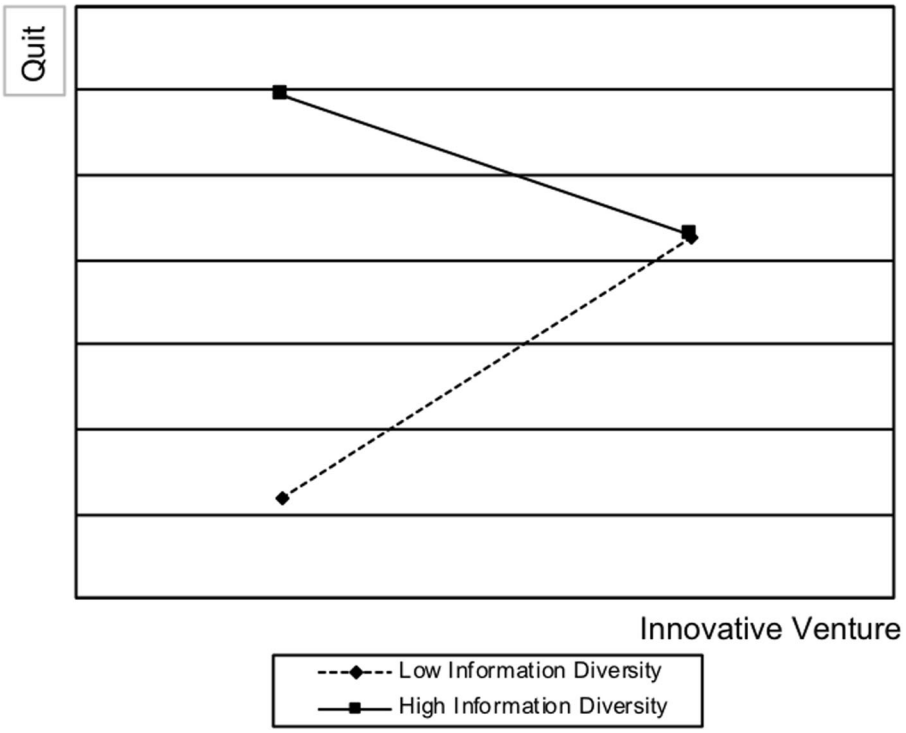

Fig. 4 The moderating effect of information diversity in subsample 1 (born-global ventures)

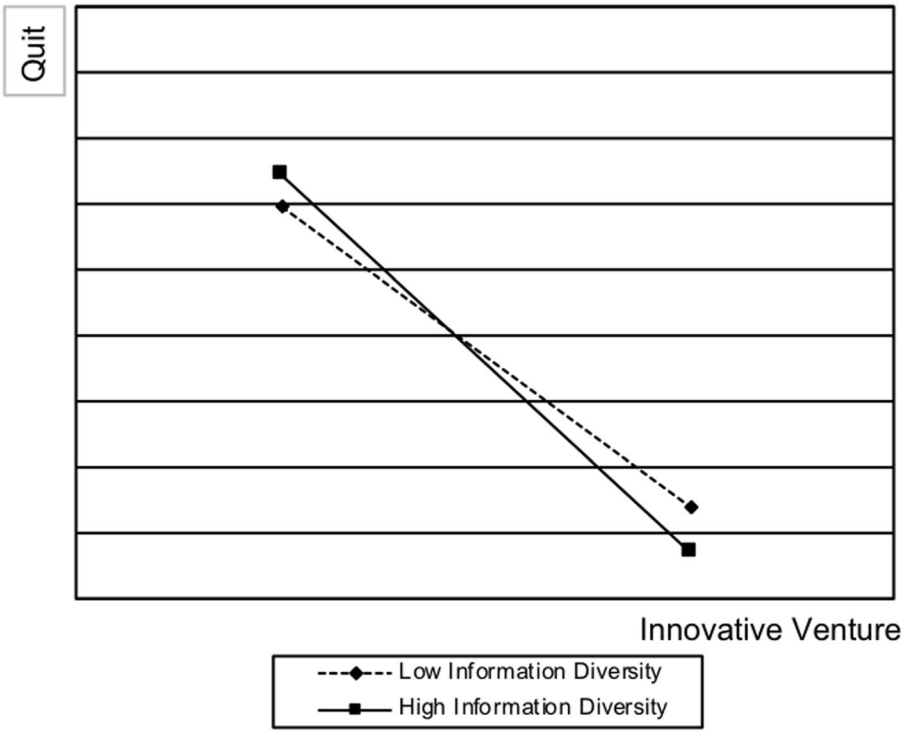

Fig. 5 The Moderating Effect of Information Diversity in Subsample 2 (non-born-globals)

confirmed our findings and thus, our findings should be robust and not affected by the analysis techniques adopted.

We examined the hypothesized effects without control variables to see if these effects were robust with variations in modeling covariates, and if any control variable had a determining effect in our results. The results indicated that born-globals exerted a negative impact on quit ($B = -3.87$, $p < .05$); the interaction between born-global and innovativeness had a positive impact on quit ($B = 6.16$, $p < .05$); and the three-way interaction of born-global, information diversity, and innovativeness had a negative impact on quit ($B = -1.81$, $p < .05$). These results were consistent with our results with control variables included. The interaction between born-global and information diversity generated a positive impact on quit ($B = 1.13$), but only marginally significant ($p = .056$). These results indicate that even without control variables, our findings still largely hold, which also supports the robustness of our hypothesized relationships with the variations in covariates.

To reduce concerns for single source bias, we replaced the city dummy variables with each city's income level, drawn from an archival database (China Statistical Yearbook, 2010). One major regional difference should derive from differential levels of economic development. For example, nascent businesses from a more developed area may be savvier in collecting information regarding innovative and global opportunities than those from less developed regions. When replacing the city dummies with the gross domestic product per capita in each of these eight cities, we found that results remained essentially the same.

Discussion

Our study uses empirical evidence from China to show that nascent born-globals are less likely to quit than are nascent domestic ventures, that both innovativeness and information diversity lead entrepreneurs to choose a born-global approach, and that among nascent born-globals, innovativeness *increases* the odds of quitting, information diversity *reduces* the odds of quitting, and that information diversity *reduces* the odds of quitting *more* among innovative born-globals.

Our findings thus provide a view of early-stage born-globals that avoids survival bias while comparing them to domestic startups at the same early stage of development. Because a large portion of our pre-launch born-global sample quit one year later, we provide a more comprehensive view of born-global issues than do studies that rely on successful entrepreneurial firms. Our findings suggest that being a born-global increases the odds of early-stage survival (Hypothesis 1). The institutional environments in China thus appear to encourage international more than domestic entrepreneurship, which might help explain the recent phenomenal growth of the Chinese economy (Ahlstrom & Ding, 2014). If this is so, other nations, developing and otherwise, might seek to emulate the Chinese model to spur their own growth through born-global entrepreneurship.

Innovative new ventures are more likely to be global (Hypothesis 2), but planning to go global with an innovative venture *increases* the likelihood of quitting (Hypothesis 3). This lends support to the notion that facing both sorts of newness at the same time is particularly challenging. Those who survive innovating while entering the global market may be successful thereafter (Knight & Cavusgil, 2004), but this may be because only the best of the best innovative born-globals make it to product launch. Our findings thus appear to support Coviello's (2015) arguments that studies focusing on post-launch born-globals suffer from significant survivor bias.

Hypothesis 5 is *not* supported and the opposite effect is significant. Information diversity makes nascent businesses *more* likely to quit global ventures. But Hypothesis 6 is supported –information diversity makes quitting less likely among innovative born-globals but *more* likely among non-innovative ones. That is, information diversity makes it *more* likely that a new venture will be born global (Hypothesis 4), and survive its first year greater *if* it is pursuing an innovative strategy (Hypothesis 6), but makes it *less likely* to survive if it is not (Hypothesis 5, c.f., Fig. 1).

Theoretical and practical implications

Our findings suggest that nascent entrepreneurs who choose to begin as born-globals are less likely to quit than those who do not, and that applying information diversity in pursuing innovation increases their infancy survival rate. Non-innovative born-global ventures are less likely to succeed in the long run, but those low on information diversity are slow to realize this.

Information diversity may help new ventures detect fatal flaws in their born-global business model early and quit sooner. The negative effects of information diversity in the nascent stage may thus be confined to non-innovative born-globals because born-globals are more likely to succeed post-launch if they innovate (Bradley et al., 2012; Knight & Cavusgil, 2004). This is consistent with the argument that innovative born-

globals succeed because they are able to quickly identify and pursue foreign opportunities (Mathews, 2006). If more sources of information lead entrepreneurs to start globally and quit non-innovative global ventures early, the best approach for born-globals may be to seek information from a breadth of sources *and* to resist pressure not to innovate (Jiang et al., 2016) – to be innovative born-globals.

The flaw may not be in the business model, but in the information diversity. Processing information from a broad spectrum of sources may distract and confuse nascent entrepreneurs, driving them to fail and eventually abandon their projects. This suggests the possibility of information overload or technostress (Tarafdar, Tu, Ragu-Nathan, & Ragu-Nathan, 2007) playing a role in the strategic choice-making of nascent entrepreneurs in China and, by extension, other settings. If this is so, electronic sources might be more likely to lead to information overload or technostress than others, such as friends and family (Tarafdar et al., 2007).

Another implication of this study is that information diversity may be beneficial only some of the time. A simpler mix of information seems better for simpler ventures, while a more complex innovative born-global requires a more complex arrangement. Evidence suggests that simple strategies are not the best approach for Chinese SMEs (Tang & Hull, 2011), and by extension for Chinese born-globals. But the possibility that new enough and small enough new ventures do benefit from simple strategies cannot be dismissed.

Innovativeness has been linked to the pursuit of global markets among new ventures (Knight & Cavusgil, 2004; Cavusgil & Knight, 2015). But our study looked at quit rate prior to launch and found evidence suggestive of survivor bias in these findings (Coviello, 2015): for pre-launch born-globals, innovation and born-global may not mix well. Our findings also illuminate the earliest stage of the accumulation of information resources among born-globals, and their likelihood of quitting, both important pieces of the born-global puzzle needing to be fully addressed (Coviello, 2015). Further examination of nascent businesses as they move toward launch is needed. What factors affect the likelihood of pre-launch survival among born-globals should be of interest to practitioners, researchers, and policy-makers.

But innovativeness in nascent born-globals can encourage survival under the right conditions. A high level of information diversity, characteristic of post-launch born-globals (Vasilchenko & Morrish, 2011), seems necessary to integrate innovation and global strategies before they launch. Founders who innovate in the global marketplace may be more willing to take risks and try new ideas. But doing so without information diversity *increases* the likelihood of quitting. Information resources are clearly as important to innovative born-global success before launch as they are typical after. Our focus in this study has been on nascent born-globals. But the fact that information diversity does not affect the survival of non-innovative pre-launch born-globals is unexpected, and needs further examination.

For would-be entrepreneurs, and policy-makers who want to encourage them, this study offers several lessons. Managers of pre-launch new ventures in China should identify and pursue a global opportunity from the start. Most new ventures are not born global, so this advice should be useful to many. Those pursuing a born-global strategy should either focus on a *non-innovative* global strategy, potentially in partnership with a foreign partner (c.f., Jiang et al., 2016), or they should focus on an *innovative* global strategy with a high degree of information diversity. Doing many new things at once is hard. Starting a new venture, entering a new market, and creating a new product all at

once is very challenging. But listening to others while doing these many things makes it easier to overcome the challenge.

Starting global may increase a new venture's legitimacy domestically and locally (Ahlstrom et al., 2008; Ma et al., 2016) and definitely reduces the odds of quitting. Policy makers might consider how to encourage entrepreneurs to start globally, that is, encouraging them to use information diversity would help Tomizawa, Zhao, Bassellier, & Ahlstrom, 2019). Information diversity would be particularly helpful to nascent entrepreneurs who want to match the profile of successful born-globals by being innovative (Vasilchenko & Morrish, 2011). To the extent our findings are due to the Chinese approach to intellectual property protection, limited domestic intellectual property protection may encourage a nation's ambitious entrepreneurs to pursue foreign markets and improve the nation's balance of trade (c.f., Ahlstrom & Ding, 2014; Li-Ying & Wang, 2015). This may advance our understanding of the circumstances, besides culture, that have contributed to the successes of Chinese businesses (Ahlstrom et al., 2010), and challenge the contention that strengthening China's intellectual property protections would benefit China (Tang & Hull, 2012). But if the challenge is valid, China and Chinese born-globals will still need to consider the danger (Tang & Hull, 2012) of domestic companies recognizing and mimicking the global venture's success. This represents another potential hazard for born-globals in a developing economy. Further investigation of this hazard is needed.

Limitations and suggestions for future research

This study examines born-global and non-born-global ventures as they first come into being at the earliest stages of the formation of new ventures. This is, in response to Coviello (2015), as early-stage as is possible to study born-globals. However, subsequent study should examine these ventures as they grow beyond a single entrepreneur, moving into multi-level research to explore such questions as whether the factors that significantly affect quitting at the nascent-stage are still significant once the entrepreneur has built a team. We know already, for example, that innovativeness is helpful to born-global success post-launch (Cavusgil & Knight, 2015; Knight & Cavusgil, 2004), but, based on our findings, not so helpful to born-globals in the earliest stage. Where does the transition occur? A reasonable expectation, as yet untested, would be the transition from one level to another, i.e., from single entrepreneur to an entrepreneurial team. We hope subsequent research addresses this point.

Since our findings are based on Chinese nascent ventures, they may not be generalizable to nascent ventures in other developing nations, let alone start-ups in developed nations. We hope this limitation is addressed in future research. Further, this study does not address whether information diversity concerning global matters encourages overconfidence among innovative pre-launch born-globals. Knowledge provided by multiple sources may give nascent businesses an edge, but it may also give them the impression that they know more than they actually do. Such overconfidence is a problem in international entrepreneurial decision-making (Heidenreich, Mohr, & Puck, 2015), suggesting in conjunction with our findings here that an examination of how entrepreneurial overconfidence is affected by a broad spectrum of information sources is called for. Future study could address these questions, and also include other information sources, such as trade journals, online networking sites, or universities.

Finally, in terms of methodology, this study focuses on moderating effects without emphasizing potential mediation relationships. As recently noted (Aguinis et al., 2017; Hayes, 2013, 2018; Holland et al., 2017), examining both mediation and moderation effects is rarely done and even more rarely done to the highest standard. We have tried to match that standard here, and hope that our results are thus more useful to other researchers. Further, we note that studies of moderating effects often suffer from measurement error or reliability issues that lead to underestimation of the strength of the moderating relationships (Aguinis et al., 2017). While the test-retest reliability assessment we conducted found no significant differences in the key variables of this study, there may still be reliability issues that mask the full strength of the relationships we tested. For example, the moderating effects on the relationship between born-global and quit for which we found support may actually be stronger; the moderating relationships for which we found no support might prove to be supported if measured with more reliable data. Thus, further study of these relationships with other data, if possible, would be beneficial. Identifying additional variables that might help explain the dependent variables would also be helpful.

Conclusion

Does being a born-global make a startup more or less likely to quit before launch? How do innovativeness and information diversity affect the decision to start or stop a born-global venture? Our answers are that (1) born-globals are less likely to quit than other pre-launch new ventures, (2) innovativeness and information diversity both increase the odds of a new venture pursuing born-global status, but also make nascent born-globals more likely to quit, and (3) innovativeness and information diversity jointly affect the odds of quitting before launch only in born-global nascent ventures, not domestic ones. Our theoretical framework suggests that this interaction arises from the challenges of facing too much newness at once, and from being able to learn from multiple sources when a new venture is simply not going to succeed. If this article could offer only one lesson, we would like it to be that the innovativeness which helps born-globals succeed *after* they launch (Cavusgil & Knight, 2015; Knight & Cavusgil, 2004) actually *reduces* the odds of a born-global surviving before launch. Therefore, our advice to those who are considering starting a new venture is to (1) consult multiple sources of information about the business plan in the formative stage to potentially head off design problems that would otherwise kill the venture later, (2) aim for an innovative approach that will support the born-global model after launch, (3) plan to increase both innovativeness and information diversity post-launch, when both are likely to increase the odds of success. Following these steps, we believe, will increase the odds of the new venture succeeding.

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References

Aguinis, H., Edwards, J. R., & Bradley, K. J. 2017. Improving our understanding of moderation and mediation in strategic management research. *Organizational Research Methods*, 20(4): 665–685.

Ahlstrom, D. 2015. From the editors: Publishing in the journal of world business. *Journal of World Business*, 2(50): 251–255.

Ahlstrom, D. 2017. How to publish in academic journals: Writing a strong and organized introduction section. *Journal of Eastern European and Central Asian Research*, 4(2): 1–9.

Ahlstrom, D., Bruton, G., & Yeh, K. S. 2007. Venture capital in China: Past, present, and future. *Asia Pacific Journal of Management*, 24(3): 247–268.

Ahlstrom, D., Bruton, G., & Yeh, K. S. 2008. Private firms in China: Building legitimacy in an emerging economy. *Journal of World Business*, 43(4): 385–399.

Ahlstrom, D., Chen, S., & Yeh, K. S. 2010. Managing in ethnic Chinese communities: Culture, institutions, and context. *Asia Pacific Journal of Management*, 27(3): 341–354.

Ahlstrom, D., & Ding, Z. 2014. Entrepreneurship in China: An overview. *International Small Business Journal*, 32(6): 610–618.

Alvarez, S., & Barney, J. 2007. Discovery and creation: Alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal*, 1(1-2): 11–26.

Bradley, S., McMullen, J., Artz, K., & Simiyu, E. 2012. Capital is not enough: Innovation in developing economies. *Journal of Management Studies*, 49(4): 684–717.

Brouthers, L. E., & Nakos, G. 2005. The role of systematic international market selection on small firms' export performance. *Journal of Small Business Management*, 43(4): 363–381.

Bruton, G., Ahlstrom, D., & Wan, J. C. C. 2001. Turnaround success of large and midsize Chinese owned firms: Evidence from Hong Kong and Thailand. *Journal of World Business*, 36(2): 146–165.

Bruton, G., Ahlstrom, D., & Yeh, K. S. 2004. Understanding venture capital in East Asia: The impact of institutions on the industry today and tomorrow. *Journal of World Business*, 39(2): 72–88.

Cavusgil, S. T., & Knight, G. 2015. The born global firm: An entrepreneurial and capabilities perspective on early and rapid internationalization. *Journal of International Business Studies*, 46(1): 3–16.

Chandra, Y., Styles, C., & Wilkinson, I. F. 2015. Opportunity portfolio: Moving beyond single opportunity explanations in international entrepreneurship research. *Asia Pacific Journal of Management*, 32(1): 199–228.

Child, J. 1972. Organizational structure, environment and performance: The role of strategic choice. *Sociology*, 6(1): 1–22.

Child, J. 1997. Strategic choice in the analysis of action, structure, organizations and environment: Retrospect and prospect. *Organization Studies*, 18(1): 43–76.

China Statistical Yearbook, 2010.

Chinta, R., Cheung, M. S., & Capar, N. 2015. Double whammy or double advantage: "Foreignness" and "newness" as determinants of success in international business. *Journal of Management and Strategy*, 6(1): 76–87.

Cohen, B., & Winn, M. 2007. Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing*, 22(1): 29–49.

Coviello, N. 2015. Re-thinking research on born globals. *Journal of International Business Studies*, 46(1): 17–26.

Delmar, F., & Shane, S. 2003. Does business planning facilitate the development of new ventures? *Strategic Management Journal*, 24(12): 1165–1185.

Delmar, F., & Shane, S. 2004. Legitimating first: Organizing activities and the survival of new ventures. *Journal of Business Venturing*, 19(3): 385–410.

DiMaggio, P. J., & Powell, W. W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2): 147–160.

Fiet, J. O., & Patel, P. C. 2008. Entrepreneurial discovery as constrained, systematic search. *Small Business Economics*, 30(3): 215–229.

Ganster, D., Mayes, B., & Fusilier, M. 1986. Role of social support in the experience of stress at work. *Journal of Applied Psychology*, 71(1): 102–110.

Gielnik, M. M., Krämer, A. C., Kappel, B., & Frese, M. 2014. Antecedents of business opportunity identification and innovation: Investigating the interplay of information processing and information acquisition. *Applied Psychology*, 63(2): 344–381.

Grégoire, D. A., Barr, P. S., & Shepherd, D. A. 2010. Cognitive process of opportunity recognition: The role of structural alignment. *Organization Science*, 21(2): 413–431.

Hayes, A. F. 2013. *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*, 1st ed. New York:The Guilford Press.

Hayes, A. F. 2018. *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*, 2nd ed. New York:The Guilford Press.
Heidenreich, S., Mohr, A., & Puck, J. 2015. Political strategies, entrepreneurial overconfidence and foreign direct investment in developing countries. *Journal of World Business*, 50(4): 793–803.
Heirati, N., & O'Cass, A. 2016. Supporting new product commercialization through managerial social ties and market knowledge development in an emerging economy. *Asia Pacific Journal of Management*, 33(2): 411–433.
Hoetker, G. 2007. The use of logit and probit models in strategic management research: Critical issues. *Strategic Management Journal*, 28(4): 331–343.
Holland, S. J., Shore, D. B., & Cortina, J. M. 2017. Review and recommendations for integrating mediation and moderation. *Organizational Research Methods*, 20(4): 686–720.
Jiang, M. S., Branzei, O., & Xia, J. 2016. DIY: How internationalization shifts the locus of indigenous innovation for Chinese firms. *Journal of World Business*, 51(5): 662–674.
Jones, M. V., Coviello, N., & Tang, Y. K. 2011. International entrepreneurship research (1989-2009): A domain ontology and thematic analysis. *Journal of Business Venturing*, 26(6): 632–659.
Keupp, M., & Gassmann, O. 2009. The past and the future of international entrepreneurship: A review and suggestions for developing the field. *Journal of Management*, 35(5): 600–633.
Knight, F. H. 1921. *Risk, uncertainty and profit*. New York:Houghton Mifflin.
Knight, G., & Cavusgil, S. T. 2004. Innovation, organizational capabilities, and the born global firm. *Journal of International Business Studies*, 35(2): 124–141.
Li, W., Bruton, G., & Filatotchev, I. 2016. Mitigating the dual liability of newness and foreignness in capital markets: The role of returnee independent directors. *Journal of World Business*, 51(5): 787–799.
Liu, M., Hull, C. E., & Hung, Y. T. C. 2017. Starting open source collaborative innovation: The antecedents of network formation in community source. *Information Systems Journal*, 27(5): 643–670.
Li-Ying, J., & Wang, Y. 2015. Find them home or abroad? The relative contribution of international technology in-licensing to "indigenous innovation" in China. *Long Range Planning*, 48(3): 123–134.
Ma, X., Ding, Z., & Yuan, L. 2016. Subnational institutions, political capital, and the internationalization of entrepreneurial firms in emerging economies. *Journal of World Business*, 51(5): 843–854.
Mainela, T., Puhakka, V., & Servais, P. 2014. The concept of international opportunity in international entrepreneurship: A review and research agenda. *International Journal of Management Reviews*, 16(1): 105–129.
Mathews, J. A. 2006. Dragon multinationals: New players in 21st century globalization. *Asia Pacific Journal of Management*, 23(1): 5–27.
Mayer, M. C. J., Stadler, C., & Hautz, J. 2015. The relationship between product and international diversification: The role of experience. *Strategic Management Journal*, 36(10): 1458–1468.
Miller, S. R., & Parkhe, A. 2002. Is there a liability of foreignness in global banking? An empirical test of banks' X-efficiency. *Strategic Management Journal*, 23(1): 55–75.
Nachum, L. 2003. Liability of foreignness in global competition? Financial service affiliates in the city of London. *Strategic Management Journal*, 24(12): 1187–1208.
Ozgen, E., & Baron, R. 2007. Social sources of information in opportunity recognition: Effects of mentors, industry networks, and professional forums. *Journal of Business Venturing*, 22(2): 174–192.
Peng, M., & Delios, A. 2006. What determines the scope of the firm over time and around the world? An Asia Pacific perspective. *Asia Pacific Journal of Management*, 23(4): 385–405.
Preacher, K. J., & Hayes, A. F. 2008. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3): 879–891.
Sarasvathy, S. D. 2001. Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, 26(2): 243–263.
Sibley, C. G. 2008. Utilities for examining interactions in multiple regression [computer software]. University of Auckland.
Simon, H. 1997. *Administrative behavior*, 4th ed. New York:The Free Press.
Stinchcombe, A. L. 1965. Social structure and organizations. In J. G. March (Ed.). *Handbook of organizations*: 142–193. Chicago: Rand McNally.
Tang, J. 2010. How entrepreneurs discover opportunities in China – An institutional view. *Asia Pacific Journal of Management*, 27(3): 461–479.
Tang, J., Kacmar, M., & Busenitz, L. 2012. Entrepreneurial alertness in the pursuit of new opportunities. *Journal of Business Venturing*, 27(1): 77–94.
Tang, J., Tang, Z., & Cowden, B. J. 2017. Exploring the relationship between entrepreneurial orientation, CEO dual values, and SME performance in state-owned vs. non-state-owned enterprises in China. *Entrepreneurship Theory and Practice*, 41(6): 883–908.
Tang, Z., & Hull, C. 2012. An investigation of entrepreneurial orientation, perceived environmental hostility, and strategy application among Chinese SMEs. *Journal of Small Business Management*, 50(1): 132–158.

Tang, Z., & Hull, C. E. 2011. The strategy configuration of Chinese SMEs. *Journal of Enterprising Culture.*, 19(3): 229–259.
Tarafdar, M., Tu, Q., Ragu-Nathan, B. S., & Ragu-Nathan, T. S. 2007. The impact of technostress on role stress and productivity. *Journal of Management Information Systems*, 24(1): 301–328.
Tomizawa, A., Zhao, L., Bassellier, G., & Ahlstrom, D. 2019. Economic growth, innovation, institutions, and the Great Enrichment. Asia Pacific Journal of Management, 36(4) (forthcoming).
Vasilchenko, E., & Morrish, S. 2011. The role of entrepreneurial networks in the exploration and exploitation of internationalization opportunities by information and communication technology firms. *Journal of International Marketing*, 19(4): 88–105.
Williams, J., & MacKinnon, D. P. 2008. Resampling and distribution of the product methods for testing indirect effects in complex models. *Structural Equation Modeling*, 15(1): 23–51.
Yamakawa, Y., Khavul, S., Peng, M. W., & Deeds, D. L. 2013. Venturing from emerging economies. *Strategic Entrepreneurship Journal*, 7(3): 181–196.
Yamakawa, Y., Peng, M. W., & Deeds, D. L. 2008. What drives new ventures to internationalize from emerging to developed economies? *Entrepreneurship Theory and Practice*, 32(1): 59–82.
Zaheer, S. 1995. Overcoming the liability of foreignness. *Academy of Management Journal*, 38(2): 341–363.
Zaheer, S., & Mosakowski, E. 1997. The dynamics of the liability of foreignness: A global study of survival in financial services. *Strategic Management Journal*, 18(6): 439–464.
Zahra, S. 2005. A theory of international new ventures: A decade of research. *Journal of International Business Studies*, 36(1): 20–28.
Zander, I., McDougall-Covin, P., & Rose, E. L. 2015. Born globals and international business: Evolution of a field of research. *Journal of International Business Studies*, 46(1): 27–35.
Zhu, Y., Konrad, A. M., & Jiao, H. 2016. Violation and activation of gender expectations: Do Chinese managerial women face a narrow band of acceptable career guanxi strategies? *Asia Pacific Journal of Management*, 33(1): 53–86.
Zhu, Y., Wittmann, X., & Peng, M. 2012. Institution-based barriers to innovation in SMEs in China. *Asia Pacific Journal of Management*, 29(4): 1131–1142.

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