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# The Influence of networking on the internationalization of SMEs: Evidence from internationalized Chinese firms

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## Abstract

This study investigates influential networking behaviours in supporting the internationalization of SMEs. Using primary data collected from 210 Chinese SMEs in Beijing and Hong Kong, regression analysis was applied to test associations between networking behaviours, resource availability and internationalization patterns. Findings indicate that resources made available from networks do not necessarily facilitate the internationalization of firms. The availability of foreign business resources is positively associated with the achievement of rapid internationalization but the availability of general organizational resources indicates a negative association. The ability of SMEs to plan and conduct networking activities strategically with key partners is beneficial to obtain the influential resources for accelerating foreign business development. The article concludes with implications for policy-makers and SME owners/managers, suggesting they should target support initiatives and skills training aimed at nurturing and developing influential networking behaviours.

## Keywords

foreign business, international new venture, internationalization, network strategy, networking, SMEs

## Introduction

SMEs encounter significant challenges in obtaining resources, foreign market knowledge, overseas contacts and business opportunities, and achieving organizational viability for developing foreign business (Zaheer, 1995; Zahra, 2005). Networks are influential in helping SMEs to overcome these resource constraints and isolation, and in enabling rapid internationalization from inception or at an early stage of start-up (Coviello and Munro, 1995; Madsen and Servais, 1997; Oviatt and McDougall, 1994; Sharma and Blomstermo, 2003).

Most of the discussions concerning the benefits of networks in the internationalization literature draw on empirical evidence from entrepreneurship and small business studies. While these studies provide important insights regarding the role of networks in general, most do not relate specifically to the international business development of firms (Witkowski and Thibodeau, 1999). Studies,

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however, have found that networks of different structural attributes (e.g. tie strength, structural hole and coherence) vary in strengths and weaknesses when serving different business functions (Burt, 1992; Coleman, 1988; Granovetter, 1973). To quote Coleman's (1988: S98) comment on social capital – defined as equivalent to the functions of networks – '(social capital) is not completely fungible but may be specific to certain activities. A given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others.' The comment implies that a firm needs to develop and deploy relationships that can provide the specific opportunities and requisite resources for achieving internationalization. Furthermore, networks may sometimes inhibit rather than facilitate a firm's business development. For example, a firm may be overly embedded within existing networks and may become ineffective in broadening its network horizons. Therefore, it may fail to realize potential business opportunities beyond its close ties (Chetty and Campbell-Hunt, 2003; Gulati et al., 2000; Locke, 1999; Witt, 2004). While a firm needs to sustain long-term relationships with existing network partners to cultivate commitment and trust, it also needs to enter new relationships and exit unproductive ones responsively when establishing business in foreign markets. There is a need to enrich knowledge concerning the function of networking in driving the internationalization of small firms, and evaluate its influence in the context of specific business conditions and resource demands (Coviello and Cox, 2006; Loane and Bell, 2006; Oviatt and McDougall, 2005; Sharma and Blomstermo, 2003).

Instead of placing the focus on networks themselves, this study investigates the networking behaviour of SMEs in supporting internationalization. It is suggested that research on the network per se often takes it for granted as a given context within which firms operate. Such an approach provides limited explanation of possible variations in the effects of networks on the business performance of individual firms (Bjorkman and Forsgren, 2000; Hite, 2005). O'Donnell (2004: 207) pointed out that: 'it is not the existence of a network per se, but rather the use of that network through the process of networking, from which benefits accrue'. Although the notion is supported by other researchers (e.g. Bourdieu, 1986; Ostgaard and Birley, 1994; Zaheer and Bell, 2005), there is still limited research on understanding networking behaviours that precede and precondition network outcomes (Borgatti and Foster, 2003; Loane and Bell, 2006; Mort and Weerawardena, 2006). This study aims to fill this literature gap in network research in the internationalization literature.

We argue that networks are the products (outcomes) of a firm's investments and efforts (Bourdieu, 1986; Forsgren and Johanson, 1992; Nahapiet and Ghoshal, 1998). In summary, a firm can have an active influence on its networking activities that shape its network relationships and position, which in turn affect business development. However, networking is resource-demanding and can result in adverse outcomes (O'Donnell, 2004; Dubini and Aldrich, 1991); it requires considerable time and resources, and the right attitudes and skills, to be effective. Because most SMEs already face resource constraints, the ability to network effectively is essential to derive value from networks that can actually benefit internationalization (Coviello and Munro, 1995; Johanson and Vahlne, 2003; Mort and Weerawardena, 2006). 'Networking' and 'network', therefore, are analysed as two separate but interdependent constructs, with the latter being the outcome of the former (Chell and Baines, 2000; Neergaard, 2005; O'Donnell, 2004; Shaw, 2006). Networking behaviours are interpreted to represent the directions and actions of firms in formulating, developing and maintaining network relationships.

This firm-level analysis enables explanation and prediction of variations in effects of networks on internationalization patterns via differences in firm behaviours. The findings are useful for both academics and practitioners in gaining a better understanding of how SMEs conduct networking to support internationalization, and which behaviours are more likely to have an impact (positively and

negatively) on the outcomes. The study enriches the knowledge of researchers concerning networks and networking in the internationalizing firm. It also draws out the implications for policy-makers and SME practitioners in order to facilitate behavioural changes and skills development.

The study further distinguishes two major effects of networking on the internationalization of firms. First, networking activities influence internationalization patterns of a firm directly in terms of its 'primary economic transaction' with foreign customers/clients, or its response to existing network partners developments abroad (Bell, 1995; Coviello and Munro, 1995; Holmlund and Kock, 1998). Second, networking may provide external resources to the firm to support its business activities, including international business development. The role of networks as sources of resources is essential for resource-constrained SMEs (Coviello, 2006; Oviatt and McDougall, 2005). These two aspects of effects, though often conflated in many studies, need not necessarily be related (Johanson and Mattsson, 1987; Larson, 1992; Turnbull et al., 1996). For example, a firm may create business relationships that provide no more than the economic value (e.g. sales revenues or cost reduction) of arm's-length transactions rather than making additional resources (e.g. capital, human resources, market information, technology) available to the firm to meet its development needs.

The study outlines and examines three core sets of associations, relating to: (1) networking behaviours and the availability of resources; (2) networking behaviours and the internationalization patterns of firms; (3) availability of resources and the internationalization patterns of firms. The investigation focuses on the achievement of rapid internationalization. Hypotheses are developed and tested using data collected from SMEs that were involved in international business activities.

The structure of the article is as follows. The next section reviews existing literature, and based on this hypotheses are generated. The third section describes the sampling and data collection procedure and explains the constructs and measures of variables. The fourth section presents and discusses the statistical findings. The last section presents the conclusions, implications and directions for future research.

## **Literature review and hypothesis development**

From a firm's perspective, networking is a resource-intensive business investment. Smaller firms generally face greater initial entry barriers than their larger counterparts in building formal business relationships. Being smaller makes it difficult for them to gain the recognition and trust of prospective network partners (Forsgren and Johanson, 1992; Stuart et al., 1999; Zahra, 2005). Accordingly, it has been suggested that many smaller firms are self-reliant and operate in isolation, without participating in networks (e.g. the 'fortress enterprises' in Curran et al., 1993); they are mostly reactive to 'serendipities' and given to inertia in networking (Carson et al., 2004; Harris and Wheeler, 2005; McAuley, 1999). Yet, certain empirical studies on the networking of SMEs have provided evidence of proactive behaviour in pursuit of foreign business development (Chetty and Campbell-Hunt, 2003; Loane and Bell, 2006; Spence, 2003). New ventures that achieve instant internationalization have tended to demonstrate higher levels of strategic proactiveness in networking (Coviello, 2006). Mort and Weerawardena's (2006) study also provides empirical evidence of born-global firms that view networking as entrepreneurial opportunity-seeking behaviour, and undertake networking proactively. Self-initiated networks by SMEs are often more successful and sustainable (Huggins, 2001). Based on these findings, the following hypotheses are developed.

Hypothesis 1a: Proactiveness to network is positively associated with the availability of network resources for the internationalization of SMEs.

Hypothesis 2a: Proactiveness to network is positively associated with the achievement of rapid internationalization by SMEs.

While proactivity helps trigger the relationship-building process, the commitment of firms to developing and maintaining relationships is essential to cultivate the level of trust and interdependency between partners that motivates exchange of resources (Carson et al., 2004; Blankenburg Holm et al., 1999; Clarke, 2006; Cook and Emerson, 1978; Ring and Van De Ven, 1992). Larson (1992) suggested that moral obligation and commitment of actors were required to achieve effective control and coordination in the course of the network development process. More coordinated networks facilitate more efficient resource flows (Blankenburg Holm et al., 1999). Huggins (2000) studied the factors enabling an informal network of small firms to share information and ideas, promote learning and innovation, and initiate collaboration effectively. He found that a strong commitment to participate in interactions that strengthen relationships and commonalities was critical. In a business context that involves greater risks and uncertainties, such as business development abroad, it requires stronger commitment of firms to initiate network exchanges. Relationship commitment, therefore, is highlighted as a precursor of network development in internationalization (Johanson and Vahlne, 2006). Network exchanges must be promoted before business opportunities are created and requisite resources and (foreign) market knowledge made available. Following Cook and Emerson (1978: 734) and Johanson and Vahlne (2006: 171), this study defines commitment in terms of the willingness and investment of a firm in developing and maintaining relationships with partners. Based on these ideas, the following hypotheses are presented.

Hypothesis 1b: Commitment to network is positively associated with the availability of network resources for the internationalization of SMEs.

Hypothesis 2b: Commitment to network is positively associated with the achievement of rapid internationalization by SMEs.

Structural attributes of networks and their variations in strengths and functions have commanded widespread research attention since Granovetter's (1973) study concerning the relative strengths of strong and weak ties. It is found that while strong ties provide actors with reliable resources and emotional support in routine and stable environments, weak ties are more effective in channelling and diffusing new opportunities, novel ideas, critical resources, information and knowledge (Burt, 1992; Coleman, 1988; Granovetter, 1973; Inkpen and Tsang, 2005). Uzzi (1996) suggested that an 'optimal network' is one which integrates both embedded ties and arm's-length ties. With specific reference to foreign business development, Dubini and Aldrich (1991: 308) emphasized the significance of network diversity as follows:

Information about new business locations, potential markets for goods and services, sources of capital or potential investors and innovations is likely to spread among individuals ... someone with a small set of overlapping ties is at a disadvantage when competing for information with someone with a large set of divergent ties.

Internationalization provides novel knowledge, but entails larger and more diverse resource demands and greater risks and uncertainties (Johanson and Vahlne, 1977). It also requires diverse but

complementary network ties to fulfil different business functions (Oviatt and McDougall, 2005; Sharma and Blomstermo, 2003). This leads to the development of the hypotheses below.

Hypothesis 1c: Openness to access diverse networks is positively associated with the availability of network resources for the internationalization of SMEs.

Hypothesis 2c: Openness to access diverse networks is positively associated with the achievement of rapid internationalization by SMEs.

An appropriate mix of network relationships is required to support internationalization. Excessive but unproductive networking, however, could be a fruitless investment and become a liability for resource-deficient SMEs (O'Donnell, 2004; Witt, 2004). It is essential for SMEs to plan and invest in networking effectively and deliberately, so that resources are invested in cultivating and maintaining relationships with prominent partners to support their growth in the international marketplace (Beekman and Robinson, 2004; Dimitratos et al., 2003; Lorenzoni and Lipparini, 1999). Therefore, it is suggested that networking should be developed as a capability of firms and conducted as a strategic activity (Bourdieu, 1986; Burt, 1992; Moller and Svahn, 2003; Ostgaard and Birley, 1994; Zaheer and Bell, 2005). A firm's networking capability is found to directly influence the quality of network ties in providing requisite resources and support (Zahra et al., 1999). Emphasizing strategic perspective in the process of internationalization, Welch and Welch (1996) proposed that network development should be intentionally nurtured to realize international expansion opportunities. They recommended the incorporation of network planning and development into the strategic management process of internationalization. Based on these ideas, the following hypotheses are developed.

Hypothesis 1d: Strategy to network is positively associated with the availability of network resources for the internationalization of SMEs.

Hypothesis 2d: Strategy to network is positively associated with the achievement of rapid internationalization by SMEs.

Finally, the study also evaluates the association between resources made available from networks and internationalization patterns of SMEs.

Resource limitations are the major barrier to the business development of SMEs (Brouthers et al., 1998; Leonidou, 2004). Internationalization involves stronger resource commitment and specific foreign experiential knowledge (Johanson and Vahlne, 1977). It is generally presumed that the lack of capital, technology and experiential knowledge, as well as human resources, reduce small firms' ability to initiate and develop foreign business (Calof and Beamish, 1995; Welch and Luostarinen, 1988; Zaheer, 1995). The presumption of SMEs as a disadvantaged group of firms in pursuing internationalization aligns with the resource-based view of the firm (RBV), which highlights inherent differential resources as the determinant of firm growth and performance (Peteraf and Barney, 2003; Penrose, 1995; Wernerfelt, 1984).

This presumption, however, is challenged by empirical evidence suggesting that some SMEs adopt a global market focus and internationalize from inception or at an early stage of start-up (Knight and Cavusgil, 1996; Madsen and Servais, 1997; Oviatt and McDougall, 1994; Rennie, 1993). In search of explanations for resource-constrained SMEs that achieved internationalization rapidly, the influential role of networks is commonly recognized (Andersson and Wictor, 2003; Belso-Martinez, 2006; Coviello and Munro, 1995; Loane and Bell, 2006; Madsen and Servais, 1997;

Oviatt and McDougall, 1994, 2005). Gulati (2007) suggested that the concept of network resources expands the realm of the RBV to encompass resources that may arise from a firm's external connections. These connections (i.e. the networks of the firm) allow firms to acquire and mobilize resources possessed by their partners. Therefore, networks can compensate for the lack of resources that SMEs own and directly control (Coviello and Cox, 2006). Networks also help overcome the liabilities of newness and foreignness of SMEs, and facilitate further network development. Cumulative network experiences strengthen a firm's ability to develop and deploy new relationships by providing them with the requisite network skills, channelling valuable information about new network opportunities, and linking the firm to potential partners (Eisenhardt and Martin, 2000; Gulati, 1999). The visibility of the firm in existing networks provides evidence of its organizational legitimacy; network referrals by reputable partners increase the credibility and trustworthiness of the firm to obtain acceptance by new partners (Gulati, 2007; Larson and Starr, 1993; Lechner and Dowling, 2003; Stuart, 1998). The solidarity that bonds network members also promotes organizational learning and knowledge creation through cooperation and collaboration with experienced partners (Inkpen and Tsang, 2005; Zahra et al., 2003; Zhou et al., 2007). SMEs are able to speed up internationalization with improved access to and acquisition of external resources, foreign experiential knowledge and foreign networks (Arenius, 2005; Coviello and Cox, 2006; Forsgren, 2002; Yli-Renko et al., 2002). Based on these notions, a hypothesis is developed as follows.

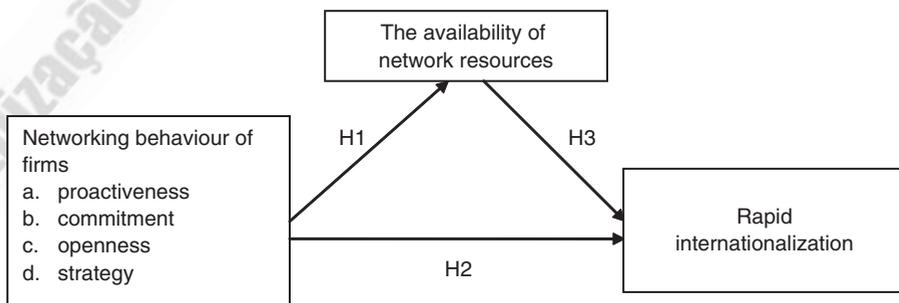
Hypothesis 3: Availability of network resources is positively associated with the achievement of rapid internationalization by SMEs.

The above hypotheses are incorporated into the conceptual framework developed for this study (Figure 1).

## Research methodology

### Data collection

The hypotheses of this study were tested using primary survey data from 210 SMEs in Hong Kong and Beijing. The usable sample size of 210 firms represents a 38% response rate from the 550 questionnaires successfully distributed. SMEs in this study are defined by number of employees; the EU Commission's definition of 250 or fewer employees was applied for sample selection. Another selection criterion is that the firms must be involved in internationalization: that is, they had sales, direct export and/or investment activities in foreign countries at the time of the study.



**Figure 1.** Conceptual Framework and the Hypotheses for the Study

Additionally, the lead founder and key decision-maker of the firm must be native Chinese. A structured questionnaire composed mainly of close-ended and rating questions was used as the data collection instrument. The questionnaire was translated into the local languages (simplified and traditional Chinese) following the forward-backward translation process (Brislin, 1970). The lead founders or key decision-makers of firms were the target respondents of the survey to ensure the richness and validity of the data collected.

The Hong Kong Trade Development Council's (HKTDC) online marketplace directory (<http://sourcing.tdctrade.com>) was used to compile the survey sample in Hong Kong. Compared with other local public and private trade directories, the HKTDC online directory provides the most comprehensive and up-to-date records of active companies in Hong Kong. In total, 400 companies from mixed industries were randomly selected and identified as meeting the three aforementioned selection criteria. Questionnaires were successfully distributed to 384 companies in two batches by post, and were followed up by email and then phone reminders. A postal survey was found to be the most effective way to access the owner-managers of small Hong Kong firms (Shi et al., 2001). One hundred and ten usable questionnaires were collected from the Hong Kong sample. Due to the constraints of direct access to companies and concern about local regulations on conducting surveys, a local qualified consulting company was employed to conduct the survey in Beijing, China. The company has conducted research projects for a number of research institutions and industrial associations in the city. Its credibility was assessed by a personal contact in Beijing and detailed discussions were held before it was employed. SMEs of mixed industries that matched the selection criteria of this study were randomly drawn from a database of Beijing companies compiled and maintained by the consulting firm. A drop-and-collect survey was conducted to yield a higher response rate (Brown, 1987). One hundred and two complete questionnaires (of which 100 were usable) were collected from 166 companies successfully contacted. In order to address concerns about the reliability of survey data collected by third parties, the company was requested to record the contact details of the respondents and enclose business cards for each of the questionnaires completed.

Mainland China and Hong Kong share the same ethnic origin but are different in political and economic systems. However, in both cases SMEs are the key pillars of these economies and significant participants in international business either in terms of import/export trade, foreign cooperation/collaboration, or inflow/outflow of foreign direct investment (FDI). Internationalization is regarded as a major business objective of private entrepreneurs in the region and many SMEs are involved in foreign business activities from inception (Dolles, 2003). Hong Kong is an export-oriented small market economy and has a heritage in entrepôt trade (Sit, 1982; Yu, 2000). The Hong Kong economic model is described as one of 'small firms reacting freely and independently to diversified domestic and international orders' (Regnier, 1993: 23). Since it has gradually opened its doors to foreign trade and investment in the early 1980s, the SME sector in mainland China has developed rapidly. SMEs have become the main contributors to foreign trade, and are active actors in different forms of foreign business relationships (Hall, 2007; *People's Daily*, 20 May 2006). It is believed that survey data from the two locations can offer rich and representative findings concerning SME internationalization and networking. While smaller firms' networking activities and their effects on internationalization may have similarities in all societies, it is suggested that they may be more intense in the Chinese context (Child and Rodrigues, 2005; Peng and Luo, 2000). The choice of Beijing as the empirical location in mainland China reflects increasing research attention on SME development in the city. It is regarded as a role model for understanding clustering effects, global linkages and the (international) development of new generation Chinese SMEs, especially in high-technology fields (Tan, 2006; Wright et al., 2008; Zhou and Xin, 2003).

There is still no consensus on the optimum sample size for quantitative study. Two hundred and ten usable responses, however, meets the minimum subject-to-item ratio of 10: 1 (the largest number of items in a single construct of this study was 20) suggested by Nunnally (1978: 421). It also exceeds the recommended sample size of 200 or more for factor analysis (Hinkin, 1995), and meets the minimum requirement of the subject-to-variable ratio of 15: 1 (the number of variables in the study is less than 20) for multiple regression test (Pedhazur, 1997: 207). The t-test statistics of non-response bias tests based on early and late responses recommended by Armstrong and Overton (1977) indicate that non-response bias was not a problem.

### Construct and measure development

*The 'networking behaviour' construct.* The construct 'networking behaviour' is composed of four variables: 'proactiveness', 'commitment', 'openness' and 'strategy'.

The three variables – 'proactiveness', 'commitment' and 'strategy' – were each measured by four behavioural descriptive statements (i.e. 12 items in total). Respondents were asked to rank items on a five-point Likert scale rating from 'strongly disagree' (1) to 'strongly agree' (5).

Measured items of 'proactiveness' and 'strategy' were designed with reference to the constructs applied in the study of Bonner et al. (2005) and Wu and Cavusgil (2006), and items of the variable 'commitment' to the study of Ritter et al., (2002). Nevertheless, a significant number of modifications were made. The items developed specifically for this study were first sent for review by academics and practitioners during the questionnaire design process, and several refinements were made to increase content validity. Exploratory factor analysis and confirmatory factor analysis were then conducted to assess validity and reliability. The total of 210 usable responses were split into two sets of data for the two factor analyses (Gerbing and Hamilton, 1996; Hurley et al., 1997).

Single exploratory factor analysis of the 12 items using oblique direct oblimin rotation resulted in one item being dropped from further analysis due to cross-loading. The factor analysis on the remaining 11 items has an excellent KMO of 0.862 and a significant Bartlett's test of sphericity. Three clusters of items were extracted with an eigenvalue of over 1, explaining 78.3% of the total variance. The scree test provided consistent results indicating three factors. All three factors had a Cronbach's alpha of over 0.8, which was above the recommended cut-off value of 0.7 (Nunnally, 1978). The internal consistency of the items of individual factors was also confirmed by a high corrected item-total correlation.

The 3-factor oblique model identified in the exploratory factor analysis was assessed with three alternative models (1-factor, 2-factor oblique and 3-factor orthogonal) using confirmatory factor analysis. The commonly used fit indices are summarized in Table 1.

The 3-factor oblique model had the best fit in terms of  $X^2/d.f.$  (Bryant and Yarnold, 2005; Kelloway, 1998), the CFI and the NNFI (Bentler and Bonett, 1980; Hu and Bentler, 1999; Kelloway, 1998). Its RMSEA of 0.075 is good according to Brown and Cudeck's (1993) baseline value of  $<0.08$ , and shows a better fit than the other models.

**Table 1.** Fit Indices of Confirmatory Factor Analysis

Model	$X^2$	d.f.	$X^2/d.f.$	RMSEA	GFI	NFI	NNFI	CFI
1-Factor	385.29	44	8.76	0.267	0.61	0.70	0.65	0.72
2-Factor oblique	243.14	43	5.65	0.207	0.71	0.81	0.80	0.84
<b>3-Factor oblique</b>	<b>65.98</b>	<b>41</b>	<b>1.61</b>	<b>0.075</b>	<b>0.90</b>	<b>0.94</b>	<b>0.97</b>	<b>0.97</b>
3-Factor orthogonal	112.84	44	2.56	0.12	0.84	0.90	0.92	0.93

Results of exploratory and confirmatory factor analysis confirmed the validity of the three variables, that is, 'proactiveness', 'commitment' and 'strategy' for hypothesis testing.

The variable 'openness' was measured by the range of channels that the respondents utilized to develop network relationships for foreign business development. A comprehensive list of 20 networking channels was derived based on an extensive review of literature, including Birley (1985), Cavusgil and Naor (1987), Chell and Baines (2000) and Ellis (2000), and discussions with practitioners. Respondents were asked to rate the use of each channel on a five-point Likert scale rating from 'not at all' (1) to 'very much' (5). Sixteen channels were retained after a factor analysis (KMO of 0.792). Three underlying factors were extracted, all with a Cronbach's alpha over Nunnally's (1978) recommended cut-off point of 0.7. The clustering of the 16 items into three different factors confirmed the level of diversity of the channels included in the list. The mean of the 16 retained items was calculated to be the scale of the variable for hypothesis testing.

*The 'availability of network resources' construct.* The 'availability of network resources' construct is defined by the amount of any tangible and intangible resources derived from network relationships. Respondents were asked to rate a list of resources on a five-point Likert scale from 'none' (1) to 'a great deal' (5). Studies have shown the influence of individual tangible and intangible resources (including financial, managerial or human capital, physical, relational, informational, market and business knowledge and technological resources) on the internationalization patterns and performance of SMEs (Gulati, 1999; Holmlund and Kock, 1998; Ibeh, 2005; Rialp et al., 2005; Yiu et al., 2007; Yli-Renko et al., 2002; Westhead et al., 2001). These existing studies were used to define a list of resource items for rating by firms. The list was further refined based on discussions with academics and practitioners. Ten resource items were included in the finalized list.

An exploratory factor analysis resulted in two clusters of resource items in the list, which were labelled as 'general organizational resources' and 'foreign business resources'. The former had a Cronbach's alpha of 0.727 and the latter 0.744, both over the recommended cut-off value of 0.7 (Nunnally, 1978).

The correlations of the predictor variables are presented in the correlation matrix outlined in Table 2. Referring to the Pearson correlation coefficient between every pair of the predictor variables for use in regression analysis, no substantially strong correlations ( $R > +/- 0.9$ ) were observed. Therefore, there was initially no multicollinearity in the data.

**Table 2.** Correlation Matrix of the Predictor Variables of the Study

	Proactiveness	Commitment	Openness	Strategy	General organizational resources	Foreign business resources
Proactiveness						
Commitment	.320**					
Openness	.241**	-.142*				
Strategy	.386**	.643**	.002			
General organizational resources	.278**	.009	.485**	.159*		
Foreign business resources	.454**	.331**	.243**	.313**	.266**	

\*\*Correlation is significant at the 0.01 level (1-tailed); \*Correlation is significant at the 0.05 level (1-tailed)

*The dependent variable – the internationalization patterns.* Investigation regarding internationalization patterns in this study was focused on the achievement of rapid internationalization by SMEs. The measure was represented by a categorical dichotomous variable, in which sampled firms were classified into two categories: ‘International New Venture’ (INV) and ‘Traditional Internationalizing Firm’.

This study applies Oviatt and McDougall’s (1994: 49) definition of ‘International New Venture’ as ‘a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries’. Three criteria specified in their more recent study (Oviatt and McDougall, 2005) – time of initial foreign business development, significance of the sale of outputs in foreign markets, and involvement in multiple foreign countries – were used as an aggregate measure for categorizing firms as INVs. The three criteria were operationalized as follows:

The time of initial foreign business development was calculated by subtracting the year of a firm’s establishment from the year in which the firm started any form of foreign business activities. The six-year cut-off was used, which is commonly adopted to define the INV (Arenius, 2005; Oviatt and McDougall, 1997; Prashantham, 2005; Spence, 2003).

The significance of the sale of outputs was measured by the percentage of foreign sales revenues to total revenues (Oviatt and McDougall, 1997). Although the 25% cut-off defined by Knight (1997) is the most commonly followed criterion (e.g. in Andersson and Wictor, 2003; Moen and Servais, 2002), it was deemed unrepresentative and insignificant considering the rapid expansion of international trade. A higher cut-off percentage at >50% therefore was applied in this study (also in Dimitratos et al., 2005; Prashantham, 2005).

Involvement in multiple foreign countries is defined by the geographical scope of foreign business activities. There is no precise operational measure for this criterion and studies often do not provide explicit measurement (e.g. in Andersson and Wictor, 2003; Coviello, 2006). In this study, respondents were asked to indicate where in a list of 12 countries/regions their companies had foreign business activities. The countries/regions were then categorized into five groups based on their geographical and socio-cultural proximity. The idea was to ensure that any combination of groups represented certain diversity. Firms which reported having foreign business activities in at least two groups of countries/regions were defined to meet this criterion. This approach is akin to that of existing studies that measured the psychic distance between geographical locations based on geographical and cultural distance (e.g. Reuber and Fischer, 1997; Sapienza et al., 2005).

All the three criteria had to be met for a firm to be categorized as an ‘International New Venture’, which is coded as ‘1’ for statistical analysis. Those firms that did not meet any one of the three criteria were categorized as ‘Traditional Internationalizing Firm’, which was coded as ‘0’. A ‘Traditional Internationalizing Firm’ is defined as a firm that pursues incremental internationalization (Johanson and Vahlne, 1977).

*Control variables.* Two control variables – ‘size of firm’ measured by number of employees and ‘industry’ by two categories ‘traditional’ and ‘high-technology’ – were included in the logistic regression analysis of the association of networking behaviours (Hypothesis 2 a–d) and the availability of network resources (Hypothesis 3) with the achievement of rapid internationalization by SMEs. Size of firm is regarded as a key differentiating factor influencing the internationalization of firms and is often included as a control variable in existing studies (e.g. Reuber and Fischer, 1997; Zahra et al., 2003). The potential effect of industry type upon the achievement of rapid internationalization by SMEs was also taken into account. The reason is that high-tech industries are believed to be inherently global-oriented and hence firms are more likely to internationalize rapidly (Bell, 1995; Bloodgood et al., 1996; Jones, 1999; Oviatt and McDougall, 1997; Yli-Renko et al., 2002).

Regarding Hypotheses 1a to 1d that assess the association of different aspects of networking behaviour with the availability of network resources, only 'size of firm' was included as a control variable. It is suggested that larger and more well-established firms could exercise their networking activities and network power more actively to obtain resources and support (Hakansson and Snehota, 1989; Stuart, 1998).

Details of the items and measurement scales that are applied to operationalize the constructs of this study are summarized in Appendix 1.

## Discussion of findings

### Networking behaviour and the availability of resources from networks

Multiple regressions were applied to test Hypotheses 1a, 1b, 1c and 1d. The regression statistics are summarized in Table 3. When the four predictor variables of the networking behaviour construct were included in addition to the control variable (model 1), the significance of the model (model 2) increased. The *F*-ratio of model 2 increased substantially from 9.094 ( $p \leq 0.01$ ) to 27.111 ( $p \leq 0.01$ ), and the  $R^2$  value shows model 2 explained 37% of the variance.

The control variable – size of firm – was positively associated with the availability of resources from networks. Its effect, however, reduced from 0.205 ( $p \leq 0.01$ ) to 0.115 ( $p \leq 0.05$ ) when the four predictor variables were added. Further analysis indicates that size of firm was significantly associated with the availability of general organizational resources from networks (0.179,  $p \leq 0.01$ ) but not with foreign business resources. A reason may be that the acquisition of foreign business resources, in particular market information and knowledge, depends on the learning orientation and capability of firms. Size of firm may not be a sufficient condition for learning. On the other hand, flexibility to learn and adapt is often cited as a competitive advantage of smaller firms (Knight and Cavusgil, 2004; Oviatt and McDougall, 1997).

**Table 3.** Multiple Regression Results – by Categories of Resources

Dependent variable	Network resources	Network resources – Organizational resources	Network resources – Foreign resources
<i>Independent variables (Model 2)</i>			
Firm size	.115*	.179**	-.050
Proactiveness (a)	.232***	.108	.323***
Commitment (b)	.058	-.070	.231**
Openness (c)	.415***	.419***	.206***
Strategy (d)	.150*	.172*	.036
<i>Control variable (Model 1)</i>			
Firm size	.205**	.255***	.017
<b>Model 1</b>			
$R^2$	.042	.065	.000
Adjusted $R^2$	.037	.060	-.005
<i>F</i> -ratio	9.094**	14.409***	.062
<b>Model 2</b>			
$R^2$	.374	.305	.283
Adjusted $R^2$	.359	.288	.266
<i>F</i> -ratio	27.111***	17.673***	20.135***
$n = 210$			

\* $p \leq .05$ , \*\* $p \leq .01$ , \*\*\* $p \leq .001$

Hypotheses 1a, 1c and 1d were supported. Statistics show that openness (H-1c) had a strong positive association with the availability of network resources (0.415,  $p \leq 0.001$ ), in particular with organizational resources (0.419,  $p \leq 0.001$ ), corroborating previous studies (Lechner and Dowling, 2003; Oviatt and McDougall, 2005). The association of proactiveness (H-1a) and strategy (H-1d) with the availability of network resources was weak. Further analysis reveals that proactiveness had a strong positive association with the availability of foreign business resources from networks (0.323,  $p \leq 0.001$ ), but not with general organizational resources. This may be due to different modes of resource acquisition (Ramachandran and Ramnarayan, 1993). Foreign business resources in this study mainly comprise intangible items such as foreign market information, knowledge and contacts. These resource items could sometimes be obtained by informal interactions and/or business exchanges with existing or prospective network actors through channels such as trade fairs and business events. The acquisition of organizational resources, including capital, physical facilities and equipment and human resources, often requires formal and contractual agreements between exchange partners. A one-sided initiative is not sufficient to lead to the acquisition of organizational resources from networks.

It is somewhat surprising to find that commitment (H-1b) was not significantly associated with the availability of network resources. This finding appears to corroborate Wu and Cavusgil's (2006: 87) comment that 'organizational commitment is not a sufficient condition to realize the rents from collaboration'. An explanation may be that while a firm may think it is committed to a network relationship, its commitment may not be well-received or perceived by the partner. Mutual commitment is not achieved and hence reciprocity and exchanges are not motivated (Anderson et al., 1994). As Sarkar et al. (2001: 362) pointed out, mutuality of commitment is enabled only when 'an exchange partner [believes] that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it'. Blankenburg Holm et al. (1999: 478) also suggested that the basis for mutual commitment is that 'the shared domain of two parties' views of their relationship is their mutual view'. However, it should be noted that commitment was positively associated with the availability of foreign business resources (0.231,  $p \leq 0.01$ ).

### *Networking behaviour and the achievement of rapid internationalization*

Logistic regression was used to test Hypotheses 2a, 2b, 2c and 2d because the dependent variable – the achievement of rapid internationalization – was defined as a categorical dichotomy. Statistics are summarized in Table 4.

The significant goodness-of-fit of both model 1 (two control variables only) and model 2 (control and predictor variables) was confirmed by the Omnibus tests ( $p \leq 0.05$ ) and the Hosmer and Lemeshow test ( $p \leq 0.05$ ). The chi-square statistic increased significantly from 6.017 (2) to 83.436 (6), and the predicted correct classification of firms improved from 60.5% to 80.5% from model 1 to model 2. It indicates that the inclusion of the predictor variables strengthened the explanation of the dependent variable.

Both control variables – size of firm and industry type – were not significantly associated with the achievement of rapid internationalization (in the formation of INVs) in either model 1 or model 2.

Hypothesis 2d concerning strategy was supported (1.315,  $p \leq 0.01$ ). The finding highlights the need to conduct networking as strategic activities by firms, especially if they are seeking to internationalize rapidly (Loane and Bell, 2006; Mort and Weerawardena, 2006; Spence, 2003; Welch and Welch, 1996). Although Hypothesis 2b (commitment) was positive (0.657,  $p = 0.056$ ), the significance of the result (0.056) was just above the minimal cut-off level of  $p \leq 0.05$ . Hypothesis 2a

**Table 4.** Logistic Regression Results of Association between Networking Behaviour and Internationalization

	B	S.E.	Wald	d.f.	Sig.	Exp(B)	95.0% C.I. for EXP(B)	
							Lower	Upper
Step 1(a)								
Firm size	-.002	.004	.228	1	.633	.998	.991	1.006
Industry	.720	.396	3.310	1	.069	2.054	.946	4.460
Proactiveness (a)	.550	.320	2.958	1	.085	1.733	.926	3.243
Commitment (b)	<b>.657</b>	<b>.344</b>	<b>3.653</b>	1	<b>.056</b>	1.929	.983	3.784
Openness (c)	<b>-1.091</b>	<b>.335</b>	<b>10.617</b>	1	<b>.001</b>	.336	.174	.648
Strategy (d)	<b>1.315</b>	<b>.317</b>	<b>17.200</b>	1	<b>.000</b>	3.725	2.001	6.936
Constant	-4.150	1.738	5.700	1	.017	.016		
Model#				0	1	2		
Omnibus test					6.017 (2)*		83.436 (6)***	
Hosmer and Lemeshow test					5.058 (8)		9.629 (8)	
Predicted % correct				59%	60.5%		80.5%	

#Model 0: Constant; Model 1: Enter Size and Industry; Model 2: Networking Behaviour

\* $p \leq .05$ , \*\* $p \leq .01$ , \*\*\* $p \leq .001$

concerning proactiveness was not supported (0.550,  $p = 0.085$ ). This may again suggest that a one-sided initiative of a firm to trigger the network development process is insufficient to result in beneficial business relationships being established.

### *The availability of network resources and the achievement of rapid internationalization*

Table 5 highlights the significant goodness-of-fit of both model 1 (two control variables only) and model 2 (control and predictor variables). The chi-square statistics, however, increased from 6.017(2) to 24.848 (4) from model 1 to model 2, and the significance level also rose.

The two control variables – size of firm and industry type – were again not significantly associated with the achievement of rapid internationalization of firms.

Hypothesis 3, which suggests that the availability of network resources is positively associated with the achievement of rapid internationalization, was only partially supported. The availability of foreign business resources was positively and significantly (0.903,  $p \leq 0.001$ ) associated with the achievement of rapid internationalization. The finding corroborates a majority of existing studies that have investigated the requisite resources for enabling internationalization (Holmlund and Kock, 1998; Johanson and Vahlne, 1990; Leonidou, 2004; Yli-Renko et al., 2002). These resources are highly specific to the foreign market context (e.g. foreign market information and experiential knowledge, foreign business contacts, and localized sales and distribution channels).

Unexpectedly, the availability of general organizational resources from networks was negatively associated with the achievement of rapid internationalization (-0.456,  $p \leq 0.05$ ). The result appears to contrast with Oviatt and McDougall's (1994) proposition that minimizing internationalization of organizational resources is a common attribute of INVs. The result of a negative association may be due to the application of an aggregated measure for classifying INVs in the study, which took into

**Table 5.** Logistic Regression Results of Association between Network Resources and Internationalization

	B	S.E.	Wald	d.f.	Sig.	Exp(B)	95.0% C.I. for EXP(B)	
							Lower	Upper
<b>Step 1(a)</b>								
Firm size	-.003	.003	.814	1	.367	.997	.991	1.003
Industry	.500	.336	2.209	1	.137	1.648	.853	3.186
Organizational resource	<b>-.456</b>	<b>.224</b>	<b>4.146</b>	<b>1</b>	<b>.042</b>	<b>.634</b>	.409	.983
Foreign business resource	<b>.903</b>	<b>.225</b>	<b>16.083</b>	<b>1</b>	<b>.000</b>	<b>2.468</b>	1.587	3.838
Constant	-2.038	.941	4.693	1	.030	.130		
<b>Model#</b>		<b>0</b>		<b>1</b>			<b>2</b>	
Omnibus test					6.017 (2)*		24.848 (4)***	
Hosmer and Lemeshow test					5.058 (8)		11.656 (8)	
Predicted % correct		59%			60.5%		63.3%	

#Model 0: Constant; Model 1: Enter Size and Industry; Model 2: Enter Org. resources and Foreign resources.

\* $p \leq .05$ , \*\* $p \leq .01$ , \*\*\* $p \leq .001$

account the time to internationalize, proportion of foreign sales to total sales, and geographical coverage. It is suggested that smaller firms are likely to depend heavily on a limited number of network parties for external resources (Chetty and Campbell-Hunt, 2003); and are obliged to fulfil the business direction and goals of these few resource-rich partners (Chow and Fung, 2000).

In summary, statistical results of the study suggest that the four aspects of networking have different influences in providing resources and/or establishing business relationships for SMEs to accelerate foreign business development. In particular, the ability to plan and conduct networking strategically with key partners is beneficial to enabling rapid internationalization. Furthermore, it is important that a firm be proactive and committed to forge network relationships, in order to obtain the foreign business resources that are essential to drive internationalization.

It should be noted that data for the study were collected in two regions of Chinese ethnicity and statistical analysis was conducted based on the combined sample. Although it is considered that firms' networking activities and their effects on internationalization share similarities among all societies, especially those of the same ethnicity (Child and Rodrigues, 2005), certain variations are expected due to differences in the institutional and business environment (Peng and Heath, 1996; Siu and Liu, 2005). In this study, for example, it is observed that sample firms in Beijing appear to be more open and proactive to networking through wider channels that entail not only personal and business contacts but also institutional channels, including government departments. On the other hand, Hong Kong firms lack the incentive to network through formal institutional channels, which may be explained by the region's traditional *laissez faire* policy and the relatively weak support for SMEs by the government (Chua, 2002; Yu, 2000). The sample size of this study, however, is not sufficient to support more rigorous statistical analysis of the hypotheses for the two regions individually. Replication of the study in more regions/countries in future research will help to enhance the generalizability of the conceptual framework and findings.

## Conclusions and implications

Within this paper it is argued that SMEs can have an active influence on their networking behaviours shaping the firms' network relationships and hence, effecting their international development. Four core behavioural aspects of networking – proactiveness, commitment, openness to network diversity and strategy – are specified and a set of measures are developed based on extensive literature review, feedback from academics and business practitioners, and rigorous statistical verification. Variations in the effects of networks are examined via behavioural differences at the level of the firm, showing how SMEs conduct networking to support internationalization. Moreover, those and behaviours that are more likely to impact (positively and negatively) on the results in terms of making network resources available and enabling rapid internationalization are also explored. This approach addresses the limitations in explanatory and predictive power of most network research, which study networks themselves and assume them to be contextually influenced by the operating environment of the firm (Bjorkman and Forsgren, 2000; Hite, 2005; Loane and Bell, 2006; Lorenzoni and Lipparini, 1999; Neergaard, 2005). The study contributes to knowledge concerning the effect of networks and networking in the specific context of the internationalizing firm, especially INVs (Coviello and Cox, 2006; Oviatt and McDougall, 2005). A more comprehensive operationalized measure of the INV, which aggregates the three dimensions (speed, proportion of foreign sales and geographical scope) in Oviatt and McDougall's (1994) original definition, is also developed. In addition, the conceptual framework is useful for examining the influence of this core business activity – networking – in small business and entrepreneurship research on business development outcomes (e.g. business formation and innovation) other than internationalization. For policy-makers and business practitioners, the study provides more concrete knowledge concerning the networking behaviour of internationalizing SMEs. It raises their awareness of those behaviours that are influential in creating positive outcomes, on which they can target policies and strategies to facilitate behavioural changes and skills development.

Although size of firm is still found to be an important factor in making resources available for international development, it is not significant in deriving the resources required to promote rapid internationalization. Size is also irrelevant when it comes to creating business opportunities and stimulating primary economic transactions abroad. This study, to a large extent, confirms that SMEs can offset limitations of their small size if they foster a positive attitude and enhance their networking skills. They can formulate and manage strategic network relationships more effectively to compensate for their constraints in developing international business.

Resource scarcity is a major barrier to the internationalization of SMEs. This study provides new insights into this common understanding by showing that different types of resources can produce different impacts. The availability of foreign business resources (including foreign market information and experiential knowledge, foreign business contacts, and localized sales and distribution channels) is positively associated with the achievement of rapid internationalization. On the other hand, reliance on networks to access organizational resources (including capital, human resources and technology) may impose restrictions on speed of foreign entry, proportion of foreign sales and/or geographical scope. It implies that SMEs should evaluate their resource position and demands, and understand the expectations and requirements of potential resource providers. It is crucial for SMEs to develop an appropriate networking strategy which allows them to access the requisite resources that match their development needs. Furthermore, SMEs need to be more proactive in triggering the information exchange and learning process to internalize foreign business resources, especially knowledge-based resources (e.g. market information and experiential

knowledge). They should place focus on acquiring these resources via both formal and informal interactions.

Network diversity may be beneficial to providing access to a larger variety of resources for international development (Oviatt and McDougall, 2005), as is confirmed in this study. However, developing and maintaining diverse networks can become a resource burden for SMEs. Findings support the notion that SMEs should strengthen their strategic intent in networking activities if they are seeking to accelerate their internationalization (Coviello, 2006; Loane and Bell, 2006; Mort and Weerawardena, 2006). It is therefore, more realistic and practical for SMEs to target a few key network partners who can provide the greatest foreign business opportunities and/or resources; and to commit resources to cultivate them as strategic relationships of the firm.

Stimulating and facilitating networking has become a key approach in industrial policies and business support programmes at international, regional, national and sub-national level to enhance the competitiveness of SMEs (e.g. European Commission, 2008; OECD, 2007; UNCTAD, 2001). These initiatives and interventions, however, must overcome many challenges to be effective; a key challenge is the conservative attitude of many SMEs to participation in networking (Bryson and Daniels 1998; Curran, et al. 1993; Hanna and Walsh, 2008; Kitching and Blackburn, 1999). Increased awareness and understanding of the important role of effective networking in supporting internationalization on the part of SMEs as well as policy-makers is essential to deepening the impact of public policy initiatives and interventions.

Findings of the study highlight three key aims for policy-makers to facilitate SME networking in supporting internationalization. The first is to improve network channels and linkages for SMEs to obtain foreign business resources. SMEs often face greater difficulties in identifying and accessing overseas business opportunities and contacts. The public sector is in a better resource and network position to undertake the role of network broker for SMEs to reach foreign markets. Brokerage activities include introducing SMEs into associated business networks abroad; collaborating with overseas trade offices and business associations to locate potential local partners; and providing match-making services for SMEs and foreign companies and organizing bilateral trade missions and exhibitions. The second aim is to help reduce the potential barriers to the business development of SMEs resulting from using external resources. Findings imply that increased reliance on network parties for organizational resources can hinder SMEs in accelerating internationalization. This may be due to the requirements and restrictions introduced by resource providers to minimize their own business risks. Policy-makers can work with key resource providers, such as financial institutions and banks, to improve systems for credit guarantees, business risk audit and firm performance appraisal. They can strengthen resource providers' confidence in providing resources for SMEs, and can increase SMEs' motivation to access external sources without the fear of losing control over their firms. The third aim is to strengthen SMEs' networking skills and competences. While networking seems to be a daily routine of business owners/entrepreneurs, they may not have the skills and capabilities in identifying and forging linkages that are relevant to international business development. Results suggest that strategic intent in networking is influential in driving internationalization. It will therefore be beneficial to include networking as a business skill that can be learned, and to tailor training and development programmes for SMEs.

Despite efforts to ensure the robustness of the research and the validity of the findings, the study has certain limitations which should be addressed by future research. First, data were collected from one key informant (the registered founder/owner/representative of the company) in each company. A multiple informant approach greatly reduces the possibility of single-respondent bias and enhances the validity of findings (Kumar et al., 1993). Second, a dyadic approach to data collection and analysis of a network relationship may be more appropriate to assess those aspects of networking, such as

commitment and trust, which involve reciprocity of parties (Sarkar et al., 2001; Wu and Cavusgil, 2006). Finally, data for the study were collected in two regions of Chinese ethnicity. Although it is believed that firms' networking activities and their effects on internationalization share similarities among all societies (Child and Rodrigues, 2005), replication in more regions/countries will help to enhance the generalizability of the conceptual framework and findings.

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### Appendix I. Items and Measurement Scales of Constructs of the Study

Constructs and variables	Latent factors resulted from factor analysis	Items	Measurement scale
Networking behaviour			
Proactiveness	Proactiveness ( $\alpha = 0.867$ )	<ul style="list-style-type: none"> <li>Promotes networking as a key activity to achieving foreign business development goals.</li> <li>Proactively participates in networking events for developing foreign business.</li> <li>Proactively networks with existing or potential foreign business partners.</li> <li>Budgets and allocates resources specifically for networking activities for foreign business development</li> </ul>	5-point Likert-scale rating of the descriptive statements: 'strongly disagree' (1) to 'strongly agree' (5)
Commitment	Commitment ( $\alpha = 0.860$ )	<ul style="list-style-type: none"> <li>Promotes trust and long-term commitment in business relationships.</li> <li>Seeks to be flexible and to accommodate partners when problems arise.</li> <li>Stresses the importance of mutual support between partners during adversity/ challenges in business relationship.</li> </ul>	
Strategy	Strategy ( $\alpha = 0.930$ )	<ul style="list-style-type: none"> <li>Plans networking activities based on business goals.</li> <li>Regularly evaluates and prioritizes business relationships according to their contributions to business goals.</li> <li>Regularly compares the company's functions, role, and power with those of the partners in business relationships.</li> <li>Regularly reviews and improves networking approaches in alignment with business goals.</li> </ul>	
Openness	Factor 1: Personal network channels ( $\alpha = 0.711$ )	<ul style="list-style-type: none"> <li>Family, relatives and personal friends of the key decision-maker</li> <li>Past work and business contacts of the key decision-maker</li> <li>Current business partners of the company</li> <li>Family, relatives, and personal friends of general staff</li> <li>Past work and business contacts of general staff</li> </ul>	5-point Likert-scale rating of the extent to which each network channels are used: 'not at all' (1) to 'very much' (5)

(Continued)

## Appendix I. (Continued)

Constructs and variables	Latent factors resulted from factor analysis	Items	Measurement scale
Availability of network resources	Factor 2: Direct business network channels ( $\alpha = 0.718$ ) Factor 3: Indirect institutional channels ( $\alpha = 0.870$ )	<ul style="list-style-type: none"> <li>• Domestic trade fairs</li> <li>• Foreign trade fairs</li> <li>• Local trade and industrial associations</li> <li>• Chinese ethnic networks</li> <li>• Local government departments</li> <li>• Local academic, research, and other professional institutes</li> <li>• Online marketplace</li> <li>• Public advertising media (e.g. magazines, TV, radio)</li> <li>• Foreign trade and industrial associations</li> <li>• Foreign academic, research, and other professional institutes</li> <li>• Foreign government departments</li> </ul>	5-point Likert-scale rating of the amount of each type of resources obtained from business relationships: 'none' (1) to 'a great deal' (5)
	Factor 1: General organizational resources ( $\alpha = 0.727$ )	<ul style="list-style-type: none"> <li>• Capital and financial resources</li> <li>• Physical resources (e.g. offices, plants, machines, equipment)</li> <li>• Business reputation and status</li> <li>• General international business and management knowledge and skills</li> <li>• Technology and technical know-how</li> <li>• New business ideas and opportunities</li> <li>• Human resources</li> <li>• Foreign market information and knowledge</li> <li>• Foreign client/ customer/ other business contact networks</li> <li>• Foreign sales and distribution channels</li> </ul>	
Internationalization patterns	N/A	<p>An aggregate measure of the following three items:</p> <ol style="list-style-type: none"> <li>1. <i>The time of initial foreign business development</i> 'The year the company started foreign business activity' minus 'The year of the company's establishment' ◦ <b>If <math>\leq 6</math> years, then '1', otherwise '0'</b></li> <li>2. <i>The significance of the sale of outputs</i> The approximate percentage (%) of foreign sales to total sales ◦ <b>If <math>&gt; 50\%</math>, then '1', otherwise '0'</b></li> </ol>	Categorical dichotomy: '0' = 'Traditional Internationalizing Firm' or '1' = 'International New Venture'

## Appendix I. (Continued)

Constructs and variables	Latent factors resulted from factor analysis	Items	Measurement scale
		<p>3. <i>Involvement in multiple foreign countries</i>            The foreign countries/regions in which the company has business activities:            Group 1: Mainland China, Hong Kong, Macau, Taiwan            Group 2: Japan and Korea            Group 3: South East Asia, Africa and Middle East            Group 4: Europe, Australia and New Zealand            Group 5: North and South America</p> <p>o <b>If the company has business activities in more than two groups of foreign countries/regions, then '1', otherwise '0'</b></p>	
Firm size	N/A	Number of employees	Number
Industry	N/A	'Traditional' or 'High-Tech'* *Classification of 'High-Tech' is based on the commonly used industry-based definitions adopted in the US (InContext, June 2000)	Categorical dichotomy: '0' = 'Traditional' or '1' = 'High-Tech'

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