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**Study on Factors Affecting SMEs' Export Channel Choice - Entrepreneurial Orientation (EO), Networks, Network Diversity, Networking Capability and Institutional Distance**

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**Study on Factors Affecting SMEs' Export  
Channel Choice**  
**-Entrepreneurial Orientation (EO), Networks,  
Network Diversity, Networking Capability  
and Institutional Distance**

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For Doctor of Philosophy in Strategic Management



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## **Dedication**

### **To my parents**

Mr. Xiaochun Deng  
Ms. Xiaohong Huang

&

### **To my parents-in-law**

Mr. Yanling Zhang  
Prof. Wei Zhao

&

### **To my husband**

Dr Zhaoxi Zhang

For their never-ending love, encouragement and support

---

## Acknowledgements

I would like to express my special thanks and gratitude to my excellent supervisors: Professor Keith D. Brouthers and Dr Fatima Wang. It has been an honour to be their Ph.D. student. I appreciate all their contributions of time and ideas that have made my Ph.D. experience productive and stimulating. They always stood by me and provided me with advice, guidance and support, as well as expertise in theory and methodology. I am especially thankful to Professor Keith D. Brouthers who has been a primary source of considerable inspiration and intellectual motivation through the entire process of this Ph.D. dissertation from the beginning to the completion. The joy and enthusiasm he has for his research in the field international business and strategic management was contagious and motivational for me, even during tough times in the pursuit of the Ph.D. Whenever I turned to him for help, he was always there with insight and patience.

My Ph.D. program would not have been possible without the help of many organizations and people. I am thankful to Professor David Chapman of UCL (University College London), who supervised me during my Master's period. He extended my insight into international business and entrepreneurship studies and encouraged my further studies in the UK. I am also grateful to my dissertation upgrade examiners: professor Samuel Aryee and Professor Pervez Ghauri, for their inspiring advice in my upgrade meeting. My special thanks go to Dr Mike Clinton, who has expertise in research methodology and statistics. He provided my colleagues and me with a very impressive statistical training course, and helped us a lot with data analysis.

A very important part of the research project was the data collection with questionnaire survey, which was fulfilled with the sincere help I received from Mr. Ruiling Zhang, Mrs. Jinghui Fang, Mr. Ziqiang Chen, Mrs. Dan Chen, Mr. Guoqiang Yu, Mr. Yubo

Dang, Mrs. Yaoling Li, Mr. Yao Pan, Mrs. Xiaojing Zhang, Mrs. Huiming Yu, Mr. Yulei Wang and Mrs. Laura Witz. I would also like to express great appreciation to the following industrial associations in China Zhejiang Province: Zhejiang Auto & Motorcycle and Parts Association, Zhejiang Crystal Crafts Association, Zhejiang Food Industry Association, Zhejiang Garment Industry Association, and Zhejiang Electric Appliance Trade Association.

Lastly, I would like to thank my family for all their endless love and encouragement. The great love and support I received from my parents and parents-in-law have made all the hard work, late nights, and sleepless nights worth it. I am also deeply indebted to my loving, supportive, encouraging and patient husband Mr. Zhaoxi Zhang, who will graduate from the University of Oxford this year as a Ph.D. as well. He provided his faithful support during the whole creation process of my Ph.D. dissertation. Without his tolerance, motivation and support, this dissertation could not have been achieved. I enjoy so much the life we are living in Oxford.

Thanks again to all who have helped me!

## ABSTRACT

This dissertation integrates transaction cost analysis (TCA), resource-based view (RBV), network and institutional theories to explore the effect of entrepreneurial orientation (EO), networks (i.e., network size and strength), network diversity, networking capability and institutional distance on small and medium sized enterprises (SMEs) export channel choice. Previous literature on the topic of export channel choice has generally focused on transaction cost theory. Under the TCA logic, observed channel structures are always thought to be those that minimize the costs associated with opportunism, whilst economizing on bounded rationality. Although TCA does a good job of explaining export channel choice, studies have ignored some indirect potential effects, such as the external macro-level institutional context, or the resources and capabilities a firm possesses. In order to fill these knowledge gaps, this research drew on the perspectives of network, institutional, TCA and RBV of the firm, suggesting that an internationalizing firm's EO, networks (i.e., network size and strength), networking capability, network diversity and institutional distance impact its export channel choice via the mechanism of affecting transaction costs and value creation.

In this dissertation, I utilized a survey research design to collect data from Chinese manufacturing SMEs involved in exporting. Based on the valuable data collected from 203 firms, the empirical findings from this study found that firms possessing high EO and network diversity make very different export structure choices from those that have weak EO capability and network diversity. As expected, network diversity is found to be positively related to the choice of hierarchical export channels. In contrast to our prediction that high-EO firms are more likely to choose a hierarchical export channel, a firm with a high-level EO is found to be more likely to choose an intermediate export channel than the hierarchical mode or market-based mode. This is perhaps due to the fact that firms consider the trade-off

between the control that each export channel affords the entrant and the cost of resource commitments. With regard to the moderators, contrary to our initial expectations, I found no evidence that a firm's networks (i.e., network size and strength) moderate the relationship between EO and export channel choice. It is confirmed that a firm's networking capability (i.e., knowledge recognizing ability, knowledge assimilation, partnering ability and total networking capability) positively moderates the relationship between network diversity and export channel choice, as indicated by previous studies. An SME's strong networking capability directly contributes to their resource acquisition and allocation, and consequently improves the efficiency and effectiveness of limited network resources, in turn making it easier for SMEs to export independently. Finally, while institutional distance has been studied in previous literature and He et al 's (2013) results suggest that the differences in institutional settings are able to affect a firm's value generating from resource-based advantages and export channel choice, institutional distance (CAGE) does not have an effect in explaining the choice of a specific export channel in our case. I speculate that this finding may be a consequence of the inaccurate measurement or lie in the nature of the study's sample. Overall, some of the hypotheses are supported and some are not.

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## Chapter 1 Introduction

In the last few decades one of the most frequently researched topics in international business has been the internationalization of firms (Lu and Beamish 2001). Most international business studies have implicitly regarded internationalization as a firm's cross border behavior, describing the term 'internationalization process' as a firm's process of increasing involvement in international markets (Johanson and Vahlne 1977, Chetty and Campbell-Hunt 2003). More and more firms, especially small and medium enterprises (SMEs), now tend to participate in international activities; internationalization has been well documented as a successful strategy for SMEs to access and exploit vast international business opportunities that were previously capitalized upon almost exclusively by large and focal firms (Ruzzier, Hisrich et al. 2006, Zhou, Wu et al. 2007).

Internationalization has recently captured increasing academic attention (Westhead, Wright et al. 2001) and several theories have emerged to explain firms' internationalization, such as economic theory, stage theory and network theory (Coviello and Martin 1999, Lamb, Sandberg et al. 2011). Specifically, economic theory explains firms' internationalization as a strategy to explore their monopolistic advantage in foreign countries (Buckley and Casson 1976), building on the use of transaction cost analysis (Williamson 1973). Stage theory suggests that firms' internationalization activities occur incrementally in stages after a period of domestic market growth and maturation (Johanson and Vahlne 1977, Johanson and Vahlne 1990). However, scholars argue that this theory provides a weak explanation for understanding SME internationalization (McDougall, Shane et al. 1994, McDougall and Oviatt 1996). Furthermore, a network explanation of internationalization suggests that organizational boundaries incorporate both formal and informed relationships (Sharma and Blomstermo 2003, Johanson and Mattsson 2015, Loane and Bell 2006). Compared with

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previous explanations, scholars argue that this perspective is a more useful concept to explain SMEs' internationalization processes (Coviello and McAuley 1999, Lamb, Sandberg et al. 2011) since firms with international aspirations are able to overcome resource limitation challenges through an increased reliance on networks (Oviatt and McDougall 1994, Patel, Fernhaber et al. 2013).

Management literature provides an additional body of research related to SME internationalization. Exporting is one of the most prominent avenues of internationalization (Lu and Beamish 2001); it has been widely recognized as the first step of entering international markets, serving as a platform for future international expansions (Kogut and Chang 1996, Lu and Beamish 2001). This strategy is particularly applicable to SMEs' internationalization because SMEs are known to suffer from foreignness liabilities and smallness caused by their size and resource constraints, and when internationalized, foreignness makes it costly for firms to operate in foreign markets (Zaheer 1995, Zaheer and Mosakowski 1997). Therefore, in order to reduce the potential costs and risks which might result from a firm's unfamiliarity with the foreign culture and other aspects of the international market, firms generally begin exporting into similar countries by using low risk and simple indirect methods; over time firms gain sufficient foreign market commitment and experience and expand to more 'psychically distanced' markets by using direct instead of indirect export channels (Osborne 1996).

Generally speaking, internationalizing firms can export their products into the target foreign market in a range of ways (Bello and Lohtia 1995). Export channels include the hierarchical, intermediate and market export channel (Klein, Frazier et al. 1990, Klein and Roth 1990). Firms can be completely integrated through the hierarchical mode, where the firm serves foreign markets with home-based representatives or establishes sales

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subsidiaries in a foreign market by itself, or it can use the market mode, where the firm relies on foreign independent agents who run the distribution and sales of the final product abroad (Klein, Frazier et al. 1990, Klein and Roth 1990). Between these two extremes, firms also can choose intermediate export channels (i.e., forming distribution related strategic alliances with other foreign firms), whereby they perform some functions while partner firms perform the others (Klein, Frazier et al. 1990, Klein and Roth 1990).

Entrepreneurs frequently face the important question of how to choose the most appropriate export channel to access foreign markets (Aulakh and Kotabe 1997). Most researchers have recognized the importance of an appropriate export channel for exporting success (McNaughton 2002). Scholars argue that the export channel decision is strategic because it affects the allocation of resources, is able to sharpen future foreign expansion, and may enhance the firm's competitive advantage (Johanson and Vahlne 1977). Choosing an appropriate export channel has gradually become an important strategic focus for internationalization because an appropriate export channel provides a firm with a better competitive advantage when operating in foreign markets (Aulakh and Kotabe 1997).

Most of the previous literature investigating these factors determines that exporting channel choice in foreign markets has mainly focused on the characteristics of exporting firms, in particular their resources and capabilities (Aulakh and Kotabe 1997, Westhead, Wright et al. 2001, He, Brouthers et al. 2013), and their need to minimize transition costs (Dwyer and Oh 1988, Klein, Frazier et al. 1990, Klein and Roth 1990, Bello and Lohtia 1995). Specifically, a transaction cost analysis (TCA) model of export channel choice is developed to identify conditions that increase the likelihood that specific export channels (i.e., an integrated or nonintegrated export channel) will be used to serve a foreign market (Anderson and Coughlan 1987, Bello and Lohtia 1995).



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Research on the topic of export channel choice has predominately been from the internationalization perspective, which is closely related to transaction cost theory (Williamson 1979). The primary focus of this theory is micro-level transaction characteristics, such as asset specificity, uncertainty (international and external) and channel volume (Klein, Frazier et al. 1990, Campa and Guillén 1999). Under the TCA logic, observed channel structures are always thought to be those that minimize the costs associated with opportunism, whilst economizing on bounded rationality (Williamson 1991, Shervani, Frazier et al. 2007). The research shows that firms will choose an intermediate channel when the asset specificity of the transaction concerned is of an intermediate degree, and a market channel will be used if the transaction involves a very low degree of asset specificity (Gatignon and Anderson 1988, Erramilli and Rao 1993, Tsang 2000, Brouthers, Brouthers et al. 2003). The market and intermediate channel will be chosen over the hierarchical channel when firms' internal uncertainty is relatively low and/or the host market is volatile (Shervani, Frazier et al. 2007). In the case where channel volumes are too low to achieve internal economies of scale in distribution, intermediate and/or market modes are generally used (Bello and Lohtia 1995). When more than sufficient channel volumes are experienced, firms are more likely to integrate further by relying on the hierarchical mode (McNaughton 1996, McNaughton 2002).

Generally speaking, existing scholars have provided evidence that TCA does a good job of explaining export channel choice (McNaughton 2002). However, some scholars argue that TCA theory is weak with respect to its explanation of how organizations choose the most appropriate export channel, because it focuses largely on the direct influence of its three factors on export channel choice and ignores some indirect potential effects, such as the external macro-level institutional context and the resources and capabilities a firm

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possesses (Makino and Neupert 2000, Shervani, Frazier et al. 2007, He, Brouthers et al. 2013). It is therefore necessary to extend the model to account for particular circumstances (John and Weitz 1988, Klein, Frazier et al. 1990, McNaughton 1996).

Building on such theories, some scholars extend previous research by examining how other contextual variables might also impact the determinant of a firm's export channel choice. For instance, based on a logistic regression model of what factors affect the form of the export channel chosen in various foreign countries, Anderson and Coughlan (1987) suggest that export channel choice is associated with the degree of service requirements, product differentiation, product category age, relatedness to the principal business, legal restrictions, competitive behavior, country being entered and the strength of the firm's patent (Anderson and Coughlan 1987). Moreover, one scholar conceptualized and tested the effect of a firm's ownership and location factors (i.e., geographical markets, cultural difference, and institutional arrangements) on the choice of export channel (Campa and Guillén 1999). The result shows that the greater the level of ownership factors (i.e., intangible technologic assets, product variability, and resources availability), the higher the likelihood of choosing high-control hierarchical export channels. When the export market is well known to a firm, and when the firm's competitors are based in richer countries than the home country, the firm will prefer hierarchical export channels (Campa and Guillén 1999).

Other factors, such as organizational capability (i.e., international experience and firm size) and strategic variables (i.e., market position strategy, global integration and differentiation strategy) have also been examined to improve explanations of export channel choice (Aulakh and Kotabe 1997). The results indicate that factors of organizational capability and a firm's strategies are associated with the export channel choice (Aulakh and

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Kotabe 1997). Researchers have also recently tried to explain variations in export channel choice by examining firms' resource-based market orientation (MO) capabilities, the institutional distance between home and export country (He, Brouthers et al. 2013), and a firm's market power (i.e., market share and level of product differentiation) (Shervani, Frazier et al. 2007). Although the results are mixed, scholars generally suggest that the basic TCA framework must be supplemented by another construct in order to adequately explain forward export channel choice. This is because the TCA perspective has ignored the way in which differing firm resources and capabilities influence the choice of export channel in international markets (Tsang 2000, Madhok 2002, Shervani, Frazier et al. 2007).

Recent researches recognize the potential for resources and capabilities to influence the choice of organizational governance and channel structure, and literature exploring these effects is beginning to emerge (Chen and Chen 2003, Leiblein 2003, Mayer and Salomon 2006, He, Brouthers et al. 2013). Collectively, studies into export channel choice have tended to conclude that the resource-based view (i.e., resources and capabilities) complements TCA approaches to export channel integration since TCA is primarily concerned with exploitation, while the resource-based view (RBV) is not just motivated by considerations of exploitation, but also exploration of resources and capabilities, taking both values and costs into account (Leiblein 2003, He, Brouthers et al. 2010).

RBV theory is highly valuable to analysis of SME internationalization (Barney, Wright et al. 2001). This theory argues that firms are heterogeneous with respect to their resources and capability endowments. Firms with resource-based advantages will achieve superior performance (Barney 1991, Barney, Wright et al. 2001). Based on this theory, exporting channel research has examined the impact of RBV advantages, such as international experience-based resource advantages (Aulakh and Kotabe 1997), organizational learning

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capability (De Clercq, Sapienza et al. 2005), and resource-based market orientation (MO) capabilities (He, Brouthers et al. 2013), on exporting channel choice. Accordingly, although the research results are mixed, scholars have found that knowledge resources and resource-based capabilities provide some firm-specific advantages.

While previous export channel research based on theories of TCA and RBV provides valuable insights about what specific factors might affect the choice of export channel, these studies tend to suffer from a variety of important issues. First, although existing international entrepreneurship and RBV studies have examined the relation between entrepreneurial orientation (EO) and SMEs' internationalization, most studies focus on internationalization in general (Lumpkin and Dess 1996, Lumpkin and Dess 2001, Rauch, Wiklund et al. 2009). The relationship between EO and SMEs' entrepreneurial strategies, particularly export channel choice, has not been tested by previous discussions. Second, while early RBV studies considering networks and the impact of networks on internationalization (Zhou, Wu et al. 2007, Al-Laham and Souitaris 2008, Musteen, Francis et al. 2010) and network structure (Burt 1992) have emerged as an important area of study, research related to the effect of network size and strength on a firm's export channel choice has been ignored (Uzzi 1996, Goerzen and Beamish 2005).

Third, although the impact of network diversity on firms' internationalization has been studied in recent network research (Goerzen and Beamish 2005, Jiang, Tao et al. 2010), this has focused on firms' performance in general, without looking at its impact on SMEs' export channel choice. While a few scholars have helped us to understand how international and domestic networks affect a firm's internationalization, they do not consider network diversity in terms of international and domestic constructs, nor do they differentiate the effect of such dimensions on export channel choice. Fourth, while prior

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network scholars using network theory which is based on RBV have explained how firms' networks in terms of relational (Oviatt and McDougall 2005) and structural position (Burt 1992) can affect their internationalization, they only look at networks with relevant resources and do not consider capability. Extant research on firms' networking capabilities has primarily focused on the link between networking capabilities and performance (Kale, Dyer et al. 2002, Walter, Auer et al. 2006); no research attention has been paid to investigating how networking capability might impact SMEs' export channel choice.

Fifth, the existing TCA literature has placed too much emphasis on micro-level cost minimization (Anderson and Coughlan 1987, Klein, Frazier et al. 1990, Zajac and Olsen 1993, Madhok 1997, Brouthers, Brouthers et al. 2003); this has caused export channel choice research to neglect the external macro-level institutional context (i.e., cultural, administrative, geographic and economical differences between home and host country), which might further influence export channel choice. It is important to study export channel choice based on institutional theory, because institutions have been defined as the 'rule of the game' by which firms participate in a given market (North 1990). A firm's international strategies can also be shaped by the characteristics of the particular context in which it operates (Hoskisson, Eden et al. 2000, Meyer, Estrin et al. 2009). Institutional theory is the foundation of institutional distance which emphasizes the relationship between organizations and the environment, and suggests that not all countries are alike (North 1990, Ghemawat 2001). Adding this theory to TCA theory can enrich the understanding of organizational strategic choices (North 1990).

In recent years, studies of export channel choice and transaction cost theories argue that TCA (Williamson 1992) is weakest with respect to its explanation of how organizations choose the most appropriate export channel to access foreign countries, acknowledging

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that refinements and extensions are desirable (Madhok and Tallman 1998, Madhok 2002). Theories of RBV, network, TCA and institutions should have strong implications for firms' strategic design adoption because the organizations operate in both competitive and institutional environments (Roberts and Greenwood 1997, Brouthers 2002). RBV compensates for the weakness of TCA theory by looking at the value-creating benefits of a transaction (Leiblein 2003, Mayer and Salomon 2006). It is important to study export channel choice by developing network theory because markets comprise a network of connected business relationships (Chetty and Wilson 2003). A firm's economic actions are influenced by the social context in which they are embedded and these actions can also be influenced by the position of actors in social networks (Gulati 1998).

### **1.1 Purpose of study**

The purpose of this study is to expand understanding of the reasons for firms' export channel choice in international markets. I address export channel choice issues by integrating TCA, RBV, network, and institutional theories into a more comprehensive model, using manufacturing-based exporting SMEs in China as the unit of analysis to consider how a firm's EO, different kinds and levels of networks (i.e., network diversity), network resources, networking capabilities and institutional distance, affect its export channel choice.

According to previous strategic management and entrepreneurship literature, I define EO as the strategic response of an organization to environmental uncertainty (Yeoh and Jeong 1995), consisting of three dimensions: innovativeness, proactiveness and risk-taking propensity (Covin and Slevin 1991, Wiklund 1999). Specifically, innovativeness reflects a firm's tendency to engage in new idea generation, novelty, experimentation, and R&D activities, thereby resulting in new products and processes and departing from established practices, administrative techniques and technologies (Lumpkin and Dess, 1996).

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The term proactiveness refers to the propensity to anticipate future wants, problems, and changes in the operating market, and to pioneer new methods and techniques (Lee, Lee et al. 2001). Firms' risk-taking propensity denotes their willingness to venture into the unknown and make investments into projects that have uncertain outcomes or unusually high profits and losses (Covin and Slevin 1991). Given that SMEs can be differentiated in terms of their EO (Yeoh and Jeong 1995, Knight 2001) and firms who possess a strong EO tend to be innovative, proactive and aggressive risk-takers in their pursuit of opportunities in overseas markets (Covin 1991), I suggest that a firm's EO has a positive relationship with its choice of export channel.

Networks are defined as the relationships between a firm's management team and employees with customers, suppliers, competitors, governments, distributors, banks, research intuitions and any other parties that enable it to internationalize its business activities (Granovetter 1985, Coviello and Munro 1997) and that can be seen as a resource in itself (Gulati 1999). According to strategic network literatures, network diversity refers to the network of relationships in which firms are embedded, which consists of different partner characteristics (Jiang, Tao et al. 2010). Partner characteristics can be distinguished based on their national background (i.e., countries of origin) (Patel, Fernhaber et al. 2013). I define a domestic-based network as a firm's cooperative ties on the national level (Lin and Chaney 2007). International networks have been defined as the network of the firm's foreign ties with foreign partners (Musteen, Francis et al. 2010). Given that the central foundation of networks is the transmission of valuable knowledge through different ties (Zhou, Wu et al. 2007, Ellis 2011), diverse networks can benefit firms in gaining access to multiple sources and providing firms with knowledge on the larger scale of relevant international expansion (Jiang, Tao et al. 2010, Patel, Fernhaber et al. 2013). I therefore

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suggest that firms' network diversity is positively associated with their export channel choice.

Networking capability refers to a firm's ability to recognize and assimilate valuable knowledge from particular partners (Cohen and Levinthal 1990, Anh, Christopher Baughn et al. 2006), and the ability to select its own efficient network of partnerships, entering into valuable relationships to acquire useful and necessary knowledge resources, while maintaining few or no redundant partnerships (Walter, Auer et al. 2006). Underpinning network, capability and strategic management literatures is the fact that although diverse networks provide firms with important knowledge sources and potential competitive advantages, firms possessing weak networking capabilities might find it difficult to benefit from such knowledge (Dyer and Singh 1998, Ireland, Hitt et al. 2002). Accordingly, I explore the idea that networking capability moderates the relationship between SMEs' network diversity and export channel choice.

Institutional distance can be understood as the extent of similarity and dissimilarity between institutional environments in the home and host country (Kostova and Zaheer 1999). Given that large institutional distance tends to increase the challenge of international expansion (Xu, Pan et al. 2004), the larger the institutional distance between the home and host country, the more knowledge the firm requires to overcome the distance (Schwens, Eiche et al. 2011). Therefore, linking the institution context to network diversity and export channel choice study, I suggest that the relationship between diversity network and export channel choice is moderated by both the formal and informal institutional distance.

## **1.2 Thesis structure**

In order to fill the above-mentioned research gaps, in this thesis I develop three frameworks and papers to delineate how entrepreneurial orientation, networks, network

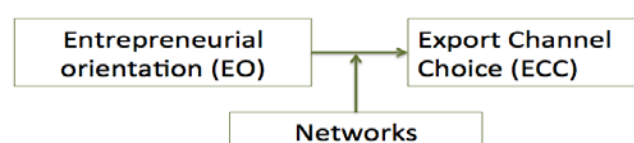


diversity, networking capabilities, and institutional distance influence firms' export channel choice.

In the first paper I integrate RBV and TCA theories into a more comprehensive mode to explain SMEs' export channel choice. According to strategic management and entrepreneurship literature, internationalizing SMEs can be differentiated in terms of their strategic entrepreneurial posture (Yeoh and Jeong 1995, Knight 2001). Given that in the exporting context, on the basis of the three-dimensional construct of EO (i.e., innovativeness, proactiveness and risk-taking), a firm's strategic posture can be established on a continuum ranging from conservative to entrepreneurial (Covin and Slevin 1989, Covin 1991, Yeoh and Jeong 1995), I intend to examine the influence of EO on SMEs' export channel choice to find out whether entrepreneurial firms with high EO will choose a different export channel from conservative firms with low EO.

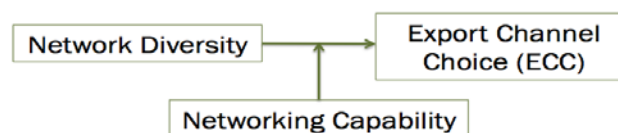
Inspired by the relational theory (Granovetter 1973, Granovetter 1985) and structure theory (Burt 1992) of social network, and given that the size and strength of networks impacts firms' potential country-wide scope and speed of internationalization (Oviatt and McDougall 2005), this study focuses on network size and strength. Given that different networks provide firms with access to distinct social resources, the value of such access will be contingent on the resource needs associated with a firm's EO (Stam and Elfring 2008), I therefore adopt networks as a moderator and also examine their moderating influence on the relationship between the EO and SMEs' export channel choice (figure 1).

Figure 1: Research Framework of Paper 1



In the second paper, I extend past research by creating a model providing new insights into the research of resource and capability factors affecting firms' export channel choice, taking into account value creation in export channel choice study (figure 2). Building on the perspective of RBV (i.e., resources and capabilities), I examine the relationship between network diversity, networking capabilities and firms' export channel choice. Unlike existing studies that concentrate on the network structure (Uzzi 1997, Burt 2000) and its impact on a firm's internationalization, this paper examines the effect of network diversity in terms of domestic and international dimensions on a firm's export channel selection. Grounded in the network perspective, I first analyze the benefits and potential drawbacks of possessing mostly international/domestic networks and diversity networks for SME internationalization; then I examine whether firms with diversity networks (i.e., both domestic and international networks) will choose different export channels compared to firms that only have either domestic or international networks. Inspired by previous networking capability research (Cohen and Levinthal 1990, Walter, Auer et al. 2006), and given that resources rely on capability to create products or advantages superior to those of rivals (Amit and Schoemaker 1993, Lu, Zhou et al. 2010), this paper explores the idea that networking capability moderates the relationship between SMEs' network diversity and their export channel choice.

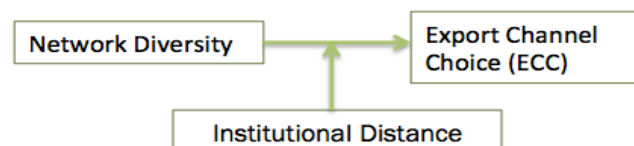
Figure 2: Research Framework of Paper 2



In the third paper, I present a comprehensive model to address the export channel choice issue by integrating RBV, network perspective and institutional theory. According to network and institutional environment literature (North 1990, Kostova and Zaheer 1999),

scholars suggest that export markets are always different from domestic markets, and the differences in institutional settings can affect a firm's value generation from resource-based advantages and international strategic choice (Brouthers and Brouthers 2000, Brouthers 2002). I thus bring institutional distance (CAGE) into the conceptual framework as a moderator between a firms' network diversity-export channel choice relationship (figure 3). Drawing from institutional theory (North 1990), scholars suggest that a country's specific institutional context sets the framework for market transactions by defining the formal and informal rules of the game and specifying the conditions in which firms are legitimate (Estrin, Ionascu et al. 2007, Holmes, Miller et al. 2013). This study adds to the aforementioned studies (paper 2) by explicitly investigating the moderating influence of both informal and formal institutional distance on the relationship between network diversity and export channel choice.

Figure 3: Research Framework of Paper 3



### 1.3 Expected contribution of research

Overall, these three papers will make several important contributions. First, the main contribution is the extension of TCA study by adding the combined theories of international entrepreneurship, RBV, network and institution to the study of a firm's export channel choice. The work thereby extends traditional research's main focus on the effect of asset specificity and environment uncertainty on multinational company's (MNCs) export channel choice, taking into account value creation in the study of SMEs' export channel choice. Second, although export channel research relies on TCA and has ably determined the most

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efficient export channel for firms to use, these studies mainly focus on MNCs in developed countries (Dwyer and Oh 1988, Gatignon and Anderson 1988, Klein, Frazier et al. 1990, Bello and Lohtia 1995). Unlike previous studies, I focus on SMEs' internationalization in an emerging market, such as China, which I would suggest is a timely subject matter. Third, previous results with regard to MNCs may not be valid for SMEs (Brouthers and Nakos 2004). Compared to large multinational companies, SMEs are different in terms of size, managerial style, ownership and resource characteristics (Coviello and McAuley 1999, Terziovski 2010). Unlike MNCs, most SMEs possess fewer resources (Brouthers and Nakos 2004) and are constrained by limited capabilities with regard to internationalization (Lu, Zhou et al. 2010). Explaining the strategic internationalization behavior of SMEs thus remains an important conceptual problem. I extend previous research on firms' export channel choice by focusing on SMEs in particular. Finally, my research contributes to export channel choice literature by adding new perspectives to previous study. I extend previous research on firms' export channel choice by developing EO and institutional distance between countries as factors related to a firm's export channel choice.

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## Entrepreneurial Orientation (EO), Networks and SMEs' Export Channel Choice

### 2.1 Introduction

When considering foreign market expansion, international firms must consider which channel structure to adopt (Klein and Roth 1990, Aulakh and Kotabe 1997). Generally, in an exporting context, firms can perform all the necessary marketing and distribution functions through the hierarchical mode, whereby a firm serves foreign markets using home-based representatives or established sales subsidiaries in a foreign market (Klein, Frazier et al. 1990, Klein and Roth 1990). Firms may choose not to perform any of these functions themselves, however, and can instead rely on contracting the tasks to independent distributors who take the title of the manufacture's goods and resell them to other middlemen and final buyers (Klein, Frazier et al. 1990, Klein and Roth 1990). Finally, a firm may instead use an intermediate mode which performs some functions; partner firms, such as commission agents and strategic allies, perform the other functions (Klein, Frazier et al. 1990, Klein and Roth 1990). Different choices of channel structure reflect a firm's varied degree of control, different requirements of resource investment (Aulakh and Kotabe 1997), different institutional arrangements and differing degrees of commitment and risk (Klein and Roth 1990).

The channel structure decision is a critical component of any firm's strategy, and choosing the right degree of channel integration can make the difference between success and failure in a foreign market because the appropriate level of integration gives a firm a more salient competitive posture when operating in a foreign market (Aulakh and Kotabe 1997, He, Brouthers et al. 2013). The correct decision must also be made early, because export channel structures are more difficult to change than other aspects of the marketing mix such as pricing, product differentiation and advertising, and wrong decisions may have

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long-lasting, adverse consequences (Anderson and Coughlan 1987, McNaughton 1996, Aulakh and Kotabe 1997).

Export channel studies primarily focus on cost-minimization in export channel integration (Anderson and Coughlan 1987, Klein, Frazier et al. 1990, Klein and Roth 1990, Bello and Lohtia 1995, Aulakh and Kotabe 1997). In determining the most cost-effective mode, scholars in the internationalization research field traditionally rely on transaction cost analysis (TCA). Empirical tests of TCA have focused on three characteristics of market exchange: 1) firm's asset specificity (i.e., product assets, physical assets and human assets), 2) frequency and 3) uncertainty (i.e., internal-behavioral and volatility and diversity of the environment in the external market) (e.g., Klein, Frazier et al. 1990, Bello and Lohtia 1995, McNaughton 1996, McNaughton 2002, Brouthers and Nakos 2004).

Building upon transaction cost theory, some scholars extend previous research by examining how contextual moderator variables affect the predictive relationship of TCA-export channel integration. For instance, Campa and Gullen (1999) conceptualized and tested the effect of determinants of TCA plus a firm's ownership and location factors (i.e., geographical markets, cultural difference and institutional arrangements) on the choice of export channel. Aulakh and Kotabe (1997) added organizational capability and strategic variables (i.e., market position strategy and global integration and differentiation strategy) to the TCA framework to improve their explanation of export channel integration. Anderson and Coughlan (1987) explicitly modeled the impact of TCA and a number of factors such as service requirements, product differentiation, product category age, relatedness to principal business, legal restrictions, competitive behavior, strength of patent and the country being entered. Klein and Roth (1990) suggest that both experience with the product and market, and the perceived difference between the home and foreign market have an impact on

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export channel structure. Bello and Lohtia (1995) examined transaction cost and production cost indicators (i.e., foreign sales, sales growth, and export intensity), considering the choice between the integrated and non-integrated export channel, and concluding that both TCA and organizational capacity influence the export channel integration. Furthermore, the effect of a firm's resource-based market orientation (MO) capabilities and the institutional distance between home and export country (He, Brouthers et al. 2013), knowledge-intensive industry factors (McNaughton 1996, McNaughton 2002), a firm's market share and the level of product differentiation (Shervani, Frazier et al. 2007) on export channel integration were considered.

While export channel research provides valuable insights about what specific factors might affect the choice of export channel, these studies tend to suffer from a variety of important issues. First, although transaction cost theory has emerged as a significant theoretical development in the study of export channel integration (Anderson and Coughlan 1987, Klein, Frazier et al. 1990, Shervani, Frazier et al. 2007), the chief criticism according to Tsang (2000), is that it puts over-emphasis on cost minimization and neglects the value creation aspect of a transaction (Zajac and Olsen 1993, Madhok 1997). Specifically, TCA is fundamentally concerned with the characteristics of exchange; the theory typically holds firm capabilities as constant (Tsang 2000, Peng 2001) and only considers the exploitation of firm-specific cost advantage, focusing on transactions based on relatively static conditions (Osborne 1996). Thus, roughly speaking, missing from the TCA perspective is how different firm resources and capabilities influence the choice of structure that firms adopt in international markets. TCA also seems to provide limited explanations of the exploitation and development of firm-specific advantages from a dynamic perspective (Tsang 2000, Peng 2001). Firms' resource heterogeneity and imperfect mobility characteristics do not explicitly

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enter transaction cost logic; TCA scholars recognize the potential for resources and capabilities to influence the choice of organizational governance and channel structure, and literature exploring these effects is beginning to emerge (Chen and Chen 2003, Leiblein 2003, Mayer and Salomon 2006, He, Brouthers et al. 2013). The emphasis on resources and capabilities as fundamental to competitive advantage creation resonates closely with the resource-based view (RBV) of the firm (Wernerfelt 1984, Barney 1991). Thus, the RBV complements the extent to which TCAs approach export channel integration since TCA is primarily concerned with exploitation while RBV is motivated by considerations not just of exploitation but also exploration of resources and capabilities, taking both values and costs into account.

Second, although small and medium-sized enterprises (SMEs) now account for a very substantial proportion of exports from most industrialized nations (Knight 2001, Brouthers and Hennart 2007, Hessels and Terjesen 2010), channel integration studies have mainly concentrated on large, resource-rich corporations in developed countries rather than SMEs in developing countries (Osborne 1996, Zacharakis 1997). Yet recent researches suggest that SMEs are not in fact smaller versions of multinational companies (MNEs) (Welsh and White 1981, Zacharakis 1997); they differ in terms of firm size, structure, managerial style, resources, and scale and scope of operations (Coviello and Martin 1999, Coviello and McAuley 1999, Lu and Beamish 2001). The results found with regard to MNEs may not be valid for SMEs (Brouthers and Nakos 2004). Further, compared with MNEs, SMEs usually face substantial resource constraints and lack capabilities and market power (Coviello and Martin 1999, Knight 2001, Lu and Beamish 2001, Brouthers and Nakos 2004). These differences and resource limitations could very well have an impact on the outcome of an SME's internationalization (Lu and Beamish 2001). In the strategic management context,

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therefore, SMEs are increasingly facing similar international problems to those of large firms (Ruzzier, Hisrich et al. 2006). However, given their relatively low base of resources, they may need to rely on RBV that focuses on resource efficiency and effectiveness to create different internationalization strategies from the ones shown to work for their larger rivals (Brouthers, Nakos et al. 2009).

RBV views firms as a bundle of resources and capabilities that combine developed competencies (Wernerfelt 1984), and suggests that firms in the same industry perform differently because they differ in their resources and capabilities (Barney 1986). Hence, SMEs will perform differently from large firms because SMEs have different resources and capabilities. Two important examples of SMEs' resources and capabilities are networks and entrepreneurial orientation (EO) (Barney 1991, Zahra and Covin 1995, Teece, Pisano et al. 1997, Gulati 1999). Networks have been acknowledged as a vital strategic resource that can help SMEs access a variety of other resources (Gulati 1999, Chetty and Wilson 2003, Mesquita and Lazzarini 2008, Manolova, Manev et al. 2010) and develop their internationalization capabilities (Chetty and Blankenburg Holm 2000). SMEs rely on network relationships for market selection and entry during their internationalization process (Oviatt and McDougall 1994). EO is a dimension of strategic posture represented by a firm's risk-taking propensity, proactiveness and innovationess (Covin and Slevin 1989, Covin and Slevin 1991, Wiklund and Shepherd 2005); EO is also acknowledged as an important resource-based capability that can be used by SMEs to facilitate access to and use of both external and internal resources (Wiklund and Shepherd 2005) and can influence SME performance (Lee, Lee et al. 2001).

While past research indicates that the RBV complements the extent to which TCA influences firms' export channel integration (Cavusgil and Zou 1994, He, Brouthers et al.



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2013), these studies do not consider SMEs. In fact, SMEs differ in the level of EO and networks they possess and these capabilities and resources are related to a firm's strategic decisions (Wiklund and Shepherd 2003). Hence, the purpose of this chapter is to integrate RBV and TCA theories into a more comprehensive mode in order to explain export channel structure choice of SMEs. I address these export channel integration issues by using manufacturing SMEs in China as the unit of analysis, and considering how Chinese SMEs deal with the issues of international export channel integration.

In response to scholars' calls for research investigating more moderators or mediators that potentially influence the relationship between EO and performance (Lumpkin and Dess 1996, Wiklund and Shepherd 2003, Rauch, Wiklund et al. 2009), and given that different networks provide firms with access to distinct social resources, the value of such access will be contingent on the resource needs associated with a firm's EO (Stam and Elfring 2008). This study therefore attempts to use SME networks as a moderator. According to Granovetter (1985) and Burt (1992), a social network is a web of relationships that can lead to securing favors in personal or organizational action. Social networks can comprise formal business networks or entrepreneurs' informal social networks (Ellis 2011). The relational theory of social networks (Granovetter 1973) states that strong and weak ties are an effective means for gaining different resources; Oviatt and McDougall (2005) indicate that three key aspects of entrepreneurial networks (i.e., strength of network ties, size of network, and overall density of the network) moderate the speed of internationalization. This chapter intends to specifically examine how an SME's network strength (i.e., strong and weak ties) and size shape the contribution of its EO for the selection of export channel because different ties are important and often vital sources of information and knowledge (Oviatt and McDougall 2005).

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This study contributes to international entrepreneurship and strategic management literatures by combining EO and networks with export channel choice, aiming to provide a better understanding of how EO and network resources influence the export channel integration of SMEs, and consequently performance. This research also contributes to the existing literature on transaction cost research by adding a resource-based perspective to the traditional transaction cost analysis of export channel choice, extending the traditional research focus on the effect of asset specificity and environment uncertainty on MNEs' export channel choice, and taking into account value creation in the study of SME export channel choice.

## **2.2 Background**

International channel choices vary significantly with respect to benefits and costs (Sharma and Erramilli 2004) and required resources (Blomstermo, Sharma et al. 2006). Current export channel choice research chiefly relies on transaction cost analysis (Anderson and Coughlan 1987, Klein and Roth 1990, Erramilli and Rao 1993, Bello and Lohtia 1995, McNaughton 1996, Aulakh and Kotabe 1997, Campa and Guillén 1999, McNaughton 2002, Shervani, Frazier et al. 2007) and indicates that firms can usually choose from among the hierarchical mode (i.e., establish foreign sales subsidiary or serving foreign market from home), intermediate mode (i.e., use commission agents or joint venture) and market mode (i.e., use of merchant distributors) (Klein, Frazier et al. 1990, Klein and Roth 1990).

Existing research on export channel choice suggests that the mode of entry has usually been classified based on the entrant's degree of control (high, medium, low) (Andersen 1997). The different channel implies different levels of control over foreign operations, different requirements of resource investment and different institutional arrangements, reflecting differing degrees of commitment and risk (Anderson and Coughlan

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1987, Klein and Roth 1990, Erramilli and Rao 1993, Aulakh and Kotabe 1997, Tsang 2000). Comparatively, the hierarchical mode provides firms with the greatest control over distribution decisions (Aulakh and Kotabe 1997). For the intermediate option, firms perform some functions and share control of distribution with their respective partners (Aulakh and Kotabe 1997). Relatively speaking, market mode (i.e., independent agents) provides firms with the least control and involves the lowest resource commitments, because the firm delegates all the marketing tasks to the foreign agents, and consequently the independent foreign distributor bears most of the marketing costs in the foreign country (Aulakh and Kotabe 1997). While the hierarchical and intermediate modes provide firms with a higher level of control, they also require greater resource commitments. Generally speaking, in making an export channel choice, international entrepreneurs need to balance the control they want to assume in the foreign market with the potential resources they want to invest to achieve this control (Anderson and Gatignon 1986, Anderson and Coughlan 1987, Gatignon and Anderson 1988).

Transaction cost theory (TCA) has been widely used in export channel choice research (Williamson 1979, Bello and Lohtia 1995, Campa and Guillén 1999); it argues that the particular choice of channel is determined by the comparative transaction costs, such as the cost of running a system, negotiating a contract and control costs (Erramilli and Rao 1993). Williamson (1975) builds TCA framework on a set of factors proposed to influence the transaction costs incurred under different channel integrations: asset specificity, frequency and uncertainty (i.e., internal-behavioral, and volatility and diversity of the environment in the external market) (Klein, Frazier et al. 1990, Bello and Lohtia 1995, McNaughton 1996, McNaughton 2002, Brouthers and Hennart 2007).

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Asset specificity is a core explanatory variable in TCA and is embraced in most channel choice studies. It refers to a firm's necessary investments to support a trading relationship, and comprises product, physical and human assets (Bello and Lohtia 1995, Shervani, Frazier et al. 2007). The latter type of asset specificity is reflected in specialized knowledge requirements concerning the supplier, product, customers, and competitors in the foreign market (Klein and Roth 1990). Current empirical research has provided strong and consistent support for the theorized relationship between transaction specific investment and organizational governance forms. In general, scholars argue that the level of asset specificity is positively related to the use of more integrated modes (Makino and Neupert 2000, Leiblein 2003). When asset specificity is high, TCA predicts that the firm will utilize a more integrated channel structure (i.e., hierarchical mode) in order to minimize transaction costs (Shervani, Frazier et al. 2007). The intermediate mode will be chosen when asset specificity of the transaction concerned is of an intermediate degree, and market mode will be used if the transaction involves a very low degree of asset specificity (Gatignon and Anderson 1988, Erramilli and Rao 1993, Tsang 2000, Brouthers, Brouthers et al. 2003).

Uncertainty is another critical factor that is defined in the TCA logic, where it is classified into two main types: internal-behavioral and external-environmental (Klein, Frazier et al. 1990). Behavioral uncertainty is endemic in the exchange relationship between partners (Chen and Chen 2003). In terms of TCA, this refers to a firm's inability to predict the behavior of individuals in a foreign country, which can lead to opportunistic behavior, such as cheating, distortion of information, or other forms of dishonest behavior (Williamson 1979). TCA claims that high levels of behavioral uncertainty increase the difficulty of evaluating the performance of exchange partners, leading to high transaction costs (Shervani, Frazier et al. 2007). Scholars argue that internal control is a mechanism to

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minimize opportunistic behavior, which can be achieved through hierarchical ownership (Brouthers and Nakos 2004). Behavioral uncertainty has strong impact on hierarchical controls (Chen and Chen 2003), and is positively related to the degree of vertical integration (Gatignon and Anderson 1988, John and Weitz 1988, Leiblein 2003). In particular, linking behavioral uncertainty to export mode structure, scholars suggest that when internal uncertainty is high and/or increasing, firms are likely to increasingly rely on more integrated export channel modes as a means of controlling the behavior-related uncertainties of foreign expansion (Chen and Chen 2003, Leiblein 2003, Shervani, Frazier et al. 2007). Contrary to this, when internal uncertainty is relatively low, the intermediate/market option will lead to low transaction costs as firms do not need to seriously monitor and direct the activity of independent partners. Hence, the market and intermediate mode will be chosen over the hierarchical mode when firms' internal uncertainty is relatively low (Shervani, Frazier et al. 2007).

The second type of uncertainty is environmental uncertainty. This refers to the risks associated with a target foreign market and is typically labeled 'country risk', which can take many forms (Gatignon and Anderson 1988, Erramilli and Rao 1993). In previous studies two dimensions of external uncertainty have been characterized: volatility (the extent to which the environment changes rapidly) and diversity (the extent to which the environment is heterogeneous) of the environment in the foreign market (Klein, Frazier et al. 1990, McNaughton 2002). Scholars argue that if a market is volatile, it is difficult to predict future outcomes in terms of demand and competitor action, and to provide protection against negative contingencies by way of contracts (McNaughton 1996). Thus, firms should not expect higher control export channel modes to be more efficient than lower control modes in volatile settings (Anderson and Gatignon 1986). In terms of diversity, a firm facing a highly

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diverse environment in a foreign market will have difficulty in obtaining and processing information about environment entities (Anderson and Gatignon 1986, Erramilli and Rao 1993). In such a foreign market, the low-control export mode will be the most efficient, since independent channel members can help gather and process the resources required to deal with a heterogeneous market (Klein, Frazier et al. 1990, McNaughton 2002).

Frequency of interaction is the third important determinant of TCA; this can affect a firm's boundary decisions about the choice of market or hierarchy, or the extent of vertical integration (Williamson 1985, Brouthers and Hennart 2007). In order to explain export channel choice, it is common to measure the channel volume and perceptual activity (Klein, Frazier et al. 1990, McNaughton 1996, McNaughton 2002). Under the TCA logic, scholars argue that firms will choose channels that will minimize the sum of the transaction and production costs (costs associated with distribution) (Klein, Frazier et al. 1990, Bello and Lohtia 1995). Thus, during the export channel selection process, the fixed costs involved in integrating transactions need to be taken into account (McNaughton 1996). Recently, researchers have empirically tested the specific effect of frequency on export channel choice. Research results indicate that the fixed costs involved in transactions within the firm can only be justified if the transaction volumes are large enough (Williamson 1985, Brouthers and Hennart 2007). In the case that channel volumes are too low to achieve internal economies of scale in distribution, the intermediate and/or market mode is used. When ample volumes are produced, firms are more likely to integrate further by relying on the hierarchical mode (McNaughton 1996, McNaughton 2002).

While prior export channel research relies on TCA and has capably determined the most efficient export channel for firms to use, these studies mainly focus on the least costly solution for MNEs in developed countries (Dwyer and Oh 1988, Gatignon and Anderson

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1988, Klein, Frazier et al. 1990, Bello and Lohtia 1995). However, SMEs are different and relatively vulnerable compared to MNEs (Coviello and McAuley 1999). SMEs generally possess fewer resources and capabilities to direct into internationalization efforts and cushion market fluctuations (Coviello and Martin 1999, Knight 2001, Lu and Beamish 2001, Brouthers and Nakos 2004). SMEs are generally less experienced internationally and thus may not have well-developed systems and processes for managing foreign operations (Zacharakis, 1997). Consequently, previous results related to MNEs may not be valid for SMEs (Brouthers and Nakos 2004). Explaining the strategic internationalization behavior of SMEs therefore remains an important conceptual problem.

International entrepreneurship research argues that given SMEs' relatively low base of resources, they should rely on RBV, which focuses on resource efficiency and effectiveness in creating differential international competitive advantages in foreign markets (Oviatt, McDougall et al. 1995, Wiklund and Shepherd 2003, Brouthers, Nakos et al. 2009, Keupp and Gassmann 2009). RBV and TCA are two distinct theories that differ in their level of analysis and consequent focus of interest (Andersen 1997, Tsang 2000, Peng 2001, Mayer and Salomon 2006). However, the former can complement the latter perspective in the consideration of export channel choice issues (Tsang 2000, Leiblein and Miller 2003). RBV raises the level of analysis from the traditional transaction to the firm, and suggests that a particular internationalization mode decision cannot be viewed in isolation; instead it must be considered in relation to the overall strategic posture of the firm (Peng 2001).

RBV was initially introduced by Wernerfelt (1984) and emerged as an important explanation for persistent firm-level performance differences (Peng 2001). RBV was primarily developed for SMEs to explain their emergence and development (Alvarez and Busenitz 2001) and addresses the central issue of how superior performance can be

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attained relative to other firms in the same market (Dhanaraj and Beamish 2003). This theory argues that a firm's sustained competitive advantages are derived from the valuable, rare, inimitable and non substitutable resources and capabilities it controls (Barney 1991). These resources and capabilities can be viewed as bundles of tangible and intangible resources (Barney, Wright et al. 2001). The attainment of such advantages will enable the firm to improve its short-term and long-term performance (Newbert 2008).

In addition, RBV has been widely adopted to provide useful insights into firms' internationalization, especially with regard to SMEs (Peng 2001, Westhead, Wright et al. 2001). This theory has helped establish that resources and capabilities are important for understanding the source of sustained competitive advantage for firms. Recently, researchers have tried to explain variations in firms' activities by examining RBV's two factors: resources and capabilities (Leiblein 2003, Mayer and Salomon 2006). RBV, which underpins both international entrepreneurship and network literatures, suggests that EO and networks are important examples of firms' resources and capabilities (Barney 1991, Zahra and Covin 1995, Teece, Pisano et al. 1997, Gulati 1999). SMEs with a different level of EO and networks may perform differently (Lee, Lee et al. 2001, Stam and Elfring 2008).

## **2.3 Research Hypotheses**

### **2.3.1 Entrepreneurial orientation and export channel choice**

Recent international entrepreneurship research has highlighted the importance of EO and linking EO to SMEs' internationalization (Covin and Slevin 1989, Francis and Collins-Dodd 2000, Wiklund and Shepherd 2005). Collectively, these studies conclude that a firm's EO tends to represent the strategic response of an organization to environmental uncertainty (Yeoh and Jeong 1995). EO is positively related with SMEs' expansion of strategic activities (Knight 2001), which means firms high in EO will be more willing to break



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away from reliable pursuits to venture into the unknown, and tend to be more likely to expand to foreign markets (Wiklund and Shepherd 2003). Three components of EO (i.e., proactiveness, risk-taking propensity, innovativeness) suggested by Miller (1983) and adopted or extended by several other studies (e.g., Covein and Slevin 1989, Lumpkin and Dess 1996) comprise a basic, unidimensional strategic orientation (Covin and Slevin 1991). Each component of EO can have a positive influence on firm performance (Wiklund and Shepherd 2003, Wiklund and Shepherd 2005, Rauch, Wiklund et al. 2009). SMEs that adopt a strong EO can recognize international opportunities and develop the process and assets required to take advantages of these opportunities, consequently becoming more successful in international operations and experiencing better performance all round (Covin, Green et al. 2006).

While a few researchers have examined the relation between EO and SMEs' internationalization, these studies tend to focus on how the entrepreneurial process impacts international performance (Zahra and Covin 1995) and its contingent relationship with environmental (Covin and Slevin 1989) and organizational factors (Covin and Slevin 1988, Jennings and Lumpkin 1989, Eisenhardt and Schoonhoven 1990, Naman and Slevin 1993). The relationship between EO and SMEs' entrepreneurial strategies, particularly export channel choice, has neither been a focus of serious conceptual discussion nor tested using robust methodology and data. This is important because a number of studies have found a strong relation between EO and SMEs' internationalization, but have not treated export strategy choice as the dependent variable. Lumpkin and Dess (1996) therefore indicated that the relationship of EO to other key predictor variables such as strategies and tactics are fertile areas for future research.

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Researchers have agreed that EO is a combination of three dimensions: innovativeness, proactiveness and risk-taking propensity (Covin and Slevin 1991, Wiklund 1999). Specifically, innovativeness reflects firms' tendency to engage in new idea generation, novelty, experimentation and R&D activities, thereby resulting in new products and processes and departing from established practices, administrative techniques and technologies (Lumpkin and Dess, 1996). The term proactiveness refers to the propensity to anticipate future wants, problems and changes in the operating market, and to pioneer new methods and techniques (Lee, Lee et al. 2001). Firms' risk-taking propensity denotes their willingness to venture into the unknown and to invest in projects that have uncertain outcomes or unusually high profits and losses (Covin and Slevin 1991).

According to previous strategic management and entrepreneurship literature, research findings demonstrate that internationalizing SMEs can be differentiated in terms of their strategic entrepreneurial posture (Yeoh and Jeong 1995, Knight 2001). In terms of exporting, on the basis of the three-dimensional construct of EO, a firm's strategic posture can be established along a continuum ranging from conservative to entrepreneurial (Covin and Slevin 1989, Covin 1991, Yeoh and Jeong 1995). In particular, some conservative firms tend to be passive, reactive and risk-adverse. In contrast, entrepreneurially orientated organizations tend to be innovative, proactive and aggressive risk-takers in their pursuit of opportunities in overseas markets (Covin 1991).

Innovativeness calls for enterprises to suspend current paradigms and to consider new methods (Lee, Lee et al. 2001). Therefore, a firm that behaves innovatively will be more likely to undertake experimental ventures, explore new ideas, produce unique products (Johnston and Czinkota 1985) and research new ways to solve problems (Lumpkin and Dess 1996). Innovative SMEs generally have the capability to transform their assets base and

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reconfigure processes and structures in a way that helps them achieve new valuable resource combinations (e.g., innovation products, new administrative techniques), which are needed for capitalizing on business opportunities and creating sustainable competitive advantages in changing environments (Jantunen, Puumalainen et al. 2005). As a consequence, strong emphasis on R&D, technological leadership and innovations among entrepreneurial firms often results in high asset specificity of the product, leading to products that are new or unfamiliar to the export marketplace (Knight 2001, Lee, Lee et al. 2001). In order to reduce customer apprehension about buying such a product, entrepreneurial firms have to offer outstanding customer service and support by relying on a vertical export channel to service customers directly (Klein, Frazier et al. 1990, Covin 1991). Hence, I theorize that firms with more innovativeness will prefer to enter export markets using hierarchical export channels instead of intermediate and/or market modes.

I theorize that entrepreneurial firms with strong proactiveness will be more likely choose hierarchical export channels for several reasons. First, proactiveness is critical to an EO, since it suggests a forward-looking perspective that is accompanied by innovative activities (Lumpkin and Dess 1996). Proactive companies like to predict future trends and the needs of the market; they tend to have the capacity to recognize opportunities at an early phase, and create opportunities through their actions (Jantunen, Puumalainen et al. 2005). With such a forward-looking perspective, proactive firms capitalize on emerging opportunities (Wiklund and Shepherd 2003) and actively seek new business, while passive firms tend to wait for unsolicited orders or only export when excess capacity cannot be absorbed by the domestic market (Pieray 1978). Thus, SMEs high in proactiveness can create first-mover advantages, target premium market segments and in general shape the market ahead of other passive competitors (Zahra and Covin 1995). Compared with

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conservative rivals, these firms also tend to acquire more information about the foreign market, possess greater managerial desire to internationalize, and have greater marketing (e.g., sales distribution channels) or technique advantages (Johnston and Czinkota 1985, Yeoh and Jeong 1995). As a result, I suggest that during the exporting process, a firm's proactiveness is positively associated with its choice of vertical integration export channel.

I also theorize that entrepreneurial SMEs with a higher risk-taking propensity will prefer to use hierarchical export channels than to export by teaming up with local partners or mechanism agents. Due to the fact that firms with an EO are often typified by risk-taking behavior (Covin, Green et al. 2006), risk-taking is closely related to both innovativeness and proactiveness, since innovation (e.g., develop and introduce innovative strategies and structures) and proactive activities (e.g., adopt and develop new product/service technologies) involve considerable uncertainty before they are ready to be commercialized (Lee, Lee et al. 2001). However, entrepreneurial firms have higher risk-taking habits than conservative firms. Although entrepreneurial firms can simply be more resource consuming than conservative firms due to their risk-taking and innovative behavior, risk-taking firms are more willing to utilize external financing to invest in and commit significant resources to opportunities in the face of uncertainty (Covin 1991). This means that risk-taking firms potentially have more physical asset investment than their conservative rivals during the internationalization process. Accordingly, I theorize that a firm's EO is positively related to their choice of vertical integration export channel. Overall, these arguments lead to the following hypothesis:

Hypothesis 1: SMEs possessing high EO will prefer to use more hierarchical modes. In contrast, conservative SMEs who have low EO will be more likely to choose market modes.

### **2.3.2 The moderating impact of networks**

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In the context of networks, researchers generally embrace a perspective that focuses on relations among actors, no matter whether they are interpersonal, interorganizational, formal, or informal (Brass, Galaskiewicz et al. 2004). A common theme in this respect is that a firm's networks can be seen as a resource in itself (Gulati 1999). Firms are embedded in social networks with other actors (Granovetter 1985); embeddedness as a strategic resource has a relational as well as a structural dimension (Gulati 1998). Applied in an organizational context, the former refers to relationships and the latter highlights the position (Granovetter 1985, Burt 1992, Gulati 1998). Networks are normally created through path-dependent processes and are, therefore, idiosyncratic and difficult to imitate (Gulati, Nohria et al. 2000). Consequently, resources accessible through networks are also relatively inimitable and nonsubstitutable (Andersson, Forsgren et al. 2002).

Most of the research recognizes that networks are indispensable for SMEs to achieve international growth (Peng and Luo 2000, Zhou, Wu et al. 2007). Considering the limited resources of SMEs, they must leverage their resources such as networks in order to successfully enter an international market (Oviatt and McDougall 1994). Generally speaking, the primary motivation for SMEs to participate in a network is to gain access to complementary resources and capabilities outside the organization, such as capital, goods, services and innovations (Coviello and Cox 2006). Superior networks are better able to exploit other key resources and capabilities and thus enhance international expansion and performance (Welch and Welch 1996, Zaheer and Bell 2005, Zhou, Wu et al. 2007, Musteen, Francis et al. 2010). There is consensus that networks are positively related to firm internationalization, leading to better performance (Peng and Luo 2000, Park and Luo 2001).

Although a few researchers have examined the impact of network resources on SMEs' internationalization, these studies mainly focus on how network resources impact

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three outcome categories related to organizational development, competitive forces, and performance, thereby examining networks as an independent variable (Chetty and Blankenburg Holm 2000, Mesquita and Lazzarini 2008, Manolova, Manev et al. 2010, Musteen, Francis et al. 2010). Moreover, scholars focus on how network resources are related to the relationship between SMEs' internationalization and performance, considering networks a mediating variable (Zhou, Wu et al. 2007). However, work with a particular focus on the way in which networks impact SMEs' export channel choice has been limited to date, and no studies treat networks as a moderator variable in EO-export channel choice research.

Networks have three main information-related benefits (i.e., foreign market knowledge, advice and experiential learning and referral trust and solidarity) (Zhou, Wu et al. 2007) and these can mitigate a firm's transaction costs during internationalization (Zacharakis 1997, Gulati, Nohria et al. 2000). Moreover, considering that network resources are a specific form of firm resources that can be considered 'strengths that firms can use to conceive of and implement their strategies' (Barney 1991: 101, Gulati 1999), this study explores the idea that network resources may further impact SMEs' export channel choice.

During the international exporting process, although EO SMEs are willing to take risks, behave innovatively and act proactively (Covin, Green et al. 2006), they need information and resources to be able to pursue internationalization in a foreign market and overcome resources constraints due to their limited size and their foreignness (Lee, Lee et al. 2001). Networks are sources that allow firms to access a variety of resources, such as information, knowledge and complementary skills (Chetty and Wilson 2003), but the value of such access through networks is contingent on the resource needs associated with a

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firm's EO (Stam and Elfring 2008). Therefore, I theorize that SMEs' network resources moderate the relation between EO and their export channel choice.

Entrepreneurship research argues that SMEs' internationalization presents the firm with a new social context (Autio, Sapienza et al. 2000). This new context provides challenges for SMEs because of their limited size and their foreignness, as well as their lack of knowledge about the new foreign market (Lu and Beamish 2001). Although an EO provides SMEs with the drive to take risks and willingness to expand abroad, SMEs need to obtain further knowledge and capabilities to be able to pursue these tasks (Lee, Lee et al. 2001). Existing empirical results from network research indicate that both new and existing networks are able to help SMEs learn and create further knowledge about foreign markets, leading to competitive advantages (Chetty and Agndal 2007). As well as providing access to new knowledge, network resources can also increase the firms' capacity to generate market intelligence in terms of identifying new international opportunities, learning from experiences and benefiting from the synergistic effect of pooled resources (Chetty and Blankenburg Holm 2000, Ellis 2011). In general, these benefits help firms' exporting activities by not only diminishing information and knowledge obstacles in foreign markets, but also facilitating international operations and saving on transaction costs.

Building upon previous theoretical studies, this research contends that network resources moderate the relation between EO and export channel choice for several reasons. First, because network resources help SMEs with high EO to improve their innovation level, and in particular provide access to resources and power (Uzzi 1997), thereby supplying SMEs with additional knowledge about how to solve business issues in the foreign market (Nahapiet and Ghoshal 1998). Consequently, this information may offer insights into innovative new ways of doing business (Lee, Lee et al. 2001). Network resources can also

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assist proactive SMEs in identifying international market opportunities (Ellis and Pecotich 2001) and becoming aware of the future demands of the foreign market and customers (Lumpkin and Dess 2001). Network resources can help decrease a firm's perceptions of risk because network members can provide SMEs with the knowledge required to understand how to operate in the international environment, and hence moderate the relationship between EO and export channel choice.

In sum, I theorize that SMEs' networks can significantly impact the relationship between their EO and export channel choice. A firm with high EO will increase its preference for hierarchies when it has more network resources. Networks can provide firms with complementary knowledge and other kinds of necessary resources that help SMEs with strong EO to be more innovative and proactive while reducing the potential risks of the foreign market. Thus, the second hypothesis suggests that:

Hypothesis 2: Networks moderate the positive relationship between EO and export channel choice. When firms have the same high EO, a firm with strong networks (i.e., network size and strength) will be more likely to choose hierarchical export channels than one that possesses weak networks.

## **2.4 Methods**

This section begins by introducing the population of firms the sample was drawn from, and then details how the questionnaire was developed for the research. A specific description of the data collection process for the survey follows. It will then be explained how this survey measures and examines the dependent, independent, and moderating variables used.

A survey methodology was employed to collect data and test the above hypotheses. The reason for adopting such a design for this study was because: 1) data gathered through



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surveys are easily quantifiable and amendable to statistical analysis and hypothesis testing; 2) it is appropriate to collect perceptual data from a large population (He, Brouthers et al. 2013); 3) the construct's measurements (i.e., entrepreneurial orientation, networks and export channel choice) has been developed for survey design in previous research and a replication of these studies was necessary; 4) information obtained by survey is relatively accurate within sampling error (He 2009, Groves, Fowler et al. 2011).

#### **2.4.1 Sample**

Data for this study were obtained through a self-report questionnaire administered to the entrepreneurs or managers from the chosen SMEs in the Mainland China manufacturing industry. China, as the world's largest emerging economy and the second largest international trade country, provides the logical context to examine the internationalization of entrepreneurial firms (Brouthers and Xu 2002, Lu, Zhou et al. 2010). SMEs have become the main contributors to China's foreign trade in recent years and are active actors in different forms of foreign business relationships (Tang 2011). Moreover, similar to firms from other emerging economies, Chinese SMEs lack resource-based advantages like reputation brand and superior technology (He, Brouthers et al. 2010) and therefore have adopted an entrepreneurial orientation (EO) approach (Li, Zhao et al. 2008). Furthermore, for Chinese SMEs, networks (e.g. *guanxi* in China) are very important to help them overcome resource constraints and isolation (Gulati 1999, Yli-Renko, Autio et al. 2001), and enable internationalization (Yli-Renko, Autio et al. 2002, Lu, Zhou et al. 2010). As a result, survey data from China can offer rich and representative findings concerning SMEs' internationalization, EO and networks.

The data comprised a random sample of 600 Zhejiang-based manufacturing SMEs (from a total population of about 40,000) involved in exporting. The sample of these firms

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was drawn from two databases: the Directory of Zhejiang SME Exporters and the Zhejiang SME Industrial directory. The reason for choosing the Zhejiang province is because it is a major transportation thoroughfare and international business and economic hub of Mainland China (Department of Commerce Zhejiang Province, 2013). Over the last few decades, relying on its rich natural resources and prominent geographical advantages, Zhejiang has become one of China's most intensive exporting provinces (Hendrischke and Feng 1999). In 2013, the total export volume around the Zhejiang province was US\$ 202.88 billion, exceeding that of most other provinces. The average growth of industrial export has increased 12.2% on a year-by-year basis (Zhejiang Province Bureau of Statistics, 2013). According to figures from the National Bureau of Statistics of the People's Republic of China (P.R.C), the export volume from Zhejiang Province ranked 1<sup>st</sup> in exports among the 31 provinces of China (China Commerce Yearbook, 2011). It is generally believed that exporting firms from the Zhejiang province are representative of Chinese exporters (Bureau 2010).

The difficulty in identifying SMEs has been noted in previous study. There is no generally accepted definition of an SME. The most commonly employed approach in entrepreneurship literature is the quantitative definition (Lu and Beamish 2001), which uses measures such as the number of employees, total turnover and total assets. According to the SME Administration of the Ministry of Finance of P.R.C., the definition of an SME in the manufacturing industry is one that employs 500 or fewer workers (Wolff and Pett 2000, Zhou, Wu et al. 2007). In order to develop a representative sample, this study selected firms on the basis of the following criteria:

- 1) Manufacturing business with operations involving exports and/or other forms of international activities;
- 2) Business with fewer than 500 employees;

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3) Firms that have been in business for at least three years. (The reason for using this criterion is because the firms have all survived the most critical years of operation (Pickle, Abrahamson et al. 1990) and their business practices presumably approximate those of established firms rather than new ventures (Covin 1991). )

4) Firms that are privately owned. (The reason for using this criterion is because in terms of EO, in privately owned SMEs, entrepreneurs are at the core of the decision-making process, and the entrepreneurs' individual orientation always represents the EO of the firms (Zhang, Ma et al. 2012). )

These criteria ensured that we selected relatively appropriate internationalizing SMEs for the research. The sample did not include trade intermediate organizations, trading agents, or service firms as it is difficult to ensure the value of the goods traded.

To ensure the questionnaire reliability and validity, I approached the questionnaire design in the following stages. First, the English version of the questionnaire was refined and I developed the initial questionnaire on the basis of preexisting measures. This early draft of the survey questionnaire was reviewed by a group of business academics who have expertise in the subject area and could provide feedback regarding clarity, comprehensiveness, appropriateness, face validity and readability of the scales and survey instructions. Second, because measurement constructs were adapted from previous studies, I attempted to contact the researchers who had used the chosen measurement instruments in the Chinese context, asking for their Chinese versions of the measurement. Fortunately, export channel choice scales in Chinese (He, Brouthers et al. 2013) were able to be obtained. The other measurements were then translated into Chinese and checked for form and meaning equivalence by an academic expert who is bilingual, speaking both English and Chinese.

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### 2.4.2 Data collection

Early January 2015 to the end of March 2015 were spent collecting research data. The target respondent for sample firms was the person who takes charge of international activities of the firms, such as the entrepreneurs, CEOs, or international department managers. In general, many entrepreneurs and managers are reluctant to participate in surveys since they are wary of leaking proprietary information to strangers at the frequent request of researchers. In order to increase participation rates, a high level of personal involvement such as telephone calls and assistance from local government and industry associations was employed. Most samples firms had been encouraged by local industry associations to take part in this research before I called them.

The potential key informants from all 600 firms were contacted by phone to explain the purpose of the research, to check that they met the four criteria, ask for their cooperation in this research and identify who would be the appropriate person to complete the survey. After multiple communications by telephone and email, 489 firms who met the necessary standards agreed to participate in this study. This yielded an 81.5% positive response. Of the 111 firms excluded from this process, 6 firms had gone bankrupt, 24 firms could not be contacted due to incorrect contact details, 21 firms refused to take part, 9 firms had ceased exporting and 51 firms were export intermediaries.

The five-page questionnaire was sent by mail or email to the CEO or top-level managers of these firms as soon as their participation was secured. A cover letter and a pre-stamped return envelope accompanied each mailed questionnaire. For firms who preferred email, I sent the questionnaire to their email address. In order to increase the response rate, several efforts were made. Firstly, all participants were promised that any information provided to this research would be strictly confidential; it was also explained how this

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study's major findings might be useful to them. A cover letter/pre-call of support from local commercial or industry associations was also sent. Secondly, one week after the initial dispatch of the questionnaire, follow-up telephone calls were made and a second round of emails sent as a reminder to those who had not yet responded. I would also call the firms after I had mailed/mailed them, in order to alert them to the fact that I had sent the questionnaire to their address/inbox. After three to four days, I called/mailed firms again to confirm that the post had been received successfully; I asked them to complete and return it to me as soon as they could. I also called/mailed firms to remind them to complete the questionnaire and reply to me as soon as possible, and I told these firms I would call again. After waiting another three days, some firms replied but some did not. In the case that firms did not respond, I politely pushed them by calling every day or re-sending the email until I received their reply.

Due to the firms' prior agreement to participate in the research, the initial mailing and a couple of following waves of surveys produced 241 responses in total. Of these responses, 38 were not useable: 19 firms had not fully completed the questionnaire (missing four or more items on any single scale or leaving blanks), 7 firms left the channel choice single question as blank and 9 firms did not use any of a hierarchical, intermediate or market channel (they used alibaba and other international online sales platform), 3 others reported the use of multiple channels as their most important export market. As a result, these 38 responses were all excluded from subsequent analysis, leaving a data set comprising observation from 203 firms, with an overall response rate of 42%.

For our useful sample, 76 (37.4%) firms opted for a hierarchical export channel, 22 (10.9%) employed an intermediate export channel and 105 (51.7%) firms adopted a market-based export channel choice. The sample firms' average age is 12 years, the average

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number of employees per firm is 177 and the average number of countries being exported to by each firm is 14. With regard to the geographic distribution of these 203 firms and their most important markets, in total, 48 countries were represented. The United States was the most important market for the largest number of companies (39 firms; 18.6%), followed by Japan (20 firms; 9.5%) and then Russia (14 firms; 6.7%).

### **2.4.3 Variables and Measurement**

Hypothesis 1 predicts the relationship between a firm's entrepreneurial orientation (i.e., innovativeness, proactiveness and risk-taking) and export channel choice; I treat the export channel choice as the dependent variable and entrepreneurial orientation as the independent variable. In hypothesis 2, it is proposed that networks (i.e., network size and tie strength) interact and moderate the effects of EO on export channel choice. The measurement of each variable is explained below.

#### **2.4.3.1 Dependent variables**

According to He et al. (2013), for the dependent variable, export channel choice, respondents were asked to indicate which statement best represented the export channel they used in their most important export market. In the questionnaire, respondents were asked: how would you classify your firm's export channel choice? 1) We service it directly from China by using home-based representatives; 2) we established wholly owned sales subsidiaries in this market; 3) we are involved in a joint venture with another company to handle sales of this product in this market; 4) we use commission agents; 5) we sell to a merchant distributor who takes the title of our product and contacts buyers themselves; or 6) other (please specify) (Klein, Frazier et al. 1990, Klein and Roth 1990). Following He et al (2013) and Klein and Roth (1990), hierarchical export channels (including options 1 and 2)

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were assigned a value of 1, intermediate export channels (including option 3) were assigned a value of 2 and the market mode (including options 4 and 5) was assigned a value of 3. Given that export channel choice is a multiple variable, I used multinomial logistic regression analysis to test the hypotheses (Hair, Black et al. 2006).

#### **2.4.3.2 Independent variables**

In line with existing research, this study defines entrepreneurial orientation (EO) as the process, structures and behaviors of firms, characterized by innovativeness, proactiveness and risk-taking propensity (Covin and Slevin 1989). According to Lumpin and Dess (1996), EO has three underlying and independent dimensions (i.e., innovativeness, proactiveness and risk taking). Since the three subscales are manifestations of EO, in this research I viewed EO as the simultaneous exhibition of these constructs and thus focused on the export channel choice implications of SMEs' overall entrepreneurial posture. Consistent with Covin and Slevin's (1989) argument that EO represents unidimensional constructs, most studies combine all dimensions of EO to create a single variable. Rauch et al.'s (2009) findings support the idea that the three dimensions of EO are of equal importance in explaining a firm's internationalization. Collectively, I used the summed index of the three dimensions instead of the individual subscales to explain firms' export channel choice.

EO was generally assessed using nine items from the original Covin and Slevin (1989) and Naman and Slevin (1993) measures. This measure of EO has been utilized in a wide variety of research and has exhibited high levels of reliability and validity in numerous studies (Barringer and Bluedorn 1999, Kreiser, Marino et al. 2002, Terjesen and Slevin 2011). The salient dimensions of EO are usually highly inter-correlated; the value of  $r$  can range from 0.39 to 0.75 (Richard, Barnett et al. 2004, Bhuian, Menguc et al. 2005, Tan and Tan 2005). As a consequence, most studies have combined these dimensions into one single

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factor, and treated the EO construct as a unidimensional concept (Naman and Slevin 1993, Lee, Lee et al. 2001, Wiklund and Shepherd 2003, Walter, Auer et al. 2006, Stam and Elfring 2008). However, there has been some debate in the literature with regard to the dimensionality of EO (Rauch, Wiklund et al. 2009). Unlike previous literature which treats EO as one single factor, some scholars have argued that EO is best viewed as a multidimensional concept (Lumpkin and Dess 2001, Covin, Green et al. 2006), since aspects of EO can occur in different combinations and may relate differently to firm performance (Covin and Slevin 1989, Kreiser, Marino et al. 2002, Brouthers, Nakos et al. 2014).

In terms of exports, I measured a firm's EO based on a nine-item measure developed by previous scholars; this captures a firm's innovativeness (three items), proactiveness (three items), and risk-taking (three items). The three items that measure innovativeness are (1) entrepreneurs favor a strong emphasis on pursuing new product ideas/change in product or service lines for export; (2) the number of products/services that have created a new market niche or penetrated established markets successfully during the past three years; (3) the extent to which entrepreneurs seek new information about exporting. The three items that measure proactiveness are: (4) the tendency to lead rather than follow in the development of new procedures and technologies; (5) the tendency to introduce new products or services; (6) the tendency to act in anticipation of future change and needs. The three items which measure risk-taking are: (7) in general the top managers of a firm have a strong proclivity for low risk projects (with normal and certain rates of return) or for high-risk projects (with chance of very high returns); (8) owing to the nature of the environment, managers are more likely to explore it gradually via cautious moves, or undertake bold acts to achieve the firm's objectives; (9) when confronted with a decision-making situation involving uncertainty, the firms typically adopt a 'wait-and-see' posture in order to minimize



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the probability of making costly decisions or adopt an aggressive posture in order to maximize the probability of exploiting potential opportunities (Covin and Slevin 1989, Kreiser, Marino et al. 2002).

Respondents were asked to evaluate each of these items on a 7-point Likert scale from 1 (disagree strongly) to 7 (agree strongly). A higher score implies that the firm possesses a higher level EO (i.e., higher innovation, proactivity or risk-taking orientation). The values for these nine items were summed up and then averaged in order to create our EO construct (Cronbach's  $\alpha = .883$ ).

#### **2.4.3.3 Moderating variables**

Inspired by the relational theory of social networks, Granovetter (1973, 1985) states that strong and weak ties are an effective means of gaining different resources (Granovetter 1973, Granovetter 1985). Given that structure theory of social networks (Burt 1992) indicates that a firm's network structure can be measured by its size (Schilling and Phelps 2007), I implemented the size and strength of the network as moderators in this study.

##### *Network size*

Following Burt (1992), network size is generally measured as the total number of cross border relationships that an entrepreneurial actor has established and maintained with other organizations. Previous empirical studies have indicated that firms with more relationships have greater latitude in their cooperative strategies (Walker, Kogut et al. 1997) because the network of collaborative relationships constitutes a conduit that channels the flow of information and knowledge among firms in the network (Ahuja 2000, Schilling and Phelps 2007), with each member firm acting as both recipient and transmitter (Ahuja 2000). The greater the size of the network, the greater the potential access to information and other resources, and thus to increased social capital (Uzzi 1997, Baum, Calabrese et al. 2000).

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Further, the more cross border ties an entrepreneurial actor has established, the greater the potential country-wide scope of internationalization and the greater the potential to increase that scope quickly (Oviatt and McDougall 2005).

In order to calculate the size of the network, I used a perceptual measure to calculate network size by relying on questionnaire data sent to informants in the sample firms. I operationalized network size by measuring the total number of network members a firm uses for internationalization. In this paper I considered networks as a set of two or more connected business relationships in which each exchange relation is between business firms conceptualized as collective actors (Axelsson and Easton 1992, Holm, Eriksson et al. 1996). These actors include competitors, suppliers, customers, distributors, R&D institutions, banks and governments (Chetty and Blankenburg Holm 2000). Inspired by Uzzi (2000) and Goerzen and Beamish (2005), in the perceptual measure setting, I asked respondents to evaluate the following items: 1) how many domestic partners worked with your firm in the last year (Goerzen and Beamish 2005); 2) how many foreign partners worked for your company in the last year (Uzzi 1996, Goerzen and Beamish 2005); 3) how many collaborative relationships with various functional departments, such as governments, banks, research institutions and suppliers, did you have (Goerzen and Beamish 2005). A higher score implies a larger network, which means that there are more sources of resources.

### *Network strength*

Previous research has provided empirical research results about the influence of inter-organizational tie strength on organization knowledge outcomes. Most research shows that inter-organizational network strength improves the transfer of specific types of knowledge and a firm's ability to benefit from ties (Goes and Park 1997, Phelps, Heidl et al.

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2012). Network strength also increases the flow of diverse knowledge (Simonin 1999, Lavie, Lechner et al. 2007).

In general, scholars have classified network strength into two types: strong and weak ties. Although strong ties provide firms with social cohesion (trust, reciprocity, and social identity) that enables them to increase the motivation of firms to share and receive knowledge (Phelps, Heidi et al. 2012), these ties require considerable investment and maintenance. As a result, the number of such ties for any individual entrepreneur rarely exceeds 20 (Oviatt and McDougall 2005). Comparatively, weak ties (i.e., relationships with customers, suppliers and others that are friendly and business-like) are far more numerous than strong ties because they require less investment, and these are important because they are vital sources of information and know-how and provide bridges with intermediaries (Oviatt and McDougall 2005). Scholars believe that the existences of cross border strong or weak ties positively and significantly affect firms' innovativeness (Ahuja 2000) and internationalization (Borgatti and Cross 2003).

According to Granovetter (1973) and Burt (1992), the strength of ties between individuals is generally measured by combining the frequency of interaction and the duration of the ties; the strength of ties between two organizations is generally measured using completely different methods: assets/non-assets alliance, the number of ongoing or prior partnerships and the length of the partnership. Therefore, network strength in this research was defined by the perceptual measure, using questionnaire data sent to informants from sample firms. In the perceptual measure setting, I asked respondents to indicate: 1) whether the frequency of interaction with business partners is very frequent (Gulati 1995); 2) whether partners play an important role in helping with firms' internationalization (Gulati 1995); 3) whether the duration of ties with partners are very

long (Granovetter 1973); 4) whether partners tend to provide firms with timely information (Granovetter 1973); 5) whether partners tend to provide firms with reliable information (Granovetter 1973); and 6) whether firms can easily obtain required resources from partners (Batjargal and Liu 2004). Respondents were asked to rate each of these items on a 7-point Likert scale from 1 (disagree strongly) to 7 (agree strongly). A higher score implies a higher social interaction and a longer relationship duration, the result of which will increase inter-firm learning and knowledge creation and transfer. The value for these six items were summed up and then averaged to create our network strength construct (Cronbach's  $\alpha = .891$ ).

#### **2.4.3.4 Control variables**

This research includes 13 control variables believed to affect firms' export channel choice and influence the hypothesized relationships (He, Brouthers et al. 2013): firm size, firm age, market experience, industry, international diversity, transaction cost factors (i.e., asset specificity, channel volume, internal-behavioral uncertainty and external-environment uncertainty), market size (i.e., GDP per capita and population size) and growth (i.e., GDP growth rate), and cultural distance.

##### *Firm size*

Given that firm size has been widely confirmed as able to influence firms' export channel choice (Erramilli, Agarwal et al. 2002, He, Brouthers et al. 2013), firm size must be considered as a control variable. Following He et al. (2013), the measurement of firm size in this study was based on the question asking 'the number of employees in the firm'.

##### *Firm age*

Firm age was controlled because previous studies have widely recognized that a firm's age can influence its internationalization (Westhead, Wright et al. 2001). As the age

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increases, firms' knowledge accumulation increases and so does its experience in acquiring resources; such knowledge and experience can be beneficial to firms in reducing the risks and costs of international expansion (Autio, Sapienza et al. 2000). Accordingly, firm age in this study was operationalized as the age of the firm. Respondents were asked to report their firm's age in 2014.

### Market experience

From the organizational capabilities perspective, market experience is recognized as an important element of a firm's capabilities and resources, influencing international strategy such as export channel choice (Aulakh and Kotabe 1997). Previous TCA scholars have suggested that market experience is considered a condition in which firms have a lower level of international uncertainty (Anderson and Gatignon 1986, Brouthers and Hennart 2007). Market experience helps firms identify the source of market intelligence, decrease information overload, and generate and disseminate information effectively (He, Brouthers et al. 2013). In this paper, market experience was measured as the number of years of experience in the target export market (Brouthers and Brouthers 2003, He, Brouthers et al. 2013). Respondents were asked to report how many years they had been exporting to the most important market.

### Industry

Given that previous findings suggest firms do better in industries in which companies allocate more resources to differentiation activities (Boter and Holmquist 1996), it is reasonable to expect that industry differentiation will impact firm international strategic decisions (McNaughton 1996). This variable was measured by asking for the firm's main line of business. Based on He et al. (2013) and McNaughton (1996), in the questionnaire respondents were asked: in the last year, what has been your firm's most important

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producing and exporting product (He, Brouthers et al. 2013)? Respondents were required to provide data on the main product line their companies' products were manufactured and exported. Based on the Standard Industrial Classification of Chinese Export Commodities (MOFCOM 2008), three industry dummy variables were created for firms representing the primary industries in our sample: clothing; imitation jewelry and related articles; and machinery and equipment industries. For each of these three dummy variables, I assign a value of 1 if the firm is in the industry and 0 if the firm is not in the industry.

#### *International diversity*

I also considered international diversity as a control variable because previous scholars have examined its impact on firms' internationalization. Scholars have indicated that international diversity (as indicated by geographic scope and the technological and cultural diversity of the countries in a firm's portfolio) can influence the breadth, depth, and speed of internationalization (Zahra, Ireland et al. 2000). This variable was measured by asking the number of countries the firm has sold its products in. Following Goerzen and Beamish (2003) and Zahra et al (2000), the survey asked 'In how many countries are this company's products sold?' Respondents were asked to provide data on the number of foreign countries their companies' products were exported to.

#### *Asset specificity*

This research also controlled for the transaction cost variables (i.e., asset specificity, external uncertainty, internal uncertainty and channel volume) because previous studies have widely recognized that TCA factors influence firms' export channel choice. I measured asset specificity with a four-item scale adapted from Shervani et al. (2007) and Erramilli and Rao (1993). These four items assessed the extent to which specialized both physical and knowledge assets were required by salespeople in order to sell the firm's products and

procedures (Shervani, Frazier et al. 2007). The transaction-specific assets here refer to the assets that are specifically invested into the export country. Respondents were asked: 1) is specialized investment in the form of tools and equipment is needed to market your firm's product (He, Brouthers et al. 2013); 2) is a large specialized investment into specific know-how unique to the business needed to market your firm's product (McNaughton 1996, Chen and Chen 2003), 3) does it generally take a long time for your firm's salesperson (whether the firms' or an intermediary's) to gain a thorough knowledge of the market and product line (Shervani, Frazier et al. 2007), 4) to be effective, does a salesperson for your firm have to take a lot of time to get to know the customers and competitors (Shervani, Frazier et al. 2007). The items were measured using a 7-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. The value for these four items were summed up and then averaged to create our asset specificity construct (Cronbach's  $\alpha = .856$ ).

#### *Channel volume (frequency)*

Channel volume is a transactional dimension. Higher levels of channel volume offer firms a motive to use hierarchical governance; the fixed costs incurred by integrating transactions within the firm can be spread if the transaction volume is large enough (Brouthers and Hennart 2007). Given that channel volume can be an indicator of the resources that influence the firm's strategy, it is reasonable to consider this as a control variable. Drawing on Klein et al. (2009), channel volume was measured by asking respondents the percentage of their most important market accounts for the total export sales last year.

#### *Internal uncertainty*

Internal uncertainty reflected the extent to which it is difficult to assess selling performance in the distribution channel (Rindfleisch and Heide 1997). It is reasonable to

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treat internal uncertainty as a control variable in an export channel choice study because it is recognized as an important element of a firm's capabilities and resources, thereby influencing its international strategy (Aulakh and Kotabe 1997). Given that behavioral uncertainty was measured using a single item (7-point scale) (He, Brouthers et al. 2013), the internal uncertainty in this study was measured using a scale derived from Shervani et al. (2014). Following He et al (2013), respondents were asked to indicate the degree to which they find it easy to measure the collective performance of individuals who perform an exporting function. This item was measured using a reverse-coded 7-point Likert scale ranging from 'very easy' to 'very difficult'.

#### External uncertainty

According to Shervani et al. (2007) and Erramilli and Rao (1993), external uncertainty is the extent to which it is difficult to accurately predict future states of the world; this is typically labeled 'country risk' and can take many forms. Following Shervani et al. (2007) and He et al (2013), this variable was measured using a four-item Likert scale. Specifically in the questionnaire, respondents were asked about: 1) the extent to which it is difficult to accurately predict future sales forecast in the host country; 2) the extent to which the host market is well known to the firm; 3) the extent to which it is difficult to monitor trends in the host country; and 4) the extent to which it is difficult to gauge competition in the host country, with higher scores indicating a higher external uncertainty. Seven-point Likert scales were utilized in this measurement. The value for these four items were summed and then averaged to create our external uncertainty construct (Cronbach's  $\alpha = .869$ ).

#### **Target market variables**

In order to discover which variables related to the target (host) market influences the choice of export channel, this study undertook a comprehensive search of studies on



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export channel choice. According to the 28 export channel choice studies (see table 1), I found that most export channel choice papers do not consider the host country characteristics very much. The most common target market variable tested in these studies is external-environmental uncertainty (i.e., volatility and diversity of the environment in the host target market), which is also treated as an important dimension of TCA (Klein, Frazier et al. 1990, Bello and Lohtia 1995, Shervani, Frazier et al. 2007). Other main target country variables tested in the studies include legal restrictions (Anderson and Coughlan 1987), psychic distance (Klein and Roth 1990), cultural distance (Erramilli and Rao 1993, Ramaseshan and Patton 1994, Parente, Choi et al. 2010), market size and growth (Chung 2002, Li 2002, He, Brouthers et al. 2013). In this study, legal restrictions and psychic distance were not considered as control variables in later analysis, because the former factor lacks variation (Anderson and Coughlan 1987) and some export channels such as intermediate and joint venture do not correlate well with psychic distance (Johanson and Vahlne 2009). Collectively, there are five target-country variables (i.e., external-environmental uncertainty, cultural distance, market size (i.e., GDP per capita and population size) and growth (i.e., GDP growth rate)) used in this study.

I also tried employing country risk distance (i.e., formal institutional differences) and corruption perception index as control variables related to the target markets because these factors often reflect a country's governmental and political actions, creating both opportunities and barriers to international business activity (Brouthers, Brouthers et al. 2008). However, these two variables were found to be highly correlated with each other ( $r = .90$ ) and with market size ( $r = .83$ ). In order to avoid potential collinearity problems in our analysis, I only included the target market variables cultural distance, market size and

**Table 1: Host country variables of the ECC study reviewed**

<b>Author</b>	<b>Export Channel</b>	<b>Host Country/Foreign market variables</b>	<b>S/NS (Significant/not significant)</b>
1. (Anderson and Coughlan 1987)	Integrated channels VS independent channels	Legal Restrictions: 1) Impact of antitrust law on the form of the transfer ---dummy variable 0/1 2) Impact of the recipient country's tariff laws on the form of transfer ---dummy variable 0/1 Size of the market being entered (do not consider it because it is such an arbitrary exercise)	Because of the lack of variation, legal restrictions were not considered in later analysis.
2. (Klein, Frazier et al. 1990)	Hierarchical mode VS Intermediate mode VS Market-based mode	Volatility and diversity of the environment in the host market (External uncertainty)	S
3. (Klein and Roth 1990)	Hierarchical mode VS Intermediate mode VS Market-based mode	Psychic distance related to host country ---five 7-point scales: 1) Language of the country 2) Accepted business practice 3) Economic environment 4) Legal system 5) Communications infrastructure	S
4. (Chan 1991)	Vertical integration (Direct channels) VS horizontal integration (indirect channels)	Did not mention host country variables /characteristics	No mention
5. (Erramilli and Rao 1993)	Full-control modes VS shared-control modes	Country risk (volatility of the environment in the host country)---dummy variable 0/1 Cultural distance of the host country---composite index based on Hofstede	S

6. (Ramaseshan and Patton 1994)	Direct channels VS Indirect channels	Market proximity (geographically and culturally closeness of the target country being entered)--- 7-point scale Government pressure from target markets to use local agents	NS
7. (Bello and Lohtia 1995)	Non-integrated export channels (Foreign distributors VS foreign agents)	Environment volatility and diversity of the target market (external uncertainty)--- Likert-type response scale	Market volatility (NS) Market diversity (S)
8. (McNaughton 1996)	Hierarchical mode VS Intermediate mode VS Market-based mode	Volatility and diversity of the environment in the host market (external uncertainty)	NS
9. (Osborne 1996)	Integrated export channel VS Non-integrated export channels	Foreign market characteristics: 1) Volatility and diversity business environment of target market 2) Cultural similarity 3) Political stability of the target market (political factors) --- type of political regime (if not a democracy) --- existence of civil war --- level of economic stability --- level of tariffs tax and/or disincentives --- existence of exclusive trade deals with other countries	S
10. (Bello and Gilliland 1997)	Integrated channels VS Non-integrated channels	Culture of the target market Language of the target market Market volatility	S
11. (Aulakh and Kotabe 1997)	Hierarchical mode VS Intermediate mode VS Market-based mode	Country risk (perceived discontinuity or unpredictability of the political and economic environment of a host country)---A five-item scale perception measuring	S
12. (Campa and Guillén 1999)	Fully internalized channel VS Shared-control channel	Did not mention host country variables/characteristics	No mention

13. (McNaughton and Bell 2001)	Hierarchical mode VS Intermediate mode VS Market-based mode	Two dimensions characterize target market's environmental uncertainty: Volatility and diversity---7 point Likert scale	S
14. (Kim 2001)	Integrated channel VS non-integrated channel (independent outside distributor)	Did not mention host country variables /characteristics	No mention
15. (Rialp, Axinn et al. 2002)	Proprietary organizational forms VS International commercial alliance VS Independent market channels	Did not mention host country variables/characteristics	No mention
16. (Chung 2002)	Direct channel modes VS indirect channel modes	1) Host market's business system (centralised decision structure)---4 items 7-point Likert scale 2) Market size of the industry in the host market	S
17. (Li 2002)	Hierarchical mode VS Intermediate mode VS Market-based mode	Environmental uncertainty of the target market Strong/weak legal frameworks Market growth (increase of demand)	No mention
18. (Li and Ng 2002)	Hierarchical exchanges VS Relational exchanges VS Market exchanges	Environmental uncertainties/ market turbulence (i.e, exchange-rate fluctuations, changes in foreign governments' policies, trade barriers, and cultural differences). Market concentration	Market Turbulence (S) Market concentration (NS)
19. (McNaughton 2002)	Multiple channels VS single channel	Environmental uncertainty (i.e., volatility and diversity of the target market)	S

20. (Li, Li et al. 2003)	Hierarchical mode VS Intermediate mode VS Market-based mode	Country risk associate with uncertainty (i.e., political instability and economic fluctuations) embedded in entry barriers, regulations governing investment, and foreign business tax laws. --- Three items on a 7-point semantic scale 1) Entry barriers (both the tariff and non-tariff barriers) 2) Government regulations of foreign investment (requirements in ownership, managerial control, prohibition or restrictions of investment in certain section) 3) Tariff tax	NS
21. (Eriksson, Hohenthal et al. 2006)	Integrated VS Non-integrated channels	Did not mention host country variables /characteristics	No mention
22. (Shervani, Frazier et al. 2007)	Integrated VS Non-integrated channels	External environment uncertainty	S
23. (Lau 2008)	Direct export channel VS Indirect export channel VS Multiple export channel	Did not mention host country variables /characteristics	No mention
24. (Hessels and Terjesen 2010)	Direct export mode VS Indirect export mode	Did not take into account the targeted overseas market	No mention
25. (Parente, Choi et al. 2010)	Direct writing distribution VS independent sales agents	Cultural distance of the host country---composite index based on Hofstede, incorporate difference 5 indexes (power distance, uncertainty avoidance, individualism, masculinity, and long-term orientation.	S
26. (Abel - Koch 2013)	Direct export mode VS Indirect export mode	Did not take into account the characteristics of destination foreign countries	No mention
27. (He, Brouthers et al. 2013)	Hierarchical export channels VS Hybrid export channels (intermediaries)	1) Environmental uncertainty of the host country ---four-item semantic scale 2) Market size of the target country ---GDP for the export market	EU (S) Market size (NS)
28. (Fernández-Olmos and Díez-Vial 2015)	Direct export mode VS Indirect export mode	Did not mention host country variables /characteristics	No mention

market growth (with external uncertainty being included as part of the TCE control variables) in further analysis.

### Market size and growth

Target market size and growth must be considered as a control variable because at the firm level it is consistently linked with the direction and value of both exports and foreign direct investment (Mitra and Golder 2002). Market size and growth has come to be recognized as an important factor which influences firms' decisions in the internationalization process (Ellis 2008, He, Brouthers et al. 2013). Following Ellis (2008) and He et al. (2013), the measurement of market size in this study was captured by using population size and national gross domestic product (GDP) for the export market, which is the sum of all market values of final goods and services produced in a country. Moreover, the measurement of growth variable related to the target markets was captured by examining the GDP growth rate (annual %). Data were obtained from the World Bank website.

### Cultural distance

Following Kogut and Singh (1988), I therefore measured the cultural distance (CD) between the target countries and China (country of origin) by using Hofstede's four cultural dimensions: power distance, uncertainty avoidance, masculinity/femininity and individuality. This approach has been widely adopted to measure cultural distance (He, Brouthers et al. 2013). Based on Hofstede's cultural indices, the cultural distance measure is computed in the following way:

$$CD_i = \frac{\sum_{j=1}^4 [(H_{ij} - H_{Cj})^2 / \text{Var}_j]}{4}$$

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Where  $CD_i$  represents the cultural distance between country  $i$  and the origin country China;  $H_{ij}$  captures cultural dimension  $j$  in country  $i$  and  $H_{Cj}$  captures cultural dimension  $j$  in China; and  $Var_j$  represents the variance in the cultural dimension  $j$  across all countries (Salomon and Wu 2012).

#### **2.4.4 Statistical Analysis**

Following the collection of data, we tested for non-response bias and common methods bias. Relying on SPSS, this study conducted statistical analyses before testing our hypotheses. SPSS is appropriate statistical software for this purpose and is also viable for testing the reliability of the measure in a theoretical context (He, Brouthers et al. 2013). This is appropriate for exploratory factor analysis (Cavusgil and Zou 1994) and multinomial logistic regression analysis used in hypothesis testing. Multinomial logistic regression was employed to classify export channel choice, and structural equation modelling (SEM) with AMOS was used to construct validity tests; this is the best multivariate procedure for testing the construct validity (Hair, Black et al. 2006).

##### **2.4.4.1 Non-response bias**

In order to assess potential non-response bias, I followed the procedure outlined by Armstrong and Overton (1997), comparing early and late respondents' differences with respect to various firm characteristics, including age of the firm ( $t=1.001$ ,  $p=.318$ ), number of export markets ( $t=1.324$ ,  $p=.187$ ), market size ( $t=-1.484$ ,  $p=.139$ ), cultural distance ( $t=-1.678$ ,  $p=.095$ ), asset specificity ( $t=.503$ ,  $p=.615$ ), international experience ( $t=-.366$ ,  $p=.715$ ), external uncertainty ( $t=1.028$ ,  $p=.305$ ) and EO ( $t=.910$ ,  $p=.364$ ). No significant difference between early and late response was found. Hence, it was concluded that response bias is not an issue in this data.

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#### 2.4.4.2 Common Methods Bias

Common methods variance may occur when both dependent and independent variables are collected from respondents at the same time. Podsakoff et al. (Podsakoff, MacKenzie et al. 2003) provide researchers with two ways to deal with common methods biases: (a) through the design of the study's procedures; and (b) through statistical controls. We utilized both methods in this study. Firstly, in the questionnaire we used different response formats for the measurement of variables; for example, I used Likert scales for EO and networking capability and open-ended questions for items such as firms' size and international diversity. Secondly, this study's independent and dependent variables are not similar in content. Thirdly, some independent variable items were reverse-scaled to avoid the occurrence of response patterns affecting the accuracy of the data.

Common factor analysis was also conducted to assess whether a single latent factor would account for all the manifest variables and ensure that common methods variance did not threaten the interpretation of the findings of this research (Brouthers, Brouthers et al. 2003). Using factor analysis and entering all variables of interest, if the unrotated factor solution contains one factor, or a factor that accounts for the majority of covariance, then common method bias may exist (Hair, Black et al. 2006). All variables in this study were entered into an exploratory factor analysis and a factor analysis was performed. The result of Harmon's one-factor analysis revealed the presence of six distinct factors with an eigenvalue greater than 1.0, rather than a single factor. This produced a six-factor solution in which the largest factors explained about 22.01% of the variance. There is no one general factor that accounts for the majority of the covariance among the variables. To overcome the potential problems with the one-factor test, I also used confirmatory factor analysis (CFA) to investigate potential common methods bias among the variables in our survey



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(Podsakoff, MacKenzie et al. 2003). The proposed model illustrated a poor fit to the data (TLI= .122; CFI= .083; IFI= .129; RMSEA= .162). The results of both tests demonstrated that common method bias alone is not likely to explain any observed relationship between model variables in this study. Consequently, it is evident that the measurement model is robust to a common method variance problem.

#### **2.4.4.3 Construct Reliability and Validity**

In this section, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) are presented in sequence to reflect the constructs' reliability and validity. According to previous research, if more than two constructs are involved, achieving unidimensional measurement (ensuring a set of measured variables has only one underlying construct) is a crucial undertaking in theory testing and development (Hair, Black et al. 2006). Given that running exploratory factor analysis in SPSS is considered a critical part of assessing construct validity (Cavusgil and Zou 1994), this research ran EFA for the sample with the procedure factor in order to demonstrate construct validity. The EFA revealed the expected factor solutions (see table 1). The factor analysis of the 23 items has an excellent KMO of 0.875 and a significant Barlett's test of sphericity. Five clusters of items were extracted with an eigenvalue over 1, explaining 70.4% of the total variance. All factors had a Cronbach's alpha over 0.8, which was above the recommended cut-off value of 0.7 (Hair, Black et al. 2006).

The EFA result also showed that EO innovativeness and EO proactiveness items loaded on a single factor, which suggested that these two scales could have been combined. However, this seemed conceptually invalid and potentially irrelevant, so another technique was required for reassessment based on the combination of conceptual foundation and some empirical evidence; it was necessary to ensure that the potential combination would not go against the basic assumption of factor analysis that 'some underlying structure does

**Table 2: Exploratory Factor Analysis (EFA) of measures**Rotated Component Matrix<sup>a</sup>

	Component				
	1	2	3	4	5
Entrepreneurial orientation1	.763				
Entrepreneurial orientation2	.754				
Entrepreneurial orientation3	.776				
Entrepreneurial orientation4	.755				
Entrepreneurial orientation5	.757				
Entrepreneurial orientation6	.681				
Entrepreneurial orientation7					.746
Entrepreneurial orientation8					.769
Entrepreneurial orientation9					.827
Network strength1		.751			
Network strength2		.731			
Network strength3		.741			
Network strength4		.834			
Network strength5		.740			
Network strength6		.708			
Asset specificity1				.835	
Asset specificity2				.777	
Asset specificity3				.843	
Asset specificity4				.726	
External uncertainty1			.835		
External uncertainty2			.826		
External uncertainty3			.879		
External uncertainty4			.814		

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

---

exist in the set of selected variables' (Hair, Black et al. 2006). As recommended by Hair et al. (2006), a structural equation approach using AMOS software was then undertaken to compare the model fit between the original three-factor EO construct suggested by the theory (Covin and Slevin 1989, Naman and Slevin 1993) and the two-factor construct suggested by EFA and fulfilled by SPSS.

The overall goodness-of-fit statistical results for these two constructs are shown in figure 4 and figure 5. Model fit test results were obtained for the original three-factor EO construct:  $X^2(24)=63.541$ ,  $p<.000$ ; IFI=.960; TLI=.922; CFI=.959; and RMSEA=.087, and for the two-factor construct as suggested by EFA:  $X^2(26)=79.850$ ,  $p<.000$ ; IFI=.945; TLI=.903; CFI=.944; and RMSEA=.097. The Chi-square statistic ( $X^2$ ) and the root mean square error of approximate (RMSEA) are considered to be 'badness-of-fit' measures because a small, non-significant  $X^2$  and a lower RMSEA score correspond to a good fit. In contrast, values of the incremental fit index (IFI), Tucker-Lewis index (TLI) and comparative fit index (CFI) range between 0 and 1, with larger values indicating better 'goodness-of-fit'. Accordingly, the original three-factor EO construct shows a comparatively better result than the two-factor EO construct in terms of model fit, since the model fit indices (IFI, TLI and CFI) achieve the higher values when the EO scale is modelled with the original three dimension. The value of RMSEA of the three-factor EO construct also decreases considerably when using the three-factor EO construct. Therefore, the three-factor EO construct was used in further analysis.

Figure 4: Model fit test of three-factor EO construct (standard estimates)  
 Chi-square= 63.541 (24df)  
 P= .000

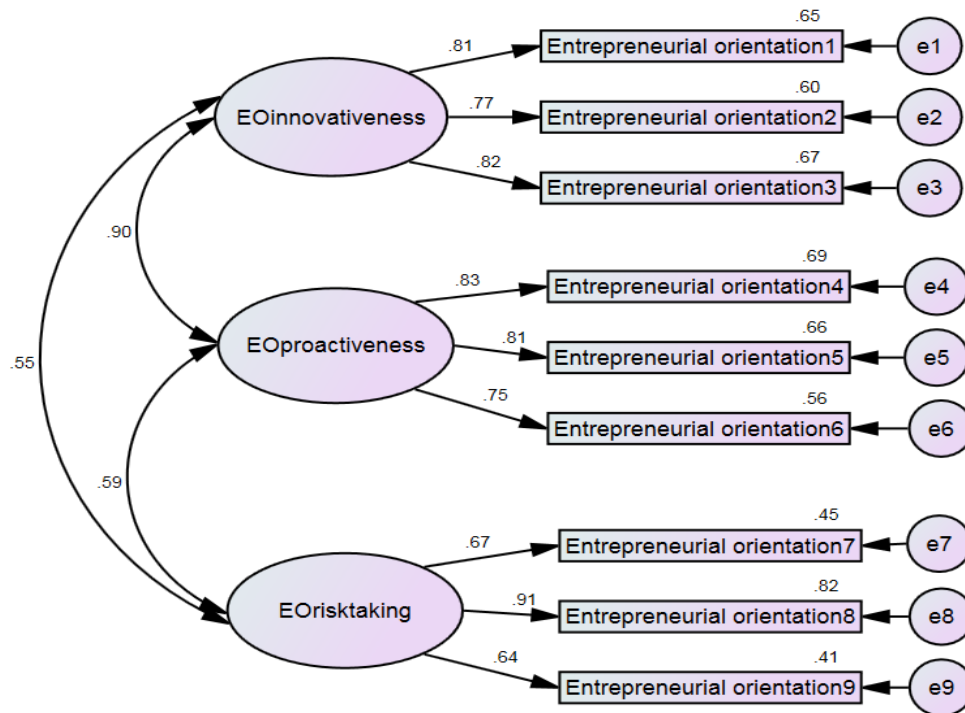
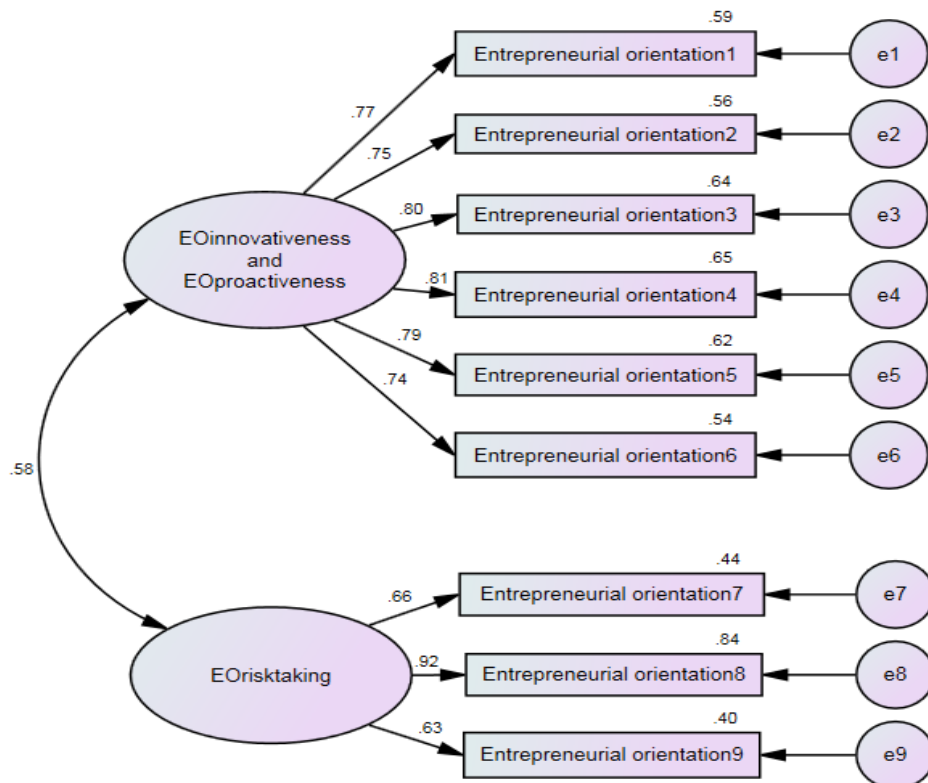


Figure 5: Model fit test of two-factor EO construct (standard estimates)  
 Chi-square= 79.850 (26df)  
 P= .000



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## 2.5 Hypotheses testing

Before testing our hypotheses, I examined the correlations between variables. Table 3 shows the means, standard deviations and correlations for all our main variables. Based on the results, I found a highly statistically significant correlation (although below the cutoff of .90 indicated by Hair et al. (2006)) between the independent variables: firm age and market experience ( $r = .609$ ). Given that the presence of high correlation is the first indication of substantial collinearity (Hair, Black et al. 2006), it is therefore necessary to investigate whether the highly correlated variables may cause multicollinearity issues in our further regression analysis.

In order to avoid highly significant correlations between the independent variables, each of the high correlation variables was tested in a separate regression. I therefore ran several separate regressions: I ran the regressions with all the variables in and then removed firm age, testing with and without firm age. Using the same method, I also tested with and without market experience. When I compared the results, I found that they are generally the same and dependent variables are significant at the same level in the regressions. Thus, there was no indication that multicollinearity was a problem in our analysis.

### Export Channel Choice (ECC) Results

In this section, I present the results of the hypotheses testing based on our developed conceptual model, as introduced in the theoretical sections. Hypothesis 1 explores the effect of an internationalized firm's EO on its export channel choice. I expected to find that it would be more likely for SMEs possessing higher levels of EO to choose a non-market export channel (i.e., a high control hierarchical mode or intermediate mode) rather

**Table 3: Mean, standard deviation, and Pearson correlations**

	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Cindustry	0.14	0.35	1																		
2. Jindustry	0.14	0.35	-.163*	1																	
3. Mindsutry	0.15	0.36	-.173*	-.170*	1																
4. Firm Size	178.28	147.69	0.095	-.164*	0.018	1															
5. Firm Age	11.81	6.92	-0.109	-.171*	0.031	.534**	1														
6. Market experience	6.70	4.56	-0.125	0.065	-0.077	.309**	.609**	1													
7. International diversity	13.76	12.80	-0.054	.143*	0.115	.225**	.213**	.226**	1												
8. Asset specificity	5.48	1.28	-.141*	-.182**	.146*	0.116	0.114	0.105	0.094	1											
9. Channel volume	55.47	23.25	0.009	.168*	-0.022	-0.132	0.045	.219**	-0.061	0.003	1										
10. Internal uncertainty	4.02	1.36	0.024	0.129	-0.078	.149*	0.114	0.064	.230**	-.173*	-0.064	1									
11. External uncertainty	4.03	1.21	0.012	0.075	0.105	.265**	.235**	.153*	.235**	0.123	-0.026	.349**	1								
12. Market size	33.22	20.87	0.064	0.043	0.004	0.037	0.059	0.115	0.017	-0.109	0.082	-0.046	-0.026	1							
13. GDPgrowth rate	2.14	2.47	-0.005	-0.017	0.057	-0.034	-0.086	-0.001	0.009	0.075	0.095	-0.002	0.067	-0.129	1						
14. Population size	179.06	280.91	-0.036	-0.056	-.174*	0.026	-0.087	-.180*	-0.063	0.072	-0.026	0.034	0.019	-.200**	.421**	1					
15. Cultural distance	2.73	1.20	0.071	-0.012	-.153*	0.049	.157*	.184**	0.043	0.032	-0.047	-0.056	-0.081	.532**	-.537**	-.258**	1				
16. EO average	4.96	1.16	-0.059	-.197**	0.114	.322**	0.127	0.006	.188**	.365**	-0.06	-0.115	.146*	0.09	-0.042	0.062	.181**	1			
17. Network size	139.05	182.98	-0.041	.183**	0.081	.333**	.227**	.149*	.350**	0.029	-0.108	.308**	.294**	-0.098	-0.093	-0.068	-0.011	0.084	1		
18. Network strength	5.52	1.08	-0.126	0.076	0.019	0.126	.161*	.226**	.288**	.470**	0.025	0.042	.206**	0.002	0.085	0.072	0.112	.469**	.202**	1	
19. Export channel choice	2.14	0.94	0.058	0.122	-0.021	-.185**	-0.131	-.158*	0.07	-0.043	-0.102	-0.022	0.016	0.005	0.047	0.063	0.023	-0.078	0.062	-0.013	1

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

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than a low control market based mode. Hypothesis 2 predicts that networks (i.e., network size and strength) can help SMEs with strong EO to be more innovative and proactive while reducing the perception of risk, with a positive moderating impact on the relation between EO and export channel choice. It was considered more likely for SMEs with stronger EO to select a high control hierarchical channel increase as networks increase.

The hypotheses were tested using multinomial logistic regression analysis because the dependent variable, export channel choice, is a three-choice categorical variable (i.e., a hierarchical mode, an intermediate mode and a market mode) (Hair, Black et al. 2006). This research is interested in the prediction and explanation of the relationships that affect the category in which a firm's channel choice is located. The multinomial logistic regression is an appropriate tool to estimate the influence of the independent variables on the probability that each channel mode will be selected; this is because the determinants of the utility of one mode can differ from those of other modes (Klein, Frazier et al. 1990, Klein and Roth 1990). This analytical mode is appropriate because of its similarity to multiple regression and its straightforwardness in statistical tests (Hair, Black et al. 2006).

When the multinomial logistic regression is estimated, one option should be set as the base mode because once  $j-1$  alternative probabilities are known, the  $j$ th is determined (Klein, Frazier et al. 1990, Hair, Black et al. 2006). I set the intermediate export channel as the default mode in testing H1 and H2. The use of this intermediate mode was assigned a value of zero, and the use of the other channel options (i.e., the hierarchical mode and the market mode) were estimated and interpretable with reference to it. The size of the various coefficients indicates the extent to which the corresponding variable contributes to the utilize of choosing that channel mode beyond its contribution to the utilize of the intermediate mode (Klein and Roth 1990).

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Five multinomial logistical regression models were run to examine the influence of EO and network variables on export channel choice. For comparing the regression model with the base model, the most common standard used is overall prediction-of-fit. Given that these are nested models based on the base model, we can then judge the impact of the added variables on a dependent variable, or model fit, by comparing the change of several indices such as the Chi-square of the model, Nagelkerke R square, and percentage of correct classification (Hair, Black et al. 2006).

Chi-square is the only measure that involves a direct statistical test of its significance and this forms the basis for many other goodness-of-fit measures (Hair, Black et al. 2006). The Chi square of the model is an improvement of  $-2 \log$  likelihood ratios from the intercept-only model to the fitted model via the likelihood ratio tests. It measures the likelihood that the observed association between the independent variable and the dependent variable is caused by chance. When the Chi-square is significant, this means that there is some association in the population between the independent and dependent variables (Hair, Black et al. 2006). This index is often used to assess the overall significance of the multinomial logistic regression model.

The Nagelkerke R square ( $R^2$ ) is another important index that provides us with information for assessing a model's overall significance. This is similar to R square for a linear regression, but does not convey exactly the same information; it basically changes the log-likelihood from the intercept-only model to the current model. The coefficient can vary between 0 and 1 (Hair, Black et al. 2006). If the regression model is properly applied and estimated, we can generally assume that the higher the value of  $R^2$ , the greater the explanation power of the regression equation, and therefore the better the prediction of the dependent variable. Given that the addition of independent variables will always cause



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the coefficient of determination ( $R^2$ ) to rise, the adjusted coefficient of determination may fall if the added independent variables have little explanatory power, thus in order to compare models with different numbers of independent variables, I used the adjusted  $R^2$  (Hair, Black et al. 2006).

With respect to testing the significance of the coefficients, logistical regression tests hypothesized about the individual coefficients, as with the multiple regression (Hair, Black et al. 2006). In logistic regression I use the Wald statistic to assess the significance of each estimated coefficient. If the logistic coefficient is statistically significant, we can interpret it in terms of how it affects the estimated probability and thus the prediction of group membership.

The results of the multinomial logistic regression for EO and network variables are presented in table 4. Model 1 in table 4 is our base model and it aims to establish a baseline against which the added contribution of independent and moderating variables can be assessed. The base model is significant ( $P < .01$ ) and the control variables explain about 27.9% of the variance in the dependent variable export channel choice. The percentage of correct classification is 60.7%. Internal uncertainty ( $P < .01$ ), market size ( $P < .05$ ), GDP growth rate ( $P < .10$ ), population size ( $P < .05$ ) and cultural distance ( $P < .10$ ) are significantly related to the dependent variable, while other controls are not significant.

Model 2 in table 4 is the EO model that includes entrepreneurial orientation as a primary independent variable; this explains about 29.6% of the variance in my dependent variable. Based on the model result, the EO variable ( $P < .10$ ) is marginally related to the selection of a market mode over a hierarchical or intermediate mode. As such, hypothesis 1 is partially supported with significant results for market modes. In addition, Models 3 and 4 explore the interaction between EO and two network measures (network size and network

**Table 4 Multinomial logit regression of export channel choice (intermediate mode=0)**

	<b>Model1</b>		<b>Model2</b>		<b>Model3</b>		<b>Model4</b>		<b>Model5</b>	
	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode
<b>Control variables</b>										
Clothing industry	.209 (1.188)	.856 (1.146)	.247 (1.224)	.868 (1.179)	.317 (1.266)	.969 (1.217)	.389 (1.278)	.995 (1.236)	.327 (1.276)	.985 (1.230)
Jewellery industry	-.785 (1.020)	.255 (.953)	-.850 (1.012)	.144 (.949)	-.618 (1.048)	.102 (.987)	-.639 (1.038)	.145 (.979)	-.618 (1.047)	.104 (.987)
Machinery industry	-.693 (.768)	-.638 (.752)	-.835 (.764)	-.750 (.750)	-.969 (.819)	-.969 (.805)	-.958 (.821)	-.995 (.808)	-.965 (.823)	-.969 (.809)
Firm size	.004* (.002)	.001 (.002)	.005** (.003)	.002 (.003)	.005* (.003)	.001 (.003)	.005* (.003)	.001 (.003)	.005* (.003)	.001 (.003)
Firm age	-.105* (.054)	-.073 (.053)	-.105* (.056)	-.074 (.055)	-.108* (.060)	-.083 (.058)	-.110* (.059)	-.081 (.058)	-.108* (.060)	-.083 (.058)
Market experience	.140 (.091)	.067 (.090)	.109 (.088)	.034 (.088)	.121 (.091)	.045 (.090)	.122 (.091)	.046 (.090)	.121 (.091)	.046 (.090)
International diversity	-.001 (.030)	.015 (.030)	.005 (.030)	.023 (.029)	.008 (.031)	.024 (.030)	.009 (.031)	.023 (.031)	.007 (.031)	.024 (.031)
Asset specificity	-.332 (.290)	-.344 (.282)	-.241 (.296)	-.236 (.289)	-.061 (.314)	-.044 (.307)	-.055 (.319)	-.046 (.312)	-.060 (.318)	-.041 (.311)
Channel volume	.007 (.013)	-.006 (.012)	.006 (.013)	-.007 (.012)	.005 (.013)	-.009 (.012)	.005*** (.013)	-.008 (.013)	.005 (.013)	-.009 (.013)
Internal uncertainty	.848*** (.283)	.722*** (.278)	.799*** (.279)	.664** (.275)	.812*** (.294)	.643** (.289)	.813 (.292)	.651** (.287)	.809*** (.295)	.643** (.290)
External uncertainty	.046 (.280)	.162 (.278)	.122 (.287)	.241 (.284)	.172 (.298)	.269 (.296)	.166 (.299)	.262 (.297)	.170 (.300)	.268 (.298)

Market size	-.037** (.016)	-.038** (.015)	-.035** (.016)	-.036** (.015)	-.045** (.018)	-.040** (.017)	-.045** (.018)	-.039** (.017)	-.045** (.018)	-.040** (.017)
GDP growth rate	.268* (.145)	.356** (.142)	.263* (.150)	.351** (.148)	.313* (.160)	.420*** (.158)	.318** (.159)	.416*** (.157)	.312* (.160)	.422*** (.159)
Population Size	-.003** (.001)	-.002* (.001)	-.003** (.001)	-.002* (.001)	-.002** (.001)	-.002* (.001)	-.003** (.001)	-.002* (.001)	-.002** (.001)	-.002* (.001)
Cultural distance	.632* (.339)	.800** (.335)	.676** (.345)	.861** (.342)	.899** (.400)	1.020*** (.390)	.913** (.400)	1.009*** (.389)	.900** (.401)	1.018*** (.390)
<b>Predictor variables</b>										
Entrepreneurial orientation (EO)			-.462 (.303)	-.552* (.296)	-.297 (.387)	-.271 (.375)	-.264 (1.888)	-.146 (1.872)	-.300 (1.874)	-.139 (1.859)
Network size					.001 (.013)	.007 (.013)	.001 (.003)	.003 (.003)	.001 (.013)	.007 (.013)
Network strength					-.756* (.416)	-.751* (.408)	-.758 (1.621)	-.576 (1.601)	-.756 (1.632)	-.643 (1.614)
<b>Interactions</b>										
EO x Network size					.000 (.002)	-.001 (.002)			.000 (.002)	-.001 (.002)
EO x Network strength							.000 (.312)	-.036 (.308)	.002 (.313)	-.023 (.309)
<b>Constant</b>	-1.107	-.339	.585	1.604	2.208	2.816	2.004	2.247	2.183	2.175
Chi-square (X <sup>2</sup> )	54.594***		58.426***		66.114***		65.157***		66.155***	
Nagelkerke R <sup>2</sup>	.279		.296		.331		.327		.331	
Nagelkerke change from step 1			.017						.052	
Nagelkerke change from step 2					.035		.031		.035	
Percent correctly classified	60.7%		60.7%		61.5%		61.5%		61.5%	
Note: n=203; * P<.10, **P<.05, ***P<.01 ( based on Wald test)										

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strength) respectively, while model 5 outlines all the interactions between EO and network proxies. The interaction variable EO x network size and EO x network strength both show insignificant results in the regression. This suggests that adding the network variable does not moderate the relationship between EO and export channel choice. The results of the regression do not provide evidence to support hypothesis 2.

In order to understand how each EO dimension might affect export channel choice, we ran separate regressions for each of the three dimensions of EO (table 5,6, and 7). In each table, we created five models to explore the hypothesis concerning export channel choice. The results of the multinomial regression for the innovativeness dimension of EO and network variables are presented in table 5. Model 1 in table 5 is the base model and it is significant ( $P < .01$ ). Compared to the original multinomial regression result (table 4), I found that in model 2 the coefficients for the EO dimension of innovativeness showed marginal significance ( $p < .10$ ) in table 5. The regression result suggests that a firm with a high-level of innovativeness capability is more likely to choose an intermediate export channel than the hierarchical mode or market-based mode. Models 3 and 4 explore the interactions between innovativeness and our network proxies separately, while model 5 includes all interactions. All the interaction models are statistically insignificant.

The results of the multinomial regression for the proactiveness dimension of EO and network variables are presented in table 6. Model 1 is the base model and it is significant ( $p < .01$ ). All the control variables explained about 27.9% of the variance in the dependent variable export channel choice. Model 2 in table 6 examines the firm's proactiveness dimension of EO and its impact on export channel choice. Compared to the original regression result (table 4), table 6 reveals that the proactiveness model (Model 2) has similar insignificant results. Moreover, the interactions in table 6 (i.e., proactiveness x

**Table 5 Multinomial logit regression of export channel choice (intermediate mode=0)**

	<b>Model1</b>		<b>Model2</b>		<b>Model3</b>		<b>Model4</b>		<b>Model5</b>	
	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode
<b>Control variables</b>										
Clothing industry	.209 (1.188)	.856 (1.146)	.229 (1.216)	.889 (1.171)	.271 (1.258)	.977 (1.206)	.387 (1.262)	1.016 (1.219)	.315 (1.266)	1.018 (1.217)
Jewellery industry	-.785 (1.020)	.255 (.953)	-.710 (1.025)	.331 (.949)	-.541 (1.051)	.255 (.984)	-.595 (1.043)	.277 (.980)	-.558 (1.051)	.270 (.986)
Machinery industry	-.693 (.768)	-.638 (.752)	-.970 (.790)	-.903 (.774)	-1.045 (.829)	-1.069 (.815)	-1.029 (.834)	-1.095 (.820)	-1.036 (.834)	-1.078 (.821)
Firm size	.004* (.002)	.001 (.002)	.005** (.002)	.002 (.002)	.005* (.003)	.001 (.003)	.005* (.003)	.001 (.003)	.005* (.003)	.001 (.003)
Firm age	-.105* (.054)	-.073 (.053)	-.104* (.056)	-.071 (.055)	-.109* (.058)	-.083 (.057)	-.110* (.060)	-.082 (.058)	-.108* (.060)	-.084 (.058)
Market experience	.140 (.091)	.067 (.090)	.101 (.089)	.030 (.089)	.118 (.091)	.049 (.090)	.118 (.094)	.052 (.093)	.117 (.095)	.053 (.093)
International diversity	-.001 (.030)	.015 (.030)	.009 (.032)	.026 (.031)	.007 (.032)	.024 (.032)	.009 (.032)	.024 (.03)	.006 (.032)	.025 (.032)
Asset specificity	-.332 (.290)	-.344 (.282)	-.201 (.297)	-.220 (.290)	-.056 (.316)	-.039 (.310)	-.044 (.326)	-.033 (.319)	-.055 (.326)	-.027 (.311)
Channel volume	.007 (.013)	-.006 (.012)	.006 (.013)	-.008 (.012)	.005 (.013)	-.008 (.012)	.005 (.013)	-.009 (.012)	.005 (.013)	-.009 (.013)
Internal uncertainty	.848*** (.283)	.722*** (.278)	.879*** (.284)	.752*** (.279)	.864*** (.292)	.715** (.286)	.847*** (.291)	.715** (.286)	.846*** (.292)	.719** (.287)
External uncertainty	.046 (.280)	.162 (.278)	.177 (.296)	.282 (.294)	.201 (.302)	.281 (.301)	.200 (.403)	.263 (.302)	.202 (.304)	.284 (.303)

Market size	-.037** (.016)	-.038** (.015)	-.035** (.016)	-.035** (.016)	-.044** (.018)	-.039** (.017)	-.045** (.018)	-.038** (.017)	-.045** (.018)	-.039** (.017)
GDP growth rate	.268* (.145)	.356** (.142)	.272* (.153)	.355** (.150)	.306* (.161)	.413*** (.159)	.309* (.160)	.413*** (.158)	.301* (.161)	.419*** (.160)
Population Size	-.003** (.001)	-.002* (.001)	-.003** (.001)	-.002* (.001)	-.003** (.001)	-.002* (.001)	-.003** (.001)	-.002* (.001)	-.003** (.001)	-.002* (.001)
Cultural distance	.632* (.339)	.800** (.335)	.718** (.354)	.870** (.348)	.899** (.402)	1.010*** (.390)	.927** (.404)	.988** (.391)	.909** (.404)	1.004*** (.392)
<b>Predictor variables</b>										
Innovativeness (EO1)			-.519* (.274)	-.498* (.269)	-.393 (.350)	-.258 (.341)	-.585 (1.605)	.045 (1.588)	-.576 (1.606)	.074 (1.591)
Network size					.002 (.013)	.005 (.013)	.002 (.003)	.003 (.003)	-.001 (.013)	.005 (.013)
Network strength					-.697* (.427)	-.722* (.420)	-.903 (1.509)	-.434 (1.494)	-.847 (1.518)	-.432 (1.505)
<b>Interactions</b>										
Innovativeness x Network size					.001 (.002)	.000 (.002)			.001 (.002)	-.000 (.002)
Innovativeness x Network strength							.047 (.273)	-.062 (.270)	.036 (.275)	-.060 (.272)
<b>Constant</b>	-1.107	-.339	.585	1.604	2.022	2.811	2.895	1.066	3.003	.719
Chi-square (X <sup>2</sup> )	54.594***		59.093***		66.658***		66.131***		67.420***	
Nagelkerke R <sup>2</sup>	.279		.299		.333		.331		.336	
Nagelkerke change from step 1			.020						.057	
Nagelkerke change from step 2					.034		.032		.037	
Percent correctly classified	60.7%		60.2%		63.5%		60.0%		61.5%	
Note: n=203; * P<.10, **P<.05, ***P<.01 ( based on Wald test)										

**Table 6 Multinomial logit regression of export channel choice (intermediate mode=0)**

	<b>Model1</b>		<b>Model2</b>		<b>Model3</b>		<b>Model4</b>		<b>Model5</b>	
	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode
<b>Control variables</b>										
Clothing industry	.209 (1.188)	.856 (1.146)	.218 (1.206)	.794 (1.163)	.303 (1.256)	.920 (1.208)	.338 (1.256)	.899 (1.213)	.318 (1.266)	.937 (1.219)
Jewellery industry	-.785 (1.020)	.255 (.953)	-.807 (1.011)	.125 (.949)	-.458 (1.062)	.203 (1.004)	-.575 (1.040)	.153 (.981)	-.449 (1.061)	.212 (1.002)
Machinery industry	-.693 (.768)	-.638 (.752)	-.824 (.764)	-.751 (.751)	-1.009 (.820)	-1.023 (.808)	-.979 (.823)	-1.017 (.811)	-.996 (.824)	-1.009 (.811)
Firm size	.004* (.002)	.001 (.002)	.005* (.002)	.002 (.002)	.005* (.003)	.001 (.003)	.005* (.003)	.001 (.003)	.005* (.003)	.001 (.003)
Firm age	-.105* (.054)	-.073 (.053)	-.103* (.056)	-.077 (.054)	-.099* (.058)	-.079 (.055)	-.106* (.059)	-.080 (.057)	-.101* (.058)	-.080 (.055)
Market experience	.140 (.091)	.067 (.090)	.119 (.088)	.046 (.088)	.124 (.091)	.053 (.090)	.128 (.091)	.052 (.090)	.126 (.091)	.054 (.090)
International diversity	-.001 (.030)	.015 (.030)	.003 (.030)	.021 (.030)	.007 (.031)	.023 (.030)	.009 (.031)	.023 (.031)	.008 (.031)	.023 (.031)
Asset specificity	-.332 (.290)	-.344 (.282)	-.268 (.298)	-.244 (.291)	-.096 (.317)	-.069 (.311)	-.077 (.319)	-.065 (.312)	-.084 (.322)	-.060 (.314)
Channel volume	.007 (.013)	-.006 (.012)	.006 (.013)	-.007 (.012)	.005 (.013)	-.009 (.012)	-.005 (.013)	-.009 (.012)	.005 (.013)	-.008 (.013)
Internal uncertainty	.848*** (.283)	.722*** (.278)	.816*** (.278)	.685** (.274)	.857*** (.297)	.697** (.292)	.838*** (.292)	.676** (.287)	.858*** (.298)	.695** (.292)
External uncertainty	.046 (.280)	.162 (.278)	.094 (.283)	.220 (.281)	.149 (.297)	.235 (.295)	.145 (.297)	.246 (.295)	.140 (.301)	.227 (.299)
Market size	-.037** (.016)	-.038** (.015)	-.036** (.016)	-.037** (.015)	-.047*** (.018)	-.042** (.017)	-.046*** (.018)	-.041** (.017)	-.047*** (.018)	-.042** (.017)

GDP growth rate	.268*	.356**	.276*	.372***	.325**	.429***	.329**	.424***	.328**	.430***
	(.145)	(.142)	(.147)	(.145)	(.157)	(.154)	(.157)	(.155)	(.157)	(.155)
Population Size	-.003**	-.002*	-.003**	-.002**	-.003**	-.002*	-.003**	-.002**	-.003**	-.002**
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)
Cultural distance	.632*	.800**	.653**	.857**	.909**	1.031***	.903**	1.014***	.905**	1.030***
	(.339)	(.335)	(.342)	(.341)	(.401)	(.392)	(.398)	(.389)	(.400)	(.391)
<b>Predictor variables</b>										
Proactiveness (EO2)			-.232	-.368	-.177	-.225	.060	-.097	.152	.021
			(.243)	(.238)	(.325)	(.314)	(1.453)	(1.443)	(1.464)	(1.455)
Network size					-.004	.001	.001	.003	-.004	.001
					(.009)	(.009)	(.003)	(.003)	(.009)	(.009)
Network strength					-.865**	-.818**	-.771	-.727	-.575	-.599
					(.416)	(.407)	(1.284)	(1.263)	(1.323)	(1.303)
<b>Interactions</b>										
Proactiveness x Network size					.001	.000			.001	.001
					(.002)	(.002)			(.002)	(.002)
Proactiveness x Network strength							.020	-.016	-.059	-.043
							(.244)	(.241)	(.253)	(.250)
<b>Constant</b>	-1.107	-.339	-.279	.822	2.398	3.122	1.187	2.437	.699	1.818
Chi-square (X <sup>2</sup> )	54.594***		57.516***		65.610***		64.770***		65.673***	
Nagelkerke R <sup>2</sup>	.279		.292		.329		.325		.329	
Nagelkerke change from step 1			.013						.050	
Nagelkerke change from step 2					.037		.033		.037	
Percent correctly classified	60.7%		61.7%		63.5%		65.0%		63.5%	
Note: n=203; * P<.10, **P<.05, ***P<.01 ( based on Wald test)										



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network size and proactiveness x network strength) show insignificance as well. Collectively, the results I found here are similar to the results I found in the original regression test.

In addition, table 7 presents the results of the multinomial regression for the risk-taking dimension of EO and its impact on a firm's export channel choice. As indicated in table 7, the base model (model 1) is significant ( $p < .01$ ) and explains 27.9% of the variance in the channel selection. The EO model (model 2) in table 7 shows insignificant result. As such, the risk-taking dimension of EO is insignificantly related to the export channel choice. In models 3, 4 and 5, I added the risk-taking and network interaction terms to test moderating effect. Neither of the interaction terms are significant. Overall, the findings that I obtained in these sub-dimension tests are consistent with the results from the original regression analysis. The multinomial regression results indicated that EO is statistically insignificantly related to the export channel choice and network variables (network size and network strength) cannot moderate this relationship. H1 and H2 are therefore not supported.

### **Robustness testing**

In order to provide robust support for our hypotheses tests, I performed a number of robustness checks to further strengthen the findings. First, I reran regressions with all the same variables as in the multinomial regression by using the ordered probit methodology (tables 8, 9, 10 and 11). Second, I developed a more parsimonious model in order to address the robustness test for the hypotheses; I reran the ordered probit regression by taking out the control variables with  $t < 1$  (eliminating variables C-industry, M-industry, firm age, asset specificity, internal uncertainty, external uncertainty, market size and population size). In the ordered probit regression, dependent variable export channel choice is a three-choice categorical variable (i.e., hierarchical mode, intermediate mode and market mode). We coded the high-control hierarchical export mode as 1, intermediate mode as 2, and market

**Table 7 Multinomial logit regression of export channel choice (intermediate mode=0)**

	<b>Model1</b>		<b>Model2</b>		<b>Model3</b>		<b>Model4</b>		<b>Model5</b>	
	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode	Hierarchical Mode	Market Mode
<b>Control variables</b>										
Clothing industry	.209 (1.188)	.856 (1.146)	.231 (1.212)	.864 (1.167)	.351 (1.264)	.965 (1.219)	.383 (1.282)	.975 (1.238)	.352 (1.270)	.946 (1.226)
Jewellery industry	-.785 (1.020)	.255 (.953)	-.895 (1.015)	.099 (.952)	-.788 (1.046)	-.012 (.988)	-.639 (1.051)	.094 (.992)	-.789 (1.046)	-.012 (.987)
Machinery industry	-.693 (.768)	-.638 (.752)	-.680 (.762)	-.596 (.747)	-.869 (.834)	-.888 (.822)	-.885 (.822)	-.910 (.809)	-.873 (.835)	-.886 (.822)
Firm size	.004* (.002)	.001 (.002)	.005** (.003)	.002 (.003)	.005* (.003)	.001 (.003)	.005* (.003)	.001 (.003)	.005* (.003)	.001 (.003)
Firm age	-.105* (.054)	-.073 (.053)	-.106** (.055)	-.074 (.055)	-.114* (.062)	-.083 (.060)	-.109* (.058)	-.078 (.057)	-.115* (.062)	-.084 (.060)
Market experience	.140 (.091)	.067 (.090)	.127 (.089)	.050 (.089)	.129 (.091)	.049 (.091)	.127 (.091)	.049 (.090)	.129 (.092)	.050 (.091)
International diversity	-.001 (.030)	.015 (.030)	.002 (.029)	.019 (.029)	.009 (.030)	.023 (.030)	.009 (.030)	.023 (.030)	.009 (.030)	.023 (.030)
Asset specificity	-.332 (.290)	-.344 (.282)	-.322 (.290)	-.333 (.283)	-.095 (.310)	-.097 (.304)	-.097 (.310)	-.097 (.303)	-.096 (.311)	-.098 (.304)
Channel volume	.007 (.013)	-.006 (.012)	.007 (.013)	-.006 (.012)	.004 (.013)	-.010 (.013)	.005 (.013)	-.008 (.013)	.004 (.013)	-.010 (.013)
Internal uncertainty	.848*** (.283)	.722*** (.278)	.776*** (.284)	.635** (.280)	.771** (.302)	.592** (.298)	.801*** (.299)	.625** (.295)	.773** (.303)	.591** (.298)
External uncertainty	.046 (.280)	.162 (.278)	.059 (.279)	.174 (.278)	.157 (.295)	.257 (.293)	.145 (.296)	.232 (.293)	.159 (.295)	.257 (.293)

Market size	-.037** (.016)	-.038** (.015)	-.036** (.016)	-.037** (.015)	-.048*** (.018)	-.043** (.017)	-.046*** (.018)	-.041** (.017)	-.048*** (.018)	-.043** (.017)
GDP growth rate	.268* (.145)	.356** (.142)	.251* (.148)	.339** (.145)	.333** (.163)	.431*** (.161)	.321** (.160)	.411*** (.157)	.335** (.164)	.429*** (.162)
Population Size	-.003** (.001)	-.002* (.001)	-.002** (.001)	-.002* (.001)	-.002* (.001)	-.002 (.001)	-.002** (.001)	-.002* (.001)	-.002* (.001)	-.002 (.001)
Cultural distance	.632* (.339)	.800** (.335)	.641* (.336)	.819** (.333)	.948** (.405)	1.047*** (.396)	.917** (.397)	1.012*** (.387)	.948** (.405)	1.049*** (.396)
<b>Predictor variables</b>										
Risk-taking (EO3)			-.284 (.256)	-.344* (.250)	-.044 (.323)	-.068 (.316)	.051 (1.842)	-.164 (1.825)	.035 (1.800)	-.190 (1.776)
Network size					.001 (.013)	.014 (.013)	.001 (.003)	.003 (.003)	.011 (.013)	.014 (.013)
Network strength					-.860** (.393)	-.871** (.389)	-.629 (1.510)	-.740 (1.489)	-.800 (1.490)	-.962 (1.466)
<b>Interactions</b>										
Risk-taking x Network size					-.002 (.002)	-.002 (.002)			-.002 (.002)	-.002 (.002)
Risk-taking x Network strength							-.042 (.296)	-.016 (.292)	-.014 (.289)	.021 (.284)
<b>Constant</b>	-1.107	-.339	.340	1.361	1.728	2.861	1.127	3.037	1.402	3.411
Chi-square (X <sup>2</sup> )	54.594***		56.564***		65.958***		64.917***		66.051***	
Nagelkerke R <sup>2</sup>	.279		.288		.330		.326		.330	
Nagelkerke change from step 1			.009						.051	
Nagelkerke change from step 2					.042		.038		.042	
Percent correctly classified	60.7%		59.2%		62.0%		61.5%		63.0%	
Note: n=203; * P<.10, **P<.05, ***P<.01 ( based on Wald test)										

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mode as 3.

The results of the ordered probit regression for EO average and network variables are presented in table 8. Model 1 in table 8 is our base model and it aims to establish a baseline against which the contribution of the independent and moderating variables can be assessed. The control variables explain about 6.32% of the variance in the dependent variable export channel choice. Firm size ( $p < 0.01$ ) is significantly related to the dependent variable, while other controls are not significant. Model 2 in table 4 added entrepreneurial orientation as a primary independent variable. The EO model explains about 6.48% of the variance in our dependent variable. The result suggests that the EO negatively affects the choice of export channel despite this variable being insignificant in the regression. As such, we do not have evidence to support hypothesis 1. Models 3 and 4 explore the interaction between EO and two network measures (network size and network strength) respectively, while model 5 outlines all the interactions between EO and network proxies. The interaction variable EO x network size and EO x network strength both suggest negative but insignificant impact on export channel choice. This suggests that adding the network variable does not moderate the relationship between EO and export channel choice. The results of the regression therefore do not provide evidence to support hypothesis 2.

Tables 9, 10 and 11 respectively show the results of the effect of EO's three dimensions (innovativeness, proactiveness and risk-taking) on export channel choice. In each table, we also presented five models. The results of the ordered probit regression for the innovativeness dimension of EO and network variables are presented in table 9. As shown in the model 1, other than firm size ( $p < 0.01$ ), none of the variables have a significant impact on export channel choice. Model 2 in table 9 suggests that a firm with a high-level of innovativeness capability is more likely to choose a hierarchical mode despite

Table 8 Ordered probit regression result

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Control Variables</b>					
Firm Size	-0.002*(0.001)	-0.002*(0.001)	-0.002**(0.001)	-0.002*(0.001)	-0.002*(0.001)
Firm Age	0.018(0.018)	-0.046(0.027)	-0.045(0.028)	-0.045(0.028)	-0.045(0.028)
Market Experience	-0.043(0.027)	0.370(0.286)	0.390(0.288)	0.360(0.286)	0.393(0.288)
Clothing Industry	0.398(0.283)	0.541(0.305)	0.402(0.316)	0.439(0.314)	0.403(0.316)
Jewelry Industry	0.573(0.302)	0.012(0.008)	0.011(0.008)	0.010(0.008)	0.011(0.008)
Machinery Industry	0.047(0.269)	-0.007(0.004)	-0.007(0.004)	-0.007(0.004)	-0.007(0.004)
International Diversity	0.011(0.008)	0.059(0.048)	0.068(0.051)	0.064(0.050)	0.070(0.051)
Asset Specificity	-0.023(0.076)	0.144(0.112)	0.126(0.116)	0.116(0.116)	0.125(0.116)
Channel Volume	-0.007(0.004)	0.016(0.018)	0.012(0.018)	0.014(0.018)	0.012(0.018)
Internal Uncertainty	-0.054(0.073)	0.052(0.269)	0.006(0.275)	-0.013(0.274)	0.004(0.275)
External Uncertainty	0.070(0.084)	-0.007(0.079)	0.001(0.085)	-0.005(0.085)	0.002(0.085)
Market Size	-0.001(0.005)	-0.063(0.073)	-0.082(0.075)	-0.077(0.075)	-0.081(0.075)
Population Size	0.000(0.000)	0.077(0.084)	0.065(0.085)	0.063(0.084)	0.065(0.085)
GDP Growth Rate	0.057(0.048)	-0.001(0.005)	0.001(0.005)	0.001(0.005)	0.001(0.005)
Cultural Distance	0.131(0.111)	0.000(0.000)	0.000(0.000)	0.000(0.000)	0.000(0.000)
<b>Predictor Variables</b>					
Entrepreneurial Orientation (EOA)		-0.073(0.092)	0.002(0.119)	0.060(0.399)	0.081(0.396)
Network Size			0.004(0.003)	0.001(0.001)	0.004(0.003)
Network Strength			-0.007(0.113)	0.103(0.321)	0.056(0.323)
<b>Interactions</b>					
EOA * Network Size			-0.001(0.000)		-0.001(0.000)
EOA * Network Strength				-0.023(0.068)	-0.014(0.068)
cut1_cons	-0.525(0.384)	-0.701(0.701)	-0.435(0.780)	-0.197(1.893)	-0.074(1.893)
cut2_cons	-0.223(0.383)	-0.396(0.700)	-0.125(0.779)	0.113(1.893)	0.237(1.893)
Pseudo R2	0.0632	0.0648	0.0740	0.0708	0.0741
LR chi2	24.18	24.82	28.18	26.96	28.23

N=203; Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 9 Ordered probit regression result

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Control Variables</b>					
Firm Size	-0.002**(0.001)	-0.002**(0.001)	-0.002**(0.001)	-0.002**(0.001)	-0.002**(0.001)
Firm Age	0.018(0.018)	-0.044(0.027)	-0.042(0.028)	-0.040(0.028)	-0.040(0.028)
Market Experience	-0.043(0.027)	0.395(0.284)	0.413(0.287)	0.373(0.283)	0.410(0.286)
Clothing Industry	0.398(0.283)	0.574(0.302)	0.455(0.309)	0.496(0.311)	0.473(0.311)
Jewelry Industry	0.573(0.302)	0.011(0.008)	0.011(0.008)	0.010(0.008)	0.012(0.008)
Machinery Industry	0.047(0.269)	-0.007(0.004)	-0.007(0.004)	-0.007(0.004)	-0.007(0.004)
International Diversity	0.011(0.008)	0.057(0.048)	0.067(0.050)	0.068(0.050)	0.073(0.051)
Asset Specificity	-0.023(0.076)	0.133(0.112)	0.121(0.116)	0.101(0.115)	0.115(0.116)
Channel Volume	-0.007(0.004)	0.018(0.018)	0.014(0.018)	0.014(0.018)	0.012(0.018)
Internal Uncertainty	-0.054(0.073)	0.047(0.269)	-0.007(0.275)	-0.024(0.275)	-0.015(0.276)
External Uncertainty	0.070(0.084)	-0.020(0.080)	-0.002(0.085)	-0.004(0.086)	0.005(0.086)
Market Size	-0.001(0.005)	-0.055(0.073)	-0.067(0.074)	-0.061(0.075)	-0.059(0.075)
Population Size	0.000(0.000)	0.072(0.085)	0.058(0.085)	0.059(0.085)	0.059(0.086)
GDP Growth Rate	0.057(0.048)	-0.001(0.005)	0.001(0.005)	0.001(0.005)	0.001(0.005)
Cultural Distance	0.131(0.111)	0.000(0.000)	0.000(0.000)	0.000(0.000)	0.000(0.000)
<b>Predictor Variables</b>					
Innovativeness (EO1)		-0.009(0.074)	0.058(0.095)	0.353(0.341)	0.366(0.340)
Network Size			0.004(0.003)	0.001(0.001)	0.004(0.003)
Network Strength			-0.020(0.115)	0.275(0.305)	0.249(0.307)
<b>Interactions</b>					
Innovativeness * Network Size			-0.001(0.000)		-0.001(0.000)
Innovativeness * Network Strength				-0.064(0.060)	-0.057(0.060)
cut1_cons	-0.525(0.384)	-0.501(0.658)	-0.187(0.787)	1.053(1.747)	1.306(1.769)
cut2_cons	-0.223(0.383)	-0.197(0.657)	0.123(0.787)	1.364(1.748)	1.618(1.769)
Pseudo R2	0.0632	0.0632	0.0735	0.0723	0.0759
LR chi2	24.18	24.20	28.01	27.54	28.91

N=203; Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 10 Ordered probit regression result

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Control Variables</b>					
Firm Size	-0.002**(0.001)	-0.002*(0.001)	-0.002*(0.001)	-0.002*(0.001)	-0.002*(0.001)
Firm Age	0.018(0.018)	-0.044(0.027)	-0.042(0.027)	-0.044(0.027)	-0.042(0.027)
Market Experience	-0.043(0.027)	0.348(0.287)	0.373(0.290)	0.338(0.287)	0.373(0.290)
Clothing Industry	0.398(0.283)	0.507(0.307)	0.373(0.317)	0.410(0.316)	0.372(0.318)
Jewelry Industry	0.573(0.302)	0.012(0.008)	0.010(0.008)	0.009(0.008)	0.010(0.008)
Machinery Industry	0.047(0.269)	-0.007(0.004)	-0.007(0.004)	-0.007(0.004)	-0.007(0.004)
International Diversity	0.011(0.008)	0.062(0.048)	0.067(0.050)	0.064(0.050)	0.066(0.051)
Asset Specificity	-0.023(0.076)	0.151(0.112)	0.125(0.116)	0.121(0.116)	0.125(0.116)
Channel Volume	-0.007(0.004)	0.013(0.018)	0.009(0.019)	0.012(0.018)	0.010(0.019)
Internal Uncertainty	-0.054(0.073)	0.041(0.269)	-0.007(0.274)	-0.020(0.273)	-0.006(0.274)
External Uncertainty	0.070(0.084)	0.004(0.079)	0.006(0.085)	-0.002(0.085)	0.005(0.085)
Market Size	-0.001(0.005)	-0.060(0.073)	-0.075(0.074)	-0.074(0.075)	-0.077(0.075)
Population Size	0.000(0.000)	0.079(0.084)	0.058(0.085)	0.065(0.085)	0.059(0.085)
GDP Growth Rate	0.057(0.048)	-0.001(0.005)	0.001(0.005)	0.001(0.005)	0.001(0.005)
Cultural Distance	0.131(0.111)	0.000(0.000)	0.000(0.000)	0.000(0.000)	0.000(0.000)
<b>Predictor Variables</b>					
Proactiveness (EO2)		-0.094(0.075)	-0.035(0.099)	-0.084(0.322)	-0.073(0.322)
Network Size			0.003(0.002)	0.001(0.001)	0.003(0.002)
Network Strength			0.012(0.113)	0.022(0.272)	-0.020(0.276)
<b>Interactions</b>					
Proactiveness * Network Size			-0.000(0.000)		-0.000(0.000)
Proactiveness * Network Strength				-0.000(0.056)	0.007(0.057)
cut1_cons	-0.525(0.384)	-0.743(0.679)	-0.517(0.754)	-0.749(1.599)	-0.697(1.608)
cut2_cons	-0.223(0.383)	-0.436(0.678)	-0.206(0.753)	-0.439(1.599)	-0.386(1.608)
<i>Pseudo R2</i>	0.0632	0.0673	0.0746	0.0722	0.0746
LR chi2	24.18	25.76	28.40	27.49	28.42

N=203; Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 11 Ordered probit regression result

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Control Variables</b>					
Firm Size	-0.002**(0.001)	-0.002*(0.001)	-0.002**(0.001)	-0.002**(0.001)	-0.002**(0.001)
Firm Age	0.018(0.018)	-0.046(0.028)	-0.047(0.028)	-0.046(0.028)	-0.047(0.028)
Market Experience	-0.043(0.027)	0.383(0.285)	0.372(0.285)	0.355(0.287)	0.360(0.288)
Clothing Industry	0.398(0.283)	0.540(0.307)	0.433(0.316)	0.443(0.315)	0.435(0.316)
Jewelry Industry	0.573(0.302)	0.011(0.008)	0.009(0.008)	0.009(0.008)	0.009(0.008)
Machinery Industry	0.047(0.269)	-0.007(0.004)	-0.007(0.004)	-0.007(0.004)	-0.007(0.004)
International Diversity	0.011(0.008)	0.058(0.048)	0.065(0.050)	0.060(0.050)	0.063(0.051)
Asset Specificity	-0.023(0.076)	0.137(0.111)	0.118(0.116)	0.114(0.116)	0.117(0.116)
Channel Volume	-0.007(0.004)	0.018(0.018)	0.016(0.018)	0.016(0.018)	0.015(0.018)
Internal Uncertainty	-0.054(0.073)	0.060(0.270)	0.001(0.275)	-0.005(0.275)	0.003(0.275)
External Uncertainty	0.070(0.084)	-0.021(0.076)	-0.013(0.084)	-0.012(0.084)	-0.012(0.084)
Market Size	-0.001(0.005)	-0.065(0.075)	-0.087(0.077)	-0.084(0.077)	-0.088(0.077)
Population Size	0.000(0.000)	0.071(0.084)	0.068(0.085)	0.058(0.084)	0.066(0.085)
GDP Growth Rate	0.057(0.048)	-0.001(0.005)	0.000(0.005)	0.001(0.005)	0.000(0.005)
Cultural Distance	0.131(0.111)	0.000(0.000)	0.000(0.000)	0.000(0.000)	0.000(0.000)
<b>Predictor Variables</b>					
Risk-taking (EO3)		-0.044(0.077)	-0.011(0.096)	-0.133(0.383)	-0.141(0.381)
Network Size			0.002(0.002)	0.001(0.001)	0.002(0.002)
Network Strength			-0.029(0.105)	-0.085(0.292)	-0.128(0.298)
<b>Interactions</b>					
Risk-taking * Network Size			-0.000(0.000)		-0.000(0.000)
Risk-taking * Network Strength				0.015(0.063)	0.022(0.063)
cut1_cons	-0.525(0.384)	-0.679(0.729)	-0.723(0.787)	-1.224(1.816)	-1.300(1.817)
cut2_cons	-0.223(0.383)	-0.374(0.729)	-0.413(0.786)	-0.915(1.816)	-0.990(1.817)
Pseudo R2	0.0632	0.0640	0.0711	0.0703	0.0715
LR chi2	24.18	24.51	27.10	26.77	27.23

N=203; Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



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the insignificance of the coefficients. Models 3 and 4 explore the interactions between innovativeness and our network proxies respectively, while model 5 includes all the interactions. All the interaction models are statistically insignificant. It should be noted that when interactions between innovativeness and our network proxies are added into the models (model 3 and 4), the sign of the coefficient of innovativeness turns positive, which may suggest that network measures can affect the impact of innovativeness on export channel choice. Again, due to the insignificance of the coefficients, the results cannot support that network measures play a moderate role in the correlations.

Furthermore, the results of the ordered probit regression for the proactiveness dimension of EO and network variables are presented in table 10. Model 1 is the base model. All the control variables explain about 6.32% of the variance in the dependent variable. Model 2 in table 10 added proactiveness as an independent variable. Compared to the original probit regression result (table 8), table 10 reveals that the proactiveness model (model 2) shows similar insignificant results. Moreover, the interactions in table 10 (i.e., proactiveness x network size and proactiveness x network strength) show insignificance as well. Collectively, the results we found here are similar to the results in the original probit regression test.

Lastly, table 11 presents the results of the ordered probit regression for the risk-taking dimension of EO and its impact on a firm's export channel choice. As indicated in table 11, the base model (model 1) explains 6.32% of the variance in the channel selection. Model 2 in table 11 shows the results of the regression while the risk-taking dimension is added to the base model. The results show insignificant coefficients for all the variables involved except firm size. In models 3, 4 and 5, we added the risk-taking and network interaction terms to test the moderating effect. Neither of the interaction terms are

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significant. Collectively, the findings that we obtained in these robustness tests are consistent with the results from the original regression analysis. The results indicate that EO is statistically insignificantly related to export channel choice. Network variables (network size and network strength) cannot moderate this relationship. H1 and H2 are therefore not supported.

Tables 12,13,14 and 15 represented the results of another robustness test. In this test I eliminated control variables with  $t < 1$  (eliminating variables C-industry, M-industry, firm age, asset specificity, internal uncertainty, external uncertainty, market size and population size). The results of the ordered probit regression for EO average and network variables are presented in table 12. Compared to the original ordered probit regression result (table 8), table 12 revealed that the base model (model 1), the EO model (Model 2) and all the interaction models (model 3,4,and 5) have similar insignificant results. Overall, the results we found here are similar to the results we found in the original ordered probit regression test with all the control variables.

Tables 13, 14 and 15 respectively show the ordered probit regression results of the effect of EO's three dimensions (innovativeness, proactiveness, and risk-taking) on export channel choice. In each table, we created five models. Model 1 is our base model and model 2 is the EO dimension model. In model 2, we added the dimension of innovativeness, proactiveness and risk-taking separately as a primary independent variable. In addition, Models 3, 4 and 5 explore the interactions between EO dimensions and networks (network size and network strength). Based on these five model results, both the independent and interaction variables are insignificant in the regression, which implies that EO does not relate to the export channel choice and network variables (network size and network strength) cannot moderate this relationship. Thus, H1 and H2 are not supported.

Table 12 Ordered probit regression result

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Control Variables</b>					
Firm Size	-0.002*(0.001)	-0.001*(0.001)	-0.002*(0.001)	-0.002*(0.001)	-0.002*(0.001)
Market Experience	-0.031(0.022)	-0.034(0.023)	-0.037(0.023)	-0.035(0.023)	-0.036(0.023)
Clothing Industry	0.341(0.267)	0.312(0.271)	0.345(0.273)	0.322(0.271)	0.352(0.273)
Jewelry Industry	0.499(0.279)	0.464(0.283)	0.346(0.291)	0.386(0.289)	0.349(0.292)
International Diversity	0.011(0.007)	0.012(0.007)	0.010(0.008)	0.009(0.008)	0.010(0.008)
Channel Volume	-0.007(0.004)	-0.007(0.004)	-0.007(0.004)	-0.006(0.004)	-0.007(0.004)
GDP Growth Rate	0.061(0.042)	0.064(0.042)	0.076(0.045)	0.073(0.045)	0.079(0.045)
Cultural Distance	0.108(0.090)	0.122(0.092)	0.125(0.095)	0.122(0.094)	0.124(0.095)
<b>Predictor Variables</b>					
Entrepreneurial Orientation (EOA)		-0.059(0.085)	0.019(0.117)	0.136(0.393)	0.158(0.389)
Network Size			0.004(0.003)	0.001(0.001)	0.004(0.003)
Network Strength			0.004(0.103)	0.159(0.314)	0.116(0.315)
<b>Interactions</b>					
EOA * Network Size			-0.001(0.000)		-0.001(0.000)
EOA * Network Strength				-0.034(0.067)	-0.025(0.067)
cut1_cons	-0.525(0.384)	-0.758(0.512)	-0.324(0.657)	0.183(1.791)	0.302(1.786)
cut2_cons	-0.223(0.383)	-0.456(0.511)	-0.016(0.656)	0.489(1.791)	0.610(1.786)
<i>Pseudo R2</i>	0.0564	0.0576	0.0676	0.0647	0.0680
LR chi2	21.58	22.06	25.76	24.66	25.91

N=203; Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 13 Ordered probit regression result**

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Control Variables</b>					
Firm Size	-0.002*(0.001)	-0.002*(0.001)	-0.002**(0.001)	-0.002**(0.001)	-0.002**(0.001)
Market Experience	-0.031(0.022)	-0.031(0.022)	-0.034(0.023)	-0.030(0.023)	-0.032(0.023)
Clothing Industry	0.341(0.267)	0.340(0.269)	0.365(0.272)	0.336(0.268)	0.368(0.271)
Jewelry Industry	0.499(0.279)	0.499(0.279)	0.390(0.284)	0.448(0.287)	0.422(0.287)
International Diversity	0.011(0.007)	0.011(0.007)	0.010(0.008)	0.009(0.008)	0.011(0.008)
Channel Volume	-0.007(0.004)	-0.007(0.004)	-0.006(0.004)	-0.007(0.004)	-0.007(0.004)
GDP Growth Rate	0.061(0.042)	0.061(0.042)	0.077(0.045)	0.076(0.044)	0.083(0.045)
Cultural Distance	0.108(0.090)	0.109(0.092)	0.126(0.095)	0.109(0.094)	0.121(0.095)
<b>Predictor Variables</b>					
Innovativeness (EO1)		-0.002(0.068)	0.070(0.093)	0.421(0.335)	0.428(0.333)
Network Size			0.004(0.002)	0.001(0.001)	0.004(0.003)
Network Strength			-0.012(0.107)	0.328(0.297)	0.300(0.299)
<b>Interactions</b>					
EO1 * Network Size			-0.001(0.000)		-0.001(0.000)
EO1* Network Strength				-0.075(0.059)	-0.066(0.059)
cut1_cons	-0.525(0.384)	-0.535(0.466)	-0.118(0.660)	1.357(1.619)	1.551(1.630)
cut2_cons	-0.223(0.383)	-0.233(0.466)	0.190(0.660)	1.665(1.619)	1.861(1.630)
<i>Pseudo R2</i>	0.0713	0.0676	0.0680	0.0564	0.0564
LR chi2	27.17	25.74	25.90	21.58	21.58

N=203; Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 14 Ordered probit regression result

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Control Variables</b>					
Firm Size	-0.002*(0.001)	-0.001*(0.001)	-0.002*(0.001)	-0.002*(0.001)	-0.002*(0.001)
Market Experience	-0.031(0.022)	-0.034(0.022)	-0.037(0.023)	-0.036(0.023)	-0.037(0.023)
Clothing Industry	0.341(0.267)	0.292(0.272)	0.333(0.275)	0.300(0.272)	0.334(0.274)
Jewelry Industry	0.499(0.279)	0.432(0.284)	0.313(0.292)	0.352(0.290)	0.314(0.292)
International Diversity	0.011(0.007)	0.012(0.007)	0.009(0.008)	0.009(0.008)	0.009(0.008)
Channel Volume	-0.007(0.004)	-0.007(0.004)	-0.007(0.004)	-0.007(0.004)	-0.007(0.004)
GDP Growth Rate	0.061(0.042)	0.068(0.043)	0.075(0.045)	0.072(0.045)	0.076(0.045)
Cultural Distance	0.108(0.090)	0.129(0.092)	0.129(0.094)	0.127(0.094)	0.129(0.094)
<b>Predictor Variables</b>					
Proactiveness (EO2)		-0.089(0.069)	-0.034(0.098)	-0.023(0.315)	-0.011(0.315)
Network Size			0.003(0.002)	0.001(0.001)	0.003(0.002)
Network Strength			0.035(0.104)	0.095(0.263)	0.054(0.267)
<b>Interactions</b>					
EO2* Network Size			-0.000(0.000)		-0.000(0.000)
EO2* Network Strength				-0.012(0.055)	-0.004(0.055)
cut1_cons	-0.525(0.384)	-0.894(0.480)	-0.421(0.635)	-0.387(1.483)	-0.316(1.491)
cut2_cons	-0.223(0.383)	-0.591(0.479)	-0.113(0.634)	-0.079(1.483)	-0.008(1.491)
Pseudo R2	0.0564	0.0607	0.0695	0.0669	0.0696
LR chi2	21.58	23.25	26.49	25.48	26.50

N=203; Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 15 Ordered probit regression result

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Control Variables</b>					
Firm Size	-0.002*(0.001)	-0.001*(0.001)	-0.002*(0.001)	-0.002**(0.001)	-0.002*(0.001)
Market Experience	-0.031(0.022)	-0.033(0.023)	-0.035(0.023)	-0.034(0.023)	-0.035(0.023)
Clothing Industry	0.341(0.267)	0.328(0.269)	0.328(0.271)	0.313(0.274)	0.317(0.274)
Jewelry Industry	0.499(0.279)	0.472(0.287)	0.388(0.292)	0.395(0.292)	0.389(0.293)
International Diversity	0.011(0.007)	0.011(0.007)	0.008(0.008)	0.008(0.008)	0.008(0.008)
Channel Volume	-0.007(0.004)	-0.007(0.004)	-0.007(0.004)	-0.006(0.004)	-0.007(0.004)
GDP Growth Rate	0.061(0.042)	0.062(0.042)	0.071(0.044)	0.068(0.044)	0.069(0.045)
Cultural Distance	0.108(0.090)	0.113(0.091)	0.115(0.094)	0.118(0.094)	0.115(0.094)
<b>Predictor Variables</b>					
Risk-taking (EO3)		-0.027(0.072)	0.004(0.092)	-0.099(0.377)	-0.107(0.376)
Network Size			0.002(0.002)	0.001(0.001)	0.002(0.002)
Network Strength			-0.020(0.092)	-0.071(0.285)	-0.104(0.291)
<b>Interactions</b>					
EO3 * Network Size			-0.000(0.000)		-0.000(0.000)
EO3 * Network Strength				0.013(0.062)	0.019(0.063)
cut1_cons	-0.525(0.384)	-0.629(0.474)	-0.563(0.625)	-0.978(1.715)	-1.050(1.717)
cut2_cons	-0.223(0.383)	-0.327(0.473)	-0.256(0.625)	-0.672(1.714)	-0.744(1.716)
<i>Pseudo R2</i>	0.0564	0.0567	0.0640	0.0636	0.0643
LR chi2	21.58	21.72	24.39	24.22	24.49

N=203; Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

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Conclusively, the findings that I obtained in these ordered probit robustness tests are consistent with the results of the original multinomial logit regression analysis.

## **2.6 Conclusions**

### **2.6.1 Findings and Discussions**

In this study I looked at the association between entrepreneurial orientation (EO), networks and export channel choice for small and medium sized Chinese firms (SMEs) based on the combination of TCA and RBV theory. Previous scholarship suggests SMEs suffer from both resource constraints and liabilities of foreignness when they expand abroad (Lu and Beamish 2001, Brouthers, Nakos et al. 2009) and firms may change their international strategy by creating greater value by leveraging network resources, which can serve as a conduit for the access and transfer of valuable knowledge (Gulati 1999). Developing this theory, I theoretically explored and tested the notion that SMEs with stronger EO will be more willing to engage in risky international operations; I also theorized that having superior network resources would have a moderating influence on the choice of hierarchical export channels. However, drawing on a sample of 203 Chinese manufacturers involved in exporting, our results provide no evidence to support these hypotheses.

I found that only the innovativeness dimension of EO was marginally significant for export channel choice; the other two dimensions of EO (proactive and risk-taking) were insignificantly related to the dependent variable. Firms possessing an innovativeness capability make very different export structure choices from those that have a weak innovativeness capability. In contrast to our predictions that high-EO firms are more likely to choose hierarchical export channels, our regression results suggest that a firm with high-level innovativeness of EO is more likely to choose an intermediate export channel than the high-control hierarchical mode or low-control market based mode. I propose a possible

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reason for this result: high-innovativeness firms are more likely to choose an intermediate export channel because they have considered the trade-off between the control that each export channel affords the entrant and the cost of resource commitments.

Although the high-control hierarchical mode provides firms with the greatest amount of control over distribution decisions, this also requires greater resource commitments (in terms of financial and managerial assets investment) in a foreign market (Klein and Roth 1990). Given that SMEs, even those with EO, often lack the resources necessary to be successful in international markets (Brouthers, Nakos et al. 2014) and they are generally unwilling or unable to take responsibility for decision-making in an uncertain foreign investment (Chetty and Agndal 2007), high-control modes are not worth considering. Compared to the intermediate mode, although the low-control market mode involves resource commitments, it also provides firms with the least control (Klein, Frazier et al. 1990). However, control (the ability to influence systems, methods and decisions) is a way to obtain a higher return and has a critical impact on the future of a foreign enterprise. Without control, a firm finds it more difficult to coordinate actions, carry out strategies and resolve the disputes that invariably arise when two parties in a contract pursue their own interests (Anderson and Gatignon 1986). Given that in making a channel choice decision in foreign markets, a firm's management needs to balance the degree of control it wants to have over foreign distribution decisions and the resources it is willing to invest to achieve this control (Aulakh and Kotabe 1997), it is reasonable for SMEs to prefer using an intermediate mode to a hierarchical or market mode.

We did not find a connection between the sub-dimensions of EO (proactive and risk-taking strategic orientation) and export channel choice. The reason for this may have been that the firms in our sample are, to some extent, non high-tech manufacturing-based SMEs,



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and such a connection may be stronger among smaller or high-tech based firms. In the studies of high-tech based small and medium-sized firms, prior scholars found a positive relationship between EO and firms' exporting (Francis and Collins-Dodd 2000, Filatotchev, Liu et al. 2009). Nevertheless, it may be that the firms in our sample had already adopted a certain orientation, such as a cultural or dominant pattern of beliefs and values, and that it is the actual company strategy (in the context of its orientation) that shapes the internationalization more. This reflects the causal chain "orientation-strategies-performance" proposed by Knight (2001), but it still warrants further study.

Contrary to our initial expectations, I found no evidence that a firm's networks (network size and strength) moderate the relationship between their EO and export channel choice. We expected that firms with networks could help SMEs with good EO to improve their innovativeness, proactiveness and risk-taking, consequently moderating the relationship between EO and export channel choice in a specific foreign market. This was due to the fact that, from an RBV perspective, networks serve as an efficient source of critical resources and can aid firms in overcoming part of the liability of foreignness they face when expanding abroad (Chetty and Agndal 2007). Networks also potentially provide SMEs with novel and required information and resources useful in developing products and competences as well as collecting foreign market information, in turn making it easier for SMEs to export independently (Brouthers, Nakos et al. 2014). However, our findings indicated that networks have little relevance in explaining the choice of a specific export mode.

There may be several explanations for the divergence found in this study. First, it is perhaps due to the fact that although networks may carry strategically valuable information and knowledge resources, these networks might simply provide redundant resources and

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may not help investing firms increase essential benefits (Lee, Lee et al. 2001). Gu et al. (2008) point out that ‘the ties that bind may turn into the ties that blind’. As such, strong networks may produce over-embeddedness that decreases the flow of new ideas into the network and limits awareness of alternative methods of doing things and predicting market trends (Gu, Hung et al. 2008). Previous literatures also suggest that shared industry knowledge and perspective networks can lead to ‘group think’ which in fact restricts the creative and innovative activities of the SME (Osarenkhoe 2010, Brouthers, Nakos et al. 2014). Given this fact, networks may not provide essential support to firms as they attempt to leverage the firm’s EO.

A second potential explanation for these results is that firms may be able to access diverse opportunities and obtain valuable benefit (i.e., knowledge and information) through networks, but they may not have the capacity to absorb this and apply it to the firm’s innovation and commercial ends (Lu, Zhou et al. 2010). In strategic management literature, the capability-building mechanism asserts that the capability to absorb outside knowledge is very important for firms' value creation (Makadok 2001). Firms with superior capabilities are better able to enhance available resource absorptivity, and consequently they can enhance their ability to put knowledge to new innovative uses (Phene and Almeida 2008). Based on our result, I propose that networks do not moderate the relationship between EO and export channel choice; this is perhaps due to the extra capability required to coordinate this relationship.

This study contributes to the literatures in several ways. First, it extends the research on international business by focusing on small and medium enterprises (SME) and their strategic internationalization. Although previous international business studies have mainly focused on large and resource-rich multinational corporations, in recent years there has

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been growing interest in the internationalization of SMEs (Lu and Beamish 2001, Oviatt and McDougall 2005). International expansion is increasingly recognized as critical to SME growth (Lu and Beamish 2001). However, compared to well-established MNEs, SMEs possess fewer resources (Chetty and Campbell-Hunt 2003, Chetty and Agndal 2007) and are subject to severe constraints due to their limited capability to mitigate the risk associated with entering international markets (Zacharakis 1997, Coviello and McAuley 1999). For this reason, SMEs may be particularly dependent on external resources to overcome certain resource constraints, and tend to seek safer growth strategies (Brouthers, Nakos et al. 2009). I thus explain SMEs' export involvement and channel choice, building on existing literature by considering the role of capability and network factors on SMEs' internationalization.

In addition, this study extends international entrepreneurship and strategic management literatures by linking firms' EO to export channel strategy. Although previous EO studies modelled a direct relationship between EO and performance and indicated that firms with greater EO tend to performance better (Wiklund and Shepherd 2003, Covin, Green et al. 2006, Rauch, Wiklund et al. 2009), there are only a few studies that have looked at this in the international context; these have ignored EO's role in influencing the firm's internationalization strategies, such as export channel choice. Lumpkin and Dess (1996) recommend that understanding the relationship between firms' EO and other key predictor variables, such as strategies and tactics, would be very important for future research because a firm's strategic entrepreneurial posture is crucial to SMEs struggling to organize resources efficiently and effectively develop strategy. This study thus explored export channel choice as a dependent variable and argued, from the perspective of RBV, that firms with strong EO may be more driven to use international expansion structures that help them capture value from these resource-based capabilities. In this way, this study made an

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important contribution by improving past research and extending our knowledge about how EO capability can affect a firm's export channel choice before it can positively impact its performance. Our findings contribute to a better understanding of EO and its impact on firms' export channel choice.

Our study also made an important contribution to the RBV and TCA perspectives by examining the moderating impact of networks on the relationship between EO and export channel choice. Unlike previous studies that mainly use a structure-conduct-performance logic (Yeoh and Jeong 1995, Zou, Fang et al. 2003) or TCA (Klein, Frazier et al. 1990, Klein and Roth 1990) to explain firms' internationalization, this study is based on a combination of TCA (Klein, Frazier et al. 1990) and RBV (Barney, Wright et al. 2001) to provide a better understanding of how capability (EO) and resources (networks) influence the export channel choices of SMEs. We contribute to TCA literature by adding a resource-based perspective to the traditional transaction cost analysis of export channel choice, extending the traditional research focus only on the impact of asset specificity and environment uncertainty on MNEs' strategic channel choice, and taking into account value creation in SME export channel choice.

## **2.6.2 Limitations and Conclusion**

Although this study provided valuable insights about EO and networks and SMEs' export channel choice, it possesses a few limitations that present opportunities for future research. First, the limitations pertain to our sample. In particular, our results were derived from a sample of SMEs in a single country, Mainland China, giving rise to concerns about the generalizability of the findings to other emerging or developed countries. Although we believe that the setting of China is not unique and these findings should be applicable to other emerging markets, specific cultural foundations are likely to differ across emerging

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economies, which may cause the same variables to have different impacts on SME EO generating and export channel choice. Hence, an extension of this study would be to collect SME samples from other environments and capture institutional differences.

Second, this research employed cross-sectional data rather than longitudinal data. Although longitudinal research designs are logistically difficult and time consuming, they do enable time-series data analysis (Morgan, Kaleka et al. 2004). Cross-sectional data were necessary and appropriate to explore what was happening at a certain point in time; however, they were not capable of fully explaining the dynamic process of developing EO, networks and export channel choice. Given that due to the cross-sectional nature of our data, it is not possible to establish conclusively any causal relationship, we suggest that it would be better for future research to use a longitudinal method to investigate the dynamic development and evaluation of EO and networks in manufacturing-based exporting firms and their corresponding effects on export channel choice.

Third, we did not provide insight into the actual impact of network diversity on the relationship between EO and export channel choice. On the basis of the three-dimension of EO, a firm's strategic posture can range from conservative to entrepreneurial (Covin and Slevin 1991); entrepreneurial behaviours entail more risk than conservative behaviours (Yeoh and Jeong 1995). When entrepreneurs become overly passive or decline to take risks or exercise creativity in order to capitalize on a market opportunity, they run the risk of losing the entrepreneurial edge. In contrast, the extent to which an EO will be effective in a given context may vary (Kreiser, Marino et al. 2002). Thus, it is important to employ a contingency framework to evaluate what factors can influence the relationship between a firm's EO and the choice of export channel.

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Future research should attempt to explore additional contingent linkages and interrelationships; for example, identifying and examining the impact of different types of networks (i.e., domestic vs. international networks; business vs. personal networks; alliance networks with competitors/non-competitors) on firms' strategic internationalization, and investigating whether and how network diversity has different impacts on EO-export channel choice relationships. An improved understanding of the role of network resources in influencing SMEs' strategic internationalization would be helpful in further conceptualization of the export channel choice. Results of these future studies, coupled with previous findings and the framework proposed here, will enhance our understanding of SMEs' export behaviour.

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## Network Diversity, Networking Capability and Export Channel Choice

### 3.1 Introduction

The choice of export channel in a foreign market is critical to exporting activities (Anderson and Coughlan 1987, Klein and Roth 1990, Aulakh and Kotabe 1997). International firms can choose the hierarchical export channel mode to provide all the marketing and distribution functions themselves (e.g., through dedicated home-based representatives or sales subsidiaries in a foreign market), or the hybrid export channel mode whereby they perform some functions and take on partner firms, such as commission agents and strategic allies, to perform the others (Anderson and Gatignon 1986, Klein, Frazier et al. 1990, Klein and Roth 1990, Campa and Guillén 1999).

Export channel choice has become a vital strategic focus for internationalization and potentially has a large and lasting impact on the success of a firm's international operations (Anderson and Coughlan 1987, Aulakh and Kotabe 1997, McNaughton 2002, He, Brouthers et al. 2013). The correct decision must be made early, because the appropriate level of integration will give a firm a more salient competitive posture (McNaughton 1996, Aulakh and Kotabe 1997). Channels provide the context for customer interface and strong linkages to all other components of the marketing mix (McNaughton 1996). However, unlike other aspects of the marketing mix, such as pricing, product differentiation and advertising, export channel choice, once made, is difficult to change (Anderson and Coughlan 1987). Thus, it is vital that firms carefully plan before undertaking internationalization.

A large number of theories have been used to explain the export channel decision. The most frequently applied theoretical perspective used in both domestic and foreign markets is based on the efficiency considerations of transaction cost analysis (TCA). TCA focuses on individual economic exchange to predict which governance mode minimizes the



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sum of transaction costs for the particular exchange (Anderson and Coughlan 1987, Klein and Roth 1990, Erramilli and Rao 1993, Bello and Lohtia 1995, McNaughton 1996, Aulakh and Kotabe 1997, Campa and Guillén 1999, McNaughton 2002, Shervani, Frazier et al. 2007). In determining the most cost-effective export channel under TCA, governance modes consider three dimensions of a transaction: 1) firm's asset specificity (i.e., product assets, physical assets and human assets), 2) transaction frequency (i.e., channel volume), and 3) uncertainty (i.e., internal-behavioral, and volatility and diversity of the environment in the external market) (Klein, Frazier et al. 1990, Bello and Lohtia 1995, Brouthers and Nakos 2004).

Building on transaction cost theory, some scholars model the impact of TCA on firms' export channel choice (Klein, Frazier et al. 1990, Bello and Lohtia 1995). Other scholars extend TCA research by examining how contextual moderator variables affect the predictive relationship of TCA-export channel integration. For instance, scholars have added organizational capability and strategic variables (i.e., market position strategy, and global integration and differentiation strategy) (Aulakh and Kotabe 1997), firm's ownership and location factors (i.e., geographical markets, cultural difference, and institutional arrangements) (Campa and Guillén 1999) to the conceptualization of TCA framework in order to improve its explanation of export channel integration. Anderson and Coughlan (1987) examine a number of factors, such as competitive behavior, service requirements, legal restrictions, product differentiation, relatedness to principal business, product category's age, strength of patent and the country being entered. Moreover, the effect of knowledge-intensive industry factors (McNaughton 1996, McNaughton 2002), a firm's market share and level of product differentiation (Shervani, Frazier et al. 2007), the firm's resource-based market orientation (MO) capabilities and the institutional distance between

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home and export country (He, Brouthers et al. 2013) on export channel integration have also been considered.

Although export channel research provides valuable insights into what specific factors might affect the choice of export channels, the dominant theory used to explain export channel choice issues is based on TCA efficiency considerations (Anderson and Coughlan 1987, Klein, Frazier et al. 1990, Shervani, Frazier et al. 2007). TCA scholars argue that channel-related decisions are primarily driven by efficiency considerations of the transaction (Zajac and Olsen 1993, Madhok 1997). Although TCA scholars have recently recognized the potential for resources and capabilities to influence the choice of channel structure, a firm's resource heterogeneity and imperfect mobility characteristics are not explicitly considered in transaction cost logic (Chen and Chen 2003, Leiblein 2003, Mayer and Salomon 2006, He, Brouthers et al. 2013). TCA has neglected the way in which different kinds or levels of resources and capabilities can influence firms' choice of export channel (Tsang 2000, Peng 2001).

A resource-based view (RBV) establishes that resources and capabilities are important in understanding the source of sustained competitive advantages for firms (Wernerfelt 1984), raising the level of analysis from the transaction cost for the firm to resource-based value creation (Peng and York 2001). RBV logic suggests that firms are able to gain sustainable competitive advantage by leveraging valuable, rare, inimitable and non-substitutable resources (Barney 1991). TCA is primarily concerned with the exploitation of resource, while RBV is also motivated by the exploration of resources and capabilities. RBV takes both value and cost into account. Thus, RBV complements the TCA approach to understanding export channel choice (He, Brouthers et al. 2013).

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Under the RBV logic, firms in the same industry perform differently because they differ in their resources and capabilities (Barney 1991, Zahra and Covin 1995, Teece, Pisano et al. 1997, Gulati 1999). In particular, networks (Coviello and Munro 1997, Gulati 1999, Gulati and Gargiulo 1999, Chetty and Blankenburg Holm 2000, Coviello and Cox 2006, Coviello 2006) and networking capability (Lorenzoni and Lipparini 1999, Knight and Cavusgil 2004, Tang 2011) have long been considered as two important examples of firms' inimitable and non-substitutable resources and capabilities. Firms often rely on their networks and networking capabilities to create firm-specific competitive advantages (Oviatt and McDougall 1994, Walter, Auer et al. 2006, Zhou, Wu et al. 2007) and achieve international growth (Peng and Luo 2000, Lu and Beamish 2001). Networks are critical for accessing external resources and overcoming resource constraints which arise due to size particularly in the case of SMEs (Chetty and Agndal 2007). Previous scholars have argued that in order to understand how SMEs internationalize in a foreign market, it is important to study the RBV network approach (Chetty and Wilson 2003, Johanson and Mattsson 2015).

One key resource that can be obtained through networks is knowledge. Within the network literature, markets are perceived as interconnected networks of business relationships (Granovetter 1985, Anderson, Håkansson et al. 1994) through which knowledge or useful information is transmitted (Zhou, Wu et al. 2007). In the last decade, various scholars have recognized not only the knowledge dimension of networks but also its link with competitive success (Inkpen and Tsang 2005). Researchers argue that network knowledge positively influences a firm's internationalization performance, because different types of networks potentially provides the firm with access to various benefits including information, resources, markets, and technologies with the associated advantages of inter-firm learning, scale, and scope economies. (Welch and Welch 1996, Ellis and Pecotich 2001,

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Brass, Galaskiewicz et al. 2004, Zaheer and Bell 2005, Zhou, Wu et al. 2007, Musteen, Francis et al. 2010, Ellis 2011).

Networks exist at various levels of analysis (Hoang and Antoncic 2003) and different kinds of networks can provide differential access to diverse resources and power (Uzzi 1997, Zimmerman, Barsky et al. 2009). For example, Chetty and Wilson (2003) differentiate networks according to whether they are social (i.e., relations with family, friends and colleagues) or strategic (i.e., relationships a firm forms with customers, suppliers, distributors, competitors and governments). They find that networks represent the principle source of external resources and that strategic networks are more important to international firms whereas social networks are more critical for domestic firms (Chetty and Wilson 2003). Ellis (2011) classifies firm networks into formal (i.e., business ties) and informal (interpersonal ties) categories in the context of international opportunity recognition. In general, research suggests that larger networks are preferred because they contain a greater volume and variety of resources (Zimmerman, Barsky et al. 2009).

In the field of networking competence, 'networking capability' refers to a firm's ability to develop and utilize inter-firm relationships, which in turn results in competitive advantage (Ritter 1999, Ritter and Gemünden 2003). Similar to a firm's absorptive capacity, the ability to import, comprehend and assimilate the knowledge obtained from external sources (e.g., suppliers and customers in foreign markets) (Cohen and Levinthal 1990), enables the firm to gain a competitive advantage (Zahra and George 2002). Based on social network theory, networking capability is also understood to be firm-specific (i.e., centrality-based and efficiency-based) partnering capabilities that enable a company to place itself in a particular position in a broader network of partnerships with other companies (Hagedoorn, Roijackers et al. 2006). Several authors have identified that networking capabilities

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positively influence on the formation of new partnerships (Hagedoorn, Roijakkers et al. 2006), promote market and partner-oriented behavior (Kale, Dyer et al. 2002, Walter, Auer et al. 2006), and improve firms' export performance (Zahra and Hayton 2008).

The perspectives of RBV underpinning the network literature suggest that firms with different levels of network resources and networking capabilities may perform differently (Hagedoorn, Roijakkers et al. 2006, Musteen, Francis et al. 2010, Fletcher and Harris 2011, Yu, Gilbert et al. 2011). Furthermore, many scholars highlight the importance of network resources impact on firms' internationalization and performance (Oviatt and McDougall 1994, Coviello and Munro 1997, Ellis 2000, Gulati, Nohria et al. 2000, Peng and Luo 2000, Zaheer and Bell 2005, Zhou, Wu et al. 2007, Musteen, Francis et al. 2010). However, neither network diversity nor networking capability has been studied in the context of SMEs' export channel choice. Although TCA provides valuable insight about a firm's export channel choice, it is primarily driven by the costs efficiency considerations (Williamson 1975, Leiblein 2003). Little effort has been made to link insights from TCA with insights from RBV, and little attention has been paid to situations where firms' different kinds and levels of network resources and networking capabilities may influence the choice of export channel. Research shows that sometimes international and domestic networks complement each other (Chetty and Campbell-Hunt 2003), however, as yet there has been no research linking them together to explain the distinct impact of diversification networks on export channel choice.

The purpose of this chapter is to integrate the RBV, network perspective and TCA theories to create a more comprehensive model that will explain the export channel choice of SMEs. I attempt to extend prior work by creating a research model that offers new insights into the resource and capability factors affecting firms' export channel choice, taking into account value creation in export channel choice study. I address the export

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channel choice issue by using manufacturing SMEs in China as the unit of analysis, and looking at how a firm's network diversity and networking capability affect its export channel choice. The main contribution of this paper is to explain export channel choice through a firm's network diversity and networking capabilities perspective.

I also make a contribution by being the first to investigate the relationship between networking capability and export channel choice strategy. Scholars have suggested that internationalization studies should include capability context variables because capabilities can improve the efficiency and effectiveness of the resources possessed by the firm (Eisenhardt and Martin 2000, Makadok 2001). Prior networking capability research has linked firms' networking capabilities with the performance by changing the firms' bundle of resources, operation routines and competencies, which in turn impacts economic performance (Hagedoorn, Roijackers et al. 2006, Walter, Auer et al. 2006, Weerawardena, Mort et al. 2007). However, questions about how networking capability impacts a firm's international strategy, in particular, export channel choice, have been largely ignored until now. Overall, this research extends strategic exporting studies by combining the perspectives of networks, networking capability and export channel choice, making extensive contributions to networking research and SME internationalization literature.

### **3.2 Background**

Past studies on SMEs' internationalization show that exporting is traditionally regarded as the most common and applicable route for SMEs to enter international markets, serving as a platform for future international expansions (Coviello and McAuley 1999, Brouthers and Nakos 2004). Exporting provides SMEs with fast access to foreign markets, requiring little capital investment, but providing the opportunity to gain valuable international experience (Lu and Beamish 2001). In terms of specific export channels, a

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number of distribution paths can be used to transfer products from the original developer to end-users. The options range from a direct channel to rather lengthy channels involving multiple intermediaries (McNaughton 1996). Generally speaking, there are two options available: direct export through 1) vertical integration (i.e., hierarchical export channel), such as serving foreign markets with home-based representatives or establishing wholly-owned subsidiaries in a foreign market, or 2) indirect export (i.e., hybrid export channel) relying on intermediate options through joint ventures and/or export intermediaries to serve foreign markets, reflecting a channel of low vertical integration (Klein, Frazier et al. 1990, Klein and Roth 1990).

During the exporting process, firms initially need to design their degree of downstream vertical integration into the foreign market, because this strategic decision can affect their allocation of resources, shape future foreign expansion and enhance their competitive advantage (Aulakh and Kotabe 1997, Campa and Guillén 1999). Previous research indicates that a different choice of export channel gives a firm a varying degree of control (high, medium, low) over foreign operations (Anderson and Coughlan 1987, Klein and Roth 1990, Erramilli and Rao 1993, Andersen 1997, Tsang 2000), also implying that firms have to satisfy the different requirements from resource investment (Aulakh and Kotabe 1997), different institutional arrangements and differing degrees of commitment and risk (Klein and Roth 1990). The hierarchical distribution channel provides firms with a higher level of control but also requires greater resource commitments (Aulakh and Kotabe 1997), such as knowledge resources and enforcement costs. In comparison, although hybrid export channels provide firms with lower control, they also involve low resource commitments because the independent foreign distributor bears most of the marketing costs in the

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foreign country (Anderson and Gatignon 1986, Anderson and Coughlan 1987, Gatignon and Anderson 1988).

Transaction cost analysis (TCA) emerged in the last few decades as a significant theoretical development for analyzing questions regarding export channel choice (Williamson 1975, McNaughton 1996, Leiblein 2003). Theoretically, the choice of export channel should be analyzed in terms of greater or lesser transaction costs (Klein and Roth 1990). TCA is concerned with the fact that export channel choice, depending on which export channel minimizes the transaction costs associated with opportunism, bounded rationality and transaction efficiencies (Roberts and Greenwood 1997, Brouthers and Hennart 2007). The choice of export channels is considered a central means for management to affect the cost of running a system, specifically factors such as the ex-ante cost of gathering information and negotiating a contract and the ex-post cost of monitoring and enforcing contractual performance (Johanson and Mattsson 1987, Erramilli and Rao 1993).

In explaining export channel choice, empirical tests of TCA have focused on three characteristics of market exchange: 1) asset specificity, 2) uncertainty (both internal-behavioral and external-market specific), and 3) channel volume (Williamson 1979, McNaughton 1996). Although the importance of these factors in determining export channel choice has been examined by a number of researchers, the results are mixed (McNaughton 1996). Many researchers who have used TCA to explain export channel choice have argued that TCA theory is weak with respect to its explanation of how organizations adopt designs over time; they acknowledge that it is necessary to adapt or extend the model to account for particular circumstances (John and Weitz 1988, Klein, Frazier et al. 1990, McNaughton 1996). I believe that the conflicting results in the literature are due in



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part to the fact that studies have focused largely on the direct influence of these three factors on export channel choice, and have ignored some indirect potential effects, such as network resources and the specific capabilities a firm possesses.

Researchers have argued that RBV complements the TCA approach to SMEs' export channel choice (Leiblein and Miller 2003). TCA only considers economic and environmental factors, while RBV is motivated by the considerations of exploitation and exploration of resources and capabilities, taking both value and cost into account (Tsang 2000, Peng 2001, Mayer and Salomon 2006). Accordingly, in this study I seek to shed light on the influence of RBV on SMEs export channel choice. In particular, I provide evidence that firms' network diversity and networking capabilities impact SMEs' export channel choice. As such, my work complements the traditional transaction cost approach to export channel study (e.g., Klein and Roth 1990, Klein et al. 1990).

From the RBV perspective, firms are heterogeneous with respect to their resources and capability endowments, and these resources and capabilities are imperfectly mobile (Teece, Pisano et al. 1997, Barney, Wright et al. 2001). The reason that RBV is so valuable in the analysis of SME internationalization is its critical assumption that firms with resource-based advantages will achieve superior performance (Barney 1991, Barney, Wright et al. 2001). As scholars have argued, resources and capabilities are key sources of competitive advantage (Wernerfelt 1984, Foss 1999, Peng 2001, Lu, Zhou et al. 2010). Thus, recent RBV researchers tend to explain variations in SMEs' international activities by examining RBV's two factors: resources and capacities.

Under the RBV logic, research results suggest that firms are able to gain competitive advantage by leveraging valuable, rare, inimitable and non-substitutable resources (Barney 1991), as well as firm-specific capabilities (Wernerfelt 1984, Peteraf 1993). A perspective of

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RBV underpinning both networks and strategic management bodies of literature suggests that networks and networking capability are two important examples of firms' resources and capabilities. Firms with different kinds and levels of networks and networking capabilities may result in differences in SME international diversification and performance (Goerzen and Beamish 2005, Walter, Auer et al. 2006, Zimmerman, Barsky et al. 2009, Torkkeli, Puumalainen et al. 2012).

Existing network research defines networks as the relationships between a firm's management team and employees with customers, suppliers, competitors, governments, distributors, bankers, families, friends or any other parties that enable it to internationalize its business activities (Coviello and Munro 1997, Zain and Ng 2006). It has been widely acknowledged that networks consist of nodes and ties. The actors (e.g., organizational or entrepreneurs) are called nodes and the links between them are called ties (Inkpen and Tsang 2005, Oviatt and McDougall 2005). With reference to the RBV perspective, networks have been thought of as an inimitable and non-substitutable resource (Chetty and Wilson 2003). Scholars have considered network resources to represent the information advantages associated with a firm's network of ties (Gulati 1999). In the entrepreneurship network literature, scholars suggest that three essential components of networks have emerged as critical to theoretical and empirical research: 1) the content of network relationships, 2) governance mechanisms in relationships, and 3) the structure or pattern that emerges from these ties (Hoang and Antoncic 2003, Inkpen and Tsang 2005, Zimmerman, Barsky et al. 2009).

Network perspective is an emerging view that identifies markets as networks of business relationships that are connected to each other (Chetty and Wilson 2003). This offers a behavioral perspective of a firm's international activities (Loane and Bell 2006) and

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argues that economic actions are influenced by the social context in which they are embedded; these actions can be influenced by the position of actors in social networks (Gulati 1998). The literature argues that this theory has evolved from RBV and provided an advancing comprehensive theoretical framework that explains how firms rely on network resource endowment to achieve competitive advantage (Lavie 2006).

The central foundation of network theories is the transmission of knowledge or useful information through interpersonal ties and social contacts with individuals (Zhou, Wu et al. 2007). In particular, scholars have suggested that networks normally provide informational benefits through two mechanisms (Gulati 1998); relational theory (i.e., emphasizing strong ties and weak ties) (Granovetter 1985) and structural theory (i.e., emphasizing the information value of the structural position the partners occupy in the network) (Burt 1992). Both theories have been applied to explain similarities in the attitudes and behavior of actors, resulting in the sharing of information through networks, and highlighting the information advantages networks can confer on certain actors (Gulati 1998).

Grounded in the network perspective, many studies have empirically demonstrated that networks can provide firms with various benefits. Specifically, scholars argue that the nature of relationships established between various parties will facilitate quick diffusion of information, and this gives rise to attitude similarity and imitation between actors in the network (Inkpen and Tsang 2005). It can also trigger knowledge opportunities for firms to enter international markets (Ellis 2000) and provide different access to foreign knowledge and information (Chetty and Wilson 2003, Chetty and Agndal 2007). In the context of SME internationalization, researchers indicate that networks are core resources for SMEs (Lavie 2006), and particularly important for the following: helping entrepreneurs identify international opportunities, obtaining complementary assets (Burt 2000), establishing

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credibility and providing the context for strategic change for both parties, resulting in strategic alliances and other cooperative strategies (Sharma and Blomstermo 2003, Oviatt and McDougall 2005), influencing in market choice and mode of entry for firms (Coviello and Munro 1997), lowering costs and minimizing risk in internationalization (Coviello and Munro 1995, Ellis and Pecotich 2001), driving foreign market expansion (Welch and Welch 1996), and finally, fostering international venturing (Yiu, Lau et al. 2007).

Inspired by Johanson and Mattsson (2015), who argue that in order to understand how SMEs internationalize in foreign markets network perspective should be used, in the last few decades the relationship between networks and SMEs' internationalization has been intensively explored by a number of researchers (Chetty and Blankenburg Holm 2000, Zain and Ng 2006). Oviatt and McDougall (2005) theorized network relationships as moderator influences on the speed of internationalization by examining three key aspects of such networks: (1) strength of network ties, (2) size of the network, and (3) overall density of the networks. Moreover, based on RBV and network theory, recent researchers have also tried to explain firms' internationalization by examining other factors, such as firms' network position (Burt 1992, Gulati 1999, Al-Laham and Souitaris 2008), strength (Uzzi 1997) and cohesion (Yu, Gilbert et al. 2011), as well as structural, cognitive and relational aspects (Inkpen and Tsang 2005, Musteen, Francis et al. 2010). Collectively, these studies have recognized that business networks are vital characteristics of successful internationalization start-ups (Oviatt and McDougall 2005). At a general level, networks are found to be facilitators for SME internationalization (Chetty and Campbell-Hunt 2003).

The relationship between networks and firm internationalization is one of the primary research themes in network research (Chetty and Blankenburg Holm 2000, Hoang and Antoncic 2003, Provan, Fish et al. 2007), and findings have recognized the importance

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of networks to SME internationalization. However, prior studies tend to ignore an important issue; the vast majority of existing studies have concentrated on network structure (Uzzi 1997, Burt 2000), without considering the content of the network, such as the characteristics of the nodes and/or the qualitative nature of the relationships (Rodan and Galunic 2004). To date, a particular focus on networks' diversity and its distinct effect on SME internationalization has been limited (Goerzen and Beamish 2005). In fact, given the role of network ties as conduits of information, learning and heterogeneous knowledge (Kogut and Zander 1992), and considering the finding that the similarities and differences among these network ties can have a vital impact on firms' knowledge access and performance (Beckman and Haunschild 2002), it is important to study network diversity and its impact on SME internationalization.

### **3.3 Research Hypotheses**

Previous studies of international entrepreneurship have tended to conclude that internationalizing SMEs are likely to experience liabilities based on foreignness (Zaheer 1995) and newness (Zahra 2005). In general, these liabilities refer to foreign firms being at a competitive disadvantage relative to local firms, and incurring higher costs than host country competitors (Zaheer and Mosakowski 1997). Liabilities have been widely acknowledged as the additional costs that firms face relative to their indigenous competitors when operating in foreign markets (Lu and Beamish 2001, Klossek, Linke et al. 2012); costs of doing business abroad normally arise from three significant hazards: unfamiliarity, relational hazards and discrimination (Zaheer and Mosakowski 1997, Denk, Kaufmann et al. 2012).

Previous research has noted the importance of having sufficient resources to help internationalizing SMEs overcome liabilities of foreignness when they expand abroad.

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Scholars argue that for entrepreneurial firms competing in the international market, network resources are critical in helping firms overcome liabilities of foreignness and newness, since much of these involve the disadvantage of increasing transaction and coordination costs, and relate to organizational constraints in terms of insufficient finance, management experience and networks, and a lack of access to information about local customers or competitors (Oviatt and McDougall 2005, Zhou, Wu et al. 2007). Moreover, scholars suggest that proactively acquiring relational ties with foreign partners or buyers can help firms to mitigate their liabilities, and consequently contribute to their international performance (Hitt, Leonard Bierman et al. 2006, Lu, Zhou et al. 2010). Networks are the source of heterogeneous resources that allow SMEs to gain legitimacy, overcome foreignness, and build competitive advantages in a foreign market (Manolova, Manev et al. 2010). In line with these views, a SME's internationalization can therefore be understood as an extension of its network relationships with foreign markets, primarily in the domestic market (Ruzzier, Hisrich et al. 2006, Lu, Zhou et al. 2010).

Combining RBV, network theories and SMEs internationalization, scholars contend that a network perspective of the internationalization process of SMEs would be a more useful concept since it is possible to overcome SMEs' liability of foreignness (Coviello and Munro 1997, Lu and Beamish 2001, Johanson and Mattsson 2015). To some degree, network theory extends RBV and advances a comprehensive theoretical framework that explains differences in SME internationalization (Lavie 2006). Moreover, scholars suggest that given resources poverty, internationalizing SMEs must leverage resources, such as by mobilizing networks, in order to decrease transaction and information acquisition costs (Peng, Lee et al. 2005) and build competitive advantages (Oviatt and McDougall 1994). SMEs also need to learn from other firms in their networks to develop the resources and

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capabilities required for internationalization (Elango and Pattnaik 2007), identify international opportunities and extend exchange relationships through network partners' advice and experience learning (Ellis 2000). Accordingly, building and maintaining network relationships is considered an integral part of the internationalization process (Liesch and Knight 1999). Networks are indispensable for SMEs aiming to achieve international growth (Wilson and Hadley 2003, Zhou, Wu et al. 2007).

Building upon existing strategic network literatures, a growing body of research suggests that network diversity is important in explaining SMEs' internationalization because the diverse networks have a direct relation to resources heterogeneity (Beckman and Haunschild 2002, Rodan and Galunic 2004, Goerzen and Beamish 2005). Network diversity refers to the network of relationships in which firms are embedded, consisting of different partner characteristics (Jiang, Tao et al. 2010). Network diversity has been measured using different levels; for instance, the dyad level (i.e., five dimensions of diversity including societal and corporate culture, national context, strategic direction and management policies) (Parkhe 1991), the network level (Goerzen and Beamish 2005) and the partner level (i.e., partner diversity, functional scope and governance structure diversity) (Jiang, Tao et al. 2010). Existing scholars generally argue that diversity (e.g., aspects of national, industry, organizational and functional differences) in partners is a significant source of heterogeneous knowledge and complementary resources (Kogut 2000) which can affect international expansion (Zimmerman, Barsky et al. 2009).

Prior studies have examined the relationship between network diversity and various firm performance measures. For instance, Goerzen and Beamish (2005) address the way in which alliance network diversity affects the performance of very large Japanese MNEs, and found that diversity in Japanese firms' foreign subsidiary networks in terms of industry and

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country background has a U-shaped relationship with corporate performance. Rodan et al. (2004) proposes that network content implies the advantages of heterogeneous knowledge, and the heterogeneity of knowledge present in the social network contributes to creativity and innovation ability improvement (Pelled, Eisenhardt et al. 1999), consequently developing a positive relationship with firms' overall performance (Rodan and Galunic 2004). Moreover, recently research has tried to explain variations in firms' performance by examining diverse partner, functional and governance networks (Jiang, Tao et al. 2010). Collectively, scholars have generally acknowledged the relevance of network diversity (i.e., variance in partners' resources, capabilities, national and industry) as an important factor that can influence on firms' performance in a number of ways (Goerzen and Beamish 2005).

Although the impact of network diversity on firms' internationalization has been studied in recent network research (Goerzen and Beamish 2005, Jiang, Tao et al. 2010), these studies have generally placed firm's performance as a dependent variable, without looking at its impact on SMEs' international strategy, in particular the export channel choice. Moreover, while previous scholars have helped us to understand how international and domestic networks can influence different aspects of internationalization, they do not measure networks diversity in terms of international and domestic constructs, nor differentiate the effect of such dimensions on export channel choice. This study therefore examines the effect of network diversity in terms of domestic and international dimensions on firms' export channel choice.

### **3.3.1 Network diversity and SMEs' export channel choice**

Firms with diverse networks generally possess a greater volume and variety of heterogeneous resources and international experience knowledge required to develop internationalization activities (Zimmerman, Barsky et al. 2009). One common observation is



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that internationalization is the process of increasing the accumulation of knowledge in markets and institutions abroad (Johanson and Vahlne 1977, Sharma and Blomstermo 2003). Previous network research indicates that domestic inter-firm and international networks are viewed as two vital sources that provide differential access to a variety of heterogeneous knowledge-related resources, offering insightful analysis of the impact of firms networks on their internationalization (Zimmerman, Barsky et al. 2009, Manolova, Manev et al. 2010).

Previous literature has defined domestic networks as the firm's cooperative ties on the national level (Lin and Chaney 2007, Manolova, Manev et al. 2010). The effects of domestic inter-firm networks are more significant for SMEs than large firms because SMEs are embedded in and typified by the domestic business environment to a greater degree (Zhou, Wu et al. 2007, Manolova, Manev et al. 2010). Generally speaking, a significant advantage of domestic inter-firm networks is acquiring and providing valuable information (Barney 1991, Lin and Chaney 2007, Zhou, Wu et al. 2007). The informational benefits from networks are important in helping SMEs to access a variety of resources and complementary skills, and/or collaborate to generate superior knowledge and capabilities (Nahapiet and Ghoshal 1998, Chetty and Campbell-Hunt 2003). Moreover, participation in domestic inter-firm networks allows SMEs to develop competencies and achieve economies of scale in operations through specialization in a carefully chosen subset of value-chain activities, such as design, logistics or contract manufacturing (Havnes and Senneseth 2001).

In line with previous work, a case study on the internationalization of 128 Finnish SMEs shows that domestic inter-firm networks have a substantial impact on firms' interest of going abroad and international business activities (Holmlund and Kock 1998). This is due to the fact that domestic inter-firm networks can provide SMEs with a source of competitive advantages by lowering costs, increasing efficiencies and differentiation and reducing the

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risk and uncertainty inherent in international operations (Zhou, Wu et al. 2007, Manolova, Manev et al. 2010). Additionally, from a study of German biotech firms, scholars find that if firms embedded themselves in a local cluster already dense with international linkages, they would have a higher probability of forming international research alliances (Al-Laham and Souitaris 2008). Collectively, these studies conclude that firms' embeddedness in domestic inter-firm networks is of strategic benefit because such networks provide SMEs with a potential mechanism that directly and indirectly enables access to key resources held by other members expanding internationally into other markets (Guler and Guillén 2010). This provides an efficient means for internationalizing SMEs to overcome deficiencies in resources and organizational capabilities (Lin and Chaney 2007).

Although extensive domestic inter-firm networks facilitate success in the domestic market, which is a good base from which to launch into foreign markets, they can only be used to a limited extent when expanding abroad (Crick and Spence 2005, Ojala 2009). Domestic inter-firm networks are significant sources of acquisition of home-based information, but cannot provide firms with sufficient international resources and experiential knowledge (i.e., including business knowledge, institutional knowledge and internationalization knowledge) (Eriksson, Johanson et al. 1997). Scholars have argued that firms with greater domestic networks tend to lack knowledge of international opportunities, perceptions of risk, and managerial experience (Zimmerman, Barsky et al. 2009), consequently resulting in more internal uncertainty during internationalization (Anderson and Gatignon 1986). Therefore, further internationalization based on domestic networks only would be costly (Eriksson, Johanson et al. 2000).

International networks refer to the network of firm ties consisting of foreign partners (Musteen, Francis et al. 2010). Researchers argue that international networks play

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an important role in firms' internationalization, because experiential knowledge inherent in such networks often guides foreign market selection and provides the mechanism for internationalization (Coviello and Munro 1997), enabling a clearer understanding of the process of identifying and exploiting opportunities abroad (Zahra, Ireland et al. 2000, Zahra 2005). International networks comprise the main source of awareness about foreign market opportunities for firms considering expansion abroad (Ellis 2000). The larger a firms' international network, the more it will be aware of international opportunities through associations (Zimmerman, Barsky et al. 2009).

Furthermore, close interactions with international contacts normally provide firms with sufficient information about foreign market conditions, not only including potential opportunities but also the pitfalls (Uzzi 1997). The knowledge that SMEs gain through such interactions can able them to mitigate perceived risk and reduce the costs involved in the internationalization process (Eriksson, Johanson et al. 1997, Musteen, Francis et al. 2010). The more contacts a SME has internationally, the more international resources the firm can draw on to carry out internationalization, further encouraging expansion abroad (Zimmerman, Barsky et al. 2009).

Although knowledge benefits provided by international networks can help SMEs successfully expand abroad, potential drawbacks to possessing greater international networks also exist. International networks introduce differences in political economic systems, societal and cultural institutions, government policies and national industry structure (Parkhe 1991). These macro-level factors are significant sources that lead to partner differences in corporate culture, strategic direction and management practices. Diversity in these components can cause more conflict and alliance costs (Jiang, Tao et al. 2010). On the one hand, a highly diversified international network provides firms with

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broadened search options, access to enriched resource pools, added value creation and capability development opportunities. On the other hand, diversified networks can also lead to increased national diversity, which might cause excessive coordination and managerial costs increasing due to the management of complex international networks (Jiang, Tao et al. 2010).

Since the drawbacks of domestic and international networks began to be studied, some scholars have suggested that in the context of internationalization, international and domestic networks complement each other and beneficial for SMEs (Chetty and Campbell-Hunt 2003, Al-Laham and Souitaris 2008). These networks can affect transaction costs in firms' international operations (Sharma and Blomstermo 2003), thereby impacting SMEs' internationalization (Chetty and Agndal 2007). Specifically, domestic network ties provide the firm with more home country resources, and facilitate indirect relationship building with foreign markets through mutual network partners (Coviello and Munro 1995, Yiu, Lau et al. 2007). On the other hand, international networks can bring knowledge creation, risk reduction, opportunity identification and external resource access, all of which will help the firm overcome the liability of foreignness (Zahra 2005), compensate for the disadvantages of limited international experience (Larson 1991, Zhou, Wu et al. 2007), and move the firm toward internationalization operation. Both sets of ties enable SMEs to access and acquire complementary resources from network partners, and they can become valuable and non-imitable resources in their own right. Overall, scholars have acknowledged that the greater the diversity of networks maintained, the better performance would be the benefits of the firm's portfolio (Goerzen and Beamish 2005, Jiang, Tao et al. 2010).

Firms can access foreign markets in a range of ways, depending on the degree of control exercised over the foreign assets necessary for the distribution of products (Campa

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and Guillén 1999). Inspired by TCA theory and extending Klein's (1990) classification of export channel forms in a continuum from non-integrated to completely integrated, the export channel developed and tested in this paper is based on the choices between hierarchical export channel and hybrid export channels grounded on the economic tradition of functions performed. A hierarchical export channel refers to firms serving foreign markets using home-based representatives, or establishing wholly owned foreign sales subsidiaries or even a manufacturing plant in export countries (Klein, Frazier et al. 1990, Klein and Roth 1990). When the subsidiary export channel is used, the firm either builds a physical presence in the foreign markets - by housing sales-people and undertaking a significant inventory, or makes sales-people travel and ships products from the firm's home base directly to foreign customers (Klein, Frazier et al. 1990). Since subsidiaries and representatives are considered to give the firm complete control of foreign production and marketing activities, they are designated full-control modes (Erramilli and Rao 1993). Such export channels enable information to be more easily directed to and from the markets, allowing firms to retain all the rents generated from the networks, and encouraging the full production of products in the foreign markets (Osborne 1996). However, the level of risk and resource commitment required from firms are correspondingly high, since the firms have to provide comprehensive knowledge to perform all the marketing and distribution functions by themselves, bearing all of the costs of opening up and serving the foreign market (Shervani, Frazier et al. 2007).

The hybrid export channel option involves the use of an independent organization such as commission agents or strategic allies, firms only perform some of the marketing-distribution functions, other necessary functions are performed largely by local partners (Klein and Roth 1990). The most common option is joint venture, which involves commercial

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alliance with a foreign partner to create a new third firm that produces and distributes products in the foreign market (McNaughton 2002). From the hierarchical to the hybrid export model, there is an decreasing degree of ownership, vertical integration, resource commitment, and risk from the firm's perspective (Anderson and Gatignon 1986, Hill, Hwang et al. 1990). Compared with the hierarchical export channel, the hybrid export channels are considered shared control modes, because they involve sharing control with third parties in order to acquire complementary knowledge and resources from partners (Erramilli and Rao 1993, Makino and Neupert 2000).

When exporting, firms generally manufacture their products at home but have to understand how to position productions in target markets and satisfy foreign customers through different routes before taking action (He, Brouthers et al. 2013). Knowledge of the market plays an important role in helping firms identify changes in products, and is able to facilitate the generation of a commercially viable, culturally adaptable and institutionally legitimized product, consequently leading to greater acceptance and sales (Subramaniam 2006, Patel, Fernhaber et al. 2013). In order to access necessary knowledge, SMEs have to rely on their networks both international or domestic (Patel, Fernhaber et al. 2013). Both types of networks are important sources for firms to form additional relationships, gain access to heterogeneous and complementary knowledge resources and capabilities outside the organization and determine opportunities and constraints (Eriksson and Chetty 2003, Oviatt and McDougall 2005), all of which helps mitigate the transaction costs of internationalization (Zacharakis 1997, Chetty and Blankenburg Holm 2000).

SMEs with diverse networks (i.e., both domestic and international networks) will prefer to expand abroad using hierarchical export channels, rather than choosing hybrid export channels, for several reasons. First, network-diversity is beneficial to firms in gaining

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access to multiple, differing sources to provide knowledge on a larger scope of relevant international expansion (Patel, Fernhaber et al. 2013). For instance, international networks provide firms with understanding on how to operate in the international environment (Coviello and Munro 1997, Mort and Weerawardena 2006). Domestic inter-firm networks offer the benefits of labor pooling, specialized suppliers and knowledge spillovers (i.e., the transmission of unclear, non-articulated, tacit forms of knowledge between home-based actors) during internationalization. In a word, diversity in knowledge sources provides distinct, yet related, pieces of knowledge (Lavie and Miller 2008). Second, a firm's ability to manage transaction variation depends on its resources (Reid 1983); requiring firms experience a greater level of risk and resources commitments are characteristic of the high control hierarchical export channel (Aulakh and Kotabe 1997). Firms with diverse networks generally have broader resources to perform all the marketing and distribution functions when serving foreign markets (Shervani, Frazier et al. 2007). Thus, network-diverse firms tend to adopt more direct and higher control export channel modes of operation, because a hierarchical export channel requires firms to have high resource investment and diverse networks provide firms with higher asset specificity of products and more comprehensive knowledge and resources to offset the transaction costs (Patel, Fernhaber et al. 2013).

Firms with mostly domestic or international networks may make different export channel choices. Previous scholars have indicated that because domestic network-based SMEs tend to lack international resources, experience, and knowledge about internationalization, they have higher perceptions of risk than internationally experienced SMEs (Makino and Neupert 2000, Lin and Chaney 2007). Thus, researchers have suggested that their initial internationalization activities should start by targeting 'psychically close' (i.e., markets having similar culture, language, political systems, trade policies) markets and

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expansion through low risk, low control and indirect exporting channel to access similar markets (Johanson and Vahlne 1977, Coviello and Munro 1997).

International network-based SMEs take advantages of the acquisition of current and country-specific institutional and business knowledge from around the world to launch their commercially viable and culturally adaptable products more rapidly (Eriksson, Majkgård et al. 2000, Subramaniam 2006). However, they tend to lack local network partners who might be helpful in creating important local advantages overseas (Chetty and Campbell-Hunt 2003, Mesquita and Lazzarini 2008). In addition, while the international network diversity and differences in partner characteristics can facilitate firms' internationalization and provide complementary capabilities and knowledge bases (Patel, Fernhaber et al. 2013), this simultaneously poses a high potential for conflicts. Diverse partners are generally very different in terms of corporate culture, strategic direction and management practices, which might cause conflict (Parkhe 1991). Thus, researchers have recently concluded that increased diversity can create more complexity in terms of management, monitoring, coordination and the potential for more conflicts, resulting in excessive monitoring, coordination and integration costs (Jiang, Tao et al. 2010). As a result, although international network-based SMEs have access to more international resources, they may still less likely to choose a hierarchical export channel because of the home-based resource constraints and increased coordination and managerial costs which might due to the complexity in managing partner diversities.

To sum up, this study theorizes that network diversity increases the propensity of a SME to choose a hierarchical export channel when exporting to foreign markets, rather than adopting hybrid export channels. SMEs with more diverse networks will potentially prefer a hierarchical export channels to a hybrid channel during the exporting process, because



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greater diverse contacts provide SMEs with more benefits in terms of foreign and national market knowledge, international opportunities and experience and referral trust. These benefits help internationalizing SMEs diminish information and knowledge obstacles in foreign markets, decrease uncertainties, facilitate asset specificity of products and minimize transaction costs in making export channel decisions. Thus, in line with the above discussion, I hypothesize that:

Hypothesis 1: The diversity of firms' networks is positively related to a firm's export channel choice.

### **3.3.2 The moderating impact of networking capability**

Scholars have adopted several theoretical viewpoints, including the knowledge-based theory (Conner and Prahalad 1996, Grant 1996), the resource-based theory (Wernerfelt 1984, Barney 1991), and the dynamic capability perspective (Teece, Pisano et al. 1997, Eisenhardt and Martin 2000), in order to develop an understanding of capabilities. From the perspective of RBV, scholars argue that resource possession and capability-building are two distinct mechanisms that can affect firms' economic rent creation (Amit and Schoemaker 1993, Makadok 2001). Although possession of resources is important, capabilities are a critical source of imitable and sustainable competitive advantages for firms, because resources rely on capabilities to transform into products or services superior to those of rivals (Amit and Schoemaker 1993, Lu, Zhou et al. 2010). Considering the interaction between capabilities and resources is important, because they are complementary rent creation mechanisms which have been used to explain competitive advantage creation (Makadok 2001).

Inspired by RBV theory, researchers have recently recognized that the capabilities view, which evolved from RBV of competitive strategy (Mort and Weerawardena 2006), is a

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special type of resource that is organizationally embedded and nontransferable, enhancing the effectiveness and efficiency of whatever resources are possessed by the firm (Alvarez and Busenitz 2001, Brinckmann and Hoegl 2011). It is critical for firms to pursue competitive advantages (Nelson 1991, Heimeriks and Duysters 2007) and to some extent complement the TCA approach to governance structure (Mayer and Salomon 2006). Moreover, firms' capabilities are a source of inimitable and sustainable competitive advantages to the firm, because they transform resources into products or services superior to those of competitors (Knight and Cavusgil 2004, Lu, Zhou et al. 2010). Under the RBV logic, scholars have argued that the key to a company's success or even its future development lies in its ability to find or create a truly distinctive competency (Teece, Pisano et al. 1997). Firms generally differ in the efficiency or effectiveness of a particular type of capability (Peteraf and Helfat 2003). The possession of a valuable and distinctive capability can enhance firms' prospects in foreign markets (Lorenzoni and Lipparini 1999, Leiblein and Reuer 2004). Additionally, several studies have noted that capabilities have a positive relation with firm performance (Kale, Dyer et al. 2002, Zou, Fang et al. 2003, Brinckmann and Hoegl 2011).

In the context of international entrepreneurship, scholars have suggested that networking capability is an important example of a firm's specific capabilities (Collins and Hitt 2006). It refers to the capacity of a firm to develop a purposeful set of routines within its networks, resulting in the generation of new resource configurations and the firm's capacity to integrate, reconfigure, gain and create resource combinations (Mort and Weerawardena 2006). Moreover, Ritter et al (2003) defines networking capability as a firm's ability to develop and use inter-firm relationships. This can be measured as a two-dimensional construct that comprises task execution and qualifications (Ritter, Wilkinson et al. 2002, Ritter and Gemünden 2003). In addition, Walter et al. (2006) argues that network

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capability is a firm's ability to develop and utilize inter-organizational relationships in order to gain access to various resources held by other actors. Four dimensions of networking capability are distinguished: coordination, relational skills, market knowledge and internal communication (Walter, Auer et al. 2006). Furthermore, it has also been understood that firm-specific capabilities enable a firm to place itself in a particular position in a broader network of partnerships with multiple companies (Hagedoorn, Roijakkers et al. 2006). Consistent with these viewpoints and extending such definitions, I define networking capability as the ability of a firm to manage effective network relationships, assimilate useful knowledge-related resources derived from such networks, and apply the knowledge-related resources to the internationalization process.

Many studies highlight the importance of networking capability and its impacts on firms' internationalization and performance. Networking capability refers to firm-specific capabilities that do not simply accrue to the firm or happen by chance (Hagedoorn, Roijakkers et al. 2006). Networking capability is inherently complex, causally ambiguous and difficult to replicate (Barney 1991, Kogut and Zander 1992). It is acknowledged as a mechanism for anticipating market opportunities, leading to more focused and market-orientated resource deployment (Walter, Auer et al. 2006). Networking capability is not only able to intensify firms' external relations, but can also improve firm performance (Ritter and Gemünden 2003). In the context of SMEs internationalization, firms develop their networking capability as a means to improve performance because it enables them to overcome resource-based constraints and liabilities of foreignness during international foreign market expansion (Mort and Weerawardena 2006). Generally speaking, there has been consensus that firm's networking capability is fundamental to the firm's success in competing in domestic or international markets, and is positively related to the

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development of new partnerships and to internationalization (Kale, Dyer et al. 2002, Hagedoorn, Roijackers et al. 2006). Firms tend to perform better as their networking capability increases (Dyer and Hatch 2006).

Scholars using the network approach, which is based on RBV, have explained how the firm network in terms of relational (Oviatt and McDougall 2005, Zimmerman, Barsky et al. 2009) and structural position (Burt 1992, Gulati 1999, Al-Laham and Souitaris 2008) can affect firms' internationalization and performance (Musteen, Francis et al. 2010, Yu, Gilbert et al. 2011). However, they only consider networks relevant to resources and do not consider the perspective of capability. Further, extant research on firms' networking capabilities has primarily focused on the link between networking capabilities and performance-related outcomes (Kale, Dyer et al. 2002, Walter, Auer et al. 2006), very little research attention has been paid to investigating how networking capability might impact SMEs international strategy, particularly export channel choice. I could identify no studies in the network and strategic management context that look at networking capability's impact on SMEs' export channel choice, and no studies that treated networking capabilities as a moderator variable to link the relationship between network diversity and export channel choice.

From the perspective of RBV, capability research has increasingly recognized the role of knowledge management as a key managerial determinant of competitive advantages (Heimeriks and Duysters 2007). By applying this perspective, I focus on network diversity, networking capability and their impact on SMEs' export channel choice. Although firms expect to gain competitive advantages through by building diverse networks, such a goal may be difficult to implement for firms with weak networking capabilities (Dyer and Singh 1998, Ireland, Hitt et al. 2002). Networking capabilities are different from network resources

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as they enable firms to create economic rent more effectively than rivals can by enhancing the value of firm resources (Lu, Zhou et al. 2010). Accordingly, this study explores the idea that networking capability moderates the relationship between SMEs' network diversity and export channel choice.

This work is inspired by absorptive capacity and partnering capability research (Cohen and Levinthal 1990, Hagedoorn, Roijakkers et al. 2006), given that the central foundation of networks is the transmission of knowledge related complementary resources through different types of ties (Brass, Galaskiewicz et al. 2004, Inkpen and Tsang 2005). Networking capability in this study mainly focuses on a firm's ability to recognize and assimilate valuable knowledge from particular partners (Cohen and Levinthal 1990), and the ability to select its own efficient network of partnerships, entering into valuable relationships to acquire useful and necessary knowledge resources, while maintaining few or no redundant partnerships (Hagedoorn, Roijakkers et al. 2006). Firms with superior networking capability are able to increase the value of network resources and create a more efficient network of relationships (Kale, Dyer et al. 2002, Walter, Auer et al. 2006).

Building upon previous studies, I theorize that firms with better networking capability, such as relational skills and resource assimilation, may be more able to enhance the available resource absorptivity, consequently increasing the value of network diversity. Firms with high network diversity and strong networking capability will increase their preference of hierarchical export channels. The reason for this is that firms' competitive advantage involves not only what assets they can access, but also how the firms assimilate and apply such assets through appropriate capabilities (Makadok 2001, Lu, Zhou et al. 2010). In the case of network diversity, although such networks are a source of knowledge and complementary resources (Zhou, Wu et al. 2007), when competing firms possess the same

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diverse networks, they cannot be sources of advantage because these networks are readily available to all competing firms (Barney 1991). I suggest that while diverse networks provide important access to knowledge-related resources, their impact on export channel choice may depend on the extent to which a firm can assimilate such knowledge (Kale and Singh 1999, Collins and Hitt 2006). Greater networking capability can promote knowledge assimilate from a particular collaboration partner by mitigating the negative influence of geographic distance, cultural and market background differences (Tsai 2001), and improving the transfer of complex knowledge into heterogeneous outputs (Alvarez and Busenitz 2001, Hansen, Mors et al. 2005). The better a firm can access another firms' knowledge, the more networking capability it required to benefit from such knowledge. Having diverse networks implies that a firm can access more knowledge from other firms. Such an amount of knowledge will have a positive impact on the adoption of a high control hierarchical export channel if the firm has a strong networking capability to effectively assimilate and apply knowledge from other firms.

In contrast, firms with high network diversity but weak networking capability will be relatively less willing to choose hierarchical export channels because inefficient networking capabilities result in firms having insufficient resources to meet the different requirements of export channels, rendering them unlikely to successfully manage network diversity. Weak networking capability is a major barrier to knowledge transfer between firms (Collins and Hitt 2006). Firms with weak networking capability are less likely to quickly transfer and assimilate knowledge from the network (Hansen, Mors et al. 2005). Empirical studies show that firms with structurally equivalent networks achieve differential benefits through these networks (Dyer and Hatch 2006) because firms differ in their ability to integrate, assimilate and apply knowledge-related resources gained from external sources (Cohen and Levinthal

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1990). A firm may be able to access certain necessary and complementary knowledge-related resources, but unable to enhance its knowledge acquisition if it does not have an efficient capability to assimilate such knowledge (Tsai 2001). Thus, in the case of network diversity, interaction between diverse networks and networking capability is critical to inter-organizational knowledge acquisition and assimilation. It can be argued that the weaker the networking capability of a company, the less likely the network can successfully provide necessary knowledge for a hierarchical export channel choice. Theoretically, firms with weak networking capability will be relatively less willing to choose hierarchical export channels, compared with firms with strong networking capability.

Networking capability is also likely to moderate the effect of low network diversity on low control export channel choice. The relationship between low network diversity and export channel choice may also depend on a firm's resource deployment and partnering abilities. These abilities, as indicated by network literature, enable a firm to increase its efficiency in deploying resources and avoiding redundant partnerships, which are important characteristics of firm-specific networking capability (Burt 1992, Ireland, Hitt et al. 2002, Hagedoorn, Roijakkers et al. 2006). Firms with low network diversity, mostly international or domestic networks, have limited time and resources as well as an urgent need to internationalize (Patel, Fernhaber et al. 2013). In such a situation, a firm may be more likely to choose a hybrid export channel if it does not have the ability to effectively and efficiently deploy and utilize such limited resources. This is because firms with weak networking capability tend to generate more redundant partnerships that carry little additional information (Hagedoorn, Roijakkers et al. 2006). Redundant links are believed to be inefficient at producing useful and helpful knowledge (Oviatt and McDougall 2005), and accompanied with increased time and resources related cost investment (Gulati 1995, Gulati

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1999, Kale, Dyer et al. 2002). Thus, I theorize that under the low network diversity situation, a firm with weak networking capability will be more likely to choose hybrid export channels than one that possesses better networking capability. The hybrid option means that firms do not perform all marketing and distribution functions, partners bear some of the operation costs and functions in the foreign markets (Anderson and Coughlan 1987, Shervani, Frazier et al. 2007).

Comparatively, a firm with low network diversity but strong networking capability will be more likely to choose a relatively superior low control export channel because these firms with superior networking capability are able to place themselves in a better central position within an inter-firm network and therefore more knowledge can be obtained (Powell, Kogut et al. 1996, Hagedoorn, Roijakkers et al. 2006). A firm with a better networking capability also has superior resource allocation ability and therefore tends to avoid unnecessary duplication of contacts (Hagedoorn, Roijakkers et al. 2006). The more efficient and non-redundant the networking capability of a firm, the more time and resources the firm will have for researching new useful partnerships and gaining more access to complementary resources (Hagedoorn, Roijakkers et al. 2006). This results in less overlap between partners' knowledge sets, costs and significant opportunities to learn new capabilities (Ireland, Hitt et al. 2002). Strong networking capability directly contributes to firms' resource acquisition and allocation, consequently improving the efficiency and effectiveness of limited network resources. Firms thereby gain more valuable resource-based competitive advantages, enhancing their strategic assets and enabling them to choose relatively superior low control export channels, such as the hybrid option.

To sum up, this study theorizes that a firm's networking capability can impact the relationship between the firm's network diversity and export channel choice, enabling it to



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enhance this relationship. When firms have the same high diversity networks, the firm who has a strong networking capability will be more likely to choose hierarchical export channels than the firm that possesses weak networking capability. In contrast, when competitors all have the same low diversity networks, the firm who has weak levels of networking capability will be more likely to choose hybrid export channels than the firm that possesses strong networking capability. This leads to the second hypothesis:

*Hypothesis 2: networking capability positively moderates the relationship between network diversity and export channel choice. The positive relationship between a firm's high network diversity and its choice of a hierarchical export channel increases when it has a higher networking capability, while the positive relationship between a firm's low network diversity and its choice of a hybrid export channel increases when it has lower networking capability.*

### **3.4 Methods**

In this section, I initially introduce the population of the firms the sample was drawn from, and then specifically detail how the questionnaire was developed and how the data were collected for the research. All measurement items employed for measuring and explaining the dependent, independent, moderating and control variables are then reported.

#### **3.4.1 Sample**

Given that data gathered through survey is easily quantifiable and amendable to statistical analysis and hypothesis testing, and information obtained by survey is relatively accurate within sampling error (Groves, Fowler et al. 2011, He, Brouthers et al. 2013). A survey research design was employed to collect data and test the above hypotheses.

Data were collected from a sample of manufacturing-based exporting SMEs in the Zhejiang province of China. There were several reasons for the choice of China as the

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research setting. First, China is the world's largest and fastest growing economy (Brouthers and Xu 2002) and the second largest international trade country in the world (Murray, Gao et al. 2007). This renders the country a logical research context in which to examine the internationalization of entrepreneurial firms (He, Brouthers et al. 2013). Moreover, similar to firms from other emerging economies, Chinese SMEs are likely to experience the liability of foreignness and newness in foreign countries (Zaheer 1995). Chinese internationalizing SMEs have recognized the importance of resources and capability in helping them mitigate these liabilities, and subsequently contributing to their internationalization (Hitt, Leonard Bierman et al. 2006, Lu, Zhou et al. 2010). It is commonly believed that using Chinese firms provides a large sample and helps control for the impact of other resource-based factors (He, Brouthers et al. 2013).

A random sample of 600 manufacturing companies involved in exporting was drawn from the directory of Zhejiang SME exporters and the Zhejiang SME Industrial Directory database provided by the customs authorities, which in total lists 40,000 firms. The reason for choosing Zhejiang province is because it is located on the eastern coast of China and is widely regarded as a major transportation thoroughfare and the international business and economic hub of Mainland China (Department of Commerce Zhejiang Province, 2013). Further, the majority of manufacturing-based international firms in the Zhejiang province relying on exporting. Exporting is the dominant method of international market participation (Hendrischke and Feng 1999). In addition, according to figures from the National Bureau of Statistics of the People's Republic of China (P.R.C), in 2011 the export volume from Zhejiang province ranked 1<sup>st</sup> in exports among the 31 provinces in China (China Commerce Yearbook, 2011). It is believed that this region provides an appropriate setting for this research.

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Four criteria were used to select the sample of firms examined in this study. First, the firms had to be primarily involved in manufacturing activities and the manufacturing business, with operations involving exports and/or other forms of international activities. This would ensure some degree of similarity in type of business operations. Second, firms had to have fewer than 500 employees. This figure is consistent with the quantitative definition of SMEs adopted by other researchers (Lu and Beamish 2001, Zhou, Wu et al. 2007). Third, firms needed to have been in business for at least three years. The reason for using this criterion is because by this point the firms have all survived the most critical years of operation (Pickle, Abrahamson et al. 1990) and their business practices presumably approximate those of established firms rather than new ventures (Covin 1991). Fourth, firms had to be privately owned. The reason for using this criterion is because from the RBV perspective (Barney, Wright et al. 2001), most Chinese SMEs are privately owned; these firms, compared with large state-owned enterprises, are generally constrained by resource unavailability and lack of international experience (Peng 2001). As a result, such firms have to rely on RBV (Westhead, Wright et al. 2001), such as network and networking capability, to access external resources and overcome their resource constraints because of their size (Chetty and Campbell-Hunt 2003, Chetty and Agndal 2007). The sample did not include trade intermediate organizations, trading agents, or service firms, as it is difficult to ensure the value of their goods traded.

The original questionnaire used in this study was developed according to a comprehensive literature review and is standardized and validated by other scholars. To ensure the reliability and validity of the questionnaire, I worked with academic experts who are familiar with the literature on which the empirical measures are based, or who have expertise in research design and could critically assess the content validity of each item.

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Suggestions for improvement were incorporated into the questionnaire. I also obtained export channel choice scales from previous researchers (He, Brouthers et al. 2013) who had used the chosen measurement in the Chinese context. The other measurements were then translated into Chinese and checked for form and meaning equivalence by an academic expert who is bilingual, speaking both English and Chinese.

### **3.4.2 Data collection**

The formal survey proceeded by post and email. Data collection time amounted to approximately three months. The target respondent for sample firms is the person who takes charge of international activities of the firm. Due to the fact that Chinese firms are wary and fearful of leaking proprietary information to strangers at the request of researchers, the majority of entrepreneurs and managers were reluctant to participate in the survey. Therefore, a high level of personal involvement, such as telephone calls and assistance from local government and industry associations, was employed to promote firm participation. By doing so, most sample firms had been encouraged by the local industry associations to take part in this research before I called them. This made it easy to get managers' to agree to respond to the survey.

I then contacted these firms by telephone to explain the purpose of this research, identify their appropriateness and ask for their cooperation. After making several efforts, 489 firms of a total of 600 (81.5% positive response) who met the necessary standards agreed to participate in the study. Of these 111 firms, 6 had gone bankrupt, 24 could not be contacted because of incorrect contact details, 21 refused to take part in the research, 9 firms had ceased exporting and 51 firms were export intermediaries.

Following telephone confirmation of participation agreement, a five-page questionnaire was then sent by post or email to the target firms' CEOs or managers who

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were responsible for international operations decision-making. For firms who preferred receiving a hard copy, the questionnaire with cover letters and a pre-paid postage envelope was sent to their company by post. Three to four days after the questionnaire had been sent, I called the mailed firms to confirm that the post had been successfully received; I asked them to complete and return it to me as soon as they could. For firms who preferred email, I sent the questionnaire to their email address. In order to improve the response rate, all participants were promised that any information provided to this research would be strictly confidential. A cover letter/pre-call of support from local commercial or industry associations was also prepared and addressed directly to the individuals identified. In addition, follow-up contact, such as several rounds of phone and personal contact were made and follow-up rounds of emails were sent as a reminder to those informants who had not yet responded one week after the initial dispatch of the questionnaire. In the case of firms who had not responded after waiting another three days, I politely pushed them by calling every day or re-sending the email until I received their reply.

A total of 241 questionnaires were returned. Of these responses, 38 were not useable (19 firms failed to fully complete the questionnaire, 16 firms did not use any of a hierarchical, hybrid or market channel, and 3 others reported the use of multiple channels as their most important export market). Thus, the usable data set comprised observations from 203 firms, with an overall response rate of 42%. This response rate is comparable with the rates reported in other research involving Chinese exporting SMEs (e.g., He, Brouthers et al. 2013; Zhou, Wu et al. 2007).

Given that this research adopted a classic categorisation of two types of export channel, referring to the hierarchical export channels (i.e., firms that serve the host market directly from China or establish wholly owned subsidiaries in the foreign market) and hybrid

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export channels (i.e., firms are involved in a strategic alliance or use commission agents) according to the degree of integration (He, Brouthers et al. 2013), a total of 151 useful samples were used in further analysis. In the sample, 76 (50.3%) firms opted for a hierarchical export channel and 75 (49.7%) employed a hybrid export channel. The sample firms' average age is 12 years, the average number of employees per firm is 180 and the average number of countries being exported to by each firm is 13. With regard to the geographic distribution of these sample firms and their most important markets, in total, 42 countries were represented. The United States was the most important market for the largest number of companies (27 firms; 17.9%), followed by Japan (20 firms; 11.3%) and then Russia (14 firms; 6.6%).

### **3.4.3 Variables and Measurement**

Hypothesis 1 predicts the relationship with export channel choice as the dependent variable, and firms' network diversity (i.e., the firm has diverse networks or mostly domestic/international networks) as the independent variable. In hypothesis 2, networking capability (i.e., knowledge recognizing, assimilation and partnering ability) is treated as a moderator. Based on RBV and knowledge-based theory, networking capability is proposed to interact and moderate the effects of network diversity on export channel choice. The measurement of each variable is explained below.

#### **3.4.3.1 Dependent variables**

Inspired by Klein et al (1990), in this study, I use perceptual measures of export channel choice as the dependent variable. Respondents were informed that the focus of the study is the export channels used by Chinese manufacturing-based exporting firms serving foreign markets (i.e., country) and they were told to concentrate on their most important foreign market (He, Brouthers et al. 2013). After noting the product and market, each

respondent was asked to indicate which of the statements (from high control hierarchical export mode to low control hybrid export mode) best represented the export channel they used in their most important export market. As in Klein and Roth's (1990) study, hierarchical channels were assigned a value of 1 and included two types: "our firm has established wholly owned foreign sales subsidiaries in the foreign market for serving the foreign customers especially" and "our firm serves the market directly from China through sending home-based representatives." Hybrid channels were assigned a value of 0 and included two types: "our firm is involved in a strategic alliance such as joint venture with another company to handle sales of this product in this market" and "our firm works together with some commission agents and performs part of the distribution functions" (Klein, Frazier et al. 1990, Klein and Roth 1990).

#### 3.4.3.2 Independent variables

Following Baum et al (2000) and Lavie and Miller (2008), in this study the measurement of network diversity was based on the Hirschman-Herfindahl index. I began by enquiring about the number of foreign partners in the focal firm's network. Respondents were requested to report their network member type in the national scope. In the questionnaire, respondents were asked: 1) how many domestic partners worked with your firm in the last year, such as competitors, suppliers, customers, distributors, R&D, institutions, banks and governments (Goerzen and Beamish 2005), 2) how many foreign partners worked for your company in the last year, such as competitors, suppliers, customers, distributors, R&D, institutions, banks and governments (Lavie and Miller 2008).

In past studies on national diversity (Baum, Calabrese et al. 2000, Patel, Fernhaber et al. 2013), the diversity of a partner's country of origin is generally measured by using the Herfindahl index:  $network\ diversity\ j = [1 - \sum_{ij} (PA_{ij})^2] / NA_j$ ; as such I used this equation to

capture the extent to which a firm has collaborative relationships with both home country (i.e., China) firms and local firms in the particular host country. More specifically, in the equation,  $PA_{ij}$  is the proportion of all firms  $i$ 's partners that belong to a given type  $j$ , and  $NA_i$  is firm  $i$ 's total number of network members (Baum, Calabrese et al. 2000). A firm with ten network members, two with domestic partners and eight foreign partners will score a *network diversity*  $i = [1 - ((2/10)^2 + (8/10)^2)]/10 = 0.032$ . A second, with a mostly domestic network comprising eight domestic partners and two foreign partners, will score a *network diversity*  $i = [1 - ((7/10)^2 + (3/10)^2)]/10 = 0.042$ . When the network partners of a given type are roughly structurally equivalent (i.e., the number of domestic network and foreign partners is roughly equivalent), the score will be closer to 0.05.

### 3.4.3.3 Moderating variables

According to Lu et al (2010) and Makadok (2001), the interaction between resources and capabilities is very important because resources generally rely on capabilities to transform into products or services superior to those of rivals, and firms' capabilities determine utilization of the limited resources of new firms and thus subsequent growth, especially for entrepreneurial firms (Knight and Cavusgil 2004). This study therefore explores the concept that firms' networking capability moderates the relationship between resource-based network diversity and export channel choice.

Based on Cohen and Levinthal (1990) and Walter et al.'s (2006) conception of absorptive capacity and network capability, in this study, a firm's networking capability is defined as its ability to recognize new external knowledge and assimilate such knowledge obtained from external sources (Cohen and Levinthal 1990, Zahra and George 2002), and partnering with valuable partners who can provide firms with complementary resources



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(Walter, Auer et al. 2006). Following this definition, networking capability is treated as a multidimensional construct comprising: 1) knowledge recognizing ability, 2) knowledge assimilation ability, and 3) partnering ability. More specifically, each dimension of networking capability was measured as follows:

*Knowledge recognizing ability*

Cohen and Levinthal (1990) suggested that a firm's investment in basic research enables it to recognize and absorb knowledge external to the firm (Cohen and Levinthal 1990), and this has led several research studies to use R&D intensity as a measure of absorptive capacity. Recently researchers, Lane et al (2001), in their study of learning and performance of international joint ventures, argued that absorptive capacity is a multicomponent construct and can be segmented into three components based on Cohen and Levinthal's (1990) original definition: 1) the ability to recognize new external knowledge, 2) the ability to assimilate it, and 3) the ability to apply it to a commercial end (Lane and Lubatkin 1998, Lane, Salk et al. 2001).

Scholars indicate that knowledge recognizing ability represents a firm's ability to recognize the value of new external knowledge (Lane, Salk et al. 2001). Recognizing the value of new external knowledge is the first important step toward knowledge acquisition. An internationalizing firm's ability to recognize the value of new external knowledge is generally represented by the firm's investment in training (Anh, Christopher Baughn et al. 2006). The researcher found that there is a significant positive relationship between investment in training and overall knowledge acquisition ( $p < 0.001$ ). Thus, in order to measure a firm's ability to recognize knowledge I constructed a four-item scale by reflecting on the previous literature and the explicit definitions of this dimension offered by Anh et al. (2006).

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In the questionnaire, respondents were asked to evaluate the following items: 1) every year our firm commits significant resources to educating and training Chinese personnel to master the technology brought by the network partners, 2) every year our firm commits significant resources to educating and training Chinese managers to master the managerial skills brought by the network partners, 3) Chinese personnel in our internationalization process have been provided with training in cross-cultural skills, and 4) in general, before new employees can achieve a satisfactory performance level, our firm has committed significant resources for their board training (Anh, Christopher Baughn et al. 2006). These items were measured on a 5-point Likert scale rating from 'strongly disagree' (1) to 'strongly agree' (5). A higher score implies that a firm has a greater knowledge recognizing ability (Cronbach's  $\alpha = .909$ ).

#### *Knowledge assimilation ability*

Following prior research on absorptive capacity (Cohen and Levinthal 1990, Lane, Salk et al. 2001), an internationalizing firm can generally assimilate knowledge from three sources located outside the firm's boundaries: other firms in the host country (where the firm exports to), other firms in the home country (where the firm's headquarters are located) and firms in other countries (Phene and Almeida 2008). Under the resource possession similarity situation, firms with stronger knowledge assimilation capability enable better innovation output and internationalization (Lane, Salk et al. 2001, Phene and Almeida 2008). This is because a firm with a stronger knowledge assimilation capability has a more efficient ability to learn and transfer the knowledge it identified through its network search (Simonin 1999, Anh, Christopher Baughn et al. 2006)

Based on Anh et al. (2006), the ability to learn is highly significant and positively associated with knowledge acquisition ( $p < 0.001$ ). As a consequence, the measurement of a

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firm's ability to assimilate new external knowledge is based on its employees' ability to learn. I then measured knowledge assimilation ability according to the existing items in the literature. In this study, four items were measured on a 5-point disagree/agree scale. In the perceptual measure setting, I asked respondents to evaluate the following items: 1) as a internationalizing firm, Chinese employees in our exporting process are able to understand and use new technology brought by the network partners, 2) Chinese employees in our exporting process are able to understand and use new marketing techniques brought by the network partners, 3) Chinese managers in our exporting process are able to understand and use new managerial techniques brought by the network partners, and 4) overall, the Chinese employees in our exporting process are able to understand and apply new knowledge and skills brought by our network partners (Anh, Christopher Baughn et al. 2006) (Cronbach's  $\alpha = .890$ ).

#### *Partnering ability*

Previous study has highlighted the importance of partnering ability and provided empirical research results related to its effect on the formation of new partnerships (Kale, Dyer et al. 2002). Scholars show that firms with knowledge about their partners can shape appropriate exchange routines and governance structure, and these firms can avoid or handle instabilities in their partnerships (Walter, Auer et al. 2006). Moreover, the ability of SMEs to conduct networking activities strategically with efficient and non-redundant contacts is beneficial in obtaining influential resources for accelerating foreign business development and internationalization (Tang 2011).

In the context of this study, I focused on partner selection and therefore defined partnering as a firm's ability to organize and structure partners' knowledge and strategically choose partners who can provide firms with complementary resources (Walter, Auer et al.

2006). Following Walter et al (2006) and Tang (2011), five items were used to measure partnering capability. Respondents were asked to evaluate whether: 1) we know our partner's markets very well (Walter, Auer et al. 2006), 2) we know our partner's products/procedures very well (Walter, Auer et al. 2006), 3) we know our partner's strengths and weakness very well (Walter, Auer et al. 2006), 4) we regularly evaluate and prioritize partner relationships according to their contributions to business goals (Tang 2011), 5) we regularly compare the firm's functions, role and power to those of partners in business relationships (Tang 2011). These items were measured on a 7-point Likert scale rating from 'strongly disagree' (1) to 'strongly agree' (7). The higher the score the greater the firm's partnering ability; the result would increase time and resource saving, and consequently improve the efficiency and effectiveness of the limited network resources and partner selection. The values of these five items were summed up and then averaged in order to create our partnering capability construct (Cronbach's  $\alpha = .883$ ).

#### **3.4.3.4 Control variables**

There are 13 control variables: firm size, firm age, market experience, international diversity, industry, transaction cost factors (i.e. asset specificity, channel volume, internal-behavioral uncertainty and external-environment uncertainty), cultural distance, market size (i.e., GDP per capita and population size) and growth (i.e., GDP growth rate), all of which are believed to affect firms' export channel choice and influence the hypothesized relationships (He, Brouthers et al. 2013).

##### *Firm size*

This research controlled for firm size because previous studies have widely recognized that a firm's size can affect its export channel choice (Erramilli, Agarwal et al. 2002, He, Brouthers et al. 2013). Larger and more diversified firms may have more

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opportunities to exploit network ties than smaller and less connected organizations (Ellis 2000, Ellis and Pecotich 2001). Following He et al. (2013), the measurement of firm size in this study was based on the question asking: ‘the number of employees are in the firm’.

#### Firm age

Given that firm age has been widely confirmed to influence a firm’s internationalization (Westhead, Wright et al. 2001), firm age must be considered as a control variable. Previous scholars have indicated that when the age increases, a firm’s knowledge accumulation increases and so does its experience in acquiring resources; such knowledge and experience can be beneficial for firms in reducing the risks and costs of international expansion (Autio, Sapienza et al. 2000). Respondents were asked to report their firm’s age in 2014.

#### Market experience

From the organizational capabilities perspective, market experience is recognized as an important element of a firm’s capabilities and resources, influencing international strategy such as export channel choice (Aulakh and Kotabe 1997). Previous TCA scholars have suggested that market experience is considered a condition in which firms have a lower level of international uncertainty (Anderson and Gatignon 1986, Brouthers and Hennart 2007). Market experience helps firms to identify the source of market intelligence, decrease information overload, and generate and disseminate information effectively (He, Brouthers et al. 2013). In this paper, market experience was measured as the number of years of experience in the target export market (Brouthers and Brouthers 2003, He, Brouthers et al. 2013). Respondents were asked to report how many years they had been exporting to the most important market.

#### International diversity

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Prior scholars have indicated that international diversity (as indicated by geographic scope and the technological and cultural diversity of the countries in a firm's portfolio) can influence breadth, depth, and speed of internationalization (Zahra, Ireland et al. 2000). Since previous scholars have suggested that international diversity impacts a firm's internationalization, I thus also considered international diversity as a control variable. Moreover, this variable was measured by asking the number of countries the firm has sold its products in. Following Goerzen and Beamish (2003) and Zahra et al. (2000), the survey asked 'In how many counties are this company's products sold?' Respondents were asked to provide data on the number of foreign countries their companies' products were exported to.

### Industry

Given that previous findings suggest firms do better in industries where companies allocate more resources to differentiation activities (Boter and Holmquist 1996), it is reasonable to expect that industry differentiation will impact firm international strategic decisions (McNaughton 1996). This variable was measured by asking for the firm's main line of business. Based on He et al (2013) and McNaughton (1996), in the questionnaire respondents were asked: in the last year, what has been your firm's most important produced and exported product (He, Brouthers et al. 2013)? Respondents were required to provide data on the main product line their companies' products were manufactured and exported via. Based on the Standard Industrial Classification of Chinese Export Commodities (MOFCOM 2008), three industry dummy variables were created for firms representing the primary industries in the sample: electrical and electronic industry; imitation jewelry industry; and food industry. For each dummy variable, I assign a value of 1 if the firm is in the industry and 0 if the firm is not in the industry.

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### Asset specificity

This research controlled for transaction cost variables (i.e. asset specificity, external uncertainty, internal uncertainty and channel volume) because previous studies have widely recognized that TCA factors influence firms' export channel choice. I measured asset specificity with a four-item scale adapted from Shervani et al. (2007) and Erramilli and Rao (1993). These four items assessed the extent to which specialized both physical and knowledge assets was required by salespeople with regard to the firm's products and procedures (Shervani, Frazier et al. 2007). The transaction-specific assets here refer to the assets that are specifically invested into the export country. Respondents were asked: 1) specialized investment in the form of tooling and equipment is needed to market your firm's product (He, Brouthers et al. 2013); 2) a large specialized investment into specific know-how unique to the business is needed to market your firm's product (McNaughton 1996, Chen and Chen 2003); 3) it generally takes a long time for your firm's salesperson (whether the firms' or an intermediary's) to gain a thorough knowledge of the market and product line (Shervani, Frazier et al. 2007); 4) to be effective, a salesperson for your firm has to take a lot of time to get to know the customers and competitors (Shervani, Frazier et al. 2007). The items were measured using a 7-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. In order to create our asset specificity construct, the value for these four items were summed up and then averaged (Cronbach's  $\alpha = .856$ ).

### Channel volume (frequency)

Channel volume is a transactional dimension. Higher levels of channel volume offer firms a motive to use hierarchical governance; the fixed costs incurred by integrating transactions within the firm can be spread if the transaction volume is large enough (Brouthers and Hennart 2007). Given that channel volume can be an indicator of the

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resources that influence the firm's strategy, it is reasonable to consider this as a control variable. Drawing on Klein et al. (2009), channel volume was measured by asking respondents the percentage of their most important market accounts for the total export sales last year.

#### *Internal uncertainty*

Internal uncertainty reflected the extent to which it is difficult to assess selling performance in the distribution channel (Rindfleisch and Heide 1997). It is reasonable to treat internal uncertainty as a control variable in an export channel choice study because it is recognized as an important element of a firm's capabilities and resources, thereby influencing its international strategy (Aulakh and Kotabe 1997). Given that behavioral uncertainty was measured using a single item (7-point scale) (He, Brouthers et al. 2013), the internal uncertainty in this study was measured using a scale derived from Shervani et al. (2014). Following He et al (2013), respondents were asked to indicate the degree to which they find it easy to measure the collective performance of individuals who perform an exporting function. This item was measured using a reverse-coded 7-point Likert scale ranging from 'very easy' to 'very difficult'.

#### *External uncertainty*

According to Shervani et al. (2007) and Erramilli and Rao (1993), external uncertainty is the extent to which it is difficult to accurately predict future states of the world; this is typically labeled 'country risk' and can take many forms. Following Shervani et al. (2007) and He et al. (2013), this variable was measured using a four-item Likert scale. Specifically in the questionnaire, respondents were asked about: 1) the extent to which it is difficult to accurately predict future sales forecast in the host country; 2) the extent to which the host market is well known to the firm; 3) the extent to which it is difficult to monitor trends in



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the host country; and 4) the extent to which it is difficult to gauge competition in the host country, with higher scores indicating a higher external uncertainty. Seven-point Likert scales were utilized in this measurement. The value for these four items were summed up and then averaged to create the external uncertainty construct (Cronbach's  $\alpha = .869$ ).

### **Target market variables**

A firm's choice of international marketing strategy depends on not only the characteristics of the company and its product, but also depends on the characteristics of the foreign market (Goodnow and Hansz 1972). In the context of exporting, a number of studies have tested for variables related to host country characteristics that influence the choice of export channel. The most common target market variable is external-environmental uncertainty (i.e., volatility and diversity of the environment in the host target market), which is also treated as an important dimension of TCA (Klein, Frazier et al. 1990, Bello and Lohtia 1995, Shervani, Frazier et al. 2007). Besides this external environment factor, there remain quite a number of target country variables that have been tested, such as legal restrictions (Anderson and Coughlan 1987), psychic distance (Klein and Roth 1990), cultural distance (Erramilli and Rao 1993, Ramaseshan and Patton 1994, Parente, Choi et al. 2010), market size and growth (Chung 2002, Li 2002, He, Brouthers et al. 2013).

In this study, legal restrictions and psychic distance were not considered as control variables in later analysis because legal restrictions lacks variation (Anderson and Coughlan 1987) and some export channels such as intermediate and joint venture do not correlate well with psychic distance (Johanson and Vahlne 2009). In order to discover more target market variables, I also tried employing country risk distance (i.e., formal institutional differences) and corruption perception index as control variables related to the host countries because these factors often reflect a country's governmental and political actions,

creating both opportunities and barriers to international business activity (Brouthers, Brouthers et al. 2008). However, these two variables were found to be highly correlated with each other ( $r = .90$ ) and with market size ( $r = .83$ ). In order to avoid potential collinearity problems in our analysis, country risk distance and corruption index were not included in this study. As a result, a total of five target-country variables, external-environmental uncertainty (also included as part of the TCE control variables), cultural distance, market size (i.e., GDP per capita and population size) and growth (i.e., GDP growth rate) were considered in the further analysis.

### Cultural distance

Following Kogut and Singh (1988), I therefore measured the cultural distance (CD) between the target countries and China (country of origin) by using Hofstede's four cultural dimensions: power distance, uncertainty avoidance, masculinity/femininity and individuality. This approach has been widely adopted to measure cultural distance (He, Brouthers et al. 2013). Based on Hofstede's cultural indices, the cultural distance measure is computed in the following way:

$$CD_i = \frac{\sum_{j=1}^4 [(H_{ij} - H_{Cj})^2 / \text{Var}_j]}{4}$$

where  $CD_i$  represents the cultural distance between country  $i$  and the origin country China;  $H_{ij}$  captures cultural dimension  $j$  in country  $i$  and  $H_{Cj}$  captures cultural dimension  $j$  in China; and  $\text{Var}_j$  represents the variance in the cultural dimension  $j$  across all countries (Salomon and Wu 2012).

### Market size and growth

Target market size and growth must be considered as a control variable because at the firm level it is consistently linked with the direction and value of both exports and

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foreign direct investment (Mitra and Golder 2002). Market size and growth has come to be recognized as an important factor which influences firms' decisions in the internationalization process (Ellis 2008, He, Brouthers et al. 2013). Following Ellis (2008) and He et al. (2013), the measurement of market size in this study was captured by using population size and national gross domestic product (GDP) for the export market, which is the sum of all market values of final goods and services produced in a country. The measurement of growth variable related to the target markets was captured by examining the GDP growth rate (annual %). Data were obtained from the World Bank website.

#### **3.4.4 Statistical Analysis**

The present study employs logistic regression to test hypotheses 1 and 2, since the dependent variable, export channel choice, is a binary variable. Logistic regression is popularly used in export channel research (Campa and Guillén 1999, He, Brouthers et al. 2013). SPSS is appropriate statistical software for this purpose and is also viable for testing the reliability of the measure in a theoretical context (Wu, Sinkovics et al. 2007, He, Brouthers et al. 2013). SPSS is also appropriate for exploratory factor analysis (Cavusgil and Zou 1994) and logistic regression analysis used in hypothesis testing. Relying on SPSS, this study conducted statistical analysis before testing my hypotheses. Logistic regression was employed to classify export channel choices predicted by the model. Moreover, Confirmatory factor analysis (CFA), through structural equation modelling (SEM), was applied to provide a confirmatory test of the measurement theory. SEM, along with the additional software package, AMOS, was used to construct validity tests; this is the best multivariate procedure for testing construct validity (Wu, Sinkovics et al. 2007).

##### **3.4.4.1 Non-response bias**

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Following the collection of the data, we tested for non-response bias and common methods bias. To assess potential non-response bias, early and late respondents were compared with respect to various firms characteristics, including firm age ( $t=.706$ ,  $p=.117$ ), international diversity ( $t=1.085$ ,  $p=.130$ ), market experience ( $t=-.871$ ,  $p=.965$ ), channel volume ( $t=-.770$ ,  $p=.208$ ), internal uncertainty ( $t=-.804$ ,  $p=.094$ ), external uncertainty ( $t=1.214$ ,  $p=.537$ ), cultural distance ( $t=-1.132$ ,  $p=.927$ ), market size ( $t=-1.400$ ,  $p=.222$ ), GDP growth rate ( $t=.083$ ,  $p=.982$ ), population size ( $t=-1.115$ ,  $p=.132$ ) and network diversity ( $t=-.396$ ,  $p=.386$ ). No significant difference between early and late response was found. The results of the test showed no indication of response bias.

#### **3.4.4.2 Common methods bias**

Common methods variance may occur when both dependent and independent variables are collected from respondents at the same time. Following the suggestions of Podsakoff and colleagues (Gu, Hung et al. 2008), I utilized two techniques to protect the result of common method biases. The first method was involved designing the study's procedures. When designing our questionnaire, we used different response formats for the measurement of variables. For example, for networking capability (including knowledge recognizing ability assimilation ability and partnering ability) I used Likert scales, for variables such as firm size and network diversity I used open-ended questions. This study's independent and dependent variables are dissimilar in content, and some independent variable items were reverse-scaled in order to eliminate response patterns that could potentially distort the accuracy of the data.

The second method involved statistical controls. Common factor analysis was conducted to assess whether a single latent factor would account for all the manifest variables and ensure that common methods variance did not threaten the interpretation of

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the findings of this research (Brouthers, Brouthers et al. 2003). Using factor analysis and entering all the variables of interest, if the unrotated factor solution contains one factor or a factor that accounts for the majority of covariance, then common method bias may exist (Wu, Sinkovics et al. 2007). All the variables in this study were entered into an exploratory factor analysis and factor analysis was performed. The results of the factor analysis revealed the presence of six distinct factors with an eigenvalue greater than 1.0, rather than a single factor. This showed a five-factor solution in which the largest factors explained about 19.38% of the variance. In addition, to overcome the potential problems with the one-factor test, I used confirmatory factor analysis (CFA) to investigate potential common methods bias among the variables in my survey (Gu, Hung et al. 2008). The estimated CFA loaded all the items of the survey onto a common “method” factor. The fit indexes for this model (TLI= .043; CFI= .234; IFI= .277; RMSEA= .140) suggest a poor model fit, demonstrating that common method bias alone is not likely to explain any observed relationship between model variables in this study. The results of both tests demonstrate that common methods variance is not a problem in the data, since the variables do not load on a single factor and there is no one general factor that accounts for the majority of the covariance among the variables. Consequently, it is evident that the measurement model is robust to a common method variance problem.

#### **3.4.4.3 Construct reliability and validity**

In this section, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) are presented in sequence to reflect the constructs’ reliability and validity. According to previous research, if more than two constructs are involved, achieving unidimensional measurement (ensuring a set of measured variables has only one underlying construct) is a crucial undertaking in theory testing and development (Wu, Sinkovics et al. 2007). Given

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that running exploratory factor analysis in SPSS has been suggested to be a critical part of assessing construct validity (Cavusgil and Zou 1994), this research therefore ran EFA for the sample with the procedure factor in order to demonstrate the construct validity. The EFA revealed the expected factor solutions (see table 16). The factor analysis of the 21 items has an excellent KMO of 0.884 and a significant Barlett's test of sphericity. Four clusters of items were extracted with an eigenvalue over 1, explaining 71% of the total variance. All factors had a Cronbach's alpha over 0.85, which was above the recommended cut-off value of 0.7 (Wu, Sinkovics et al. 2007).

The EFA result also showed that knowledge recognizing ability (i.e., dimension 1 of networking capability) and knowledge assimilation ability (i.e., dimension 2 of networking capability) items loaded on a single factor, which suggested that these two scales could have been combined. However, this seemed conceptually invalid and potentially irrelevant; consequently, another technique was required for reassessment based on the combination of conceptual foundation and some empirical evidence. It was necessary to ensure that the potential combination would not go against the basic assumption of factor analysis that 'some underlying structure does exist in the set of selected variables' (Wu, Sinkovics et al. 2007). As recommended by Hair et al (2006), CFA, a special version of the structural equation model (SEM), along with the AMOS software was then undertaken to compare the model fit based on goodness-of-fit measures between the original three-factor networking capability construct derived from the theory (Cohen and Levinthal 1990, Walter, Auer et al. 2006) and the two-factor construct, as suggested by EFA and fulfilled by SPSS.

The overall goodness-of-fit statistical results for these two constructs are shown in figure 6 and 7. Model fit test results were obtained for the original three-factor networking capability construct:  $X^2(62) = 182.356$ ,  $p < .000$ ; CFI=.936; TLI=.907; IFI=.937; and RMSEA=.096,

**Table 16: Exploratory Factor Analysis (EFA) of measures**Rotated Component Matrix<sup>a</sup>

	Component			
	1	2	3	4
Knowledge recognizing ability1	.854			
Knowledge recognizing ability2	.848			
Knowledge recognizing ability3	.845			
Knowledge recognizing ability4	.822			
Knowledge assimilation ability1	.753			
Knowledge assimilation ability2	.793			
Knowledge assimilation ability3	.616			
Knowledge assimilation ability4	.686			
Partnering ability1		.750		
Partnering ability2		.831		
Partnering ability3		.792		
Partnering ability4		.767		
Partnering ability5		.682		
Asset specificity1			.821	
Asset specificity2			.740	
Asset specificity3			.849	
Asset specificity4			.762	
External uncertainty1				.841
External uncertainty2				.838
External uncertainty3				.881
External uncertainty4				.799

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

and for the two-factor construct as suggested by EFA:  $X^2(64) = 329.143$ ,  $p < .000$ ; CFI=.860; TLI=.801; IFI=.862; and RMSEA=.141. The chi-square statistic ( $X^2$ ) and the root mean square error of approximate (RMSEA) are considered to be ‘badness-of-fit’ measures because a small, non-significant  $X^2$  and a lower RMSEA score correspond to a good fit. In contrast, the values of the comparative fit index (CFI), Tucker-Lewis index (TLI) and incremental fit index (IFI) range between 0 and 1; larger values indicate better goodness-of-fit. Accordingly, the original three-factor networking capability construct comparatively shows a better result than the two-factor networking capability construct in terms of model fit, since the model fit indices (CFI, TFI and IFI) achieved the higher values when the networking capability scale was modelled based on the original three-dimension. The value of RMSEA of the three-factor networking capability construct also decreased considerably when using the three-factor networking capability construct. Therefore, the three-factor networking capability (NC) construct was used in further analysis.

Figure 6: Model fit test of three-factor NC construct (standard estimates)  
 Chi-square= 182.356 (62df)  
 P=.000

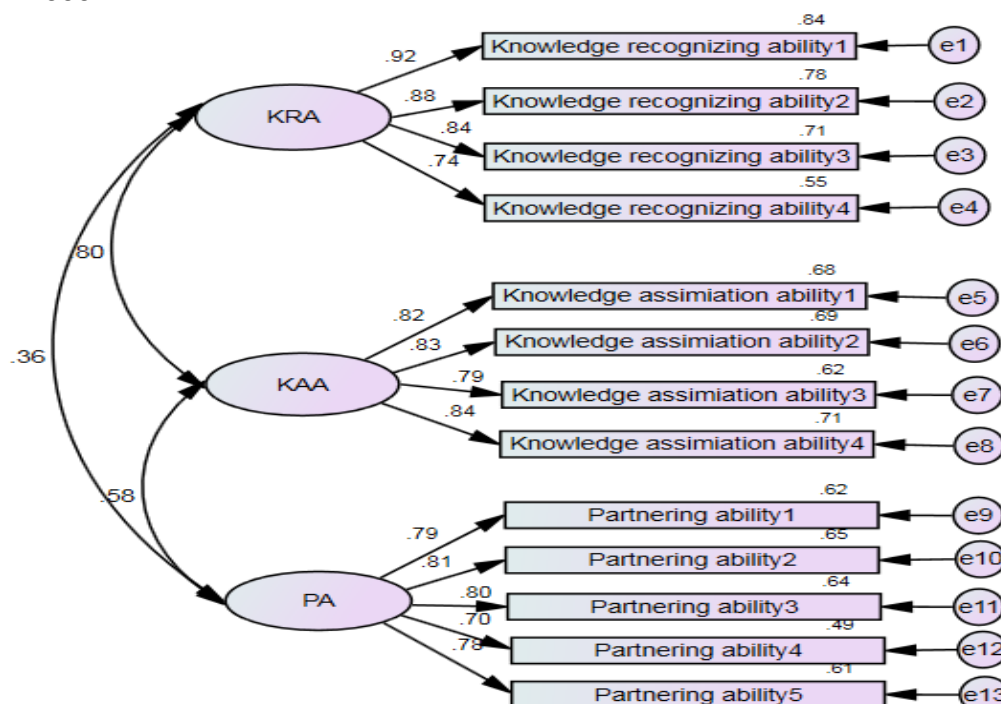
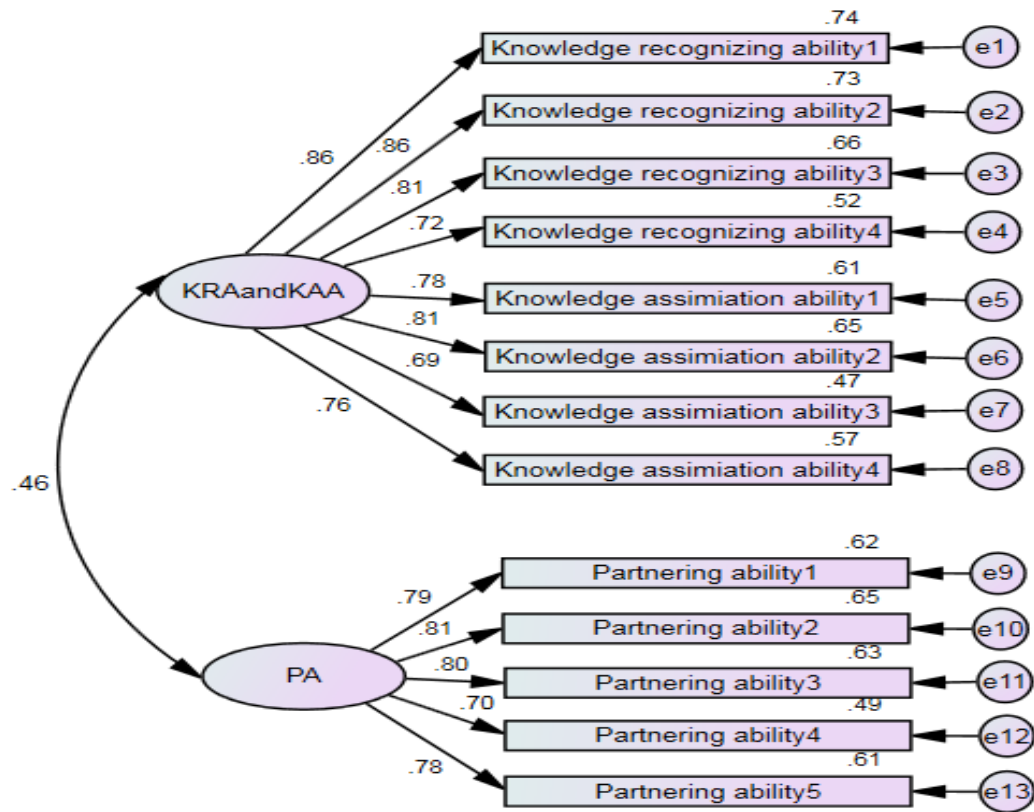




Figure 7: Model fit test of two-factor NC construct (standard estimates)  
 Chi-square= 329.143 (64df)  
 P=.000



Reliability is an evaluation of the level of consistency between the multiple measure of a variable (Wu, Sinkovics et al. 2007). Based on the results of EFA, the reliability of the constructs was then tested. The 13-item measurement of total networking capability is a second order factor containing three first order factors: knowledge recognizing ability (four items), knowledge assimilation ability (four items) and partnering ability (five items). Each of the asset specificity and external uncertainty constructs include four items.

In obtaining reliabilities of empirical measurements, the internal consistency method is the predominant one. In testing the internal consistency, Cronbach's alpha has become the most widely used method, both because of the practical problems of other methods and because the alpha coefficient provides a direct estimate of the mean of all split half tests (Wu, Sinkovics et al. 2007). Therefore, the reliability of these factors (i.e., total networking

capability, knowledge recognizing ability, knowledge assimilation ability, partnering ability, asset specificity, and external uncertainty) was tested using the procedure scale in SPSS, as illustrated table 17. The results of the reliability test showed that the value of Cronbach's alpha ranges from .856 to .909, exceeding the usual .70 benchmark (Wu, Sinkovics et al. 2007). Accordingly, the measure of total networking capability, knowledge recognizing ability, knowledge assimilation ability, partnering ability, asset specificity and external uncertainty, demonstrate adequate reliability for the sample.

**Table 17: Constructs reliability**

<b>Variables (items)</b>	<b>Label</b>	<b>Cronbach's alpha</b>
Total networking capability (13 items)	TotalNC	.908
Knowledge recognizing ability (4 items)	KRA	.909
Knowledge assimilation ability (4 items)	KAA	.890
Partnering ability (5 items)	PA	.883
Asset specificity (4 items)	AS	.856
External uncertainty (4 items)	EU	.869

Given that the high inter-correlations between the networking capability variables, I created a total networking capability by adding the values of the 3 different capability variables. Total networking capability has been treated as an aggregation variable containing three networking capability dimensions and able to test the moderating effect of the three-capability interactions altogether. Moreover, in order to reduce the correlation

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impact between the independent variable and networking capability interaction variables, in this research the interactions were rescaled (by subtracting the corresponding variable mean from each value) by using procedures to diminish the high correlations (Erramilli and Rao 1993); all interaction variables were recalculated by using their centered values (Darlington and Hayes 1990). Firstly, I created a Z score for network diversity and new Z scores for each of the 4 capability variables. I then took the centered value of network diversity and multiplied it by each of the moderating variables to create 4 different interaction variables – network diversity x knowledge recognizing ability, network diversity x knowledge assimilation ability, network diversity x partnering ability and network diversity x total networking capability.

### **3.5 Hypotheses testing**

I examined the correlations between variables before I tested the hypotheses. Table 18 shows the means, standard deviations and correlations for each of variables used in this study. Based on the results, some statistically significant correlations (correlation values exceeding 0.60) were observed between the independent variables, such as firm age and market experience ( $r = .611$ ), and the four factors of networking capability (i.e., knowledge recognizing ability (KRA), knowledge assimilation ability (KAA), partnering ability (PA) and total networking capability (TNC)). All of the networking capability measures exhibited significant overlap; the highest correlation among the networking capability variables was 0.88 between TNC and PA. Besides this highest value, TNC was also highly related with KRA ( $r = .801$ ) and KAA ( $r = .875$ ). Moreover, the relationship between KRA and KAA ( $r = .665$ ) and the relationship between KAA and PA ( $r = .654$ ) was also above 0.6. The correlations between the independent variable, network diversity, and these four capability measures were not significant.

Table 18: Mean, standard deviation, and Pearson correlations

	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1.J-industry	.10	.30	1																				
2.EE-Industry	.19	.40	-.162*	1																			
3.FoodIndsutry	.23	.42	-.182*	-.268**	1																		
4.FrimAge	11.97	7.27	-.124	-.244**	.226**	1																	
5.FirmSize	179.68	149.01	-0.069	-0.066	0.000	.507**	1																
6.International diversity	12.74	12.73	.078	-.055	-.066	.266**	.285**	1															
7.Asset specificity	5.49	1.30	-.207*	-.166*	.235**	.087	0.047	.070	1														
8.Channel volume	53.60	24.92	.113	-.204*	.112	.102	-0.06	-.111	.046	1													
9.Internal uncertainty	3.95	1.28	-.004	.178*	-.026	.200*	.262**	.231**	-.218**	-.103	1												
10.External uncertainty	3.95	1.23	-.017	.035	-.098	.269**	.311**	.169*	.115	-.122	.301**	1											
11.MarketSize	32.48	20.95	.024	-.098	-.097	.105	0.121	.012	-.104	.111	-.030	-.014	1										
12.Cultural distance	2.67	1.20	-.066	-.140	.090	.187*	0.086	.064	.062	-.038	-.073	-.079	.483**	1									
13.GDP growth rate	2.24	2.52	.074	.102	-.050	-.075	-0.014	.007	.076	.076	.084	.086	-.164*	-.570**	1								
14.Population size	187.36	303.49	-.027	.228**	-.070	-.132	-0.014	-.040	.081	-.052	.054	.052	-.236**	-.287**	.450**	1							
15.Market Experience	6.74	4.78	.079	-.317**	.342**	.611**	.318**	.224**	.095	.246**	.115	.126	.135	.185*	.039	-.190*	1						
16.Network diversity	80.85	22.53	.095	-.099	-.123	.035	-0.01	.237**	.078	.090	.041	.024	.215**	.158	-.231**	-.042	.081	1					
17.Knowledge recognizing ability	2.51	.94	.096	.039	.164*	-.032	-.278**	-.098	-.287**	.050	.023	-.223**	.037	.001	-.112	-.052	.055	-.019	1				
18.Knowledge assimilation ability	2.23	.81	.083	.068	-.046	.074	-0.117	-.162*	-.404**	.001	.028	-.200*	.085	-.131	.072	.000	.061	-.074	.665**	1			
19.Partnering ability	2.68	1.09	.130	.246**	-.165*	-.025	-.193*	-.197*	-.591**	-.068	.165*	-.175*	.060	-.141	-.030	-.061	-.049	-.096	.477**	.654**	1		
20.Total networking capability	2.49	.82	.126	.160*	-.040	-.002	-.233**	-.185*	-.527**	-.017	.101	-.229**	.069	-.111	-.033	-.050	.013	-.078	.801**	.875**	.880**	1	
21.Export channel choice	.50	.50	-.024	-.054	.075	.134	.245**	.017	.000	.147	.197*	.081	.001	.044	-.082	-.127	.214**	.155	.058	.039	-.053	.005	1

\* . Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

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In order to avoid highly significant correlations between the variables, which might lead to multicollinearity issues in our further analysis, the firm age variable was not included and each of the capability variables was tested in a separate regression. In addition, given that the correlations between asset specificity and two of the capability measures (i.e., PA and TNC) were very close to 0.60, it was also considered necessary to work out whether the variable asset specificity would impact the capability measures. As a result, I ran two separate regressions, testing with and without asset specificity. When I compared the results, I noted that they are generally the same; PA and total networking capability interactions are significant at the same level in the regressions.

### **Export Channel Choice (ECC) Results**

This study reports on the testing of two hypotheses, which explore internationalizing SMEs' export channel choices. Hypothesis 1 investigates the influence of the firm's network diversity on its export channel choice. I expected to find that it would be more likely for SMEs with high network diversity to choose a hierarchical export channel (i.e., set up wholly owned subsidiaries to serve the foreign market or serve the market directly from China) rather than a hybrid mode (i.e., rely on joint venture or use commission agents). Hypothesis 2 predicts that firms' networking capability enhance the effectiveness and efficiency of the network resources possessed by the firm, with a positive moderating impact on the relation between network diversity and export channel choice. The probability of SMEs with high network diversity selecting hierarchical export channels increases as networking capability increases

In this section, I ran three regressions on my data (including one original regression table and two robustness tests). I specified logistic regressions to analyze the predictors of the internationalization of exports and the mode of such internationalization. I used logistic

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regression analysis because the dependent variable only has two values (Hair, Black et al. 2006). Logistic regression is a standard method of assessing the individual effects of multiple independent and control variables on a discrete choice of dependent variable (Campa and Guillén 1999). This research is interested in the prediction and explanation of the relationships that affects the category in which a firm's channel choice is located. The logistic regression is an appropriate tool for testing this purpose because it is equivalent to two-group discriminant analysis and more suitable in many situations (Hair, Black et al. 2006). Technically, this generally represents the two groups of interest as a binary variable with a value of 0 or 1. Hair et al (2006) suggested that it does not matter which group is assigned the value of 1 versus 0, but in this assignment the interpretation of the coefficients must be noted. Given that export channel choice in this research is a binary variable (namely hierarchical mode and hybrid mode)(He, Brouthers et al. 2013), in testing H1 and H2, the hierarchical mode is assigned a value of 1, and the hybrid channel option is assigned a value of 0.

In each logistic regression table, six models were created to test the two hypotheses with regard to export channel choice. As these are nested models based on the base model, I can judge the impact of the added variables on a dependent variable, or model fit, by comparing the change of several indices such as the Chi-square of the model and Nagelkerke R square (Hair, Black et al. 2006). The Chi-square of the model is an improvement of -2 log likelihood ratios from the intercept-only model to the fitted model via the likelihood ratio tests. It measures the likelihood that the observed association between the independent variable and the dependent variable is caused by chance. This test provides a comprehensive measure of predictive accuracy based on the actual

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prediction of the dependent variable rather than the likelihood value (Hair, Black et al. 2006). This index is often used to assess the overall significance of the regression model fit.

The Nagelkerke R square ( $R^2$ ) is another important index that provides us with information for assessing the model's overall significance. This is similar to R square for a linear regression, but does not convey exactly the same information, with a maximum value of 1 (Hair, Black et al. 2006). It basically reflects the change in terms of log-likelihood from the intercept-only model to the current model. If the regression model is properly applied and estimated, we can generally assume that the higher the value of  $R^2$ , the greater the explanation power of the regression equation, and therefore the better the prediction of the dependent variable (Hair, Black et al. 2006). The principle for this is the higher, the better.

With respect to testing for the significance of the coefficients, I use the Wald statistic to see whether the logistic coefficient is different from 0 and assess the significance of each estimated coefficient in logistic regression (Hair, Black et al. 2006). If the logistic coefficient is statistically significant, we can interpret this in terms of how it affects the estimated probability and thus the prediction of group membership. According to Hair et al (2006), the logistic coefficient reflects both the direction and magnitude of the independent variable's relationship. The direction of the relationship (positive and negative) reflects the changes in the dependent variable associated with the changes in the independent variable. A positive relationship means that an increase in the independent variable is associated with an increase in the predicted probability, and vice versa for a negative relationship. To determine the magnitude of the coefficient, or how much the probability will change given a one-unit change in the independent variable, the numeric value of the coefficient must be evaluated (Hair, Black et al. 2006).

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The results of the first logistic regression for network diversity and networking capability are presented in table 19. Model 1 is the base model and it is significant ( $P < .05$ ). The purpose of the base model is to establish a baseline against which the added contribution of variables can be assessed. Consequently, this model only includes the firm and target market characteristics and transaction costs as the control variables, and export channel choice as the binary dependent variable. All control variables explain about 19.9% of the variance in the dependent variable export channel choice. Firm size ( $p < .05$ ), channel volume ( $p < .10$ ) and internal uncertainty ( $p < .05$ ) are significantly related to the dependent variable, while the other control variables are not significant.

In Model 2 (table 19), I added the primary independent variable, network diversity. This model included all the control variables and the independent variable. The purpose of the network diversity model is to examine whether the firm's network diversity has a major impact on its export channel choice. This model was significant ( $p < .05$ ) and indicated that network diversity is positive and significantly ( $p < .05$ ) related to export channel choice. Model 2 explained about 24.4% of the variance in the dependent variable. Adding the network diversity variable increases 4.5% of the explained variance in export channel choice over the base model; the increase in explanatory power over Model 1 was also significant ( $p < .01$ ). This model provides support for hypothesis 1: firms with higher network diversity tend to prefer hierarchical export channels.

In Model 3 to 6 (table 19), I added the capability interaction terms with network diversity to test hypothesis 2. Models 3, 4 and 5 showed the results of the logistic regression when each networking capability variable was added to the network diversity model separately. As expected, network diversity showed positive and significant results in all models. H1 has therefore been confirmed again. Moreover, all the interaction variables



**Table19: Logistic Regression of Export Channel Choice**

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<b>Control variables</b>						
J-industry	-.085(.652)	-.107(.650)	-.037(.670)	.022(.682)	-.105(.663)	-.048(.673)
EE-industry	.150(.520)	.182(.542)	.239(.559)	.435(.574)	.521(.592)	.479(.588)
F-industry	.041(.499)	.256(.526)	.153(.551)	.289(.537)	.231(.533)	.249(.540)
Firm size	.003**(.001)	.004**(.001)	.004***(.002)	.004***(.002)	.004***(.002)	.004***(.002)
International diversity	-.015(.015)	-.025(.016)	-.024(.016)	-.023(.016)	-.026(.017)	-.023(.016)
Asset specificity	.044(.158)	-.042(.164)	.007(.174)	.014(.179)	-.118(.193)	-.027(.191)
Channel volume	.015*(.008)	.013(.008)	.012(.008)	.016*(.009)	.015*(.009)	.015*(.009)
Internal uncertainty	.325**(.164)	.300*(.168)	.278*(.169)	.264(.171)	.313*(.173)	.272(.171)
External uncertainty	-.024(.164)	.023(.167)	.058(.171)	.094(.175)	.016(.174)	.065(.176)
Market size	-.009(.011)	-.022*(.012)	-.022*(.012)	-.023*(.013)	-.023*(.012)	-.023*(.012)
Cultural distance	-.012(.219)	.196(.246)	.158(.250)	.121(.260)	.188(.260)	.172(.258)
GDP growth rate	-.102(.101)	-.013(.109)	.005(.113)	-.040(.112)	-.011(.112)	-.003(.113)
Population size	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)
Market experience	.050(.049)	.035(.050)	.048(.054)	.046(.054)	.043(.052)	.046(.054)
<b>Predictor variables</b>						
Network diversity		.023**(.010)	.027**(.011)	.026**(.011)	.024**(.010)	.026**(.011)
Knowledge recognizing ability (KRA)			.176(.230)			
Knowledge assimilation ability (KAA)				.137(.267)		
Partnering ability (PA)					-.129(.250)	
Total networking capability (TNC)						.071(.305)
<b>Interactions</b>						
zKRA x zNetwork diversity			.438*(.226)			
zKAA x zNetwork diversity				.605**(.259)		
zPA x zNetwork diversity					.338*(.216)	
zTNC x zNetwork diversity						.572**(.239)
<b>Constant</b>						
	-2.270*(1.369)	-3.866** (1.564)	-4.920*** (1.871)	-4.980** (2.000)	-3.396 (2.086)	-4.680** (2.176)
Chi-square (X <sup>2</sup> )	24.124**	29.316**	34.171***	36.047***	33.133**	35.718***
X <sup>2</sup> change from model 1		5.192**				
X <sup>2</sup> change from model 2			4.855***	6.731***	3.817**	6.402***
Nagelkerke R <sup>2</sup>	.199	.244	.280	.293	.272	.291

Note: n=151; Hybrid channel=0

\* P&lt; .10. \*\*P&lt; .05. \*\*\*P&lt; .01 (based on Wald test)

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calculated based on centered scores - knowledge recognizing ability x network diversity ( $p < .10$ ), knowledge assimilation ability x network diversity ( $p < .05$ ) and partnering ability x network diversity ( $p < .10$ ) - are significant in the regressions. Model 6 is a combination model. I created total networking capability as an aggregation variable to test the moderating effect of the three-capability interactions altogether. I examine the interaction of network diversity x total network capability in Model 6. Model 6 is significant ( $p < .05$ ) and explained about 29.1% of the variance in my dependent variable. The increase in explanatory power over the network diversity model is also significant ( $p < .01$ ). The result suggests that adding the total networking capability can moderate the relationship between network diversity and export channel choice. Therefore, all 4 models (3-6) provide support for hypothesis 2.

In order to provide robust support for our hypotheses, I performed a number of robustness checks to further strengthen the findings. First, I developed a more parsimonious model to address the robustness test for the hypotheses; I reran the logistic regression by taking out the control variables with  $t < 1$  (eliminating variables F-industry, external uncertainty and cultural distance) (table 20).

In table 20, six models were created. Model 1 was the base model and was significant ( $p < .05$ ). All control variables explained about 19.9% of the variance in the dependent variable export channel choice. As expected, firm size ( $p < .05$ ), channel volume ( $p < .10$ ) and internal uncertainty ( $p < .05$ ) were significantly related to the use of hierarchical export channels. Model 2 added network diversity as an independent variable. This was significant ( $p < .01$ ) and the increase in explanatory power over Model 1 was also significant ( $p < .01$ ). Network diversity was found to be significantly related to export channel choice ( $p < .05$ ), as predicted in hypothesis 1. Models 3, 4 and 5 (table 20) explore the interactions

**Table20: Logistic Regression of Export Channel Choice**

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<b>Control variables</b>						
J-industry	-.100(.638)	-.184(.639)	-.074(.656)	-.042(.665)	-.172(.647)	-.109(.656)
EE-industry	.142(.511)	.138(.527)	.224(.546)	.407(.558)	.494(.577)	.450(.572)
Firm size	.003**(.001)	.004**(.001)	.004***(.002)	.004***(.002)	.004***(.002)	.004***(.002)
International diversity	-.015(.015)	-.025(.016)	-.024(.016)	-.024(.016)	-.027(.016)	-.023(.016)
Asset specificity	.041(.151)	.001(.154)	.045(.164)	.051(.174)	-.098(.191)	.007(.185)
Channel volume	.015*(.008)	.012(.008)	.011(.008)	.015*(.009)	.014(.009)	.014*(.009)
Internal uncertainty	.319**(.157)	.308*(.162)	.295*(.163)	.290*(.166)	.323*(.165)	.293*(.164)
Market size	-.009(.009)	-.017*(.010)	-.018*(.010)	-.020**(.010)	-.018*(.010)	-.019*(.010)
GDP growth rate	-.100(.084)	-.066(.090)	-.038(.093)	-.073(.092)	-.061(.091)	-.051(.092)
Population size	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)
Market experience	.050(.044)	.052(.046)	.061(.050)	.064(.049)	.059(.047)	.064(.049)
<b>Predictor variables</b>						
Network diversity		.021**(.010)	.026**(.011)	.025**(.011)	.023**(.010)	.025**(.011)
Knowledge recognizing ability (KRA)			.175(.222)			
Knowledge assimilation ability (KAA)				.101(.260)		
Partnering ability (PA)					-.173(.239)	
Total networking capability (TNC)						.031(.294)
<b>Interactions</b>						
zKRA x zNetwork diversity			.450**(.226)			
zKAA x zNetwork diversity				.610**(.253)		
zPA x zNetwork diversity					.381*(.216)	
zTNC x zNetwork diversity						.580**(.240)
<b>Constant</b>	-2.336*(1.263)	-3.421**(.1457)	-4.536***(.1752)	-4.440**(.1845)	-2.759(1.866)	-4.057**(.1982)
Chi-square (X <sup>2</sup> )	24.090**	28.409***	33.620***	35.360***	32.371***	34.969***
X <sup>2</sup> change from model 1		4.319***				
X <sup>2</sup> change from model 2			5.211***	6.951***	3.962***	6.560***
Nagelkerke R <sup>2</sup>	.199	.237	.276	.289	.267	.286
Note: n=151; Hybrid channel=0						
* P< .10. **P< .05. ***P< .01 (based on Wald test)						

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between network diversity and my three networking capability measures separately, whilst Model 6 is a combination model that includes the interaction with total network capability. All the interaction models were significant; interactions KRA (Model 3), KAA (Model 4) and total networking capability (Model 6) were significant at the level of  $P < .05$ , and interaction PA (Model 5) was significant at the level of  $P < .10$ . Hypothesis 1 and 2 are supported in this robustness test. Compared to the original regression result (table 19), I found that the interaction variable KRA x network diversity showed stronger significance (result changed from  $p < .10$  to  $p < .05$ ) in table 20. Collectively, the results we found here are similar to the results we found in the original regression test.

Table 21 represented the results of another robustness test. In this test I eliminated control variables having  $t < 0.5$  (eliminating variables F-industry, external uncertainty and cultural distance as well as J-industry, EE-industry and asset specificity). Compared to the original regression result, table 21 revealed that the base model (Model 1) and the network diversity model (Model 2) have similar significant results ( $p < .05$ ). The results of interactions KRA x network diversity (Model 3) and PA x network diversity (Model 5) in table 21 are different from those in the table 19. The coefficients for interaction KRA x network diversity showed more significance ( $p < .05$ ) in table 21 than in the original table ( $p < .10$ ). Interaction PA x network diversity in table 19 showed significance ( $p < .10$ ); in contrast, it showed insignificance in table 21. Nevertheless, the combination model (Model 6) in both tables is significant ( $p < .05$ ). Overall, the findings that I obtained in these robustness tests are consistent with the results from the original regression analysis. Results indicated that network diversity is significantly related to the export channel choice and networking capability can moderate this relationship. H1 and H2 are supported.

**Table21: Logistic Regression of Export Channel Choice**

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<b>Control variables</b>						
Firm size	.003**(.001)	.004**(.001)	.004***(.002)	.004***(.002)	.004***(.002)	.004***(.002)
International diversity	-.015(.015)	-.025(.016)	-.024(.016)	-.024(.016)	-.026(.016)	-.024(.016)
Channel volume	.015*(.008)	.011(.008)	.010(.008)	.015*(.009)	.013(.008)	.013(.009)
Internal uncertainty	.315**(.149)	.316**(.153)	.294*(.156)	.296*(.156)	.349**(.163)	.310*(.159)
Market size	-.009(.009)	-.017*(.010)	-.018*(.010)	-.019**(.010)	-.017*(.010)	-.018*(.010)
GDP growth rate	-.098(.083)	-.067(.088)	-.035(.092)	-.067(.090)	-.059(.089)	-.048(.090)
Population size	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)
Market experience	.048(.043)	.049(.045)	.057(.048)	.056(.046)	.045(.045)	.053(.046)
<b>Predictor variables</b>						
Network diversity		.021**(.010)	.026**(.010)	.024**(.010)	.021**(.010)	.023**(.010)
Knowledge recognizing ability (KRA)			.157(.211)			
Knowledge assimilation ability (KAA)				.084(.233)		
Partnering ability (PA)					-.075(.189)	
Total networking capability (TNC)						.053(.244)
<b>Interactions</b>						
zKRA x zNetwork diversity			.447**(.223)			
zKAA x zNetwork diversity				.574**(.242)		
zPA x zNetwork diversity					.327(.205)	
zTNC x zNetwork diversity						.536**(.229)
<b>Constant</b>						
	-2.059**(.816)	-3.354*** (1.125)	-4.137*** (1.308)	-3.909*** (1.310)	-3.330*** (1.261)	-3.861*** (1.362)
Chi-square (X <sup>2</sup> )	23.884***	28.220***	33.335***	34.704***	31.271***	34.230***
X <sup>2</sup> change from model 1		4.336***				
X <sup>2</sup> change from model 2			5.115***	6.484***	3.051***	6.010***
Nagelkerke R <sup>2</sup>	.198	.236	.274	.284	.259	.280

Note: n=151; Hybrid channel=0

\* P&lt; .10. \*\*P&lt; .05. \*\*\*P&lt; .01 (based on Wald test)

Given that a visual representation of results is easier for readers to understand than a table of numbers, and particularly helpful when presenting interaction effects (Ahuja and Lampert 2001, Osarenkhoe 2010), to help interpret the results of the interaction variables (Model 3, Model 4, Model 5 and Model 6) obtained in table 19 I created four figures. In figure 8 I plotted the interaction between network diversity and a firm's knowledge recognizing ability. This figure shows that an increase in knowledge recognizing ability enhances the association between network diversity and export channel choice. I found that knowledge recognizing ability positively moderates the relationship between network diversity and export channel choice. Firms with high network diversity tend to choose hierarchical export channels when they have strong knowledge recognizing ability. In contrast, firms with high network diversity but weak knowledge recognizing ability are relatively less willing to choose hierarchical export channels. This result provides support for hypothesis 2.

Figure8: Interaction effect of knowledge recognizing ability

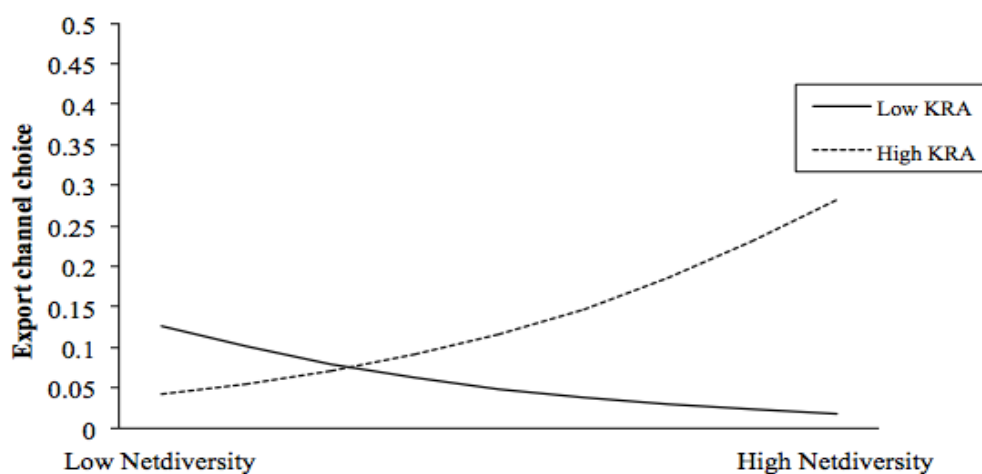
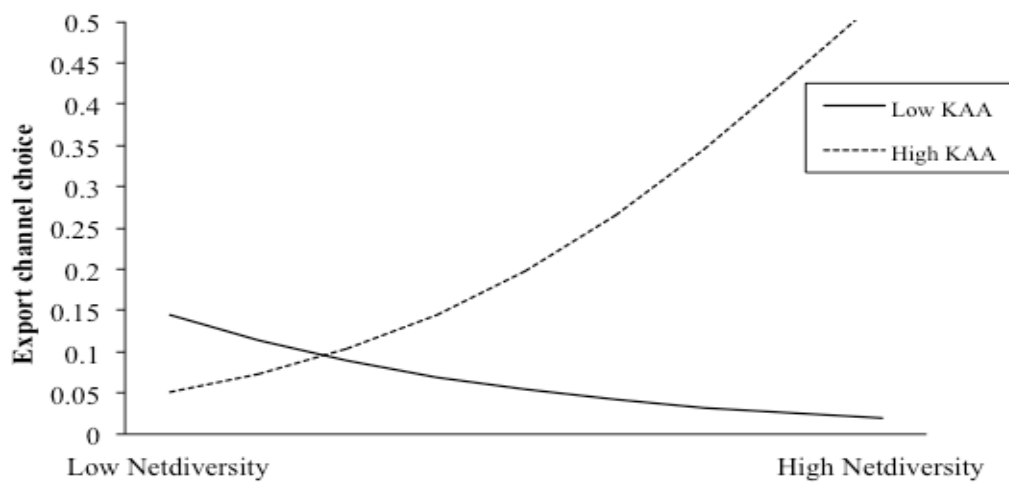


Figure 9 illustrates the interaction between international network diversity and knowledge assimilation ability. As can be seen in the figure, I found that knowledge assimilation ability can impact the relationship between network diversity and export

channel choice; enhancing this association. Knowledge assimilation ability has a positive moderating effect on the relation between network diversity and export channel choice. We theorized that in the case of firms having network diversity, although such networks are the source of knowledge, competing firms possessing the same diverse networks cannot be considered as sources of advantages. The more a firm can access another firm's knowledge, the more it requires a superior assimilation ability in order to benefit from such knowledge. Thus, this result provides support for hypothesis 2.

Figure9: Interaction effect of knowledge assimilation ability



In figure 10 I plotted the interaction between network diversity and a firm's partnering ability. The moderator partnering ability variable is similar to the KRA and KAA variables. This figure also shows that an increase in partnering ability enhances the association between network diversity and export channel choice. I found that partnering ability has a positive moderating effect on the network diversity - export channel choice relationship; at high levels of partnering ability, network diversity has a stronger influence on choosing hierarchical export channels, whereas when partnering ability is low, the effect becomes significantly weaker. Hence, this result is consistent with hypothesis 2.

Figure10: Interaction effect of partnering ability

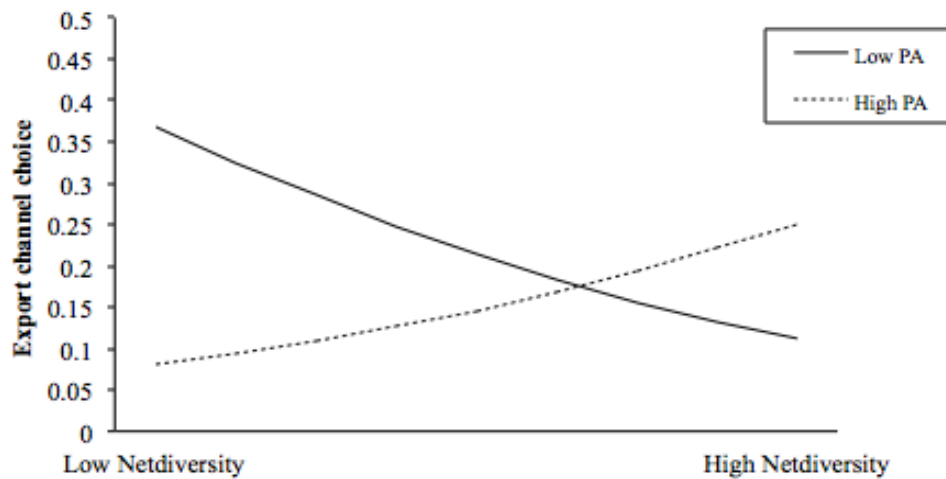
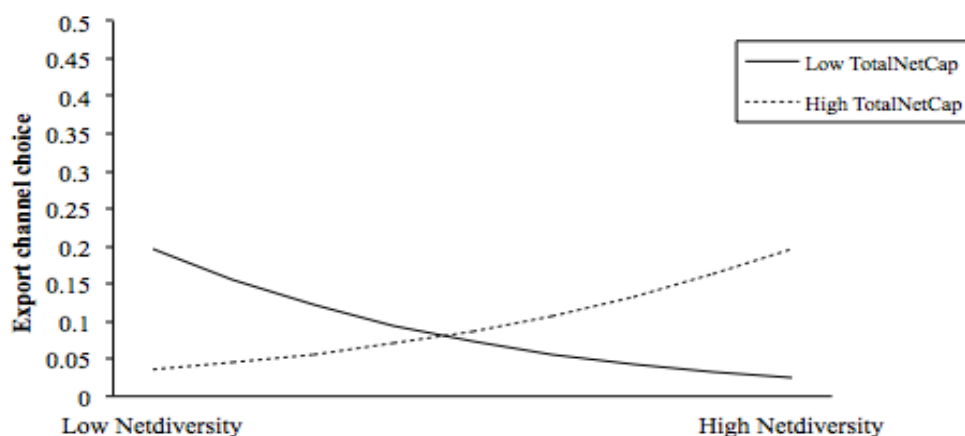


Figure 11 illustrates the interaction between international network diversity and total networking capability. This figure shows that an increase in total networking capability has a positive effect on the export channel choice. Total networking capability positively moderates the relationship between network diversity and export channel choice. When firms have the same high diversity networks, the firm who has strong total networking capability will be more likely to choose hierarchical export channels than one that possesses a weak networking capability. In contrast, when competitors all have the same low diversity networks, the firm who has weak levels of total networking capability will be more likely to choose hybrid export channels than one that possesses strong total networking capability. My results provide support for hypothesis 2.

Figure11: Interaction effect of total networking capability





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## 3.6 Conclusions

### 3.6.1 Findings and Discussion

In this study, I integrated RBV with network and TCA theories to create a more comprehensive model and explain SME export channel choices. Previous scholarship suggests that the diverse network partner backgrounds and experiences can provide firms with more diverse samples of information from which to learn (Goerzen and Beamish 2005), consequently mitigating the transaction costs of internationalization (Zacharakis 1997) and impacting business strategy (Chetty and Agndal 2007). Developing this theory, I explored and tested the notion that SMEs with more diverse networks would be more willing to choose hierarchical export channels as opposite to hybrid export channels. Moreover, given that resources and capabilities are two distinct mechanisms that can affect firms' economic rent creation, and firms can rely on capabilities to enhance the effectiveness and efficiency of the resources they possess, I also theorized that networking capability would have a moderating influence on the relationship between network diversity and export channel choice. Based on a sample of 151 Chinese SMEs, I found support for these conceptualizations.

I found that firms possessing high network diversity make very different export structure choices from those that have low network diversity. Consistent with my predictions that a firm's network diversity is positively related to its export channel choice, findings suggest that firms with high network diversity are more likely to choose hierarchical export channels. From an RBV perspective, diversified networks serve as an efficient source of critical resources and provide SMEs with novel and required information that firms can use for developing products and competences, in turn making it easier for SMEs to export independently (Brouthers, Nakos et al. 2014). In contrast, a firm with low network diversity

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is more likely to choose a hybrid export channel given lower resource investment requirements. Furthermore, weak network diversity results in firms having knowledge and resources that are neither sufficient nor comprehensive enough to meet the resource requirements of export channels (Patel, Fernhaber et al. 2013).

Results also show support for hypothesis 2. Consistent with the initial expectations, I found evidence that a firm's networking capability (i.e., knowledge recognizing ability, knowledge assimilation ability, partnering ability and total networking capability) moderates the relationship between network diversity and export channel choice. Both the original and robustness regression results show that there are no direct effects for capabilities, but all of the combination models (network diversity x total networking capability) are significant. Overall, the results suggest that networking capability has a positive moderating effect. Firms with strong networking capability are more likely to choose hierarchical export channels; in contrast, firms with weak networking capability are more likely to choose hybrid export channels. Although a hierarchical export channel implies more resource commitments, firms with strong networking capability will be able to quickly recognize, assimilate and apply useful knowledge-related resources derived from networks to the internationalization process. In contrast, firms with less networking capability are less able to quickly recognize, assimilate and apply useful knowledge-related resources derived from networks to the internationalization process; this in turn will result in competitive disadvantages, rendering the firms less likely to successfully manage network diversity and leaving them insufficient resources to meet the different requirements of hierarchical export channels. Accordingly, such firms will be more likely to choose hybrid export channels.

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This study makes three important contributions to the literature. First, this research enriches the emerging literature on networks by focusing on the nature and implications of different kinds and levels of networks for SMEs' strategic internationalization. Although previous perspectives on RBV underpinning the network literature suggest that a highly diversified network provides firms with market and resource access advantages (Jiang, Tao et al. 2010, Musteen, Francis et al. 2010), enables firms to cope with the risks and challenges associated with SME internationalization (Oviatt and McDougall 1994, Johanson and Vahlne 2003), and consequently increasing firms' ability to achieve international performance goals (Lavie and Miller 2008, Musteen, Francis et al. 2010), no study shows the effect of network diversity in the context of SMEs' export channel choice. Moreover, while a few scholars have helped us to understand how foreign networks and domestic networks affect firms' internationalization (Patel, Fernhaber et al. 2013), they do not consider network diversity in terms of international and domestic distinction. I therefore linked both the foreign and domestic networks to explain the distinct impact of diversified networks on export channel choice, exploring export channel choice as a dependent variable and arguing that, from the perspective of RBV, network diversity impacts SME export channel choice. My study therefore contributes to a better understanding of network diversity and its impact on export channel choice.

Second, underpinning the networks and capabilities literatures, I suggest that although firms expect to gain competitive advantages by building diverse networks, for firms possessing weak networking capabilities such a goal may be more difficult to implement (Dyer and Singh 1998, Ireland, Hitt et al. 2002). Weak networking capability is a major barrier for firms to transfer and assimilate useful knowledge from one to another. Although diversified networks provide firms with important access to knowledge-related

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resources, their impact on export channel choice may depend on the extent to which the firm can assimilate and apply such new knowledge. Accordingly, this study explores the idea that networking capability moderates the relationship between a SME's network diversity and export channel choice.

This is the first study that empirically tested and provided significant support for the importance of networking capability's moderating role. The findings support the general notion that although diversified networks provide firms with broader access to knowledge-related resources, their impact on export channel choice is dependent on the extent to which the firm can recognize and absorb such resources, and apply it to commercial ends. Overall, in the case of network diversity, interaction between network resources and networking capability is critical to knowledge acquisition and assimilation. Greater networking capability allows firms to promote knowledge assimilated from partnerships by mitigating the negative influence of cultural distance and market differences, and improving the transfer of complex knowledge into heterogeneous outputs. The result empirically reveals that under the same network diversity situation, the stronger the networking capability of a firm, the more likely the firm is to successfully provide the necessary resources for a hierarchical export channel choice.

Third, this study also contributes to TCA and export channel choice studies by adding a resource-based perspective to a traditional transaction cost model of export channel choice. According to the traditional TCA perspective, strategic management and export channel studies suggest that firms generally make export channel choices based on lower cost considerations (Williamson 1979) and the efficiency of a particular export channel (Anderson and Coughlan 1987, Klein, Frazier et al. 1990). Although TCA theory provides valuable insights into what specific factors might affect the choice of export channels, from

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the RBV, I argue that a firm's resource and capability heterogeneity are not explicitly considered in transaction cost logic; export channel choice issue should not be viewed in isolation or solely as a cost-reducing process, but should rather be considered as an important aspect of the firm's overall strategic posture (Peng 2001). Given that the RBV offers a value creation perspective on the mechanism behind export channel choice, I therefore integrate RBV and TCA theories to develop a more comprehensive model and explain the export channel choice of SMEs. This study extends the focus from cost minimization to take into account value creation in export markets, particularly paying attention to the situation of how firms' different types of network resources and networking capabilities interact and impact firms' export channel strategy over and above the impact of TCA variables. In this way, our research makes an important contribution by extending prior work on TCA and internationalization. It supports the widespread belief that RBV complements the TCA approach to understanding SMEs' export channel choice (Leiblein and Miller 2003, He, Brouthers et al. 2013), also provides a better understanding of how resources and capability work together to help explain export channel choice.

### **3.6.2 Limitations and Conclusion**

Although this study provides some interesting findings, there are several limitations that future researchers can build on to further develop of this area of research. First, the limitations pertain to the questionnaire filling-in process. My study uses a single key informant approach, which is common practice in SME internationalization research. Previous scholars have suggested that choosing the appropriate key informant can alleviate some of the potential problems (Kumar, Stern et al. 1993). I chose the founder or international department managers as key informants, who I assumed were well informed about their own organization. However, the debate continues as to whether multiple

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responses from an organization are necessary to ensure the validity of results, such as those in this study (Phillips 1981). Although the use of multiple informants is a more rigorous data collection procedure, in this study I minimized the potential common source bias by separating the entire questionnaire into two sections and reversing some of the scales. In future research, researchers could try to request that multiple informants from an organization fill in the questionnaire.

The second limitation pertains to my sample. My results were derived from a sample of SMEs in a single country, Mainland China, and therefore the findings may not be generalizable to another environment. Although I believe that the setting of China is not unique and these findings should be applicable to other emerging markets, specific cultural foundations are likely to differ across emerging economies, which may cause the same variables to have different impacts on firms' capacity to generate and export channel choice. Hence, an extension of this study would be to collect SME samples from other environments and capture institutional differences. Another limitation is the limited size of my sample, which yielded only 151 usable cases. The sample size may not be large, particularly for maximum likelihood estimate. Thus, statistical power, the ability to detect a variable's influence on another variable, might be reduced (Anderson and Coughlan 1987). Hence, the generalizability of our findings should be further tested based on a bigger sample.

Third, this research employs cross-sectional data rather than longitudinal data. Although longitudinal research designs are logistically difficult and time consuming, they do enable time-series data analysis (Morgan, Kaleka et al. 2004). Cross-sectional data are appropriate to explore what is happening at a certain point in time. However, they are not capable of fully explaining the dynamic process of variables. Given that the cross-sectional nature of the data does not allow causal inferences about the longitudinal interplay

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between network diversity, networking capability and export channel choice, I suggest that it would be better for future research to use a longitudinal method to clarify the dynamic development and evaluation of networking capability and network diversity in SMEs and their interaction effects on export channel choice.

Fourth, another limitation in this study is that I only examined manufacturing-based SMEs and did not consider service firms. I do not know whether the findings drawn from manufacturing-based firms can be used to explain service-based firms or not, because service firms are different from manufacturing firms. Previous studies suggest that transaction cost theory can impact service and manufacturing firms differently (Erramilli and Rao 1993), since service firms are more people-intensive (Brouthers and Brouthers 2003), and manufacturing firms are more investment-intensive in terms of plant, equipment and inventory (Gatignon and Anderson 1988). For this reason, future studies can resolve this limitation by examining service firms.

Fifth, I do not take into consideration the context of institutional distance, particularly the differences between the home and host country contexts, into the network diversity-export channel choice model. In fact, it would be reasonable to investigate how differences in institutions in home and host countries affect the export channel choice of network diverse firms; institutional distance has been widely recognized as the most impeding factor for firm operations in foreign countries (Delios and Beamish 1999, Brouthers and Brouthers 2000, Brouthers 2002). Future research might want to explore additional contingent linkages and interrelationships among network diversity, institutional distance and export channel choice. An improved understanding of the role of network diversity and institutional distance in influencing internationalization strategies would be helpful in further conceptualization of export channel choice.

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In conclusion, this study makes several important contributions. By exploring the impact of network diversity and networking capability on SME export channel choice I add valuable insights about how a firm's resources and capability can be interactive in order to mitigate some liabilities of foreignness and result in competitive advantages. The study highlights the importance of having both different background partner resources and networking capabilities for SMEs expanding abroad. I develop a new theory to explain how the RBV can be applied to exporting activities, an area of strategy that has received little attention from RBV scholars. I add to knowledge by developing a unique perspective to explain how network diversity is related to export channel choice, whilst investigating the moderating role of networking capability in the relation between network diversity and export channel choice. Results of the framework proposed in this paper will enhance our understanding of SMEs' export behaviour.



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## Network Diversity, Institutional Distance and Export Channel Choice

### 4.1 Introduction

In exporting context, an initial and important decision that international firms need to make is the degree of export channel integration they want in a given foreign market; i.e., the extent to which they will locate distribution, sale, and service activities in the foreign markets where their products are sold (Bello and Lohtia 1995). Generally, international firms can access the target foreign market in a range of ways. For instance, firms can be completely integrated using the hierarchical mode, where the firm serves foreign markets with home-based representatives or establishes sales subsidiaries in a foreign market by itself, or to rely on the hybrid export channel mode whereby they perform some functions and take on partner firms, such as commission agents and strategic allies, to perform the others (Anderson and Gatignon 1986, Klein, Frazier et al. 1990, Klein and Roth 1990, Campa and Guillén 1999).

Export channel decision is strategic because it affects the allocation of resources able to sharp future foreign expansion, and it may enhance the firm's competitive advantages (Johanson and Vahlne 1977). Further, given that the difficulty of switching existing channels (Anderson and Coughlan 1987, McNaughton 1996), and appropriate level of channel integration give a firm a more salient competitive posture when operating in a foreign market where they face distinct institutional environments (McNaughton 1996, Aulakh and Kotabe 1997), hence, choosing the appropriate export channel is an important strategic problem for most emerging export firms.

Existing research on export channel selection in foreign markets suggests that the choice of the particular export channel depends on the degree of control exercised over the foreign assets necessary for the distribution of products (Campa and Guillén 1999). Most

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previous literature which investigates these factors determines that the exporting channel choice in foreign markets has mainly focused on the characteristics of the exporting firms, in particular its resources and capabilities (Aulakh and Kotabe 1997, Westhead, Wright et al. 2001, He, Brouthers et al. 2013), and its need to minimize transition costs (Dwyer and Oh 1988, Klein, Frazier et al. 1990, Klein and Roth 1990, Bello and Lohtia 1995).

A resource-based view (RBV) suggests that firms develop unique resources or capabilities that they can exploit in foreign markets, or use foreign markets as a source for acquiring or developing new resource-based advantages (Barney 1991, Madhok 1997, Tsang 2000). Exporting channel research has examined the impact of RBV advantages on exporting channel choice, such as international experience-based resource advantages (Aulakh and Kotabe 1997), organizational learning capability (De Clercq, Sapienza et al. 2005), resource-based market orientation capabilities (He, Brouthers et al. 2013), and a number of firm-specific resource-based variables (i.e., R&D intensity, skilled works, and experience) (Mutinelli and Piscitello 1998). Although the research results are mixed, scholars generally found that knowledge resources, capabilities and experience provide some type of firm-specific advances. Firms' internationalization activities occur incrementally and are influenced by increased international business knowledge, export experience, and market dependency (Johanson and Vahlne 1977). Thus, firms normally begin exporting in a nearby market by using simple indirect methods such as employing independent distributors; over time firms gain sufficient international knowledge and experience in a foreign market will then move from simple exporting operations to more complex organizational structures (Osborne 1996).

In terms of TCA, in the words of Williamsons (1981), TCA theory is a useful economic approach that can be used to study the organizational strategic design adoption (Klein,

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Frazier et al. 1990, Bello and Lohtia 1995, Brouthers, Brouthers et al. 2003). It generally concentrates on micro-analytical aspects such as opportunism and bounded rationality (Meyer, Estrin et al. 2009), able to economize on the costs of exchanging goods and services in the market (Anderson and Coughlan 1987). In an exporting context, TCA theory has been largely applied to explain firms' channel choice decision (Dwyer and Oh 1988, Klein, Frazier et al. 1990, Bello and Lohtia 1995). Three TCA factors are hypothesized to influence this decision: asset specificity, internal-behavior and external-market uncertainty, and frequency (Klein, Frazier et al. 1990). Moreover, a few researchers have attempted to extend TCA-export channel integration study by examining other contextual moderator variables; scholars have conceptualized and added firms' ownership and location factors (Campa and Guillén 1999), industry specific factors (McNaughton 2002), and firms' market share and production differentiation (Shervani, Frazier et al. 2007). Although these studies used different criteria, TCA has been adopted as either all or part of the theoretical perspective and it comes to similar conclusions. Under the TCA logic, observed channel structures are always thought to be those that minimize the costs associated with opportunism, whilst economizing on bounded rationality (Williamson 1991). Generally speaking, existing scholars provided evidence that TCA does a good job of explaining channel choice.

Although the resources and capabilities (RBV) and TCA are critical in the research area of export channel integration, these studies tend to suffer from two shortcomings. First, the majority of RBV studies, which mentioned networks, have ignored the diversification aspects of network impact on a firm's export channel choice. While network structure has emerged as an important area of study (Burt 1992), a less explored area of research relates to the content of networks, such as the characteristics and qualitative nature of different kinds of relationships (Uzzi 1996, Goerzen and Beamish 2005). Second, the existing TCA

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literature has put over-emphasis on micro-level cost minimization (Anderson and Coughlan 1987, Klein, Frazier et al. 1990, Zajac and Olsen 1993, Madhok 1997, Brouthers, Brouthers et al. 2003) and the vast majority of export channel choice research has neglected to think about the external macro-level institutional context, such as macro-level foreign market regulatory and legal, and cultural differences, which might influence firms' strategic export channel choice.

Early work investigating the relationship between networks and internationalization tended to focus on the effect of networks (i.e., strategic/social networks, formal/informal networks, interpersonal/inter-organizational) (Chetty and Wilson 2003, Zimmerman, Barsky et al. 2009, Manolova, Manev et al. 2010, Ellis 2011) on firms' foreign market entry mode (Ellis 2000, Sharma and Erramilli 2004), internationalization (Coviello and Munro 1997, Oviatt and McDougall 2005, Musteen, Francis et al. 2010), or international performance (Peng and Luo 2000, Zaheer and Bell 2005, Zhou, Wu et al. 2007). Although the results are mixed, scholars suggested that networks could be thought of as an inimitable and non-substitutable resource as well as a means to access other valuable resources, and in turn provide firms with strategic advantages (Dyer and Singh 1998, Gulati 1999). Previous international business and network literatures affirm the value of networks to firms' internationalization and performance. However, most studies focus on internationalization in general and there is not yet research about networks' impact on particular export channel choices.

With regards to network diversity, prior research grounded with RBV suggests that the key network attributes that may have a particularly important effect on firm performance are the similarities and differences among network partners (Beckman and Haunschild 2002). Increased diversity in partners' industry, organizational, and national

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background will incur added complexity and coordination costs but will provide broadened resource and learning benefits (Jiang, Tao et al. 2010). Network diversity can also enhance a firm's breath of perspective, cognitive resources, and overall problem-solving capacity (Hambrick, Cho et al. 1996), because the role of inter-organizational networks as conduits of information, learning and knowledge (Goerzen and Beamish 2005), and knowledge heterogeneity within networks, result in performance benefit (Rodan and Galunic 2004). In addition, Goerzen and Beamish (2005) found that a firm's network diversity in terms of industry and country background have a u-shaped relationship with its performance. Scholars generally suggested that the greater the diversity of relationships maintained, the more resource-obtaining would be the benefit of the firm's performance. However, networks have commonly been treated as a holistic concept. Moreover, there has not yet been research about different kind of networks, such as international and domestic networks and impact on export channel selection.

While RBV is certainly important, recent scholars have suggested that international strategies also can be shaped by the characteristics of the particular context in which firms operate, such as the institutions (Hoskisson, Eden et al. 2000, Meyer, Estrin et al. 2009). Institutions have been defined generally as the 'rule of the game' by which firms participate in a given market (North 1990). In a broad sense, a macro-level institutional environment affects firm's transaction cost (North 1990). Comparatively, TCA provides an under-socialized account whereas institutional theory offers an over-socialized perspective within organizational studies (Roberts and Greenwood 1997). Transaction cost theorists argue that both the RBV, TCA and institutional theory should have strong implications for firms' strategic design adoption, since the organizations operate in both competitive and institutional environments (Roberts and Greenwood 1997, Brouthers 2002). Moreover, TCA



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is weakest with respect to its explanation of how organizations adopt designs over time, and acknowledge that refinements and extensions are desirable (Williamson 1992). Adding the institutional perspective into TCA theory can enrich the understanding of organizational strategic choices (North 1990).

In the institutional context, prior research argues that institutional distance is a measure of cross-country differences (Scott 1995, Kostova and Zaheer 1999). Institutional theory is the foundation of institutional distance which emphasizes the relationship between organizations and the environment, and suggests that not all countries are alike (North 1990). It is also a non-efficiency perspective in which we assert that institutional environment is seen as the key determinant of firm strategic structure and behavior (Scott 1995, Xu and Shenkar 2002). Scott (1995) introduced the concept of a three-dimensional country institutional context, comprised of regulatory (i.e., constitutions, laws, legal aspects, vary in different countries that lead to regulative distance), normative and cognitive dimensions (i.e., to some extent, capture elements of culture) (Chao and Kumar 2010). Thus, in cross-country differences institutional distance is the extent of similarity or dissimilarity between the regulatory, cognitive, and normative institutions of two countries (Scott 1995, Kostova 1997). These differences in institutional settings are particularly significant for firms operating in a multiple institutional context, which can have an impact on the value firms can generate from resource-based advantages (Brouthers, Brouthers et al. 2008), and may also affect internationalization and strategic decisions (Brouthers 2002, Huang and Sternquist 2007, Meyer, Estrin et al. 2009), such as export channel selection (He, Brouthers et al. 2013).

The purpose of this chapter is to expand understanding of the reasons underlying firms' export channel choice decisions in international markets. In addition, it will bring

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institutional distance into the concept framework as a moderator between a firm's network diversity-export channel choice relationship. This chapter responds to the call issued by prior scholars, such as Meyer and Peng (2005), Mayer et al (2009), Peng (2001, 2008), and Wrigh et al (2005) for more integration between institutions and RBVs. It is also consistent with the viewpoint of Robert and Greenwood (1997) and North (1990) that TCA is particularly suitable for integration with the institutional theory for providing a better understanding of the governance structure choice. We thus address export channel integration issues by integrating RBV, network perspective, institutional and TCA theories into a more comprehensive model, and using manufacturing SMEs in China as the unit of analysis, to look at how a firm's different kinds of networks (i.e., international versus domestic) and institutional differences between home and export markets, affect its export channel choice.

The main contribution of this paper is the extension study of TCA by adding the RBV, network perspective and institutional theory together to transaction cost export channel selection research, and the development of factors that suggests a firm's network diversity and the institutional differences between countries, are all related to a firm's export channel choice. More specifically, this research can contribute to export channel choice literature by adding network and institutional perspectives to previous study. It does so by examining the value creation potential of different level networks to verify whether or not international networks and domestic networks within a firm have the same impact on the choice of export channel integration.

Further, this study makes a contribution to existing literature on network diversity-export channel choice research by adopting an institutional theory perspective focusing on how difference in institutions in home and host countries affect the relationship between

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network diversity and export channel choice. Institutional theory suggests that export markets are always different from the domestic markets, and those differences in institutional settings are able to affect firm's value generating from resource-based advantages and international strategic choice (Brouthers and Brouthers 2000, Brouthers 2002). Unlike in previous literatures that mainly focus on the direct impact of country-level institutional distance on a firm's internationalization, in this research I develop the conceptual research model that the institutional distance moderates the interrelationship between a firm's network diversity and export channel choice; thus it can enhance the understanding of institutional distance study.

## **4.2 Background**

Entrepreneurs frequently face the important question of how to choose the most appropriate export channel to access foreign markets. Generally speaking, export channels include hierarchical export channel and hybrid export channel (Klein, Frazier et al. 1990, Klein and Roth 1990). These two types of export channels represent an increasing degree of ownership, vertical integration, resource commitment, and risk from the firm's perspective (Anderson and Gatignon 1986, Hill, Hwang et al. 1990). In general, the hierarchical integrated export channel, whereby the firm has branched into the foreign market, provides firms with the highest level of control, but it also requires greater resource commitments from the firm (Aulakh and Kotabe 1997). In contrast, hybrid export options involve lower resource commitment whilst providing firms with a lower level of control (Anderson and Gatignon 1986, Gatignon and Anderson 1988).

Transaction cost theory (TCA) has offered a critical perspective to help us better understand the forces shaping export channel choice (Williamson 1973). Four factors (i.e., asset specificity, channel volume, and internal and external uncertainty) are proposed to

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influence the transaction costs incurred under different choices (Klein and Roth 1990, McNaughton 1996). Under the TCA logic, scholars argue that when asset specificity, internal uncertainty and channel volume is high, firms will tend to utilize high control export channels, as a means of controlling the behavior-related uncertainties of foreign expansion (Chen and Chen 2003, Leiblein 2003, Shervani, Frazier et al. 2007), and in order to minimize transaction costs (Makino and Neupert 2000, Leiblein 2003). In contrast, firms should not expect higher-control export channels to be more efficient than lower-control modes when asset specificity of the transaction concerned is of a relatively low degree and operates in a high external uncertainty environment (Bello and Lohtia 1995, Shervani, Frazier et al. 2007).

Although the importance of these factors in determining export channel choice has been examined by a number of researchers, such factors are a necessary but insufficient condition for firms to achieve the most effective export channel choice. Scholars argue that the TCA logic is biased toward considering only the cost aspect of a transaction, ignoring potential value creation effects such as the resources-based competitive advantages a firm possesses (Lavie 2006, Mayer and Salomon 2006). In order to choose a most effective export channel, firms would do better to consider both the benefits and the costs when contemplating a transaction (Bello and Lohtia 1995). SMEs within the constraint of bounded rationality should make a comparison of all the gains, such as resources and capability acquisition, and costs that are attached to one channel as opposed to others (Chen and Chen 2003). As a result, studies indicate that RBV compensates for the weakness of TCA theory by looking at the value-creating benefits of a transaction (Madhok 1997, Makadok 2001). These two theories are, to some extent, complementary to each other (Leiblein 2003, Mayer and Salomon 2006).

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Research underpinning the export channel choice has found that when exporting, firms generally manufacture their products at home but have to understand the situations of foreign markets in different ways because it is necessary for firms to know how to position the production and satisfactory to foreign customers before action (He, Brouthers et al. 2013). Knowledge of the market plays an important role in helping firms identify changes in products and consequently leads to greater acceptance and sales (Kogut and Zander 1992, Goerzen and Beamish 2005). Diverse networks play a valuable role in opening conduits to much-needed knowledge, thereby increasing expansion speed and decreasing operation risks (Lavie and Miller 2008, Patel, Fernhaber et al. 2013).

From the perspective of RBV, a firms' network can be seen as an important firm-specific resources in itself (Gulati 1999). In a network context, firms are embedded in inter-organizational networks and strive to integrate their advanced resources to collectively create better performance (Chetty and Agndal 2007, Zimmerman, Barsky et al. 2009). In the case of network diversity, scholars argue that firms that collaborate with partners have different backgrounds (i.e., differences in industry, national and functional) may incur conflicts and increase integration costs. However, network diversity also provides broadened search options, access to enriched resources pools (Parkhe 1991, Jiang, Tao et al. 2010). Studying network diversity is important since firms have to acquire needed resources and knowledge from those diverse partners to generate complementary resources and competitive advantages (Subramaniam 2006, Patel, Fernhaber et al. 2013). Previous findings about the influence of network diversity on firms' internationalization indicate that diversity networks are able to provide firms with more benefits in terms of foreign and domestic market knowledge, business opportunities and experience (Goerzen and Beamish 2005, Jiang, Tao et al. 2010). These benefits help firms diminish knowledge obstacles in foreign

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markets, decrease the uncertainties, and also minimize transaction costs during exportation (Lavie and Miller 2008). All these benefits affect the transaction costs involved in firms' international operations. Through its influence on transaction costs, network diversity may further impact the firms' export channel choice.

Although previous studies have offered valuable insights to help us better understand the forces shaping export channel choice from both TCA and RBV perspectives, little consideration has been given to the external macro-level institutional context, such as macro-level institutional environment differences between foreign countries and those in a firm's home country (Kostova and Zaheer 1999). While recent studies have begun to explore the direct/indirect impact of country-level institutional differences on internationalization strategies (Xu and Shenkar 2002, Chan and Makino 2007) and export channel choice (He, Brouthers et al. 2013), none of them focus on the role of country-level institutional differences that are important for influencing the value of resource-based network advantages and export channel choice.

According to international business research, firms are embedded in country-specific institutional arrangements (Busenitz, Gomez et al. 2000). Local knowledge encompasses a broad array of host country characteristics, such as political and legal rules and the social norms for business transactions (Delios and Beamish 1999). A country's specific institutional context sets the framework for market transactions by defining the formal and informal rules of the game and specifying the conditions in which firms are legitimate (North 1990, Holmes, Miller et al. 2013).

Drawing from institutional theory and grounded in the sociologist perspective, Scott (1995) introduced the concept of a three-pillar country institutional context, comprising regulatory, normative and cultural-cognitive dimensions (Kostova 1997). Specifically, the

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regulatory pillar refers to the formal rules and regulations. These regulations vary between different countries, leading to 'regulative distance' between home and host countries (Brouthers, Brouthers et al. 2008). The normative and cognitive dimensions refer to social norms (Brouthers, Brouthers et al. 2008). This defines what behavior and values are expected of organizations, which are often visible through shared values or norms, and the way to work in a certain country (Bruton, Fried et al. 2005). Grounded in the economic approach, institutionalism in the economic tradition, on the other hand, suggests that the institutional environment consists of formal and informal institutions (North 1990). Both the formal and informal institutions are the devised constraints that shape human interaction (North 1990, Eden and Miller 2004). Institutions impact the performance of the economy through their effect on the cost of transaction and transformation (Meyer, Estrin et al. 2009, Chao and Kumar 2010).

Building upon the formal and informal aspects of the institutional frameworks, scholars argue that they differ in their degree of formalization and realization (i.e., the ease with which foreign firms can make sense of them), and they also have different implications for businesses (Kostova and Zaheer 1999, Estrin, Ionascu et al. 2007, Shaner and Maznevski 2011). The formal differences are generally transparent and the easiest to observe and interpret correctly because they consist of public regulations (Kostova and Zaheer 1999). In contrast, the informal differences are harder to understand and require experiential learning processes. Informal aspect is more tacit and perhaps part of the deep structure of a country, which is difficult to sense and interpret (Estrin, Ionascu et al. 2007). Institutional theory indicates that if a firm's strategy is able to conform to regulatory structure (i.e., formal aspects of the institutional environment) and is consistent with established institutional norms (i.e., informal aspects of the institutional environment) of the host

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market, then it can be viewed as legitimate (North 1990, Spencer and Gómez 2004, Brouthers, Brouthers et al. 2008). For firms, gaining legitimacy in foreign markets in which they do business is very important because this leads to access to critical resources (Zimmerman and Zeitz 2002, Brouthers, Brouthers et al. 2008). Lack of requisite legitimacy, on the other hand, lowers firm performance (Chao and Kumar 2010).

The use of institutional theory is growing in all areas of strategic management research (Busenitz, Gomez et al. 2000, Hoskisson, Eden et al. 2000). Previous research reveals that institutional environment can have a direct and indirect affect on a foreign firm's strategic activities (Delios and Beamish 1999), the evolution of foreign partnerships (Steensma, Tihanyi et al. 2005), the differences in entrepreneurial activities (Busenitz, Gomez et al. 2000, Bruton, Fried et al. 2005), and the value of resource-based advantages (Brouthers, Brouthers et al. 2008). Collectively, researchers have suggested that adding the institutional context variable to theories of TCA and RBV is important for enhancing the understanding of a firm's international strategic choice. Institutional context variables refer to conditions that undermine property rights and increase risks in exchange that tend to influence managerial cost and uncertainty evaluations in foreign markets (Roberts and Greenwood 1997, Brouthers 2002). Moreover, without a proper understanding of the country-specific institutional contextual issues, the value of the firm's resource-based advantages may be reduced (Brouthers, Brouthers et al. 2008).

Building upon institutional theory and combining it with RBV and export channel choice study, scholars argue that simply aligning structures and resources for understanding firms expanding abroad may not be enough to find the most-efficient channels because foreign markets may be institutionally distant (i.e., differences in formal and informal environments) (Hessels and Terjesen 2010). Such institutional differences between home



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and export markets can make it easier or more difficult for firms to harvest value from firm-specific resources like network diversity (Sirmon, Hitt et al. 2007, He, Brouthers et al. 2013), thereby increasing both opportunities and barriers to business activity (Brouthers, Brouthers et al. 2008), and consequently affecting firms' export channel choice (He, Brouthers et al. 2013). Generally speaking, the more the institutional differences increase, the more difficult it is for firms to sense and interpret the local institutional requirements (Kostova and Zaheer 1999). Recently researcher has discussed this perspective's implication for firms' international strategy, proposing that larger institutional differences might be associated with lower control governance structure in the foreign market (Xu and Shenkar 2002, He, Brouthers et al. 2013). In contrast, when a firm's initial exporting activity starts by targeting a country that is institutionally similar, it will be easier for the firm to understand and adjust to the legitimacy requirements of the host country, therefore this may encourage the firm to serve the local actors through high control channels (Schwens, Eiche et al. 2011).

Scholars suggest that additional research about the institutional context and its impacts on firms' internationalization is needed (Tihanyi, Griffith et al. 2005, Schwens, Eiche et al. 2011). In response to scholars' call for more research to investigate this relationship, and given that institutional distance may influence the value of resource-based advantages (Brouthers, Brouthers et al. 2008), a few studies have considered the moderating influence of the institutional context. He et al (2013) found empirical support that SMEs export channel choice is contingent on the interplay between firm resources (i.e., market orientation capability) and institutional factors. I extend this research by theorizing that differences in institutional settings can also moderate the relation between network diversity and export channel choice. Moreover, this study adds to the aforementioned studies by explicitly investigating the moderating influence of both informal and formal

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institutional distance on the relationship between network diversity and export channel choice.

In next section, I develop a theory and hypotheses that suggest the interrelationship between network diversity and export channel choice is moderated by institutional distance. I add to current research by demonstrating that the network diversity does not influence firms' export channel choice independently, but in combination with other important factors (i.e., institutional context) frequently studied in the field. This study gives a comprehensive model to address the export channel choice issue by integrating RBV, network perspective, and institutional theory.

### **4.3 Research Hypotheses**

Internationalization is the process of increasing accumulation of knowledge in markets and institutions abroad (Johanson and Vahlne 1977, Sharma and Blomstermo 2003). Combining international entrepreneurship, RBV, and strategic network literatures, a growing body of research suggests that network diversity is important in helping explain SMEs' internationalization. Diverse networks are beneficial to firms, enabling them to gain access to multiple and different resource sources, as a result providing a larger scope of knowledge on relevant international expansion (Patel, Fernhaber et al. 2013). Scholars argue that domestic inter-firm networks and international networks can be viewed as vital ways to help actors access a variety of heterogeneous resources and knowledge, offering insightful analysis of the impact of firms' networks on their internationalization (Patel, Fernhaber et al. 2013). Due to the fact that partner variances, such as national, industry and functional differences, have a direct impact on resources and heterogeneity to firms (Beckman and Haunschild 2002, Rodan and Galunic 2004, Goerzen and Beamish 2005), consequently impact international expansion (Zimmerman, Barsky et al. 2009).

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The domestic network has been defined as a firm's cooperative ties on the national level (Lin and Chaney 2007). International networks refer to the network of ties in which firms are embedded that consists of foreign partners (Musteen, Francis et al. 2010). In the context of internationalization, scholars have argued that while domestic inter-firm networks are significant sources of acquisition of home-based information, firms with greater domestic networks tend to lack knowledge of international managerial experience and perceptions of risk (Zimmerman, Barsky et al. 2009), consequently resulting in more internal uncertainty and costs during internationalization (Anderson and Gatignon 1986). In contrast, the more contacts a SME has internationally, the more international resources the firm may be able to draw on to carry out internationalization, potentially further encouraging expansion abroad (Parkhe 1991). However, drawbacks to possessing greater international networks do also exist, for example diversity in a partner's background can become complex in terms of management, monitoring and coordination, consequently resulting in excessive integration costs (Jiang, Tao et al. 2010). Grounded in such benefits and drawbacks, scholars have indicated that international and domestic networks form a complementary relationship, compensating for the disadvantages of each other (Chetty and Campbell-Hunt 2003). Overall, the greater the diversity of networks maintained, the better the performance will be, thereby benefiting the firm's portfolio (Patel, Fernhaber et al. 2013).

Linking network diversity to export channel choice, in paper 2 I theorized that network diversity increases the propensity of a SME to choose a hierarchical export channel when exporting to foreign markets rather than to adopt hybrid export channels. The reason for this is that network-diversity is beneficial to firms in gaining access to multiple, differing sources to provide knowledge on a larger scope of relevant international expansion

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(Goerzen and Beamish 2005, Patel, Fernhaber et al. 2013). Firms with diverse networks generally have broader resources to perform all the marketing and distribution functions when serving foreign markets (Shervani, Frazier et al. 2007).

In contrast, I theorize that firms with low network diversity, mostly domestic or international networks, will make a different export channel choice. In the case of domestic network-based SMEs, because of the difficulty of acquiring foreign market knowledge, firms with little host country experience tend to acquire foreign market knowledge by partnering with local firms (Barkema, Bell et al. 1996, Delios and Beamish 1999), or start by targeting 'psychically close' (i.e., markets with a similar culture, language, political system and trade policies) markets, expanding through low risk, low control export channels to access similar markets. Moreover, in the case of international network-based SMEs, I theorize that although international networks offer firms many benefits, there are also significant costs and risks involved with foreign partners; they require various investments to maintain the ongoing interactions necessary for product commercialization (Jiang, Tao et al. 2010, Patel, Fernhaber et al. 2013). As a result, such firms tend to adopt indirect low control export channels, since SMEs typically lack the resources for building governance structures to cope with increased costs. Overall, when firms have low network diversity (i.e., mostly domestic or international networks), they will prefer to expand abroad through low control hybrid export channel choice rather than choose high control hierarchical export channels.

#### **4.3.1 The moderating role of institutional distance**

The institutional context of both informal and formal institutions (North 1990) in a foreign business environment can be very different from those in a firm's home environment. To capture these variations across countries, scholars have developed the concept of 'institutional distance' (i.e., the extent of similarity and dissimilarity between

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institutional environments) to analyze firms' internationalization issues (Kostova and Zaheer 1999). Theoretical considerations suggest that international business strategies can be significantly challenged in very different ways by two different kinds of institutional distance: informal and formal (Xu, Pan et al. 2004, Schwens, Eiche et al. 2011).

In general, scholars have defined informal distance as cultural and ideological differences between a firm's home and host country (Kostova, Roth et al. 2008). Firms find it difficult to bridge these differences because knowledge about informal institutions is often tacit (Estrin, Baghdasaryan et al. 2009). Formal distance, on the other hand, is generally recognized as differences in the legal institutions and prevalent rules, laws and regulations between a firm's home and host country (Xu and Shenkar 2002, Xu, Pan et al. 2004). Given that previous institutional distance studies defined and measured cross-national distance along four basic dimensions: cultural, administrative/political, geographic, and economic (Ghemawat 2001), this study considered institutional distance in terms of formal and informal dimensions embodied in cultural, administrative, geographic and economic aspects. From the institutional perspective, scholars suggest that the larger these distances between the home and host countries are, the more difficult it is for firms to establish legitimacy in the host country and to transfer organizational practices from the existing to the new foreign market (Xu and Shenkar 2002). Greater institutional differences trigger both external and internal legitimacy issues for firms (Xu, Pan et al. 2004).

Ghemawat (2001) provides the most comprehensive framework (the CAGE distance framework) for examining the impact of distance on firms' internationalization strategy. The CAGE framework (i.e., cultural, administrative / political, geographic, and economic dimension) allows the four factors to be viewed as dimensions of the distance construct. Specifically, cultural distance refers to differences in social norms, language, and beliefs

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prevalent in the two countries. Administrative distance refers to differences in government policies, regulation and institutions between the home and host country. Geographic distance refers to the actual distance in miles or kilometers between the countries. This distance is often linked with the informal dimension such as cultural distance, because scholars suggest that culturally similar countries also have a greater possibility of geographic closeness, which is closely linked with economic development (Coval and Moskowitz 1999). Finally, economic distance refers to differences in economic conditions between the two countries (Ghemawat 2001). Given that cultural and geographic factors are conceptually close to informal institutions, in this study we include cultural and geographic distance as aspects of informal institutional distance. Building upon the work of North (1990) and Ghemawat (2001), the construct formal institutional distance in this research is considered as the extent of difference between the two countries in terms of its regulatory context, expressed in administrative and economic dimensions.

#### *Informal institutional distance*

With regard to informal institutions and their direct impact on firms' internationalization, prior scholars have argued that greater informal institutional distance tends to increase the difficulty of doing business in the host country (Xu and Shenkar 2002). The greater the informal institutional distance between home and host country, the more difficult it is for firms to transfer the former management model and adapt to local practices and preferences (Gelbuda, Meyer et al. 2008, Schwens, Eiche et al. 2011). As a result, a large informal distance can lead to increasing liability of foreignness (Kogut and Singh 1988). In general, this liability refers to the disadvantages of the position of the internationalizing firm compared with that of local firms in the host country (Zaheer 1995, Eden and Miller 2004). It has been broadly acknowledged that a firm operating in a foreign market incurs additional

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costs (i.e., those resulting from unfamiliarity hazards, relational hazards and/or discrimination hazards) that a local firm would not incur (Eden and Miller 2004, Denk, Kaufmann et al. 2012). Scholars have indicated that whatever its source, this liability implies that foreign firms will be less profitable than local firms, all else being equal, and perhaps even have a lower probability of survival (Zaheer 1995, Zaheer and Mosakowski 1997).

Firms may also incur additional costs and waste time attempting to understand and deal with individuals and organizations in the host country, and such added costs and delays may result in resource-based value erosion (Brouthers, Brouthers et al. 2008). Previous findings on the direct influence of informal institutional distance on a firm's internationalization are inconclusive. Several studies have found a negative relationship (Erramilli and Rao 1993), while others have found positive associations (Anand and Delios 1997).

A growing body of academic research documents that cultural distance has a profound effect on all aspects of international strategic activities. Linking the cultural aspect of informal institutional distance to the relationship between network diversity and export channel choice, I suggest that in exporting to a low cultural distance market, the firm with high network diversity will choose high control hierarchical export channels. The reason for this is that low cultural institutional distance implies that some cultural attributes, such as language and ideological background of the business in the foreign country, are very similar to those in the firm's home country (Kostova 1997). The differences between countries are easily perceived and understood (Ghemawat 2001). As a result, the additional costs of doing business abroad, arising from unfamiliarity and relational hazards (Gaur and Lu 2007), are marginal or even negligible because of minimal requirements for learning (Xu and Shenkar

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2002). Consequently, firms will adopt high control hierarchical export channels by functioning on their own.

I further theorize that a firm with high network diversity will increase its preference for hierarchical export channels when cultural distance increases. This is because when exporting to a market with increasing cultural institutional distance, the transfer of strategic routines and establishment of legitimacy becomes more challenging (Meyer, Estrin et al. 2009). Although local partners may seem useful for helping firms overcome the unfamiliarity arising from such large cultural distance, in fact the cultural distance is likely to inhibit communication between the firm and local actors (Meyer 2001). The difficulties of working with local partners will be heightened in countries with large cultural distance (Gaur and Lu 2007). Moreover, knowledge about cultural institutions is often tacit (Kostova and Zaheer 1999) so that engagements across culturally distant barriers require intensive cross-cultural communication (Estrin, Baghdasaryan et al. 2009). Consequently, the cost of communication and collaboration will be increased, which may result in the incremental costs eventually exceeding the incremental benefits (Kotabe, Dunlap-Hinkler et al. 2007). Given that firms with diverse networks have broader resources to perform all functions when serving foreign markets (Shervani, Frazier et al. 2007), firms operating in a host country with higher cultural distance may in fact find it more challenging to integrate existing operations with local firms or to manage a strategic alliance with a local firm, than to simply function on their own.

Cultural distance is also likely to moderate the impact of low network diversity on low control hybrid export channel choice. In the case that a firm has low network diversity (i.e., mostly domestic or international networks) and is exporting to a low cultural distance market, I suggest that it will prefer hybrid export channels. This is because exporting into a



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host country with low cultural institutional distance will make it easy for firms to establish legitimacy in the host country, with few barriers inhibiting communication and transfer of organizational practices from the parent firm to the subsidiaries in the host country (Xu, Pan et al. 2004, Estrin, Baghdasaryan et al. 2009). Although firms with low network diversity tend to lack the resources to perform all functions when serving the foreign market, those exporting into a market with low cultural distance do not need to access certain knowledge resources. Low cultural distance generally generates negligible challenges in doing business in the host country (Holmes, Miller et al. 2013).

In contrast, when cultural institutional distance between the home and host country is high, I theorize that a firm with low network diversity will increase its preference for hybrid export channels. The reason for this is that when firms enter countries where the cultural context differs greatly from their home market, it will be more difficult for the firm to understand and adjust to the legitimacy requirements of the host country (Schwens, Eiche et al. 2011). Exporting into host countries with increasing cultural distance exposes firms to additional challenges of knowledge resource acquisition (Eden and Miller 2004). It can be quite challenging for a foreign firm to access necessary information (Gaur and Lu 2007), because such distance is tacit in nature (Scott 1995) and relates to softer issues in exporting operation, such as transferring firms' routines between the partners and adapting to the host market (Xu, Pan et al. 2004). Given that firms with low network diversity generally lack knowledge-related resource source, and in culturally distant export markets, firms need to cooperate with local actors to obtain knowledge of the local business environment in order to manage cross-cultural interfaces (Estrin, Ionascu et al. 2007), they may be successful in the export operation only if they use hybrid export channels to partner with local firms that can provide such valuable knowledge. Accordingly, I theorize that the

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probability of firms with weak network diversity selecting hybrid channels increases as cultural distance increases. Hence, I develop the first hypothesis:

*Hypothesis 1: the cultural aspect of informal institutional distance positively moderates the relationship between firms' network diversity and export channel choice.*

Linking the geographic aspect of informal institutional distance to the relationship between network diversity and export channel choice, I suggest that in exporting to a low geographic distance market, the firm with high network diversity will choose high control hierarchical export channels by functioning on its own. The main reason for this is because trade activity-based costs, such as transportation and communications costs, trade barriers and costs associated with foreign exchange transactions, are primarily affected by geographic distance (Ghemawat 2001, Eden and Miller 2004). Firms exporting to a low geographic distance generally implies that firms face marginal or even negligible trade risks and costs arising from differences in legal systems and practices, languages, monetary regimes, and tariffs or tariff-equivalent restrictions (Fратиanni and Oh 2009). Thus, when the geographic distance of informal institutions is low, the additional economic activity costs of doing business abroad, resulting from physical distance (travel, transport, coordination) and unfamiliarity with the local environment, are insignificant because of minimal requirements for information networks and transportation infrastructures (Xu and Shenkar 2002).

Additionally, I theorize that firms with high network diversity are more likely to choose hierarchical export channels when geographic distance increases because high geographic institutional distance may increase the likelihood of exposure to opportunistic behavior from host market partners (Schwens, Eiche et al. 2011). Supervision and management of partners is more difficult and opportunistic behavior is more likely as geographic distance increase (Eden and Miller 2004). If firms adopt a hybrid export channel,

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the greater geographic dispersion will increase the difficulty of evaluating the performance of partners, because both distance and variations in local conditions make interpretation of behavior more difficult (Hennart 1993). Collectively, as firms grow in geographic reach, the cost of constraining opportunistic behavior increases. Under this situation, in order to minimize opportunistic behavior and diffusion of specific knowledge, a firm can generally establish specific control mechanisms (Klein, Frazier et al. 1990). Ownership is a critical control mechanism (Brouthers and Nakos 2004). Hierarchical export channels provide firms with a larger degree of control and enable firms to avoid the relational hazards and opportunistic behavior of partners in unknown environments (Bello and Lohtia 1995). Given that high network diversity is beneficial to firms, allowing them to gain access to multiple sources and knowledge on a larger scope of relevant international expansion (Patel, Fernhaber et al. 2013), I therefore theorize that firms with a network-based information advantage will be more likely to rely on hierarchical export channels to do business in a geographically distant host market.

The relationship between low network diversity and low control export channel choice is also likely to be moderated by the geographic aspect of informal institutional distance. Geographic distance, as indicated by the CAGE distance literature, affects the cost of transportation and communications (Ghemawat 2001) and has a significant impact on firms' decisions during internationalization (Malhotra, Sivakumar et al. 2009). In the case that a firm has low network diversity (i.e., mostly domestic or international networks), I theorize that it will choose a hybrid export channel if the host market has a low geographic distance because firms with low network diversity tend to lack the resources to perform marketing and distribution functions when serving a foreign market. Although exporting into a host country with low geographic institutional distance will make it easier for firms to

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establish legitimacy in the host country because the liability of foreignness and social costs arising from unfamiliarity and discriminatory hazards are less (Eden and Miller 2004), firms with low network diversity have limited knowledge-related resources as well as an urgent need to internationalize (Patel, Fernhaber et al. 2013).

Comparatively, a firm with low network diversity, but exporting to a host country with high geographic institutional distance, will be more likely to choose a low control export channel because exporting into host countries with high geographic distance exposes firms to additional challenges of knowledge resource acquisition (Eden and Miller 2004) and higher economic and management costs (Malhotra, Sivakumar et al. 2009). The larger the difference between the geographic institutions of the home and host countries, the greater the need for tacit local knowledge and social costs (Estrin, Baghdasaryan et al. 2009). However, low network diversity cannot provide firms with significant resources to overcome the challenges involved in transfer (Parkhe 1991, Patel, Fernhaber et al. 2013). Therefore, given that local partners can be helpful in overcoming the unfamiliarity arising from large informal institutional distance, firms must cooperate with local firms that provide knowledge of the local business environment and help in overcoming liabilities and reducing management costs (Chan and Makino 2007, Estrin, Baghdasaryan et al. 2009). Collectively, firms at an information disadvantage will be more likely to rely on collaboration with local firms as a structure for doing business at the host market level. Hence, I assume that a large geographic distance between the home and host country will positively moderate the relation between low network diversity and the choice of low control export channels. This will occur to such an extent that the probability of firms with lower network diversity choosing low control hybrid export channels increases as the informal institutional

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differences increase. Similar to the arguments regarding differences in culture, the above arguments lead to the second hypothesis:

*Hypothesis 2: the geographic aspect of informal institutional distance positively moderates the relationship between firms' network diversity and export channel choice.*

#### Formal institutional distance

A number of prior studies have examined the direct effect of formal institutional distance on a firm's internationalization. Scholars have generally focused on regulative institutional distance (Xu, Pan et al. 2004) and suggested that the existing legal institutions and rules in a particular country can promote a certain type of business behaviors and restrict others (Estrin, Ionascu et al. 2007, Holmes, Miller et al. 2013). Formal institutional distance is critical for firms since it leads to being foreignness and lacking external legitimacy (Scott 2008); it can also affect a firm's strategies (Peng 2003) because of the risks and penalties associated with organizational deviance from legal rules (Mezias 1990, Xu, Pan et al. 2004). The host government can use its authoritative and regulative powers to directly restrict or influence the behavior of enterprises (Grewal and Dharwadkar 2002). A review of empirical studies in this domain shows inconsistent results; while some researchers found that formal institutions have a positive significant impact (Kostova and Zaheer 1999, Xu and Shenkar 2002, Chan and Makino 2007), others, such as Brouthers and Nakos (2004), found the opposite relationship. Some authors did not find any significant effects (Burgel and Murray 2000).

This divergence in the impact of formal institutional distance factors on the internationalization of firms is intriguing as theoretically it implies that the variability in these studies may be examined by other mediating/moderating factors. Hence, this study introduces network diversity as a third variable in the formal institutional distance and

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export channel choice relationship. According to Ghemawat (2001), the construct formal institutional distance is generally considered as the extent of difference between the two countries in terms of its regulatory context, incorporated administrative and economic distance. Therefore, in this research, I mainly focus on the core dimensions of formal institutional distance (i.e., administrative dimension and economic dimension) to plan internalization strategies (Ghemawat 2001, Malhotra, Sivakumar et al. 2009).

Linking the administrative aspect of formal institutional distance to the relationship between network diversity and export channel choice, I suggest that when exporting to a low administrative distance market, the firm with high network diversity will choose a hierarchical export channel. This is because in contexts characterized by low administrative institutional distance, the dissimilarity between the home and host country's political and regulatory institutions is not pronounced (Xu, Pan et al. 2004). Moreover, compared to informal distance, formal institutional distances normally incur less of an unfamiliarity hazard for foreign entrants because most of the obstacles are formalized and codified and thus can be understood relatively easily (Estrin, Ionascu et al. 2007, Gaur and Lu 2007). Differences resulting from formal institutional distance are not tacit and do not require a lengthy learning process (Estrin, Baghdasaryan et al. 2009). Firms with high network diversity will benefit from their network diversity in such ways as overcoming costs and knowledge associated with formal distance, and acquiring local legitimacy (Patel, Fernhaber et al. 2013). This means that when administrative institutional distance is small, firms can easily find information about these aspects on their own by using secondary sources. Accordingly, firms with high network diversity will prefer hierarchical export channels when administrative distance is low.

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I further theorize that high administrative distance reduces the use of hierarchical export channels, but firms with high network diversity, a network-based information advantage, may maintain their preference by relying on hierarchical export channels when doing business in administratively distant host markets. This is because that although the higher the administrative distance, the greater the entry barriers for firms and the slower the expansion (Ghemawat 2001, Campbell, Eden et al. 2012), firms with high network diversity will help them identify good partners and consequently reduce the uncertainty and transaction hazards of doing business in such administratively distant countries (Yiu and Makino 2002).

In the case of administrative distance increasing, scholars argue that the compliance burden for foreign entrants and the liability of foreignness becomes greater (Kostova and Zaheer 1999, Eden and Miller 2004). As the administrative distance increases, the differences in legal systems will often be linked with more constraint in matters of protectionism; foreign firms may receive differential and worse treatment from the host country government, buyers and suppliers compared to domestic firms. Moreover, the firm's home government can also generate differential treatment; for instance, by prohibiting the firm from engaging in certain activities or by levying more onerous taxes than local firms face in the host country (Holmes, Miller et al. 2013). As a result, in an increasingly formal distant institutional context, foreign firms are considered less legitimate and face greater potential costs (Kostova and Zaheer 1999). In this situation, in order to achieve social acceptance and legitimacy, firms generally reduce the use of hierarchical export channels and tend to establish legitimacy by forming strategic alliances with socially legitimate partners. However, given that high network diversity helps firms identify good partners that provide them with sufficient resources and this can also be helpful in

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overcoming unfamiliarity arising from high formal institutional distance between the home and host countries (Rodan and Galunic 2004, Patel, Fernhaber et al. 2013), I thus suggest that firms with high network diversity will continue to prefer hierarchical export channels when exporting into countries with high administrative distance.

Building upon the institutional theory that administrative distance deals with the dimension of the government and the country's legal system, which largely influences firms' strategic internationalization (Malhotra, Sivakumar et al. 2009), I also theorize that the administrative aspect of formal institutional distance likely to moderate the impact of low network diversity on low control hybrid export channel choice. Firms with low network diversity may continue to prefer hybrid export channels when venturing into countries with low administrative distance. The main reason for this is that the administrative institutional environment, which varies in different countries, can either have a positive or a negative influence on business activity in different economies (Brouthers, Brouthers et al. 2008, Chao and Kumar 2010). Sometimes, a host government's actions can promote a positive environment for foreign investment, such as creating a stable business environment and legal protection for private property. By contrast, in order to protect domestic companies, countries may also raise barriers to preempt foreign competition (Holmes, Miller et al. 2013). They may impose regulations on their markets and show more constraint in matters of protectionism, which means that foreign entrants will need to spend more time and costs overcoming these regulations (Malhotra, Sivakumar et al. 2009). Given that low administrative distance still creates high-coordination needs and relative costs, firms with low network diversity may find it difficult to achieve success doing business in an uncertain environment without knowledge-related resource advantages (Kogut 2000, Lavie and Miller



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2008). As a consequence, firms with low network diversity will continually prefer hybrid export channels even if administrative distance is low.

In addition, I theorize that when administrative institutional distance increases, a firm with low network diversity will increase its preference for hybrid export channels. This is due to the fact that the administrative distance becomes larger, the more the firm is challenged to achieve regulatory legitimacy (Chao and Kumar 2010) and adapt its business to dissimilarly functioning political, legal, or economic institutions (Kostova and Zaheer 1999). However, firms with a low level of network diversity tend to be less able to overcome issues of legitimacy created by differences in the institutional context because they are generally not knowledgeable enough about the local regulations, rules, and political institutions. In such situations, firms may find it easier to overcome the challenges arising from larger administrative institutional distance by adopting a hybrid export channel since the direct information and support provided by local partners can help foreign firms more easily understand the local institutional environment, overcome the liabilities and appropriately adjust to conform to local laws and external legitimacy requirements. On the basis of these arguments, I hypothesize the following:

*Hypothesis 3: the administrative aspect of formal institutional distance positively moderates the relationship between firms' network diversity and export channel choice.*

Economic distance is another important dimension of formal institutional distance. Economic differences across countries have been linked with differences in the wealth or income of consumers (Ghemawat 2001). The income level, considered as one of the most important economic attributes that create distance between countries, has a marked effect on consumer purchasing power and preferences. At one level, consumer lifestyle is seemingly correlated with wealth (Iyer 1997).

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When considering the impact of economic distance on the relationship between network diversity and export channel choice, I theorize that in exporting to a low economic distance market, the firm with high network diversity will choose high control hierarchical export channels. This is due to the fact that low economic distance reflects less dissimilarity of economic characteristics (e.g., consumer purchasing power, preference and lifestyle etc.) between a firm's home and host country (Kostova 1997). Operating in economically similar markets ensures that knowledge transfer among countries is valuable. As a result, this allows firms to more easily understand and correctly interpret the consumer demand and business institutions of the host country (Ghemawat 2001). Consequently, less economic-related knowledge will be required, and the additional liability of foreignness and costs resulting from low economic distance when doing business in a host country are marginal. Given that firms with high network diversity generally possess a greater volume of heterogeneous resources and international experience knowledge required to fit different formal institutions during internationalization (Zimmerman, Barsky et al. 2009), they are likely to adopt high control hierarchical export channels by functioning on their own. Thus, it is reasonable to assume that when exporting to a low economic distance market, firms with high network diversity will choose high control hierarchical export channels.

I further suggest that when the economic aspect of formal institutional distance increases, firms may reduce their use of hierarchical export channels; however, a firm with high network diversity will continually choose hierarchical export channels for several reasons. First, dissimilar economic conditions associated with dissimilarities in customer demand and business institutions (Ghemawat 2001). As economic distance increases, the requirement for such economic-related knowledge increases as well (Mittra and Golder 2002). Given that firms are able to acquire local knowledge and access from local partners,

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high economic distance tends to reduce their use of hierarchical channels. However, if they choose hybrid channels, more coordinated efforts are required to resolve disagreements between partners. Due to the increased costs associated with the coordinated efforts, a hybrid form of export becomes less efficient compared to a hierarchical form. Thus, in entering countries with high economic distance, a hierarchical export channel seems a more effective choice over a hybrid form. Second, scholars have indicated that if the foreign markets are very distant formal-institutionally, then transferring strategic resources to and from those foreign subsidiaries becomes an arduous task (Kostova 1999). It would be far more effective for firms to choose high control export channels so as to have tight control over their foreign operations and enhance the knowledge transfer efficiency (Gaur and Lu 2007). Given that high network diversity can benefit firms in terms of knowledge and support, and this enables them to choose high control export channels in different formal institutional contexts (Lavie and Miller 2008), I theorize that a firm with high network diversity will still use hierarchical export channels even if economic distance between the home and host country is high.

I also suggest that economic distance is likely to positively moderate the relation between low network diversity and the choice of hybrid export channels. When entering foreign countries that are economically similar to the home market, firms with low network diversity may also choose hybrid export channels. Although venturing into countries with low economic distance implies that firms can build on their economies of scale and experience by easily transferring their skills and knowledge from their home to the new market, low network diversity firms may have insufficient experience and ability to leverage their existing knowledge in a host market with low economic distance. In the context of networks, researchers generally embrace a perspective that low network diversity results in

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firms having knowledge and resources that are neither sufficient nor comprehensive enough to meet the resource requirements of hierarchical export channel (Patel, Fernhaber et al. 2013). In this situation and given that previous scholars have also shown that the legal restrictions on foreign-owned firms tend to discourage the formation of wholly owned subsidiaries (Gatignon and Anderson 1988, Salomon and Wu 2012), I theorize that firms with low network diversity may eschew functioning on their own; such firms will adopt a hybrid export channel instead of choosing a hierarchical export channel.

Moreover, I theorize that when the economic distance between the home and host country increases, firms with low network diversity will increase their preference to rely on collaboration with local firms as a structure. Previous scholarship indicated that firms find it difficult to succeed when entering countries that have dissimilar economic environments because they cannot readily transfer their existing business models to countries that have dissimilar characteristics in terms of media, distribution channels, business institutions and consumer disposable income (Ghemawat 2001). A greater economic distance between the home and host country exposes the firms to additional challenges of knowledge-related resource acquisition and transaction costs, consequently discouraging their internationalization (Mitra and Golder 2002). Given that a firm's success stems from its strategies conforming to the specific demand of the external institutional environment in which it does business (DiMaggio and Powell 1983, Brouthers, Brouthers et al. 2008), creating partnerships with local actors can help firms to acquire the resources they need to develop a more appropriate strategy (Estrin, Ionascu et al. 2007). Based on this logic, I assume that firms may be successful in the export operation only if they use hybrid export channels to partner with local firms that can provide the knowledge they need. The

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probability of firms with weak network diversity selecting hybrid channels increases as economic distance increases. Based on the above discussion, I hypothesize that:

*Hypothesis 4: the economic aspect of formal institutional distance positively moderates the relationship between firms' network diversity and export channel choice.*

#### **4.4 Methods**

The key objective of this section is to outline the methodology employed for the purpose of this study. To test the above hypotheses, a questionnaire survey method was employed. Data relevant to the hypotheses were gathered from the SMEs located in Mainland China's economically developed eastern Province of Zhejiang (adjacent to Shanghai). This section begins by introducing the population the sample firms were drawn from, then a specific description of the data collection process for the survey follows. All measurement items employed for measuring and explaining the dependent, independent, moderating and control variables are then reported.

##### **4.4.1 Sample**

The present study is confined to manufacturing-based exporting SMEs. China's Zhejiang province was selected as the research laboratory. The data consisted of a random sample of 600 Zhejiang-based manufacturing SMEs (from a total population of about 40000) involved in exporting. The sample of these firms was drawn from two databases-the Directory of Zhejiang SME Exporters and the Zhejiang SME Industrial directory.

The reason for choosing China is because China is the world's largest and fastest growing economies (Brouthers and Xu 2002) and the second largest international trade country in the world (Murray, Gao et al. 2007). This makes it the logical research context in which to examine the internationalization of entrepreneurial firms (He, Brouthers et al. 2013). In addition, similar to firms from other emerging economies, Chinese

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internationalizing SMEs are likely to have the liability of foreignness and newness in foreign counties (Zaheer 1995), therefore they have recognized the importance of RBV and institutions in helping them mitigate these liabilities during internationalization (Hitt, Leonard Bierman et al. 2006, Lu, Zhou et al. 2010).

The reason for choosing the Zhejiang province is because it is located on the eastern coast of China and possesses many important commercial posts (Wikipedia). It has been widely regarded as a major transportation thoroughfare and international business and economic hub of Mainland China (Department of Commerce Zhejiang Province, 2013). Zhejiang is a key base for small-commodities, electromechanical, metallurgic, light, food, chemical, construction materials and textile manufacturing in China (Hendrischke and Feng 1999). In recent years, in relying on its rich natural resources and prominent geographical advantages, it has become one of China's most intensive exporting provinces (Hendrischke and Feng 1999). According to figures from the National Bureau of Statistics of the People's Republic of China (P.R.C), in 2011 the export volume from the Zhejiang Province ranked 1<sup>st</sup> in exports among the 31 provinces of China (China Commerce Yearbook, 2011).

In this study, the sample of firms was selected from the following four criteria:

- 1) In order to be consistent with the quantitative definition of SMEs adopted by other researchers (Lu and Beamish 2001), this study requires sample firms to have fewer than 500 employees. Entrepreneurship literature generally uses measures such as the number of employees, total turnover and total assets (Zhou, Wu et al. 2007). According to the SME Administration of the Ministry of Finance of P.R.C., the definition of an SME in the manufacturing industry is one that employs 500 or fewer workers.

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2) To ensure some degree of similarity in type of business operations, the sample firms have to be primarily involved in manufacturing activities and the manufacturing business with operations in exports and/or other forms of international activities.

3) Firms need to have been in business for at least three years; the reason for using this criterion is because the firms have all survived the most critical years of operation (Pickle, Abrahamson et al. 1990) and their business practices presumably approximate those of established firms rather than new ventures (Covin 1991).

4) Firms are privately owned; the reason for using this criterion is because from the RBV perspective (Barney, Wright et al. 2001), most Chinese SMEs are privately owned; these firms, compared with large state-owned enterprises, are generally constrained by resource unavailability and inadequate international experience (Peng 2001). As a result, such firms have to rely on networks to access external resources and overcome resource constraints because of their size (Zhou, Wu et al. 2007). Based on institutional theory, SMEs are likely to react more sensitively (Brouthers and Nakos 2004) to challenges arising from the institutional context (Scott 1987) because they face greater resource scarcity and generally cannot provide sufficient resources to satisfy the increasing costs and risks caused by institutional environment differences (Schwens, Eiche et al. 2011). Collectively, I expect that the interactive effect of the institutional context is particularly important for SMEs.

A questionnaire was used to collect research data. The original questionnaire was developed according to a comprehensive literature review and standardized and validated by reference to other scholars. To ensure the reliability and validity of the questionnaire, I worked with academic experts who are familiar with the literature on which the empirical measures are based, or who have expertise in research design and could critically assess the content validity of each item. Suggestions for improvement were incorporated into the

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questionnaire. I also obtained export channel choice scales from previous researchers (He, Brouthers et al. 2013) who had used the chosen measurement instrument in the Chinese context. The other measurements were then translated into Chinese and checked for form and meaning equivalence by an academic expert who is bilingual, speaking both English and Chinese.

#### **4.4.2 Data collection**

In this investigation, the target sample firms did not include trade intermediate organizations, trading agents or service firms, as it is difficult to ensure the value of the goods traded by these firms. Moreover, only entrepreneurs, CEOs, or international department managers were selected as informants because these individuals are intimately involved in and responsible for international operations decision-making; they are also likely to be the person understands the knowledge about the firms' internationalization activities. Given that most Chinese firms are wary and fear leaking proprietary information to strangers at the request of researchers, the majority of entrepreneurs and managers were reluctant to participate in the surveys. Therefore, a high level of personal involvement (including telephone calls and assistance from local government and industry associations) was employed to help this research ensure a high participation rate. In order to ensure as many managers as possible responded to our survey, most samples firms were encouraged by local industry associations to take part in this research before I called them.

Data were gathered using the questionnaire. I spent approximately three months collecting research data. Before I mailed or emailed the questionnaire, I contacted target firms by telephone to explain the purpose, to check that the firm actually met the four criteria and to ensure they were willing to participate in the study. After numerous efforts, 489 firms of a total of 600 firms (81.5% positive response) who met the necessary standards



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agreed to participate in the study. Of these 111 firms, 6 had gone bankrupted, 24 could not be contacted because of incorrect contact details, 21 refused to take part in this research, 9 firms had ceased exporting and 51 firms were export intermediaries.

The five-page questionnaire was then sent by mail or email to the key informants of all the target firms as soon as their participation was secured. The questionnaire included cover letters and a pre-paid postage envelope. Follow-up telephone calls were made to all mailed firms after three to four days following the initial dispatch of the questionnaire to confirm that the post had been received successfully; I asked them to complete and return it to me as soon as possible. For other firms who preferred email, I sent the questionnaire to their email address. In order to improve the response rate, all participants were promised that any information provided to this research would be strictly confidential. A cover letter/pre-call of support from local commercial or industry associations was also prepared and addressed directly to the individuals identified. In addition, follow-up calls were made; informants who did not reply to the initial survey within 1 week were identified, and then several rounds of phone calls and personal contact was made and a follow-up round of emails sent as a reminder. In the case of firms who had not responded after waiting another three days, I politely pushed by calling every day or re-sending the email until I received their reply.

After several efforts and follow-up work, a total of 241 questionnaires were received. Of these responses, 38 were not useable. More specifically, 19 firms failed to fully complete the questionnaire; 7 firms left the channel choice single question as blank and 9 firms did not use any of a hierarchical, intermediate or market channel; and 3 others reported the use of multiple channels as their most important export market. Thus, these 38 responses were all excluded from subsequent analysis. After the screening procedure, a qualified sample of

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203 firms remained for data analysis. This resulted in a response rate of 42%. The response rate is comparable with the rates reported in other research involving Chinese exporting SMEs (e.g., He, Brouthers et al. 2013, Zhou, Wu et al. 2007).

With regard to the typology of export channel choice, although some different categorisations are found in previous literature, there seems to be no agreement on a typology of export channel choice. Based on the degree of integration, the hierarchical/hybrid channel classification has been used in a recent exporting study (He, Brouthers et al. 2013). Among the categorisations, the hierarchical/hybrid channel classification is a useful scheme. Given that this categorisation offers a clearer view of channel structures for exporting, this research adopted He's (2013) categorisation of two types of export channel: hierarchical export channels (i.e., firms that serve the host market directly from China or establish wholly owned subsidiaries in the foreign market) and hybrid export channels (i.e., firms that are involved in a strategic alliance or use commission agents).

Although there are 203 samples in total, the sample referred to in the further analysis includes 151 firms from the manufacturing sector. The other 52 samples firms who used independent distributors as export channel were not taken into account because this research adopted a classic categorisation of two types of export channel (i.e., including the hierarchical and hybrid export channels). Of these 151 samples, 76 (50.3%) firms opted for a hierarchical export channel and 75 (49.7%) employed a hybrid export channel. The average age of the sample firms is 12 years; the average number of employees per firm is 180 and the average number of countries being exported to by each firm is 13. In terms of sample geographic distribution, a total of 42 countries are represented. The United States was the

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most important market for the largest number of companies (27 firms; 17.9%), followed by Japan (20 firms; 11.3%) and Russia (14 firms; 6.6%).

### **4.4.3 Variables and Measurement**

#### **4.4.3.1 Dependent variables**

Inspired by Klein et al (1990), in this study, I use perceptual measures of export channel choice as the dependent variable. Respondents were informed that the focus of the study is the export channels used by Chinese manufacturing-based exporting firms serving foreign markets (i.e., country) and they were told to concentrate on their most important foreign market (He, Brouthers et al. 2013). After noting the product and market, each respondent was asked to indicate which of the statements (from high control hierarchical export mode to low control hybrid export mode) best represented the export channel they used in their most important export market. As in Klein and Roth's (1990) study, hierarchical channels were assigned a value of 1 and included two types: "our firm has established wholly owned foreign sales subsidiaries in the foreign market for serving the foreign customers especially" and "our firm serves the market directly from China through sending home-based representatives." Hybrid channels were assigned a value of 0 and included two types: "our firm is involved in a strategic alliance such as joint venture with another company to handle sales of this product in this market" and "our firm works together with some commission agents and performs part of the distribution functions" (Klein, Frazier et al. 1990, Klein and Roth 1990).

#### **4.4.3.2 Independent variables**

Following Baum et al (2000) and Lavie and Miller (2008), in this study the measurement of network diversity was based on the Hirschman-Herfindahl index. I began by enquiring about the number of foreign partners in the focal firm's network. Respondents

were requested to report their network member type in the national scope. In the questionnaire, respondents were asked: 1) how many domestic partners worked with your firm in the last year, such as competitors, suppliers, customers, distributors, R&D, institutions, banks and governments (Goerzen and Beamish 2005), 2) how many foreign partners worked for your company in the last year, such as competitors, suppliers, customers, distributors, R&D, institutions, banks and governments (Lavie and Miller 2008).

In past studies on national diversity (Baum, Calabrese et al. 2000, Patel, Fernhaber et al. 2013), the diversity of a partner's country of origin is generally measured by using the Herfindahl index:  $network\ diversity\ i = [1 - \sum_{jj} (PA_{ij})^2] / NA_i$ ; as such I used this equation to capture the extent to which a firm has collaborative relationships with both home country (i.e., China) firms and local firms in the particular host country. More specifically, in the equation,  $PA_{ij}$  is the proportion of all firms  $i$ 's partners that belong to a given type  $j$ , and  $NA_i$  is firm  $i$ 's total number of network members (Baum, Calabrese et al. 2000). A firm with ten network members, two with domestic partners and eight foreign partners will score a  $network\ diversity\ i = [1 - ((2/10)^2 + (8/10)^2)] / 10 = 0.032$ . A second, with a mostly domestic network comprising eight domestic partners and two foreign partners, will score a  $network\ diversity\ i = [1 - ((7/10)^2 + (3/10)^2)] / 10 = 0.042$ . When the network partners of a given type are roughly structurally equivalent (i.e., the number of domestic network and foreign partners is roughly equivalent), the score will be closer to 0.05.

#### 4.4.3.3 Moderating variables

Taking into consideration the context of the host country, in particular the formal and informal institutional environment dissimilarity between the host and home country context, in international business study is very important because countries vary in terms of

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the nature of cultural, administrative and economic institutions (Ghemawat 2001). Nations possess unique institutional environments, including formal and informal constraints on human and organizational behavior (North 1990, Estrin, Ionascu et al. 2007). Given that institutional environments vary from one country to another and such differences in institutional settings can not only affect a firm's strategic decisions (Kostova and Zaheer 1999, Xu and Shenkar 2002) but also have an impact on the value a firm can generally get from resource-based advantages (Brouthers, Brouthers et al. 2008, He, Brouthers et al. 2013), this study brings institutional distance (i.e., both formal and informal aspects) into the conceptual framework as a moderator between resource-based network diversity and export channel choice.

Theorizing about institutional environment difference in this paper, I intend to apply a distance measure to capture the moderator variable. According to previous institution distance studies, the distance between two countries can manifest along four basic dimensions: cultural, administrative/political, geographic, and economic (Ghemawat 2001). Hence, the moderator variable institutional distance in this research is considered as the difference between the home and host country in terms of formal and informal dimensions, which encompasses cultural, administrative, geographic and economic aspects. Given that the World Bank database has been used extensively in international business research, data for our measures were obtained from the World Bank website. The institutional distance was then calculated as the absolute difference between the two countries' (home and host) scores on respective dimensions.

#### *Informal institutional distance*

Cultural distance has been widely recognized as the main informal institutional dimension (He, Brouthers et al. 2013). It captures cognitive and normative institutions

(Ghemawat 2001, Salomon and Wu 2012). In this study, in addition to cultural distance, we also include the geographical factor as another aspect of informal institutional distance in our analysis, because geographic distance of the country institutional context is conceptually close to cultural and informal institutions. International business literatures have long recognized the important role geographic distance plays and have indicated that this is subject to the costs of transportation and communication in firms' internationalization (Anderson 1979, Fratianni and Oh 2009, Berry, Guillén et al. 2010, Boeh and Beamish 2012). Geographic proximity not only lowers the cost of managerial coordination and control, but also facilitates personal contact that is necessary for effective transfer of knowledge and other resources (Shenkar 2001).

With regard to the measurement of informal institutional distance, following Kogut and Singh (1988), I measured the cultural distance between the target countries and China (country of origin) by using Hofstede's (1980) four cultural dimensions: power distance, uncertainty avoidance, masculinity/femininity and individuality (Lavie and Miller 2008, Berry, Guillén et al. 2010). Despite its acknowledged limitations (Shenkar 2001, Berry, Guillén et al. 2010), this measure has been employed extensively in internationalization studies (He, Brouthers et al. 2013). Data for China and each host country were obtained from Hofstede's website. Based on Hofstede's cultural indices, the cultural distance measure is computed in the following way:

$$CD_i = \frac{\sum_{j=1}^4 [(H_{ij} - H_{Cj})^2 / \text{Var}_j]}{4}$$

where  $CD_i$  represents the cultural distance between country  $i$  and the origin country China;  $H_{ij}$  captures cultural dimension  $j$  in country  $i$  and  $H_{Cj}$  captures cultural dimension  $j$  in China;

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and  $\text{Var}_j$  represents the variance in the cultural dimension  $j$  across all countries (Salomon and Wu 2012).

Different methods were used to measure the geographic distance. For instance, Krishna (2003) and Frankel, Stein and Wei (1995) used the bilateral direct line distance (measured in thousands of miles) to measure geographic distance (Frankel, Stein et al. 1995, Krishna 2003). Chen (2004) calculated the geographic distance between pairs of countries by using the latitudes and longitudes of the main city in each region (Chen 2004). Moreover, several papers measured geographic distance between two countries by using the great circle distance measure (Berry, Guillén et al. 2010, Boeh and Beamish 2012). Given that the great circle method has been used extensively in international economics and business literatures, in this study, we employ the great circle method for geographic distance measures. Data were obtained from the CIA Factbook (Berry, Guillén et al. 2010).

#### Formal institutional distance

The moderator variables for formal institutional distance mainly manifests in political rules, legal decisions and economic issues that influence the firm's strategies and operations (Estrin, Baghdasaryan et al. 2009, Schwens, Eiche et al. 2011). With regard to the measurement of formal institutional distance, previous studies adopted different methods and indexes. For example, in Gaur and Lu's research (2007), World Competitiveness indices were used to capture the formal aspect of a country's institutional environment that impact subsidiary survival (Gaur and Lu 2007). Brouthers et al (2008) examined the formal risk distance by using the Euromoney country risk measure. Schwens et al (2011) used Hermes Country Risk Rating to measure the moderator variable formal institutional risk, focusing on the economic, political and legal situation in the host country. Although these measures are useful, they tend to concentrate on the effect of the regulative environment on foreign

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direct investments, not exporting activities. While many scholars have recognized the importance of considering institutions in international business studies and measured these using different methods, so far there have no consistent viewpoints on which measure is the best.

Given that this study is derived from the transaction cost approach, we therefore draw upon the economic approach to consider institution issues. Building upon the work of North (1990) and Ghemawat (2001), the construct formal institutional distance in this research is considered as the extent of difference between the two countries in terms of its regulatory context, expressed in administrative and economic dimensions. According to Berry et al (2010), economic indicators include information on: income level (GDP per capita), prevailing inflation rates, and intensity of trade with the rest of the world (exports plus imports and as a proportion of GDP). The administrative distance dimension includes: the colonize-colonized links, common language, influence of religion and legal systems. Based on these conceptions, we obtained data on country-level indicators related to administrative and economic aspects of the institutional environment from the World Bank's (2014) World Development indicators database.

#### **4.4.3.4 Control variables**

In this study, 12 variables were controlled as previous literatures have shown they may affect firms' export channel choice and influence the hypothesized relationships (He, Brouthers et al. 2013): firm size, firm age, market experience, international diversity, industry, transaction cost factors (i.e. asset specificity, channel volume, internal-behavioral uncertainty and external-environment uncertainty), market size (i.e., GDP per capita and population size) and growth (i.e., GDP growth rate).

##### *Firm size*



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This research include firm size as a control variable because previous studies have widely recognized that a firm's size can affect its export channel choice (Erramilli, Agarwal et al. 2002, He, Brouthers et al. 2013). Larger and more diversified firms may have more opportunities to exploit network ties than smaller and less connected organizations (Ellis 2000, Ellis and Pecotich 2001). In the questionnaire, respondents were asked: 'the number of employees in the firm'.

#### Firm age

Firm age was also considered as a control variable in this research because firm age has been widely confirmed to influence a firm's internationalization (Westhead, Wright et al. 2001). Previous scholars have indicated that firms accumulate knowledge and experience with increased age, which can be beneficial for firms in reducing the risks and costs of international expansion (Autio, Sapienza et al. 2000). In the questionnaire, respondents were asked to report their firm's age in 2014.

#### Market experience

Market experience is recognized as an important element of a firm's capabilities and resources that influence its international strategy, such as export channel choice (Anderson and Gatignon 1986, Aulakh and Kotabe 1997, He, Brouthers et al. 2013). Market experience not only helps firms to identify the source of market intelligence and then generate and disseminate information effectively, but it also impacts the fact that internationalizing firms tend to select a hierarchical channel (He, Brouthers et al. 2013). Therefore, I controlled for market experience in the analysis. I operationalized market experience by measuring the number of years of experience in the target export market (Brouthers and Brouthers 2003, He, Brouthers et al. 2013). Respondents were asked to report how many years they had been exporting to the most important market.

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### International diversity

This study considered international diversity as a control variable because previous scholars have shown that international diversity impacts a firm's breadth, depth, and speed of internationalization (Zahra, Ireland et al. 2000). Consistent with Goerzen and Beamish (2003) and Zahra et al (2000), international diversity was measured by asking how many countries the firm had sold its products to. In the questionnaire, respondents were asked to provide data on the number of foreign countries that their companies' products were exported to.

### Industry

Although this research focuses on exporting manufacturing, the industry these firms belong to might still influence their export channel choice. Therefore, this study control for industry in the analysis. According to He et al (2013) and McNaughton (1996), industry was measured by asking for the firm's main line of business. In the questionnaire, respondents were asked: in the last year, what has been your firm's most important produced and exported product (He, Brouthers et al. 2013)? Based on the Standard Industrial Classification of Chinese Export Commodities (MOFCOM 2008), three industry dummy variables were created for firms representing the primary industries in the sample: electrical and electronic industry; imitation jewelry industry; and food industry. For each dummy variable, I assign a value of 1 if the firm is in the industry and 0 if the firm is not in the industry.

### Asset specificity

Given that previous studies have widely recognized that TCA factors influence firms' export channel choice, this research also controlled for transaction cost variables (i.e. asset specificity, external uncertainty, internal uncertainty, and channel volume). The transaction-specific asset here implies that the assets are specifically invested in the export country

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(Shervani, Frazier et al. 2007). Based on Shervani et al. (2007) and Erramilli and Rao (1993), I measured asset specificity with a four-item scale. In the questionnaire, respondents were asked: 1) specialized investment in the form of tooling and equipment is needed to market your firm's product (He, Brouthers et al. 2013), 2) a large specialized investment into specific know-how unique to the business is needed to market your firm's product (McNaughton 1996, Chen and Chen 2003), 3) it generally takes a long time for your firm's salesperson (whether the firms' or an intermediary's) to gain a thorough knowledge to market the product line (Shervani, Frazier et al. 2007), 4) to be effective, a salesperson for your firm has to take a lot of time to get to know the customers and competitors (Shervani, Frazier et al. 2007). The items were measured using a 7-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. In order to create our assets specificity construct, the value for these four items were summed up and then averaged (Cronbach's  $\alpha = .856$ ).

#### *Channel volume (frequency)*

Channel volume is also a transactional dimension. Given that channel volume can be an indicator of the resources that influence the firm's strategy (Brouthers and Hennart 2007), it is reasonable to consider this a control variable. Drawing on Klein et al. (2009), channel volume in this research was measured by asking respondents the percentage of their most important market accounts for the total export sales last year.

#### *Internal uncertainty*

I treated internal uncertainty as a control variable in this study because it is recognized as an important element of a firm's capabilities and resources that can influence its international strategy (Aulakh and Kotabe 1997). Internal uncertainty reflects the extent to which it is difficult to assess selling performance in the distribution channel (Rindfleisch and Heide 1997). In this study, Shervani et al.'s (2014) single item scale was used to measure

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behavioral uncertainty. Following He et al (2013), in the questionnaire, respondents were asked to indicate the degree to which they find it easy to measure the collective performance of individuals who perform an exporting function. This item was measured using a reverse-coded 7-point Likert scale ranging from 'very easy' to 'very difficult'.

### External uncertainty

In the international context, external uncertainty is typically labeled 'country risk' and can take many forms. It reflects the extent to which it is difficult to accurately predict future states of the world (Erramilli and Rao 1993, Shervani, Frazier et al. 2007). TCA studies suggest that the level of external environmental uncertainty can increase firms' reliance on networks when internationalizing (Xin and Pearce 1996, Peng and Luo 2000). In addition, external environmental uncertainty in terms of export market competitiveness can affect export performance (Zou and Stan 1998). Adapting He et al's (2013) operationalization, this variable was measured by using a four-item Likert scale. In the questionnaire, respondents were asked about 1) the extent to which it is difficult to accurately predict future sales forecast in the host country, 2) the extent to which the host market is well known to the firm, 3) the extent to which it is difficult to monitor trends in the host country, and 4) the extent to which it is difficult to gauge competition in the host country, with higher scores indicating a higher external uncertainty. Seven-point Likert scales were utilized in this measurement. The value for these four items were summed up and then averaged to create the external uncertainty construct (Cronbach's  $\alpha = .869$ ).

### **Target market variables**

A number of studies have tested for variables related to host country characteristics that influence the choice of export channel. In the exporting context, the most common tested target market variables include external-environmental uncertainty (Klein, Frazier et

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al. 1990, Bello and Lohtia 1995, Shervani, Frazier et al. 2007), legal restrictions (Anderson and Coughlan 1987), psychic distance (Klein and Roth 1990), cultural distance (Erramilli and Rao 1993, Ramaseshan and Patton 1994, Parente, Choi et al. 2010), market size and growth (Chung 2002, Li 2002, He, Brouthers et al. 2013).

Legal restrictions and psychic distance were not considered as control variables in this study because legal restrictions lacks variation (Anderson and Coughlan 1987) and some export channels such as intermediate and joint venture do not correlate well with psychic distance (Johanson and Vahlne 2009). Cultural distance was not employed as a control variable because it is the dimension of institutional distance that is treated as a moderator.

Given that country risk distance (i.e., formal institutional differences) and corruption perception index often reflect a country's governmental and political actions, creating both opportunities and barriers to international business activity (Brouthers, Brouthers et al. 2008), I also tried employing these two factors as control variables related to the host countries. However, these two variables were found to be highly correlated with each other ( $r = .90$ ) and with market size ( $r = .83$ ). In order to avoid potential collinearity problems in our analysis, country risk distance and corruption index were not included in this study. Consequently, a total of four target-country variables, external-environmental uncertainty (also included as part of the TCE control variables), market size (i.e., GDP per capita and population size) and growth (i.e., GDP growth rate) were considered as controls related to the host country in the further analysis.

#### *Market size and growth*

Since target market size and growth has been shown to be an important factor that influences firms' decisions in the internationalization process (Mitra and Golder 2002, Ellis 2008, He, Brouthers et al. 2013), this factor was included as a control variable. Following

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Ellis (2008) and He et al. (2013), the measurement of market size in this study was captured by using population size and national gross domestic product (GDP) for the export market. Moreover, growth variable related to the target markets was measured by examining the GDP growth rate (annual %). Data were obtained from the World Bank website.

#### **4.4.4 Statistical Analysis**

This study employs logit regression to test hypotheses because the dependent variable, export channel choice, is a binary variable. Logit regression is popularly used in export research (He, Brouthers et al. 2013). Before testing the hypotheses, this study conducted statistical analysis (including non-response bias and common method bias test) by relying on SPSS. SPSS is appropriate statistical software for testing the reliability of the measures in a theoretical context (Wu, Sinkovics et al. 2007, He, Brouthers et al. 2013) and logit regression analysis in hypothesis testing (Cavusgil and Zou 1994).

##### **4.4.4.1 Non-response bias**

In order to assess potential non-response bias, I followed the procedure outlined by Armstrong and Overton (1997), comparing early and late respondents' differences with respect to various firm characteristics, including firm age ( $t=.706$ ,  $p=.117$ ), international diversity ( $t=1.085$ ,  $p=.130$ ), market experience ( $t=-.871$ ,  $p=.965$ ), channel volume ( $t=-.770$ ,  $p=.208$ ), internal uncertainty ( $t=-.804$ ,  $p=.094$ ), external uncertainty ( $t=1.214$ ,  $p=.537$ ), market size ( $t=-1.400$ ,  $p=.222$ ), GDP growth rate ( $t=.083$ ,  $p=.982$ ), population size ( $t=-1.115$ ,  $p=.132$ ) and network diversity ( $t=-.396$ ,  $p=.386$ ). No significant difference between early and late response was found. Hence, it was concluded that response bias does not appear to be an issue in this data.

##### **4.4.4.2 Common methods bias**

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Following the collection of the data, we also tested for common methods bias. Common methods variance may occur when both dependent and independent variables are collected from respondents at the same time. Following the suggestion of Podsakoff et al (Podsakoff, MacKenzie et al. 2003), I utilized two techniques to protect the result of the common method bias. The first method of doing so was involved in designing the study's procedures. When designing the questionnaire, I used different response formats for the measurement of variables. For example, for asset specificity and external uncertainty I used Likert scales; for items such as firm size and network diversity I used open-ended questions; and for variables such as institutional distances I used secondary data. Certain independent variable questions were reverse-scaled in order to eliminate response patterns that could potentially distort the accuracy of the data.

The second method involved statistical controls. Common factor was conducted to assess whether a single latent factor would account for all the manifest variables and ensure that common method variance does not threaten the interpretation of the findings in this research (Brouthers, Brouthers et al. 2003). Using factor analysis and entering all the variables of interest, if the unrotated factor solution contained a factor that accounted for the majority of covariance, then common method bias may have been considered to exist (Wu, Sinkovics et al. 2007). All the variables in this study were entered into an exploratory factor analysis and factor analysis was performed. The results of the factor analysis showed a five-factor solution in which the largest factors explained about 18.72% of the variance. In addition, to overcome the potential problems with the one-factor test, I used confirmatory factor analysis (CFA) to investigate potential common methods bias among the variables in my survey (Podsakoff, MacKenzie et al. 2003). The estimated CFA loaded all the items of the survey onto a common "method" factor. The fit indexes for this model (TLI=.068; CFI=.015;

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IFI=.087; RMSEA=.122) suggest a poor model fit, implying that common method bias alone is not likely to explain any observed relationship between model variables in this study. These results demonstrate that common methods variance is not a problem in the data, since the variables in this study do not load on a single factor and there is no one general factor that accounts for the majority of the covariance among the variables. Consequently, it is evident that the measurement model is robust to a common method variance problem.

#### 4.5 Hypotheses testing

In this section, I present the results of the hypothesis testing based on the conceptual model we developed, as introduced in the theoretical section. Before testing the hypotheses I examined the correlations between variables. Table 22 shows the means, standard deviations and correlations for all our variables. I observed some highly statistically significant correlations (although below the cutoff-of .90, as indicated by Hair et al (2006)) between the independent variables, such as firm age and market experience ( $r=.611$ ), economic distance and market size ( $r=.727$ ).

Given that the correlation between economic distance and market size was higher than 0.60, it was considered necessary to work out whether the market size variable would impact the institutional distance measures. In order to avoid highly significant correlations between the variables, which might lead to multicollinearity issues in the further analysis, I ran several separate regressions; I ran the regressions with all the variables in and then removed market size, testing with and without market size. When I compared the results, I found that they are generally the same; economic distance is significant at the same level in the regressions. Moreover, in this research all interaction variables were recalculated by using their centered values in order to diminish the high correlation between the independent variables and institutional distance interaction variables. I created a Z score for



Table 22: Mean, standard deviation, and Pearson correlations

	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.J-industry	0.10	0.30	1																			
2.EE-industry	0.19	0.40	-.162*	1																		
3.Food-indsutry	0.23	0.42	-.182*	-.268**	1																	
4.Firm age	11.97	7.27	-0.124	-.244**	.226**	1																
5.Firm size	179.68	149.01	-0.069	-0.066	0.000	.507**	1															
6.International diversity	12.74	12.73	0.078	-0.055	-0.066	.266**	.285**	1														
7.Asset specificity	5.49	1.30	-.207*	-.166*	.235**	0.087	0.047	0.070	1													
8.Channel volume	53.60	24.92	0.113	-.204*	0.112	0.102	-0.06	-0.111	0.046	1												
9.Internal uncertainty	3.95	1.29	-0.004	.178*	-0.026	.200*	.262**	.231**	-.218**	-0.103	1											
10.External uncertainty	3.95	1.23	-0.017	0.035	-0.098	.269**	.311**	.169*	0.115	-0.122	.301**	1										
11.Market size	32.48	20.95	0.024	-0.098	-0.097	0.105	0.121	0.012	-0.104	0.111	-0.030	-0.014	1									
12.Market experience	6.74	4.78	0.079	-.317**	.342**	.611**	.318**	.224**	0.095	.246**	0.115	0.126	0.135	1								
13.GDPgrowthrate	2.24	2.52	0.074	0.102	-0.050	-0.075	-0.014	0.007	0.076	0.076	0.084	0.086	-.164*	0.039	1							
14.PopulationSize	187.36	303.49	-0.027	.228**	-0.070	-0.132	-0.014	-0.040	0.081	-0.052	0.054	0.052	-.236**	-.190*	.450**	1						
15.Network diversity	80.85	22.53	0.095	-0.099	-0.123	0.035	-0.010	.237**	0.078	0.090	0.041	0.024	.215**	0.081	-.231**	-0.042	1					
16.Culttural distance	2.67	1.20	-0.066	-0.140	0.090	.187*	0.086	0.064	0.062	-0.038	-0.073	-0.079	.483**	.185*	-.570**	-.287**	0.158	1				
17.Geographic distance	6.82	3.99	-0.032	-0.095	-0.019	0.047	0.079	0.120	-0.024	-0.027	0.033	-0.017	.287**	0.030	-0.078	-0.046	.178*	.211**	1			
18.Administrative distance	9.88	7.80	0.085	0.031	-0.046	-0.106	-0.130	-0.080	-0.012	.176*	-0.031	0.010	-0.093	-0.029	-0.030	-0.094	-0.007	-.204*	-0.077	1		
19.Economic distance	8.79	8.88	-0.044	-0.046	-0.070	0.049	0.140	-0.071	-0.071	0.030	-0.033	0.066	.727**	0.027	-0.057	-0.106	.209*	0.156	.189*	-0.054	1	
20.Export channel choice	0.50	0.50	-0.024	-0.054	0.075	0.134	.245**	0.017	0.000	0.147	.197*	0.081	0.001	.214**	-0.082	-0.127	0.155	0.044	-0.041	0.027	0.014	1

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

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network diversity and new Z scores for each of the four institutional distance variables. I then took the centered value of network diversity and multiplied it by each of the moderating variables to create four different interactions – network diversity x cultural distance, network diversity x administrative distance, network diversity x geographic distance, and network diversity x economic distance.

### **Export Channel Choice (ECC) Results**

In this study, I report on the test of four hypotheses which explore internationalized SMEs' export channel choices. Hypothesis 1 and 2 explore the moderating influence of the informal distance on the relationship between network diversity and export channel choice. I expect to see that it would be more likely for SMEs with high network diversity to choose a hierarchical export channel than a hybrid export channel when informal institutional distance (i.e., cultural and geographic distance) increases. Hypothesis 3 and 4 predict that the relationship between network diversity and export channel choice will be positively affected when the formal institutional distance (i.e., administrative and economic distance) between home and host countries increases. The probability of SMEs with high network diversity selecting hierarchical export channels increases as formal institutional distance increases.

In order to test our hypotheses I ran two regressions on the data (including the original regression and one robustness test). This study used logit regression analysis since the dependent variable had only two groups (Hair, Black et al. 2006); this generally represents the two groups of interest as a binary variable with a value of 0 and 1. This research is interested in the prediction and explanation of the relationships that affect the category in which a firm's export channel choice is located. Logit regression is an appropriate tool for testing this purpose because it is equivalent to two-group discriminate

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analysis and suitable in many situations (Hair, Black et al. 2006). Moreover, it involves straightforward statistical tests, a similar approach to incorporating metric and nonmetric variables and nonlinear effects, along with a wide range of diagnostics (Hair, Black et al. 2006). Given that export channel choice in this research is a binary variable (i.e., hierarchical mode and hybrid mode) (He, Brouthers et al. 2013) for testing H1, H2, H3 and H4, the utility of hierarchical mode is assigned a value of 1, and the utility of hybrid channel option is assigned a value of 0.

Six logit regression models were created to test our four hypotheses concerning export channel choice. As these are nested models based on the base model, I could judge the impact of the added variables on a dependent variable, or model fit, by comparing the change in several indices, such as the Chi-square of the model and Nagelkerke R square (Hair, Black et al. 2006). The Chi-square of the model measures the likelihood that the observed association between the independent variable and the dependent variable is caused by chance. This test provides a comprehensive measure of predictive accuracy that is based not on the likelihood value, but instead on the actual prediction of the dependent variable (Hair, Black et al. 2006). This index is often used to assess the overall significance of the regression model fit.

The Nagelkerke R square ( $R^2$ ) is another important index that provides us with information for assessing a model's overall significance. This index is similar to R square for a linear regression, but it does not convey precisely the same information, with a maximum value of 1 (Hair, Black et al. 2006). It is basically changed in terms of log-likelihood from the intercept-only model to the current model. If the regression model is properly applied and estimated, we can generally assume that the higher the value of  $R^2$ , the greater the

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explanation power of the regression equation, and therefore the better the prediction of the dependent variable (Hair, Black et al. 2006).

With respect to testing for significance of the coefficients, logit regression tests hypothesis about individual coefficients like multiple regression. In logit regression, I use the Wald statistic to assess the significance of each estimated coefficient in logistic regression (Hair, Black et al. 2006). If the logistic coefficient is statistically significant, we can interpret this in terms of how it affects the estimated probability and thus the prediction of group membership (Morgan, Kaleka et al. 2004).

The results of the binary logit regression for network diversity and institutional distance are presented in table 23. Model 1 in table 23 is our base model and it is significant ( $P < .05$ ). The purpose of the base model is to establish a baseline against which the added contribution of variables can be assessed. This model only includes the firm and target market characteristics and transaction costs as the control variables, and export channel choice as the binary dependent variable. All controls explain about 21.7% of the variance in the dependent variable export channel choice. Firm size ( $p < .01$ ), channel volume ( $p < .10$ ) and internal uncertainty ( $p < .05$ ) are found to be positively related to the dependent variable, while the other control variables are not significant.

In Model 2, I added independent variable network diversity. This model examined whether a firm's network diversity has a major impact on its export channel choice. The model was significant ( $p < .05$ ) and indicated that network diversity is positive and significantly ( $p < .05$ ) related to export channel choice. Model 2 explained about 24.4% of the variance in our dependent variable. Adding the network diversity variable increases 2.7% of the explained variance in export channel choice over the base model; the increase in

**Table 23: Logit Binary Regression of Export Channel Choice**

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<b>Control variables</b>						
J-industry	-.295(.672)	-.334(.673)	-.334(.672)	-.386(.686)	-.284(.674)	-.315(.682)
EE-industry	.066(.527)	.109(.548)	.093(.550)	.166(.566)	.162(.556)	.126(.560)
F-industry	.059(.508)	.264(.534)	.245(.535)	.375(.555)	.326(.541)	.313(.537)
Firm age	-.056(.036)	-.058(.038)	-.059(.038)	-.061(.038)	-.055(.038)	-.062(.039)
Firm size	.004***(.002)	.005***(.002)	.005***(.002)	.005***(.002)	.005***(.002)	.005***(.002)
International diversity	-.013(.016)	-.022(.016)	-.023(.016)	-.022(.016)	-.024(.016)	-.024(.016)
Asset specificity	.043(.157)	-.013(.162)	-.041(.166)	-.049(.169)	-.033(.164)	-.022(.163)
Channel volume	.016*(.008)	.013(.008)	.013(.009)	.011(.008)	.010(.009)	.013(.008)
Internal uncertainty	.345**(.167)	.325*(.171)	.326*(.172)	.325*(.172)	.308*(.172)	.322*(.171)
External uncertainty	.015(.168)	.047(.172)	.064(.174)	.047(.173)	.061(.173)	.054(.173)
Market size	-.009(.009)	-.017*(.010)	-.023*(.012)	-.015(.010)	-.017*(.010)	-.010(.015)
Market experience	.091(.056)	.087(.059)	.081(.060)	.091(.060)	.092(.060)	.089(.060)
GDP growth rate	-.120(.087)	-.084(.093)	-.029(.114)	-.081(.093)	-.085(.094)	-.084(.095)
Population size	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)
<b>Predictor variables</b>						
Network diversity		.022**(.010)	.023**(.010)	.027**(.012)	.025**(.011)	.025**(.011)
Cultural distance (CD)			.213(.258)			
Geographic distance (GD)				-.047(.051)		
Administrative distance (AD)					-.006(.025)	
Economic distance (ED)						-.026(.040)
<b>Interactions</b>						
zCD x Network diversity			.013(.205)			
zGD x Network diversity				.182(.254)		
zAD x Network diversity					-.148(.154)	
zED x Network diversity						.142(.278)
<b>Constant</b>						
	-2.262*(1.309)	-3.481**(.1509)	-3.920**(.1605)	-3.398**(.1540)	-3.481**(.1568)	-3.721**(.1562)
Chi-square (X <sup>2</sup> )	26.468**	30.952***	31.650**	32.108**	31.880**	31.501**
X <sup>2</sup> change from model 1		4.484**				
X <sup>2</sup> change from model 2			0.111**	1.156**	0.928**	0.549**
Nagelkerke R <sup>2</sup>	.217	.244	.261	.265	.263	.260

Note: n=151; Hybrid channel=0

\* P &lt; .10. \*\* P &lt; .05. \*\*\* P &lt; .01 (based on Wald test)

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explanatory power over Model 1 was also significant ( $p < .05$ ). As predicted, the result showed that firms with higher network diversity tend to prefer hierarchical export channels. Model 3 and Model 4 tested the moderating effects of the variable informal institutional distance (i.e., cultural distance and geographic distance). Model 3 includes the interaction between cultural distance and network diversity. Model 4 includes the interaction between geographic distance and network diversity. Based on these two model results, informal institutional distance interaction variables are insignificant in the regression, which implies that informal institutional distance does not moderate the relation between network diversity and export channel choice. Thus, hypothesis 1 and 2 are not supported.

Model 5 and 6 are the formal institutional distance models. I added the formal distance interaction variable into the network diversity model. These two models examine the moderating effect of the formal institutional distance (i.e., administrative distance and economic distance) on the relation between network diversity and export channel choice. Both the interaction variable administrative institutional distance  $\times$  network diversity and economic distance  $\times$  network diversity showed an insignificant result in the regression. The regression results suggest that adding the formal institutional distance cannot moderate the relationship between network diversity and export channel choice. Therefore, hypothesis 3 and 4 are not supported. Conclusively, neither the formal nor informal institutional distance can moderate the relationship between network diversity and export channel choice.

### **Robustness testing**

Although CAGE distance framework is the most comprehensive framework for examining the impact of formal and informal institutional distance on firms' internationalization strategy, the three pillars of institutional environments (i.e., including the regulative dimension as well as the cognitive and normative dimensions) is another

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institutional distance measurement to access the distance differences between countries. The regulatory pillar refers to the formal rules and regulations (Brouthers, Brouthers et al. 2008). These regulations vary between different countries, leading to 'regulative distance' between home and host countries (Chao and Kumar 2010). The informal pillar, normative and cognitive dimensions, refers to social norms (North 1990, Brouthers, Brouthers et al. 2008). This defines what behavior and values are expected of organizations, which are often visible through shared values or norms, and the way to work in a certain country (Bruton, Fried et al. 2005).

In order to provide robust support for our hypotheses, I performed a robustness test based on the three-pillar measurement to further strengthen the findings. Following Kogut and Singh (1988), I measured the informal cultural distance between the target countries and China (country of origin) by using Hofstede's four cultural dimensions: power distance, uncertainty avoidance, masculinity/femininity and individuality (Lavie and Miller 2008). The normative distance (Cronbach's  $\alpha = .945$ ) captures managerial attitudes and norms taken from the Global Competitiveness Report (Xu, Pan et al. 2004) in the year export activities began; this includes seven dimensions: efficacy of corporate boards, pay and productivity, capacity and innovation, degree of customer orientation, extent of staff training, reliance on professional management and willingness to delegate authority (He, Brouthers et al. 2013). Moreover, according to He et al (2013), I used the Economic Freedom Index (EFI) to measure formal institutional distance. 10 items developed by He et al (2013) were used to measure the formal distance constructor (Cronbach's  $\alpha = .816$ ).

Table 24 shows the result of the robustness test. We created six logit models to explore the hypotheses concerning export channel choice. Model 1 in table 24 is our base model and it is significant ( $P < .05$ ). The transaction cost and other control variables explain

Table 24: Logit Binary Regression of Export Channel Choice

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<b>Control variables</b>						
J-industry	-.295(.672)	-.334(.673)	-.334(.672)	-.267(.684)	-.349(.678)	-.217(.693)
EE-industry	.066(.527)	.109(.548)	.093(.550)	.198(.559)	.086(.562)	.185(.578)
F-industry	.059(.508)	.264(.534)	.245(.535)	.233(.533)	.261(.537)	.227(.542)
Firm age	-.056(.036)	-.058(.038)	-.059(.038)	-.056(.038)	-.058(.038)	-.058(.039)
Firm size	.004***(.002)	.005***(.002)	.005***(.002)	.004***(.002)	.005***(.002)	.005***(.002)
International diversity	-.013(.016)	-.022(.016)	-.023(.016)	-.021(.016)	-.022(.016)	-.021(.016)
Asset specificity	.043(.157)	-.013(.162)	-.041(.166)	-.012(.163)	-.020(.164)	-.068(.171)
Channel volume	.016*(.008)	.013(.008)	.013(.009)	.011(.008)	.013(.008)	.013(.009)
Internal uncertainty	.345**(.167)	.325*(.171)	.326*(.172)	.354*(.173)	.324*(.172)	.359**(.176)
External uncertainty	.015(.168)	.047(.172)	.064(.174)	.026(.174)	.049(.172)	.046(.178)
Market size	-.009(.009)	-.017*(.010)	-.023*(.012)	-.017*(.010)	-.016*(.010)	-.023*(.013)
Market experience	.091(.056)	.087(.059)	.081(.060)	.095(.060)	.087(.059)	.089(.061)
GDP growth rate	-.120(.087)	-.084(.093)	-.029(.114)	-.084(.094)	-.082(.094)	-.017(.115)
Population size	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)	-.001(.001)
<b>Predictor variables</b>						
Network diversity		.022**(.010)	.023**(.010)	.024**(.010)	.023**(.011)	.027**(.011)
Cultural distance (CD)			.213(.258)			.220(.264)
Normative distance (ND)				.429(.343)		.601(.387)
Formal distance (FD)					-.004(.014)	-.013(.016)
<b>Interactions</b>						
zCD x Network diversity			.013(.205)			.013(.199)
zND x Network diversity				-.152(.249)		-.235(.300)
zFD x Network diversity					.004(.214)	.124(.244)
<b>Constant</b>						
	-2.262*(1.309)	-3.481** (1.509)	-3.920** (1.605)	-5.616** (2.290)	-3.205* (1.772)	-6.196** (2.510)
Chi-square (X <sup>2</sup> )	26.468**	30.952***	31.650**	32.749**	31.047**	34.476**
X <sup>2</sup> change from model 1		4.484**				
X <sup>2</sup> change from model 2			0.698**	1.797**		
Nagelkerke R <sup>2</sup>	.217	.244	.261	.270	.257	.282

Note: n=151; Hybrid channel=0

\* P&lt; .10. \*\*P&lt; .05. \*\*\*P&lt; .01 (based on Wald test)



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about 21.7% of the variance in the dependent variable, the export channel choice. Model 2 in table 24 examines a firm's network diversity impact on its export channel choice. This model was significant ( $p < .05$ ) and indicated that network diversity is positive and significantly ( $p < .05$ ) related to export channel choice. The result supports the hypothesis that firms with higher network diversity tend to prefer hierarchical export channels, as predicted in paper 2. Model 3, 4 and 5 explore the interactions between network diversity and our three institutional distance measures separately, while model 6 includes all interactions between network diversity and institutional distance proxies. All the interaction models are insignificant. Collectively, the results we found here are similar to the results we found in the original regression test.

## **4.6 Conclusions**

### **4.6.1 Findings and Discussion**

In this study I integrated the TCA perspective with RBV and institutional theories to create a more comprehensive model to explain small and medium sized Chinese firms' (SMEs) export channel choices. In particular, I looked at the association between network diversity, institutional distance and export channel choice for SMEs. Previous scholarship suggests that the institutional context of a country determines the complexity and cost of conducting transactions for an individual firm (Brouthers and Brouthers 2000, Xu and Shenkar 2002), and a firm's high network diversity can provide them with significant resources for overcoming the challenge of transfer and the unfamiliarity arising from institutional distance (Shaner and Maznevski 2011, Patel, Fernhaber et al. 2013). Developing this theory, I explored and tested the notion that institutional context does not influence a firm's export channel choice independently, but instead in combination with other important export channel choice-decision criteria, such as network diversity. I theorized that

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institutional distance would have a moderating influence on the relationship between network diversity and export channel choice. However, drawing on a sample of 151 Chinese manufacturers involved in exporting, our results provide no support for these hypotheses.

I found that firms possessing high network diversity make very different export channel choices from those that have low network diversity. A Firm's network diversity is positively related to its export channel choice; this result is consistent with the findings of paper 2, which suggests that firms with high network diversity are more likely to choose hierarchical export channels. In contrast, a firm with low network diversity is more likely to choose hybrid export channels because these do not require firms to have high resource investment, and weak network diversity results in firms having knowledge and resources that are neither sufficient nor comprehensive enough to meet the resource requirements of hierarchical export channels (Patel, Fernhaber et al. 2013).

The results also reveal that hypotheses 1, 2, 3 and 4 are not supported. In hypotheses 1, 2, 3 and 4 I proposed that informal institutional distance (i.e., cultural distance and geographic institutional distance) and formal institutional distance (i.e., administrative distance and economic institutional distance) strengthen the positive relationship between network diversity and hierarchical export channel choice. However, contrary to my initial expectations, I find no evidence that institutional distance moderate network diversity-export channel choice relationship. Both the original and robustness regression results show that institutional distance has little relevance in explaining the choice of a specific export channel, all of the interaction terms (network diversity x informal institutional distance and network diversity x formal institutional distance) are not significant. There may be several potential explanations for the divergence found in this study.

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While cultural distance has been widely tested in previous studies, our findings indicated that cultural distance has no significant moderating effect in our case. Perhaps this can be explained by Shenkar's (2001) argument that the implicit assumption of culture being stable is an illusion, as cultures gradually evolve. Our study used Hofstede's cultural data gathered a couple of years ago to explain international strategic decisions made perhaps some years later. The problem with this approach is that, even if we assume that cultural values are relatively stable and do not change substantially in a certain year, we cannot explain strategic changes that occurred after the export channel choice was made. Given that a 'static' cultural distance measure cannot predict strategic behaviour precisely (Shenkar 2001), hence, this may be a potential explanation for the divergence found in the study.

Moreover, a potential explanation for the insignificant result of informal institutions is that geographic distance is also a matter of knowledge distance. Informal institutional knowledge is particularly tacit and complex (Kostova and Zaheer 1999, Tallman and Chacar 2011) and firms' network diversity does not easily facilitate the transfer of this tacit knowledge from one country to the next. Although diversified networks provide firms with access to knowledge-related resources (Gaur and Lu 2007, Meyer, Estrin et al. 2009), the practice-based learning perspective suggests that facilitating the movement of the tacit component knowledge is not an easy task (Tallman and Chacar 2011) and such knowledge acquisition is often subject to high transaction costs (Hennart 1988). This may also partly explain the insignificance of the geographic distance of informal institutions in our export channel choice analysis.

Another reason that may explain the insignificant institutional finding is the measurement of institutional distance. Consistent with past studies, our indicators of formal

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and informal institutional distance provide objective country-level measures of these concepts. However, using different measures may allow scholars to obtain different results on the institutional environment. Researchers may wish to use measures such as the European Bank of Reconstruction and Development measure of institutional factors (Raiser and Tommaso 2001), the Corruptions Perception Index (Brouthers, Brouthers et al. 2008), or Henisz's Political Constraints (Henisz 2000), although we found high correlations between these measures and the ones in this study. Furthermore, our institutional measures did not work; this is perhaps because they are objective measures and not what managers perceive to be the distance. Prior research tends to indicate that managerial perceptions of institutional distance drive international marketing decisions (Yiu and Makino 2002, Xu, Pan et al. 2004), and consequence performance of foreign firms (North 1990, Gaur and Lu 2007, Brouthers 2013). When exploring the impact of institutional environments on decision-making, perceptions of the environment are all important (Brouthers 2013). Given that our measures of formal and informal distance may not be the best ones, future studies may refine our measures and consider the measurement of institutional distance from both the perceived distance and the actual distance to understand firms' international activity.

This study makes three important contributions to the existing research. First, it extends the research on strategic management and the traditional TCA of export channel choice by adding the network perspective and institutional distance to create a more comprehensive research model. Although in an exporting context TCA theories have been frequently applied to explain firms' internationalization and this has provided valuable insights about what specific factors might affect the channel choice (Bello and Lohtia 1995, Aulakh and Kotabe 1997), observed channels have always been thought to be those that minimize the costs associated with opportunism whilst economizing on bounded rationality

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(Zhao, Luo et al. 2004, Shervani, Frazier et al. 2007). Previous research generally provided an under-socialized perspective within organizational studies (Roberts and Greenwood 1997), often forgetting to consider the impact of resources embedded in networks and the macro-level institutional environment in terms of the firm's transaction cost. In fact, both RBV and institutional theory should have strong implications for firms' strategic design adaptation, because organizations operate in both competitive and institutional environments (Brouthers 2002) and institutional distance affects firm's transaction cost (North 1990). Adding RBV and institutional theory to TCA theory can enrich the understanding of firms' international strategic choice. Hence, this study builds on existing literature by considering the role of network diversity and the context in which firms operate as factors in SMEs' internationalization, expanding understanding of reasons underlying firm's export channel choice decisions in international markets.

Second, this study makes an important contribution to network literatures. Network literature has generally treated the network as a holistic concept and is short of research into its impact on international strategies, especially with regards to firms' export channel choice. My study extended network research to include both the domestic and foreign networks of exporting firms. We not only followed on from previous studies that mainly focus on a firm's domestic networks (Peng and Luo 2000, Park and Luo 2001, Yiu, Lau et al. 2007, Guler and Guillén 2010), but also explored firms' networks with foreign businesses and agencies and their influences on export channel choice. We focused on the information-related benefits of networks (i.e., knowledge of foreign market opportunities, advice and experiential learning and referral trust and solidarity), which we suggest impact firms' export channel choice by means of saving transaction costs and improving efficiency.

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In addition, this study contributes to the increasing importance and applicability of institutional theory to explain SMEs' export strategy and behaviour in the international context. Prior studies have looked into problems in transfer of organizational knowledge and practices due to differences in institutional contexts (Kostova 1999, Kostova and Roth 2002), effects of institutional distance on multinational firm strategies pertaining to choice of countries, entry mode (Brouthers and Hennart 2007, Estrin, Baghdasaryan et al. 2009), ownership (Xu and Shenkar 2002, Xu, Pan et al. 2004), and survival of foreign subsidiaries (Chan and Makino 2007, Gaur and Lu 2007) as well as performance (Chao and Kumar 2010, He, Brouthers et al. 2013). I extend this body of work by focusing on the role that institutional distance plays in moderating the export channel choice consequence of network diversity. In this way, this study made an important contribution by improving past research and extending our knowledge about how institutional distance can affect a firm's export channel choice before it can impact the firm's performance. Moreover, by empirically studying the impact of four distance factors (CAGE) we offer a more comprehensive understanding of the impact of distance factors on firms' export channel choice behaviour in the rapidly changing global environment. Collectively, our findings contribute to a better understanding of institutional distance and its impact on SMEs' export channel choice.

#### **4.6.2 Limitations and Conclusion**

This study is subject to several theoretical and methodology limitations, which future researchers can build on for further developing of research in this area. First, given that the use of a single export channel for exporting operations in a foreign market is the most popular export market entry and international expansion mode, this research therefore focuses on internationalization firms which only use a single export channel in

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their most important export market. To improve the generalizability of our findings, further studies should examine firms that use multiple channels.

Second, although the context of Chinese businesses provided an illustration of the model for testing purposes, the context itself presents a limitation. In particular, our results were derived from a sample of SMEs in Mainland China, a single country; this gives rise to concerns about the generalizability of the findings to other emerging or developed countries. Thus, although I believe that the setting of China is not unique and these findings should be applicable to other emerging markets, only further research can adequately address this issue. Hence, an extension of this study would be to collect SME samples from other environments.

The third limitation pertains to the questionnaire filling-in process. This study uses a single key informant approach, which is common practice in SMEs internationalization research. Previous scholars have suggested that choosing the appropriate key informant can alleviate some of the potential problems (Kumar, Stern et al. 1993). I chose the founder or international department managers as key informants, who I assumed were well informed about their own organization. However, the debate continues as to whether multiple responses from an organization are necessary to ensure the validity of results, such as those in this study (Phillips 1981). Although the use of multiple informants is a more rigorous data collection procedure, in this study I minimized the potential common source bias by separating the whole questionnaire into two sections and reversing some of the scales. In the future research, researchers could try to request that multiple informants from an organization fill in the questionnaire.

Fourth, another limitation in this study is that I only examined manufacturing-based SMEs and did not consider service firms. We do not know whether our findings drawn from

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manufacturing-based firms can be used to explain service-based firms or not, because service firms are different from manufacturing firms. Previous studies suggest that transaction cost theory can impact service and manufacturing firms differently (Erramilli and Rao 1993) since service firms are more people-intensive than manufacturing firms (Brouthers and Brouthers 2003), and manufacturing firms are more investment-intensive in terms of the plant, equipment and inventory (Gatignon and Anderson 1988). For this reason, future studies can resolve this limitation by examining service firms.

Fifth, this research employs cross-sectional data rather than longitudinal data. Although longitudinal research designs are logistically difficult and time-consuming, they do enable time-series data analysis (Morgan, Kaleka et al. 2004). Cross-sectional data were necessary and appropriate to explore what was happening at a certain point in time (Morgan, Kaleka et al. 2004). However, they were not capable of fully explaining the dynamic process of variables. Given the cross-sectional nature of our data, it is not possible to establish conclusively any causal relationship; thus, I suggest that it would be better for future research to use a longitudinal method to investigate the dynamic development and evaluation of network diversity and institutional distances in manufacturing-based exporting firms and their interaction effects on export channel choice.

Sixth, this research only focused on the export channel choice behaviour of firms. While offering very important insights, the obvious next issue to consider is the firm performance. It will be interesting to see whether the distance factors impact the relationship between network diversity, firms' export channel and international performance. To date, there is no empirical evidence linking distance factors and network diversity to the international performance of firms. Moreover, although we incorporate all four distance factors (CAGE) into our model, further research could focus on the relative



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role of each factor. For instance, some of the distance factors may be more important than others during certain stages of the internationalization process.

In conclusion, this study provides important extensions to past export channel research, exploring and improving our understanding of how network diversity impact SMEs' export channel choice, with a particular emphasis on how the country institutional context indirectly influences the potency of network diversity and consequently impacts the choice of export channels. I develop a new theory to explain how the RBV and institutional context can be applied to exporting activities, an area of strategy that has received little attention from RBV and institutional scholars. I add to knowledge by investigating the moderating role of institutional distance in the relation between network diversity and export channel choice. This study represents a first step toward understanding the links among network diversity, institutional distance and export channel choice, and thus future research on this important nexus is warranted. Results of the future studies coupled with the framework proposed in this paper will enhance our understanding of SMEs' export behaviour.

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## Chapter 5: Conclusions

This research focuses on SME export channel choices. The central purpose of this study is to contribute to a more holistic understanding of the factors that impact SMEs' export channel choices. Export channel choice in this dissertation has been defined as the export distribution channel structure chosen by the internationalizing firm to perform export marketing and distribution functions. Basically, in an exporting context, firms have three choices when implementing international marketing and distribution functions (Klein and Roth 1990). Firms can choose to provide all the marketing and distribution functions themselves through the hierarchical mode (i.e., serves foreign markets with home-based representatives or establishes sales subsidiaries in a foreign market), or they can choose not to perform any of these functions by relying on the market-based mode (i.e., use foreign independent distributors). Between these two extremes, firms also can choose hybrid export channels, also named intermediate modes, (i.e., forming distribution related strategic alliances with other foreign firms), whereby they perform some functions while partner firms perform the others (Klein, Frazier et al. 1990, Klein and Roth 1990).

The study of export channel choice is very important because, as an indispensable strategy for internationalizing firms, the proper channel choice has performance implications (Aulakh and Kotabe 1997, He, Brouthers et al. 2013). The choice of export channel, in relation to the cross-boarder relationship, is also a critical issue in order to determine the ex-ante opportunism of channel partners (Cavusgil and Zou 1994). In addition, export channel structures are more difficult to change than other aspects of the marketing mix, such as pricing or product, and wrong decisions may have long-lasting, adverse consequences for firms (Anderson and Coughlan 1987).

In this dissertation I developed three frameworks and papers. I addressed the export channel choice issue by integrating TCA, RBV, network, and institutional theories into a more comprehensive model, and using manufacturing-based exporting SMEs in China as the unit of analysis to look at how SMEs' entrepreneurial orientation, networks (i.e., network size and network strength), network diversity, networking capability and institutional distance affects its export channel choice.

In order to test the hypotheses, I utilized a survey research design to collect data from 600 Zhejiang-based manufacturing SMEs (from a total population of about 40,000) involved in exporting. The sampling and data gathering procedure is reported in each paper, along with the development process of the measurement items. Moreover, I documented the results of descriptive statistics, nonresponse bias test, common methods variance test, and construct reliability and validity test in each paper. Multinomial logistic regression, ordered probit regression and binary logit regression were use to test the export channel models and identify the channel choice predicted by our models. The results of the hypotheses testing are summarized in the following table (see table 25), which presents the relationships found among factors (i.e., EO, network size and strength, network diversity, networking capability and institutional distance) in the suggested models.

Table 25: summary of hypotheses testing results

Hypothesis	Relationship examined	Support
(Paper1) H1	Entrepreneurial orientation (EO) → Export channel choice	Partially supported
(Paper1) H2	Networks → EO-Export channel choice relationship	Not supported
(Paper2) H1	Network diversity → Export channel choice	Supported
(Paper) H2	Networking capability → ND-Export channel choice relationship	Supported
(Paper3) H1 and H2	Informal institutional distance → ND-Export channel choice relationship	Not supported
(Paper3) H3 and H4	Formal institutional distance → ND-Export channel choice relationship	Not supported

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## 5.1 Paper Summaries

### *Summary of paper 1*

Most previous EO studies modelled a direct relationship between EO and performance (Lumpkin and Dess 1996, Lumpkin and Dess 2001, Stam and Elfring 2008, Brouthers, Nakos et al. 2014), largely ignored EO's role in influencing the firm's export channel choice. Based on the combination of TCA, network theory and RBV, in paper 1 I view EO and networks as a firm's inimitable capability and resources, proposing that international marketing strategy (i.e., export channel choice) could be the missing link in the relationship between a firm's entrepreneurial orientation and its international performance. In particular, firms with high-EO are more likely to choose a non-market mode of exchange (a hierarchical export channel or an intermediate export channel).

The rationale behind this proposition is that all components of EO, namely innovativeness, proactiveness and risk-taking, lead to the firms' choosing a non-market export channel. An entrepreneurial-orientated firm tends to behave innovatively, prefers to predict trends, and has higher risk-taking habits than conservative firms often resulting in possessing a greater managerial desire for internationalization (Covin and Slevin 1991, Lumpkin and Dess 1996, Wiklund and Shepherd 2003). I also propose that networks moderate the relationship between EO and export channel choice because resource-based networks provide firms with access to distinct social resources and the value of such access will be contingent on the resource needs associated with a firm EO (Stam and Elfring 2008)

In contrast to our predictions, which suggested that firms possessing high EO will be more likely to choose hierarchical export channels, both the multinomial regression and ordered probit regression results reveal that we do not receive significant support for the hypotheses in paper 1. Instead, the results of multinomial regression show that a firm with a



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high-level EO is more likely to choose a market-based export channel than the hierarchical mode. Our ordered probit regression findings indicate that EO has little relevance in explaining the choice of a specific export channel. Moreover, I find no evidence that a firm's networks (network size and strength) moderate the relationship between EO and export channel choice. These divergent results can perhaps be explained by following reasons.

First, firms have considered the trade-off between the control that each export channel affords the entrant and the cost of resource commitments (Aulakh and Kotabe 1997). While the hierarchical mode provides firms with greater control than other channels, this also requires more resource commitments (Klein and Roth 1990). Second, although networks carry strategically valuable knowledge resources, these networks might simply provide redundant resources and they may not provide essential support to firms as they attempt to leverage the firm's EO (Lee, Lee et al. 2001, Gu, Hung et al. 2008). Third, firms are able to access resources through networks, but they may not have the capacity to absorb this and apply it to the firm's innovation and commercial ends (Phene and Almeida 2008, Lu, Zhou et al. 2010). Accordingly, further capability may be required to coordinate this relationship.

Although this study obtained an unexpected result for the EO to export channel choice relationship and found no support for the networks' moderating affect, these findings enrich our knowledge of SMEs' EO, networks and export channel choice. I call for further research to investigate the mechanism of these findings to see whether they are context specific. I also call for future studies look for more moderating factors.

### ***Summary of paper 2***

Paper 2 aims to investigate the relationship between network diversity, networking capability and export channel choice. In particular, I theorize that the diversity of firms'

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networks is positively associated with their export channel choice, and networking capability (i.e., knowledge recognizing ability, knowledge assimilation ability, and partnering ability) positively moderates this relationship. The rationale behind this proposition is that building upon the information-related benefits of networks, the diversity of network partners' background and experiences can provide firms with more diverse samples of information from which to learn (Goerzen and Beamish 2005), consequently mitigating the transaction costs of internationalization (Zacharakis 1997) and impacting business strategy (Chetty and Agndal 2007). Moreover, underpinning the networks and capabilities and strategic management literatures, although diverse networks provide important access to knowledge-related resources, their impact on export channel choice may depend on the extent to which a firm can recognize and assimilate such knowledge, and apply it to the commercial ends (Kale and Singh 1999, Collins and Hitt 2006).

In paper 2 I treat export channel choice as a binary variable, a choice between hierarchical export channel and hybrid export channel. The results of binary regression reveal that hypothesis 1 and 2 are supported. This provides empirical evidence that firms with high network diversity are more likely to choose hierarchical export channels than hybrid export channels. Diversified networks serve as an efficient source of critical resources and provide SMEs with required information that firms can use for developing competences, in turn making it easier for SMEs to export independently (Brouthers, Nakos et al. 2014). Consistent with our expectations, I find evidence that networking capability has a positive moderating effect, as predicted.

These findings enrich the literature on network study by focusing on the nature and implications of different kinds and levels of networks for SMEs' strategic internationalization. I also make an important contribution to the capability-based view; this study is the first to

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treat networking capability as a holistic concept in firm internationalization study and to consider networks from the perspective of dynamic capability. With regard to the interacting effects of network diversity and networking capability, another question that should be answered is that will they impact firms' international performance? Further research should examine this issue in order to expand existing knowledge in this respect.

### ***Summary of paper 3***

Unlike in previous strategic management literatures that generally provided an under-socialized perspective within organizational studies and ignored the impact of macro-level institutional environment with regard to the firm's transaction cost (Roberts and Greenwood 1997), I extended this body of work by focusing on the role that institutional distance plays in moderating the export channel choice consequences of network diversity. Following network diversity studies and linking RBV, institutional theories and TCA perspective, in paper 3 I hypothesize that both informal (i.e., cultural distance and geographic distance) and formal (i.e., administrative distance and economic distance) institutional distance will have a positive moderating influence on the relationship between network diversity and export channel choice.

The rationale behind this proposition is that the institutional context of both informal and formal institutions in a host country can be very different from those in a firm's home environment (North 1990). Firms with diverse networks will have broader resources to perform all functions when serving foreign markets (Shervani, Frazier et al. 2007, He, Brouthers et al. 2013). Although costs and hazards of doing business in larger institutionally distant countries may be increased, firms can mitigate such challenges by utilizing higher levels of ownership (Delios and Beamish 1999, Brouthers and Nakos 2004). They can do this because the knowledge and support required from highly diverse networks is beneficial to

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firms in overcoming the challenges of entering institutionally distant countries (Patel, Fernhaber et al. 2013).

Contrary to our expectations, the results of binary logit regression reveal that the hypotheses in paper 3 are not supported. It appears that institutional distance has little relevance in explaining the choice of a specific export mode. In our empirical test, I find that the differences in institutional context do not moderate the influence of network diversity on export channel choice. Three potential explanations for this are reported. First, I speculate that this finding may be a consequence of using Hofstede's cultural data gathered from the website to measure the firm's cultural institutional distance. A 'static' cultural distance measure cannot predict strategic behaviour precisely (Shenkar 2001). Second, this result can perhaps be explained by the practice-based learning perspective, which suggests that informal institutional knowledge is highly tacit and complex (Tallman and Chacar 2011). Although network diversity provides firms with access to sufficient knowledge-related resources to overcome unfamiliarity arising from large informal institutional distance (Meyer, Estrin et al. 2009), facilitating the movement of tacit component knowledge is difficult (Tallman and Chacar 2011). Third, the result is explained by referring to the fact that our institutional measures did not work; the measurement we adapted are objective measures and not what managers perceive to be the distance. Using different measures may allow scholars to obtain different results on the institutional environment.

Paper 3 enriches the understanding of firms' international strategic choice by adding RBV and institutional theory to TCA theory. It also contributes to the increasing importance and applicability of institutional theory to explain SMEs' export strategy and behaviour in the international context. Our approach has weaknesses however. The informal institutional distance may be proxied by alternative measures; recent studies (Estrin, Ionascu et al. 2007,

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Kim and Gray 2009) suggest that different measurements may result in different results. Further research may wish to develop alternative measures for differences in informal institutions.

## **5.2 Research implications and Main Contributions**

Researchers and managers can gain several important benefits from the present set of studies and contributions I have made. First, I suggested that EO, one of the central concepts in the domain of entrepreneurship and internationalization (Covin, Green et al. 2006, Rauch, Wiklund et al. 2009), should be combined with international strategies (i.e., export channel choice) in the context of exporting in an integrated framework. In this regard, the present study developed and tested this theory, making a key contribution to both strategic management and international entrepreneurship literatures that bridges the gaps between the resource-based capability and international strategies. Our model of EO in international business provides an extension to EO studies. For a long time EO studies have suggested that EO affects performance directly (Wiklund and Shepherd 2003, Covin, Green et al. 2006, Rauch, Wiklund et al. 2009), only a few studies have looked at this in the international context; these studies have generally ignored the influence of EO on the firm's internationalization strategies. In this dissertation, it was suggested that the choice of an appropriate export channel, a matter of strategic business choice, can be guided and influenced by the internationalizing firms' entrepreneurial-orientated philosophy and activities. Thus, our study has expanded EO studies.

Second, this study extends network literature by examining the direct and indirect influence of the different aspects of networks (i.e., network size, strength and diversity) on firms' export channel choice before they can impact firms' international performance (Uzzi 1996, Goerzen and Beamish 2005, Zhou, Wu et al. 2007, Jiang, Tao et al. 2010). Although

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they are grounded in the network perspective and many studies have empirically demonstrated that networks can provide firms with various benefits, network literature is short of research into the impact of networks on international strategy (Grayson and Ambler 1999), especially firms' export channel choice (Zou and Stan 1998). Given that the central foundation of network theory is the transmission of knowledge through social contacts (Zhou, Wu et al. 2007) and these information-based benefits can mitigate a firm's transaction costs during internationalization (Gulati, Nohria et al. 2000), the present study therefore argues that firms' networks, as a source of social resources, influence their export channel strategy. I particularly focused on three aspects of networks (network size, network strength, and network diversity). This study tested the role that network size and network strength play in moderating the export channel choice consequence of EO, examining the direct impact of network diversity on the choice of export channels. It was confirmed that network size and strength have no moderating effect, but network diversity is positively associated with export channel choice. Our model and findings contribute to the theoretical development in the field of networks and international entrepreneurship.

Third, this research contributes to the capability-based view by being the first to treat networking capability as a holistic concept and investigate its affect in the context of SME export channel choice. Although based on RBV several studies have focused on the issue of how networking capability impacts firms' internationalization (Kale, Dyer et al. 2002, Zahra and George 2002, Walter, Auer et al. 2006), most of them have treated networking capability as a single construct (i.e., network competence, alliance capability, partnering capability and absorptive capacity). In order to complement this line of research, this research identified the features of the networking capability set, comprising three dynamic elements: knowledge recognizing ability, knowledge assimilation ability and partnering

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ability. I added a holistic networking capability context variable into firms' internationalization studies. Collectively, this study contributes to existing networking capability literatures by considering networks from the perspective of dynamic capability, extending the traditional research focus on the impact of single capability dimension on firms' internationalization.

Fourth, this study also makes an important contribution by developing a framework that takes into account institutional differences between countries and tailors the resource-structure paradigm to be applicable to exporting activities and strategy of SMEs. Prior studies have looked into problems in transfer of organizational knowledge and practices due to differences in institutional contexts (Kostova 1999, Kostova and Roth 2002), effects of institutional distance on firm strategies pertaining to entry mode choice (Brouthers and Hennart 2007, Estrin, Baghdasaryan et al. 2009), ownership (Xu and Shenkar 2002, Xu, Pan et al. 2004), survival of foreign subsidiaries (Chan and Makino 2007, Gaur and Lu 2007) and performance (Chao and Kumar 2010, He, Brouthers et al. 2013). I extended this body of work by focusing on the role that institutional distance (CAGE factors) plays in moderating the export channel choice consequence of network diversity. The introduction of the institutional distance concept, I believe, provides a unique and interesting new perspective to SME export channel research. Our finding contributes to a better understanding of the institutional factor (CAGE distance) and its impact on the relationship between network diversity and export channel choice.

Finally, this study also contributes to traditional TCA theory and SMEs export channel research by focusing on SMEs particularly and linking the RBV, network perspective and institutional context to create a more comprehensive research model. TCA theory has been frequently applied to explain firms' internationalization and has provided valuable insights

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about which specific factors might affect channel choice (Bello and Lohtia 1995, Aulakh and Kotabe 1997). However, these TCA studies mainly focus on the least costly solution and MNEs in developed countries (Gatignon and Anderson 1988, Klein, Frazier et al. 1990), largely ignoring SMEs, RBV and institutional environment in terms of the firm's transaction costs. Given SMEs' relatively low base of resources, scholars have suggested that previous results found for MNEs are not valid for SMEs (Brouthers and Nakos 2004); their particular export mode decision cannot be viewed in isolation (Peng 2001), instead they must be considered in relation to the overall resource (Westhead, Wright et al. 2001) and business environment of the firm (Meyer 2001). Hence, this study linked RBV and institutional theory with the TCA perspective to approach SMEs' export channel choice issue. RBV extends the focus from cost minimization to take into account value creation in internationalization and differences in institutional settings that are able to affect firm's value generating from resource-based advantages and international strategic choice (Brouthers and Brouthers 2000, Brouthers 2002). In this way, this study contributes to existing TCA literatures by considering the influence of RBV and institutional factors on SMEs' export channel choice.

### **5.3 Limitations**

Several limitations to this dissertation may suggest further research opportunities. First, a number of limitations pertain to my sample. This entire research only examined manufacturing-based SMEs and did not consider service firms. I do not know whether the findings drawn from manufacturing-based firms can be used to explain service-based firms, because service firms are different from manufacturing firms (Erramilli and Rao 1993). Previous studies suggest that transaction cost theory can impact service and manufacturing firms differently (Erramilli and Rao 1993), because service firms are more people-intensive than manufacturing firms (Brouthers and Brouthers 2003), and manufacturing firms are



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more investment-intensive in terms of plant, equipment and inventory (Gatignon and Anderson 1988). For this reason, future studies can resolve this limitation by examining a greater number of service firms. The second limitation with regards to my sample is that our results were derived from a sample of SMEs in Mainland China, a single country; this gives rise to concerns about the generalizability of the findings to other emerging or developed countries. Although I believe that the setting of China is not unique and these findings should be applicable to other emerging markets, only further research can adequately address this issue. Hence, an extension of this study would be to collect SME samples from other environments. The third limitation pertaining to my sample is that given that the use of a single export channel for exporting operations in a foreign market is the most popular export market entry and international expansion mode, this research focuses on internationalization firms which only use a single export channel as their most important export market. To improve the generalizability of the findings, further studies should examine our models in the less common situation of internationalizing firms that use multiple channels.

The fourth limitation is pertaining to the questionnaire filling-in process. My study uses a single key informant approach, which is common practice in SME internationalization research. Previous scholars have suggested that choosing the appropriate key informant can alleviate some of the potential problems (Kumar, Stern et al. 1993). I chose founders or international department managers as key informants, who I assumed were well informed about their organization. However, the debate continues as to whether multiple responses from an organization are necessary to ensure the validity of results such as those in this study (Phillips 1981). Although common methods variance was not found to be problematic

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in this study, which applied a single-informant design, future research could try to adopt a multiple-informant approach in the questionnaire survey.

Fifth, this research employs cross-sectional data rather than longitudinal data. Although longitudinal research designs are logistically difficult and time consuming, they do enable time-series data analysis (Morgan, Kaleka et al. 2004). Cross-sectional data were necessary and appropriate to explore what was taking place at a certain point in time. However, they were not capable of fully explaining the dynamic process of variables. Given the cross-sectional nature of the data, it is not possible to establish conclusively any causal relationship; thus, I suggest that it would be better for future research to use a longitudinal method to investigate the dynamic development and undertake evaluation of these factors and their interaction effects on export channel choice.

Finally, this study is also subject to methodology limitations. The measurement of informal institutional distance needs to be reconsidered or refined. In order to explore the role that institutional distance plays in moderating the export channel choice consequence of network diversity, I used Hofstede's cultural indices to measure the cultural institutional distance. However, the hypotheses are not supported, perhaps due to inaccurate measurement. Inspired by Shenkar's (2001) argument that the implicit assumption of culture being stable is an illusion as cultures gradually evolve (Shenkar 2001), I explained the results with the reason that the data gathered two years ago can not be used to explain international strategic decisions made some years later. Recent studies (Estrin, Ionascu et al. 2007, Kim and Gray 2009) suggest that different measurements may result in different results. While I believe that the informal institutional distance should be proxied by alternative measures, only further research can adequately address this issue. Further research may wish to develop alternative measures for differences in informal institutions.

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## 5.4 Main Conclusion

In conclusion, this study differs from past export channel choice research that has typically relied on analysis of transaction cost advantages and focused on well-established multinational firms. Here, I made several important contributions to the literature by integrating TCA with RBV, network perspective and institutional theory into a more comprehensive research mode, examining the context specificity of these theories in an internationalizing SME context. I add to knowledge by developing a unique perspective to explain how EO and network diversity is related to export channel choice, whilst investigating the moderating role of networks (i.e., network size and strength) in the relation between EO and export channel choice, also exploring the moderating role of networking capability and institutional distance in the relation between network diversity and export channel choice. This study provides initial empirical support for the notion that the RBV and institutional context can be applied to SME exporting activities, an area of strategy that has received little attention from RBV and institutional scholars. Results of the framework proposed in this paper will enhance our understanding of SME export behaviour.

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**I need your help.** I am conducting research on how the factors (i.e., entrepreneurial orientation, networks, network diversity, networking capabilities, and institutional distance) affecting small and medium-sized enterprises' (SMEs) export channel choice in the context of China. This questionnaire asks you about various aspects of your company's exporting activities. The survey will take approximately 10-15 minutes.

This questionnaire is for academic study only. All responses will be held in strict confidentiality. If you wish, however, the findings of this study will be shared with you. Please enclose your business card with the completed questionnaire in the return envelope to allow us to send you an executive summary report of this survey via email. Your business card will be separately from the completed questionnaire to maintain anonymity.

This survey explores various aspects of your exporting activities. There are no "right" or "wrong" answers to the questions. Please answer all of the questions in the survey with reference to the exporting activities occurring at the organizational level with which you are most familiar. In this questionnaire, "we" and "our" mean your company.

Thank you very much for your interest and time and I am looking forward to receiving your response.



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products, administrative techniques, or technologies.

Disagree strongly 1 2 3 4 5 6 Agree strongly 7

6. In dealing with competitors, my firm prefers to “initiates actions to which competitors respond” rather than “responds to actions which competitors initiate”.

Disagree strongly 1 2 3 4 5 6 Agree strongly 7

7. In general, the top managers of my firm have a strong proclivity for high-risk projects (with chance of very high returns) rather than low risk projects (with normal and certain rates of return).

Disagree strongly 1 2 3 4 5 6 Agree strongly 7

8. Owing to the nature of the environment, the top managers of my firm would be more likely adopt bold acts to achieve the firm’s objectives than explore it gradually via cautious moves.

Agree strongly 1 2 3 4 5 6 Disagree strongly 7

9. When confronted with a decision-making situations involving uncertainty, our company typically adopts an aggressive posture in order to maximize the probability of exploiting potential opportunities rather than adopting a ‘wait-and-see’ posture in order to minimize the probability of making costly decisions.

Disagree strongly 1 2 3 4 5 6 Agree strongly 7

**Section 3. In the following questions, network partners include relationships between your firm’s management team and its competitors, suppliers, customers, distributors, R&D institutions, banks and governments, which enable you to get knowledge and resources that will help with your internationalization activities**

10. How many domestic (i.e., Chinese) network partners worked with your firm in the last year? \_\_\_\_\_

11. How many foreign (i.e., non-Chinese) network partners worked with your firm in the last year? \_\_\_\_\_

12. How many government, banks, and R&D institutions worked with your firm in the last year? \_\_\_\_\_

13. The frequency of interaction with our network partners is very frequent.

Disagree strongly 1 2 3 4 5 6 Agree strongly 7

14. Network partners play an important role in helping my firm’s exporting.

Agree strongly Disagree strongly

	1	2	3	4	5	6	7
15. The duration of ties with our network partners are always very long.							
Disagree strongly	1	2	3	4	5	6	Agree strongly 7
16. Network partners tend to provide my company with timely information.							
Disagree strongly	1	2	3	4	5	6	Agree strongly 7
17. Network partners tend to provide my company with reliable information.							
Agree strongly	1	2	3	4	5	6	Disagree strongly 7
18. My firm can easily obtain required knowledge from network partners.							
Disagree strongly	1	2	3	4	5	6	Agree strongly 7
19. Every year our company commits significant resources to educating and training Chinese personnel to master the technology brought in by network partners.							
Disagree strongly	1	2	3	4	5	6	Agree strongly 7
20. Every year our company commits significant resources to educating and training Chinese managers to master the managerial skills brought in by our network partners.							
Agree strongly	1	2	3	4	5	6	Disagree strongly 7
21. Chinese personnel in our company have been provided with training in cross-cultural skills.							
Disagree strongly	1	2	3	4	5	6	Agree strongly 7
22. In general, before a new employee can achieve a satisfactory performance level, my firm has committed significant resources for their broad training.							
Disagree strongly	1	2	3	4	5	6	Agree strongly 7
23. Chinese employees in our company are able to understand and use new technology brought in by network partners.							
Agree strongly	1	2	3	4	5	6	Disagree strongly 7
24. Chinese employees in our company are able to understand and use new marketing techniques brought in by network partners.							
Disagree strongly	1	2	3	4	5	6	Agree strongly 7



## SMEs' Export Channel Choice Questionnaire Part Two

**Section 1. All of the following questions concern your firm's most important export market, defined as the market in which your firm has its greatest sales.**

1. Which country is your most important export market? \_\_\_\_\_
2. For how many years have you been exporting to this market? \_\_\_\_\_
3. Your company's exports to this market are structured as: (please circle only 1 type)
  - A. We service it directly from China, using home-based representatives.
  - B. We established wholly owned sales subsidiaries in this market.
  - C. We are involved in a joint venture with another company to handle sales in this market.
  - D. We use commission agents.
  - E. We sell to independent distributor who takes title to our product and contacts buyers itself.
  - F. Other (Please specify) \_\_\_\_\_
4. In how many other markets do you use the same export structure? \_\_\_\_\_
5. In the last year, what type of product did you export to this market? \_\_\_\_\_
6. In the last year, the value of our company's annual exports to the most important market amounted to \_\_\_\_\_% of the value of our total export sales.

**For the most important export market, please indicate whether you agree or disagree with the following statements:**

7. To be effective, a salesperson (whether our own or an intermediary's) has to take a lot of time to get to know the customers.

Disagree strongly 1 2 3 4 5 6 7 Agree strongly

8. It takes a long time for a salesperson (whether our own or third party) to learn about our products thoroughly.

Agree strongly 1 2 3 4 5 6 7 Disagree strongly

9. To be effective, a salesperson (whether our own or an intermediary's) has to take a lot of time to get to know our competitors and their products.

Disagree strongly 1 2 3 4 5 6 7 Agree strongly

10. A specialized investment in the form of tooling and equipment or specific know-how is needed to market our company's product line.

Agree strongly 1 2 3 4 5 6 7 Disagree strongly

11. How easy is it to monitor and measure the collective performance of individuals who perform exporting function in your most important market

Very easy 1 2 3 4 5 6 7 Very difficult

For your most important export market it is:

12. Easy to monitor trends 1 2 3 4 5 6 7 Difficult to monitor trends

13. Sales forecasts are accurate 1 2 3 4 5 6 7 Sales forecasts are inaccurate

14. Easy to gauge competition 1 2 3 4 5 6 7 Difficult to gauge competition

15. The market is well known to us 1 2 3 4 5 6 7 The market is not known to us

## Section 2. Export performance

**Please indicate whether you agree or disagree with the following statements:**

During the last 3 years, our most important export market...

- |   | Disagree<br>strongly | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Agree<br>strongly |
|---|----------------------|---|---|---|---|---|---|---|-------------------|
| 1. Has been very profitable.                                |                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |                   |
| 2. Has achieved rapid sales growth.                         |                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |                   |
| 3. Has very satisfactory export performance.                |                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |                   |
| 4. Has achieved our company's initial strategic objectives. |                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |                   |

*Please put this completed questionnaire into the envelope with return address printed and sends it back to me at your earliest convenience.*

*Thank you for participating*