Valuing Social Capital: Shifting Strategies for Export Success of Vietnamese Small- and Medium-Sized Enterprises

Huong Thi Xuan NGUYEN

Victoria Institute of Strategic Economic Studies

Victoria University, Melbourne, Australia

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ABSTRACT

This study examines the impact of social capital on the export success of domestic SMEs in Vietnam, looking at both export propensity (whether they export at all) and export performance (how much they export). Two stylized facts inspire the research. The first is the relatively modest performance of Vietnamese SMEs in export activities to date, despite their potential and increasing importance in the economy. The second is the widespread perception within Vietnam about the power of social relationships of firms in the Vietnamese business environment.

This study uses a mixed methods approach, combining a qualitative thematic analysis of semi-structured interviews of SME owners/managers with quantitative testing of hypotheses on a secondary panel dataset from 2007 to 2015. Logistic regression models were employed to test hypotheses related to export propensity and multiple linear regressions were used to test those related to export performance.

The results indicate that social capital is positively related to export propensity of domestic SMEs, but that its impacts on their export performance are not consistent. Each type of network impacts differently on export performance indicators of the studied SMEs (positive, negative and sometimes non-significant). Similarly, the qualitative study provides evidence that social capital supports SMEs in the initial stage of their export venture, but not their continuous export sustainability. One of the significant findings to emerge from the qualitative study is that the impact channels of social capital on SMEs' export success may have changed from relying on rent-seeking opportunities provided by close connections with authorities towards being a tool for improving credibility and building capability for SMEs.

This study highlights the importance of establishing an appropriate networking strategy for SMEs who wish to pursue export ventures. It suggests that, if SMEs aim at long-term export success, they may need to diversify their networks, including business networks and social networks, both domestically and internationally, rather than focus on connections with politicians and authorities. This is because the expected benefits from rent appropriation in export activities will eventually diminish as a more transparent system is put in place. Hence, SMEs should utilize their networks to improve their knowledge, credibility and capability, which help in enhancing their long-term competitiveness. The present study also implies that the government and relevant trade

associations, in supporting SMEs to participate successfully in the international market, may need to focus on long-term network building and capacity-building activities.

DECLARATION OF AUTHENTICITY

I, Huong Thi Xuan NGUYEN, declare that the PhD thesis entitled *'Valuing Social Capital: Shifting Strategy for Export Success of Vietnamese Small and Medium Sized Enterprises'* is no more than 100,000 words in length including quotes and exclusive of tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

Signature Date 9 February 2018

PUBLICATIONS INTEGRATED IN THE THESIS

Some sections of this thesis have been presented at a conference and a research symposium:

1. Referred International Conference Presentation

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LIST OF ACRONYMS

AFTA	ASEAN Free Trade Area
APEC	Asian Pacific Economic Cooperation
ASEAN	Association of South East Asian Nations
CEPT	Common Effective Preferential Tariff
CIEM	Central Institute of Economic Management (Vietnam)
EAEU	Eurasian Economic Union
EU	European Union
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GDP	Gross Domestic Product
GNI	Gross National Income
GSO	General Statistics Office of Vietnam
HAWA	Ho Chi Minh City Handicraft and Wood Industry Association
HS	Harmonized Commodity Description System
ILSSA	Institute of Labour Science and Social Affairs
MFN	Most Favoured Nation Treatment
MoLISA	Ministry of Labour, Invalids and Social Affairs of Vietnam
MPI	Ministry of Planning and Investment of Vietnam
NTB	Non-Tariff Barrier
PTA	Preferential Trade Agreement
RBV	Resource-Based View
RS	Rent Seeking Theory
SC	Social Capital
SCAT	Social Capital Assessment Tool
SME	Small- and Medium-sized Enterprise
SNA	Social Network Approach
SOC	State-Owned Corporation
SOCB	State-Owned Commercial Bank
SOE	State-Owned Enterprise
SSRN	Social Science Research Network database
TC	Transaction Cost Economics
TPP	Trans-Pacific Strategic Economic Partnership Agreement
VCCI	Vietnam Chamber of Commerce and Industry
VieTrade	Vietnam Trade Promotion Agency
VND	Vietnam Dong
WB	World Bank
WTO	World Trade Organization

EXECUTIVE SUMMARY

Social capital has recently emerged as a determinant of firm performance. In the international business literature, social capital is seen as positively related to firms becoming internationally engaged, especially during the market entry stage of firm development. Empirical studies have generally shown a positive relationship between social capital and the overall export performance of firms. On the other hand, the literature also points out that social capital may limit the international opportunities of firms, so that firms become trapped in the domestic market by extensively relying on information from internal networks.

The measurement of export success is a topic of disagreement, not only at a conceptual level but also at an operational one. Some researchers consider export success as synonymous with good export performance and hence measured by indicators such as export intensity (percentage of exports in total sales) or other indicators such as export market diversity or market share. In the case of small- and medium-sized enterprises (SMEs) in emerging economies, where SMEs generally lack the resources and competencies to pursue export ventures, whether firms participate at all in export activities is an important issue. Thus, in this study a distinction is made between whether a firm exports at all (export propensity) and how well a firm performs in the overseas markets (export performance).

This study examines and evaluates the impact of social capital on the export success of Vietnamese SMEs, looking at both export propensity and export performance. Two stylized facts inspire the research. The first is the relatively modest performance of Vietnamese SMEs in export activities to date, despite their perceived strong potential and their increasing importance in the economy. The second is the widespread perceptions within Vietnam about the power of social capital or of the social relationships of firms in the Vietnamese business environment.

Hence, this thesis endeavours to answer the following three research questions:

1. Does social capital impact positively on the export success (export propensity and export performance) of SMEs in Vietnam?
2. By what channels does social capital impact on the export propensity and export performance of SMEs in Vietnam?

3. Have the impact mechanisms of social capital on export performance of Vietnamese SMEs changed over the economic transitional process?

This study employs a definition of social capital that has been widely used in research about social capital at the firm level: social capital is defined as "the sum of the actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual or social unit" (Nahapiet & Ghoshal 1998, p. 243). Two indicators are used to measure the social capital of firms - the size of their networks and the resources they derive from the networks; while three indicators - export revenue, export intensity and export market diversity - are used to measure the export performance of SMEs.

The context of the research is the Vietnamese economy during its late transitional phase, focusing on the past ten years from 2007-2016. This ten-year period has marked the deeper integration of Vietnam into the global economy, as well as the country's consistent commitment to transforming the economy to being a market-oriented one. During this period, the continued growth of the SME sector has been an engine for the development of the economy. During the transitional process, extensive economic and trade reforms have been undertaken. As a result, the private sector, which mostly consists of SMEs, has evolved dramatically, and private enterprises have been allowed to participate in international trade activities. The transitional process has also created huge opportunities for rent appropriation and rent-seeking behaviour, especially in the privatization of the state-owned sector. The extensive use of administrative controls in the centrally planned economy led to an accumulation of power in the hands of public servants, to distribute economic resources and to channel rent-appropriation opportunities. Hence, many firms saw the establishment of close relationships with politicians and public servants as part of the success formula for firms in Vietnam.

The reform toward being a market-oriented economy has required substantial institutional development, both formally and informally. In terms of formal institutional development, legislative instruments have been devised for the creation of a fairer playing field for the private sector. However, in terms of informal institutions, the earlier business culture and the old way of doing business is still widespread. This includes the perception that firms can rely on their relationship with politicians and public servants to resolve any business difficulty.

This study combines qualitative and quantitative methods to evaluate the impacts of social capital on export success of Vietnamese SMEs. The mixed methods deployed in the study follow the convergent parallel approach of Creswell (2014). This includes the collection and analysis of primary qualitative data and the testing of statistical hypotheses on secondary panel data. The qualitative data were collected from semi-structured interviews of nineteen SMEs' owners and managers, based on a pre-set interview protocol. The collected data were then coded and thematically analysed using the NVIVO software, version 11. In the quantitative stage, biennial survey data on Vietnamese SMEs from 2007 to 2015 were used. This provides a large dataset of over 2,500 observations per survey round, allowing the examination of social capital impacts over time. This rich dataset enabled the incorporation of various control variables (such as firm size and firm ownership types) as well as the examination of some other determinants of export success (such as the firm's knowledge and level of innovation). Besides the descriptive statistics and correlation analysis, the key components of the quantitative stage were a logistic regression model employed to test hypotheses related to export propensity and panel data regression technique (random effects and fixed effects regression model) employed to test hypotheses related to export performance. Various robustness checks were performed to validate the quantitative results, such as the use of a probit model for export propensity and the use of pooled OLS for export performance. The qualitative and quantitative study results were then compared and triangulated to investigate their agreements and disagreements. The mixed methods approach allows for examination of the detailed views of participants from the qualitative data, which also provide insights on the generalizability of the results from the statistical estimation using the large-scale quantitative data.

There are five main conclusions from the study, which are summarized below.

Firstly, results from both forms of analysis show that the resource dimension of social capital is positively associated with SMEs' export propensity. The quantitative logistic regression model found that, at the statistical significance level of 5%, the export likelihood of the sampled firms increases when the resources received from their networks (measured by the number of supports from their networks) increase. In contrast, the size of the business network (measured by the number of contacts in the network) is negatively associated with export propensity, while the size of social network and political network are found to be statistically insignificant.

The qualitative study found that most SMEs became involved in the export business through references and support from their networks (62.5% in comparison with 18% non-reference). Furthermore, the qualitative study also found that resources from social capital are generally useful at the first stage of reaching out to the international market (the market entry phase). Hence, this specifically asserts that the resource dimension of social capital, rather than social capital in general as often described in the literature, is a positive factor of export participation of SMEs in Vietnam.

Secondly, with regard to export performance, mixed impacts have been found in the quantitative study. Since export performance is represented by three indicators - export revenue, export intensity and export market diversity - this study finds that each dimension of social capital shows a distinct impact on export performance of SMEs:

- For export revenue, the random effects regression results indicate that only the level of support from SMEs' networks is positively related to export revenue of SMEs (at 95% confidence level). Other than that, the sizes of all four types of network are not positively associated with export revenue of the sampled firms.
- For export market diversity, it is found that the size of business networks and social networks are both positively associated with export market diversity. These findings add to those in the current literature that the structural dimension of social capital (here the size of networks) is more likely to link with market performance indicators, while the resource dimension of social capital is more likely to be associated with economic indicators of export performance.
- For export intensity, there is an absence of a link between SMEs' export intensity and social capital, for both the structural and the resource dimensions. Hence, social capital does not appear to be relevant in explaining the export intensity of SMEs.

Thirdly, besides confirming the positive relationship between firm size and export success of SMEs, this study also found that the general knowledge of SMEs about law and regulation is positively associated with both export propensity (at confidence level of 99%) and export revenue (at confidence level of 95%). The knowledge of SMEs, in turn, is positively correlated with the level of SMEs' social capital.

Fourthly, the impact channels of social capital on export success of Vietnamese SMEs are reported in the qualitative study. Respondents believed that social capital can support export success of SMEs in several ways. Some significant channels include: (i) providing relevant information regarding business opportunities; (ii) connecting to customers; (iii) identifying and connecting to suppliers; (iv) facilitating the creation of knowledge and enhancing credibility; and (v) facilitating the export procedures and dealing with relevant authorities. These factors are important for SMEs in reducing transaction costs and gaining competitive advantage in export markets; which, in turn, are crucial for sustaining export success.

Finally, the qualitative study provides evidence of changes in the impact mechanism of social capital on export performance. The qualitative analysis reports that there are different perceptions of exporters about the importance of social capital. SMEs in export non-restricted sectors are less focused on the connections with authorities, politicians and public service officers, and more on building trust and credibility with their business partners, both domestically and internationally. Furthermore, SMEs in export restricted sectors, who used to rely on 'special connections' to succeed, have over time become less reliant on those opportunistic relationships. Hence, this demonstrates that the impact channels of social capital have been shifted from the rent-seeking dominance to the transaction cost reduction spectrum.

The hypothesis testing results indicate that the size of SMEs' political networks is found to be statistically insignificant and uncorrelated to either export propensity or any of the export performance indicators, indicating that the political connections might, by the time of the survey period, no longer be helpful for exporting SMEs.

Findings of the present research extend the current literature in several ways. Firstly, the study offers additional empirical evidence for the positive impact of social capital on export propensity of SMEs (Ellis & Pecotich 2001; Lindstrand, Melén & Nordman 2011), for an emerging economy such as Vietnam. Secondly, it points out the relative importance of the resource dimension of social capital, in comparison to the structural dimension of social capital, in supporting the internationalization of SMEs. Thirdly, it shows that impacts of social capital on export performance of SMEs can be complex; and as such, network size and network resource may have contradictory impacts on different aspects of export performance. Fourthly, it confirms the positive correlation between social

capital and firm's knowledge, and hence on export performance, which has been reported by previous research (see, for example, Loane & Bell 2006; Roxas & Chadee 2011; Yli-Renko, Autio & Tontti 2002). Moreover, it adds to the current literature some new impacts of social capital in the context of an emerging economy, such as the facilitation of export procedures. Finally, the present research results demonstrate the shift of social capital impacts during the economic transitional process, which finding offers a new research domain in studying social capital from the perspectives of different theories.

This study suggests that, if SMEs aim at long-term export success, they may need to shift their networking strategy from building relationships with politicians and public servants to building wider networks, including business networks and social networks, both domestically and internationally. This is because the expected benefits from rent appropriation in export activities would eventually diminish when a more transparent system is in place. Hence, SMEs should utilize their networks to improve their knowledge, credibility and capability, which help in enhancing their long-term competitiveness. The present research also suggests that the government and relevant trade associations, in supporting SMEs to participate to the international market successfully, may need to focus on long-term network building and capacity-building activities.

CHAPTER 1: INTRODUCTION

1.1 Motivation and background of the research

In Vietnam, it is believed that social relationship and connection is a 'golden key' to anything, including success in business. Nevertheless, it is unclear how far such a 'golden key' can take firms, and by what mechanism social relationships and connections can impact on the performance of firms, especially the international performance of small- and medium-sized enterprises ('SMEs').

Inspired by the wide-spread belief in the power of social relationships, and the considerable underperformance of Vietnamese SMEs in the international market, despite the evolution of the SME sector in the Vietnamese economy in recent years, this research sets out to explore the three following issues. The first issue is the question whether social relationships of SMEs in a developing country impact on export success of these firms, given that social relationships are perceived to be beneficial for domestic business performance of firms. The second issue is in what way have each type of social relationship impacts on export success of SMEs in Vietnam. The last issue is how the mechanisms of impacts have changed over time, especially during the economic transition process of Vietnam.

Figures from the General Statistics Office of Vietnam show that SMEs account for over 98% of total registered firms of the country (Vietnam General Statistics Office 2017). SMEs' development is considered as one of the critical priorities and central to the economic development process of Vietnam (Vietnamese Government 2012). The private sector in Vietnam, where the most prevalent and most dynamic segment in creating jobs is SMEs, accounts for an increasing share of economic growth and employment, especially since phasing out the central planning system in the early 1990s (Nguyen, VT 2004). As a result, SMEs are considered the driving force for the transition of the economy from a centrally planned to an entrepreneurship-driven market economy (Nguyen, VT 2004; Vu, VH 2014). However, Vietnamese SMEs have had limited participation in the international market, and only provide a modest contribution, under 10%, to the export revenue of the country (Vietnam General Statistics Office 2013), in comparison with the 25-40% contribution of SMEs in export revenue of OECD countries and 10-25% of SMEs globally (Organization for Economic Co-operation and Development 2018). Since 2007 when Vietnam became an official member of the World

Trade Organization (WTO), the internationalization of SMEs and SMEs export performance has attracted the growing interest and attention of researchers, policy makers and business owners (Le, V & Harvie 2010a; Nguyen, AN et al. 2008; Thai & Chong 2011; Vu, VH 2012, 2014; Vu, VH & Lim 2013). This will be discussed further in Chapter 2 on Vietnamese SMEs in the era of reforms.

In a 'late transitional[1]' economy such as Vietnam, where institutional development is underway and the market mechanisms have not yet been able to operate efficiently, firms have tended to rely extensively on their own network of relationships and trust-based transactions as substitutes for market mechanisms (McMillan & Woodruff 1999; Nguyen, VT 2005). Furthermore, for SMEs, whose internal resources are generally insufficient, intense network relationships help to support entrepreneurs to overcome their limitations and gain access to the international market (Manolova, Manev & Gyoshev 2014). In other words, for successful internationalization, it has been argued that entrepreneurs in transitional economies should 'leverage their networks' in order to maximize the benefits from external resources to surmount the obstacles of resource constraint and institutional void (Manolova, Manev & Gyoshev 2014). The resources that SMEs could extract from their network of contacts, both current and potential ones, are a source of 'capital' for firms, which is referred to as 'social capital' (Nahapiet & Ghoshal 1998).

Social capital is considered an emergent factor impacting the performance of firms (Roxas & Chadee 2011), and research on the relationship between social capital and firms' internationalization has attracted increased interest (see, for example, Kontinen & Ojala 2012; Loane & Bell 2006; Manolova, Manev & Gyoshev 2010; Presutti, Boari & Fratocchi 2007; Yli-Renko, Autio & Tontti 2002; Zhang, X et al. 2016; Zhou, Wu & Luo 2007). However, to date, there are not many researches on impacts of social capital on export performance and, in particular, export performance of SMEs from emerging economies (Roxas & Chadee 2011). Moreover, with regard to exporting as a primary mode of international market entry, research often looks at either the propensity to export or the post-entering export performance of firms, rather than investigating both the export

[1] For Fforde (2002), the economic transition process of Vietnam can be divided into 4 stages. The period before 1980 is the pre-transition stage; from 1981-1990 can be called the "pure transition" stage. Afterward, from 1991-2000 is the "primary accumulation" (stage III); and then followed by "normal accumulation" from 2001 onward (stage IV). Stages III and IV are commonly referred to as the 'late transitional' because of the nature of the economy as no longer a 'transitional' one but not yet having all the characteristics of a market economy.

likelihood and the export performance of firms. For the present research, it is proposed that, when considering export activities of SMEs in Vietnam, the propensity to export of SMEs and the performance of exporting SMEs are equally important. Therefore, the term 'export success' is proposed in the present research to comprise two aspects of exports at firm level: the propensity to export, and the export performance of firms.

In the context of Vietnam, social capital has started to catch the attention of business and economics researchers. There have been several researches on the impacts of social capital on business activities, such as: the relationship between social capital and the success of young entrepreneurs in Hanoi (Turner & Nguyen 2005); the interaction between social capital and human capital impacting new-born firms (Santarelli & Tran 2013); the relationship between relational capital and performance of international joint venture companies (Lai & Truong 2005); and the role of social capital in the performance of particular sectors such as real estate enterprises (Nguyen, HT & Huynh 2012). More recently, the work of Le, VC, Nguyen and Nguyen (2014) has developed a theoretical model and then empirically confirmed the positive relationship between social capital and performance of small firms in Vietnam. To the best of the present author's knowledge, however, so far there appears to be a research gap on the impact of social capital on export success of firms in general, and on the local, private small- and medium-sized enterprises in particular. The present research, therefore, sets out to fill this identified research gap.

1.2 Research objectives and research questions

This research aims to analyse the relationship between social capital and export success by answering the central research question, **"What is the relationship between social capital and export success of SMEs in Vietnam?"**; which forms the central research hypothesis, **"Variations in social capital are significant to variations in export success of SMEs in Vietnam"**.

There are three issues, or three sub-questions, that the current research pursues to address the central research question:

i. Does social capital positively impact export success (i.e. export propensity and export performance) of SMEs in Vietnam?

ii. By what channels does social capital impact on the export propensity and export performance of SMEs in Vietnam?

iii. Have the impact mechanisms of social capital in export performance of Vietnamese SMEs changed over the economic transitional process?

In order to answer the abovementioned research questions, first and foremost, the research aims to clarify the core concepts that will be used in this research.

Firstly, this research will contextualize social capital in terms of the perceptions of Vietnamese on this concept. Social capital is a multilevel concept that can be assessed at the community level, organizational level or individual level (Coleman 1988, 1990; Putnam 1993, 2000), and can be viewed from within both sociology and economics disciplines (Crudeli 2006; Durlauf & Fafchamps 2004). For the purpose of the current research, social capital is viewed at the organizational level and from the economics perspective, which relates to the central idea of the value of social networks (Andriani & Christoforou 2016; Bourdieu 1986; Coleman 1988; Granovetter 1985; Lin, Burt & Cook 2001; Nahapiet & Ghoshal 1998; Putnam 1993, 2000). Although there is a lack of consensus among scholars on social capital, the definition of Nahapiet and Ghoshal (1998) has been most widely used, and will be taken as the working definition of this research. According to Nahapiet and Ghoshal (1998, p. 243), social capital is "the sum of the actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual or social unit". Nahapiet and Ghoshal's dimensions of social capital (comprising the structural, cognitive and relational dimensions) will also be used as a framework to develop the contextualized concept of social capital in Vietnam.

Secondly, the present research will follow the common approach in the fields of economics and management in measuring social capital focusing on social networks, to remove any ambiguity from the definition of social capital (Saglietto, David & Cézanne 2016). For the present study, social capital is measured by the size of a firm's external network, volume of resources contained in such network, and opportunity to access those resources (Saglietto, David & Cézanne 2016). Therefore, social capital in the present research is measured by the network size and the actual network support, focusing on four different types of network: (i) formal business network; (ii) informal social network; (iii) network with bank; and (iv) network with politicians and authorities.

Thirdly, since export performance is a complex and multifaceted construct (Carneiro, Rocha & Silva 2011), it has been measured by various parameters, including

objective and subjective criteria. According to the specific 'late transitional' context of the Vietnamese economy and the current low involvement of SMEs in export activities, this research aims to select and justify a relevant measurement for export performance of these firms. Hence, Export Performance in this research is measured using three different variables, Export Sales Revenue, Export Intensity, and Export Market Diversity (Papadopoulos & Martín Martín 2010; Singh 2009).

Finally, in association with the 'late transitional' economy, this research will deploy the concept of 'transaction costs' and 'rents' to frame the main research hypothesis. For this, '***transaction costs***' refer to 'the costs involved in market exchange', which 'include the costs of discovering market prices and the costs of writing and enforcing contracts' (OECD 2008, p. 549), while '***rents***' are the excess earnings or 'the portion of earnings in excess of the minimum amount needed to attract a worker to accept a particular job or a firm to enter a particular industry' (Crudeli 2006, p. 916).

1.3 Positioning of the study

The Vietnamese economy has implemented its 'Renovation', or 'Doi Moi[2]' strategy, since the late 80s and early 90s, which led the economy from being a centrally planned to market-oriented economy. During the process of transition, alongside with the restructuring of the economic ownership and rearrangement of the State-owned sector, opportunities to appropriate rents dramatically increased (Fforde 2002). However, those rent-seeking opportunities reduced as the market economy gradually replaced the old economic system. Meanwhile, transaction costs at firm level were higher in the central planned economy because of the inflexibility of the command economic system. Those transaction costs were expected to decrease as market competition taken place. As such, social capital should be relevant for explaining the better performance of firms, not only by presenting firms with opportunities for rent seeking but, more importantly, by helping to reduce transaction costs (lower cost for seeking and monitoring partners and related activities). Therefore, the current research is positioned in the intersections of various theories, as discussed in detail below.

[2] Doi Moi, or Đổi Mới, is a popular Vietnamese term, meaning Reform or Renovation. Doi Moi has been widely used, without translation, in literature about Vietnamese Economic Development to describe the reform ideology and its economic policies.

From the resource-based point of view, social capital can be seen as an intangible asset that creates competitive advantage for firms, according to the VRIO (value, rarity, inimitability and organisation of resources) framework (Barney 2001). Social capital has been added as a unique, intangible resource that supports firms in identifying new business opportunities, accessing foreign markets, and facilitating business transactions. In the international business literature, social capital has been found to be positively related to firm internationalization (Ellis & Pecotich 2001; Loane & Bell 2006; Yli-Renko, Autio & Tontti 2002), especially during the market-entry period of firms (Agndal, Chetty & Wilson 2008; Manolova, Manev & Gyoshev 2010). On the other hand, the literature also points out that social capital may limit the international opportunities of firms, so that firms can be trapped in domestic markets by extensively relying on information from internal networks (Laursen, Masciarelli & Prencipe 2012).

From the perspective of dynamic capability, social capital can be seen as one of the dynamic capabilities of firms (Loane & Bell 2006; Pinho 2011; Roxas & Chadee 2011). Social capital possesses all the three important characteristics of a dynamic capability, namely the sensing, the seizing, and the transforming. For example, social capital, in form of network contacts, enables a firm to quickly identify business opportunities (the sensing capability), and efficiently respond to the market demand (the seizing capability). Moreover, the social capital of a firm, on the one hand, grows with the development of the firm, while on the other hand it can help transform the business of such a firm (the transforming capability).

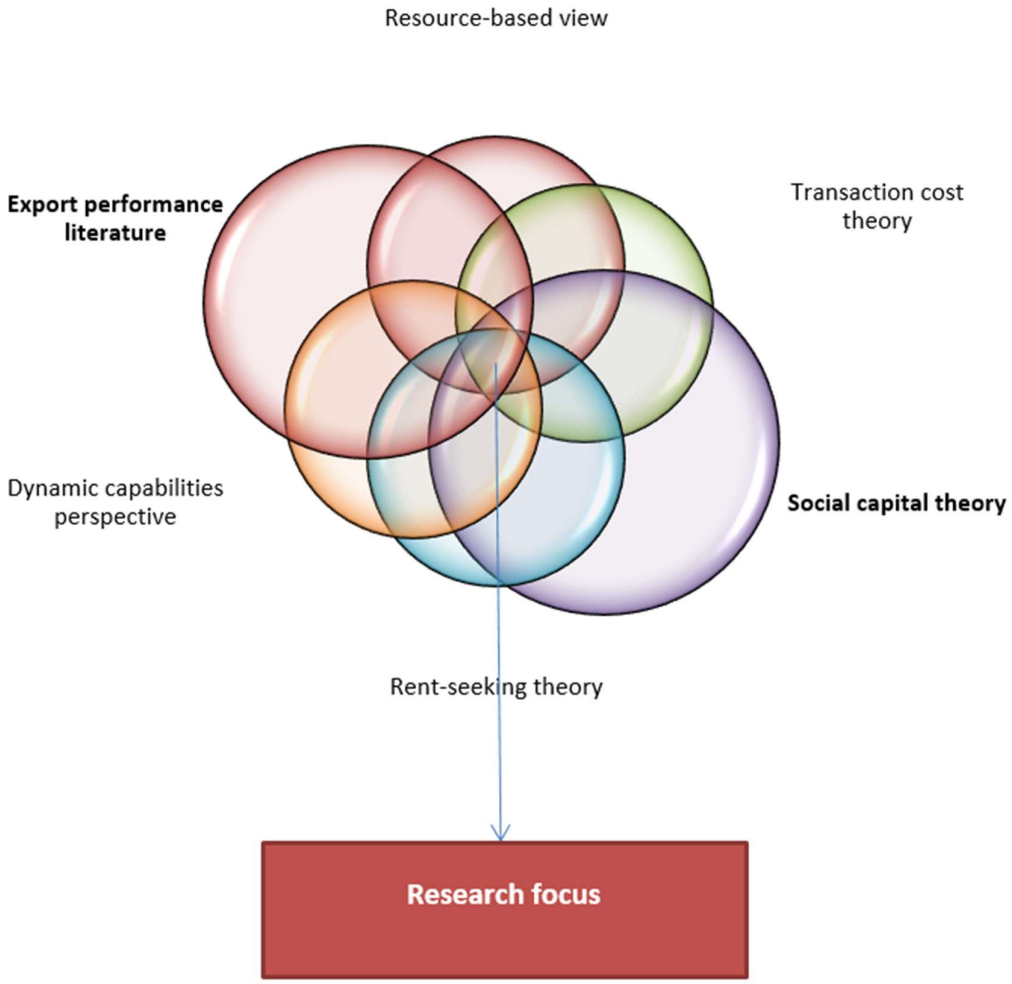
From the transaction costs perspective, where decisions are based on minimization of transaction costs (Thai & Chong 2011), social capital can be seen as lubricant to relatively reduce firms' transaction costs. In the export business, transaction costs comprise search costs, negotiation costs, and monitoring costs. Essentially, social capital is characterised by three dimensions: the structural, the relational, and the cognitive dimensions. Therefore, it is associated with generalized trust, mutual understanding, and norms (Nahapiet & Ghoshal 1998), and hence, with better cooperation between focal firms and their counterparts. As a result, firms with a higher level of social capital may enjoy lower transaction costs, resulting in better performance.

From the rent-seeking theory perspective, where market imperfection creates rent-seeking opportunities (Thai & Chong 2011), social capital is associated with rent creation

(Crudeli 2006); thus, a high level of social capital leads to greater opportunities for seeking export-related rents and to better export performance.

The integration of the different theories in explaining the impacts of social capital on export success of SMEs is presented in Figure 1.1.

Figure 1.1: Positioning of the present study



From the resource-based view, a firm's network and relationship creates social capital that can be utilized as a firm's resources and capabilities to support its performance (Dhanaraj & Beamish 2003; Roxas & Chadee 2011). From this perspective, a firm's network and relationship can be argued to be a determinant of firm's performance, given that other resources and capabilities are equal to those of its competitors. Hence, the firm that outperforms in the marketplace is the one with better ability in developing and managing network relationships, or in other words having higher level of social capital.

This argument holds validity typically for SMEs in developing countries, because one of the major difficulties for SMEs in developing countries is the lack of resources. It is impractical for these firms to gather all necessary resources to enter the export business (Luo 2003; Pinho 2011; Roxas & Chadee 2011). Thus, social capital in the form of external connections can be used to fill the gap.

From the integration of the resource-based view and the transaction cost perspective, where decisions are based on minimization of transaction costs (Thai & Chong 2011), social capital can be used to minimize transaction costs of a firm and facilitate its performance (Yang, Ho & Chang 2010). From this integrated perspective, social capital is considered a unique resource which helps firms to outperform through cost-cutting mechanisms.

The traditional resource-based view emphasizes that the possession of strategic resources is critical for shaping, positioning and building a firm's competitive advantage in the marketplace. On the other hand, extant works have been done to argue that the capability of firms in organizing these resources is more essential for firms' performance (Loane & Bell 2006; Roxas & Chadee 2011). This argument is a significant evolution of the resource-based view, and sets the background for the research on dynamic capabilities. From the dynamic capabilities perspective, a firm's ability to organize, integrate, form and reform internal and external resources to interact with and adapt to a changing business environment is critical (Teece, Pisano & Shuen 1997). Through the lens of dynamic capabilities, it is argued here that social capital is a dynamic capability in that it helps a firm to create new resources and capabilities by connecting available resources from internal and external networks to facilitate its business performance. This capability is especially important in export ventures where the perceived level of uncertainty is higher than in the domestic market. Thus, social capital and export performance may have a positive relationship.

By integrating a dynamic capabilities perspective and rent theory, Blyler and Coff (2003) claim that social capital is critical in the process of acquiring, integrating, and circulating resources. Therefore, social capital may be a key to understanding both rent generation and rent appropriation. In the context of a transitional developing country, where rent is typically directed at the discretion of related government officials (Mbaku 1998), social capital, typically in form of informal political connections, may be perceived as extremely important for the performance of firms.

1.4 Theory, practice and policy contributions

In terms of theory, this research is essential since it responds to the call for more research on aspects of social capital such as network development and the role of trust in the entrepreneurship process, especially in the internationalization context. Meanwhile, it validates whether the current knowledge from research on social capital and export performance (mostly conducted in developed countries) can be applied to transitional economies. More importantly, it contributes to the literature gap with regard to impacts of social capital on SMEs' export performance and economic success, about which we currently know little. Particularly, this study makes the following four main theoretical contributions.

Firstly, this research contextualizes and validates the concept of social capital in the context of Vietnam, which contributes to bridging the gap in current knowledge on social capital in transitional economies. The complexity and the lack of consensus in understanding the concept of social capital require more qualitative work to contextualize the concept before applying it to explain certain relationships. However, a literature survey of the social capital topic from an economics perspective in Vietnam suggests that inadequate contextualization work has been done so far (Turner & Nguyen 2005; Santarelli & Tran 2013).

Secondly, this research integrates both rent-generation and transaction cost-reduction with social capital, which may explain how the different levels of social capital at different stages could lead to different (or even contradictory) results in economic success. In the context of a 'late transitional' economy such as Vietnam, where the transition from a centrally planned to a market economy has been taking place since the 1990s, this change process is worth researching. During the transition, rent creation caused by appropriation processes is expected to have been swept away by market competition, while the institutional development will tend to reduce transaction costs, as the economy becomes more 'normal' and converges with international norms.

Thirdly, from the analysis of the impact of social capital on export performance and economic efficiency through rent creation and transaction cost reduction, the present research adds to current knowledge on changing incentive patterns and institutions in a transitional economy. The reasons that existing knowledge may not hold validity in a new research setting such as Vietnam include:

- Different legal and institutional framework: Transitional economies are different from the Western developed market economies, where legislation and the institutional framework are well-established. In transitional economies, firms are facing much more challenges incurred from an incomplete law and legal execution system, as well as the lack of willingness to conform to laws and regulations. Moreover, the inadequacy of information infrastructure, public services and other independent business services may significantly lower the level of transparency in transitional economies. These differences may invalidate the research results on economics and management conducted in developed economies. Although the present research positions Vietnam as a 'late' transitional economy, many of the above typical characteristics of a transitional economy still hold and need to be captured appropriately.
- Different cultural background: social capital is closely related to culture; thus, the different cultural settings of Asian economies may nullify the research results conducted in Western countries previously.

Finally,, this research provides a thorough and comprehensive investigation of export participation and performance of SMEs in Vietnam, by way of consolidating and analysing firm-level data. This investigation and formation of an SME export database may trigger further research on the topic related to exports of SMEs in Vietnam.

In terms of practice, this research is vital to enterprises since it provides better guidelines for SMEs on how to successfully utilize resources to improve export performance, especially in the conditions of a developing country where most SMEs lack financial resources but face fiercer competition in both domestic and foreign markets. In particular, the research would answer the question of whether social capital contributes to a firm's export success, and provides in-depth understanding of how this impact can be measured, from which implications for factor improvement can be extracted and justified.

From the perspectives of policy makers and facilitators, the research provides practical suggestions on how to support businesses in establishing and nurturing social capital in order for them to achieve greater benefits from factors such as networks, shared norms and values, and co-operation amongst others. The other practical implication of

the research is to raise awareness of business associations of their role in facilitating relevant activities to support their members.

In summary, the research findings could be used by policy makers in assessing, adjusting and justifying their decisions on issues related to social capital, and by managers in reallocating resources or modifying strategy if they aim to improve their export performance. This research can also be used by marketing and international business professionals, since it introduces new determinants as well as provides validation on the gap in knowledge of sector specific determinants of export performance, and may suggest further research on the topic.

1.5 Research design and methodology

1.5.1 Research paradigm

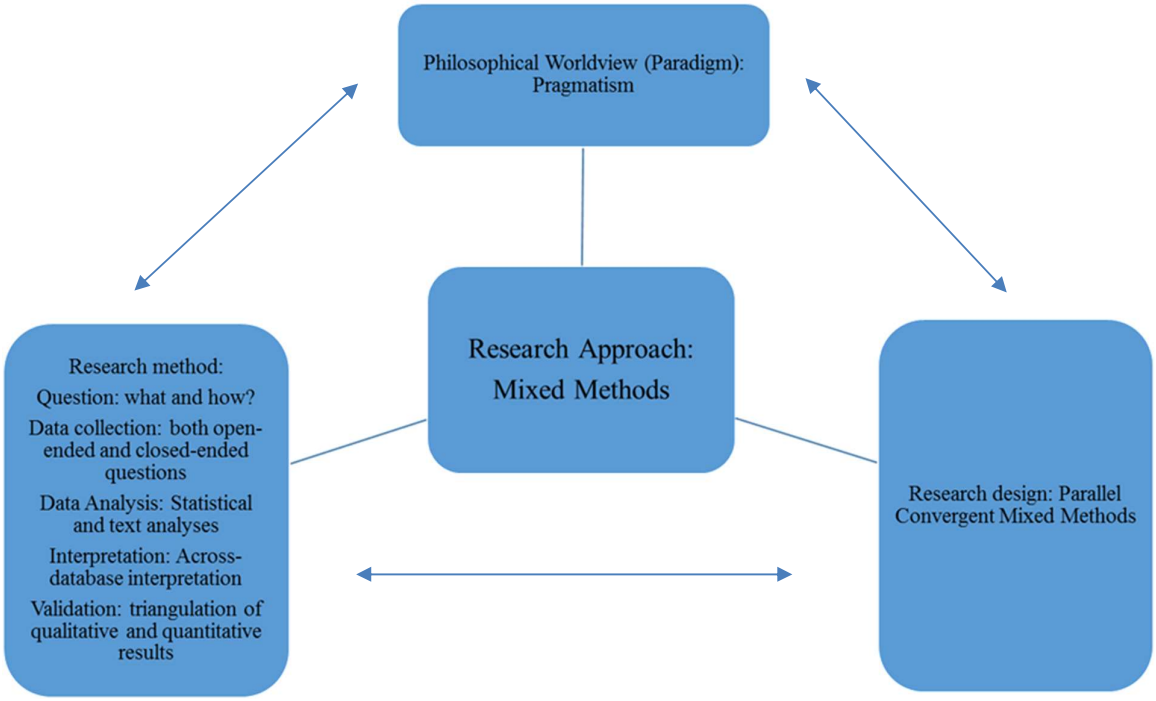
As Goodrick (2014) highlighted, the choice of the world view or research paradigm is the first step in the research process. It is the inquiry lens of the researcher about knowledge, and the basis for subsequent choices of methodology, methods and research design. The present study is designed within the overarching research paradigm of pragmatism. The pragmatic paradigm believes that there is no single truth and that the world is not an absolute unity (Creswell 2014). Pragmatism is concerned with the questions, 'what?' and 'how?', and considers that research occurs in social, historical, political and other contexts. Therefore, pragmatist researchers seek answers for their research problems by using multiple methods, and employ different forms of data collection and analysis (Creswell 2014; Tashakkori & Teddlie 2003). The research framework for the present study is presented in Figure 1.2.

1.5.2 Research method

Under the overarching pragmatic paradigm, this research was conducted using a mixed methods approach. The mixed methods approach deployed in the study follows the convergent parallel approach of Creswell (2014). This includes the collection and analysis of qualitative data and quantitative data separately, and then comparing and triangulating both sets of results to find out their agreements and disagreements. This method allows the research to examine detailed views of participants from the qualitative data. It also provides insights on the generalizability of the results based on the evidence drawn from

statistical estimations using the large-scale quantitative data. Detail on the research methodology will be presented in Chapter 4.

Figure 1.2: Research framework - The interconnection of worldviews, design, and research methods



Source: Author adapted from Creswell (2014, p. 5)

1.6 Structure of the research

The present study consists of eight chapters. A summary of each chapter is presented below.

Chapter 1 provides an overview of the research motivation, research questions, and the main research hypotheses. Chapter 1 also sets boundaries for the research and positions the present research within the related theories upon which the research builds. An introduction to the overall research paradigm, research design and methodology is also covered in this chapter.

Chapter 2 presents background information on the Vietnamese economy, focusing on its reform process and its transition from being a centrally planned economy to a market-oriented economy. The chapter highlights the development of the private sector, in which SMEs are dominant, in the Vietnamese economy. It also discusses the evolution

of SMEs and their participation in international trade activities during the integration of the Vietnamese economy into the global economy.

Chapter 3 reviews related literature on export propensity, export performance, and social capital. This chapter presents the developments in conceptualization, operationalization and possible measurement of the key concepts of social capital and export performance. One of the focuses of this chapter is the identification of the research gaps in the current literature, with regard to research on the impacts of social capital on export propensity and export performance of SMEs in emerging economies. This chapter, thus, discusses how the present study will address the identified research gaps.

Chapter 4 provides information about how the research was conducted. It also provides the justification of the mixed methods approach and the selection of the convergent parallel method specifically for the present research. Details about the method used in the qualitative study, such as sample selection, data collection, data analysis and presentation, as well as considerations of ethical issues, reliability and validity of the qualitative study, are also presented in this chapter.

Chapter 5 presents the findings of the qualitative analysis, highlighting the importance of social capital in doing business in Vietnam. It also compares and contrasts the relative importance of social capital to export participation and export performance of SMEs at different stages of their export business, as well as of different business sectors. The impact mechanisms of social capital on export performance of the sampled SMEs are examined in this chapter, highlighting the importance of knowledge facilitation and credibility enhancement, rather than the reliance on rent-seeking opportunistic behaviours.

Chapter 6 presents the quantitative study on export propensity (decision whether or not to export) using a secondary panel data consisting of over 2,500 manufacturing SMEs in Vietnam. Besides the discussion of hypotheses development, data treatment procedures, and selection of statistical tools, this chapter presents the descriptive statistics and the comparison between exporting SMEs and non-exporting ones. The research hypotheses on relationships between social capital variables and export propensity are then tested using the logistic regression models on panel data.

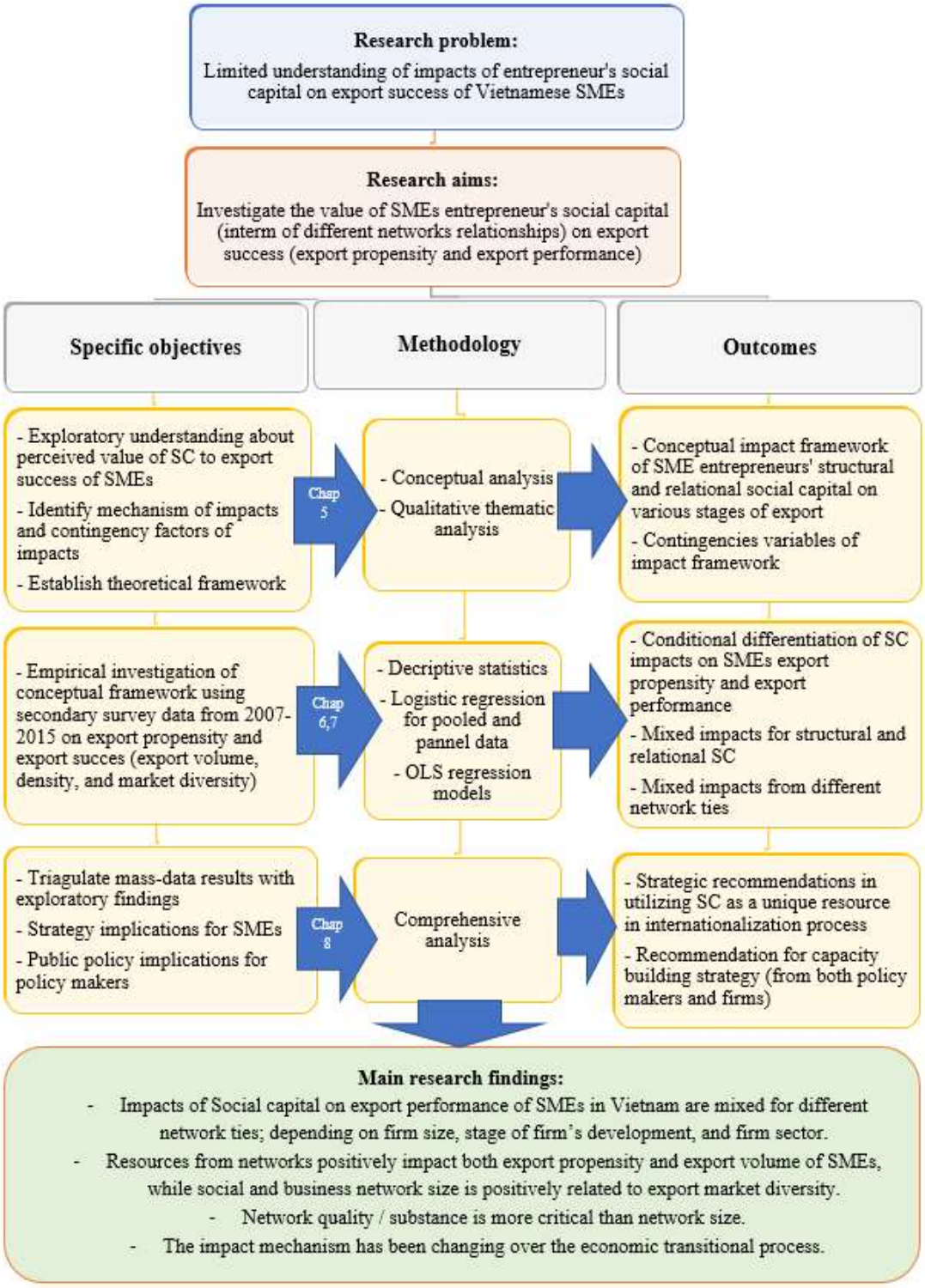
Chapter 7 presents the quantitative study on export performance, with the dependent variables being export sales revenue, export intensity, and export market

diversity. Detailed discussions on research framework and hypotheses development are presented in this chapter. While both Chapters 6 and 7 use the same SME survey, Chapter 7 focuses only on exporting SMEs. In this chapter, the random effects regression models are used to estimate the export revenue and export intensity models, whilst fixed effects regression model is used for export market diversity model.

Chapter 8 triangulates the results of the qualitative and the quantitative studies. It discusses the convergence of the results to support the findings of the present research, that social capital could be important for SMEs at the beginning stage of entering the export market. Nevertheless, social capital is found to be not as important for continuing exporters. This chapter also highlights role of social capital in knowledge creation; which, in turn, can positively impact the export success of SMEs. Chapter 8 then offers some implications with regard to policy, managerial, and theoretical perspectives. The chapter ends with discussion of research limitations and suggestions for future research.

The research pathways and results of each chapter are presented in Figure 1.3.

Figure 1.3: Research pathways and summary of research results



CHAPTER 2: VIETNAMESE SMES IN THE ERA OF REFORMS

2.1 Introduction

The main purpose of this chapter is to provide an overview of the development of Vietnamese SMEs, during and post the economic transition process. This development is placed in the institutional context of Vietnam, both formal and informal. The chapter includes three main sections. The first section starts by providing a general picture of Vietnam and its economy, then describes the country's economic reforms and its integration process. The next section highlights the main aspects of the informal institutional context, such as cultural and ethical issues. The evolution of the SME sector and some initial assessments on SME export activities are the focus of the last section.

2.2 Economic reforms and international integration

2.2.1 Country overview

Vietnam is located in South East Asia, borders the Gulf of Thailand, Gulf of Tonkin, and Pacific Sea, alongside China, Laos, and Cambodia. Vietnam's geographical advantages firstly stem from its very long coast line of 3,260 kilometres (excluding islands) and its easy access to major sea routes, ensuring a favourable condition for most parts of the country in terms of international transportation (Van Arkadie & Mallon 2003). Besides this, Vietnam, as part of Southeast Asia, is close to East Asia (e.g. China, Japan, South Korea), a region of rapidly expanding and relatively prosperous economies, enabling the country to promote its trading activities.

The country occupies 332,698 km² and ranks sixty-fifth largest in the world in terms of land area (World Bank 2015). However, in terms of population, Vietnam is the fourteenth most populous (World Bank 2015) and the forty-seventh most densely populated country in the world (United Nations Population Division 2017). With a total population of approximately 92 million people, GDP of US$193.599 billion and GNI per capita of US$1,990, Vietnam is currently categorized as a lower-middle income country (World Bank 2015).

Before 1986, the Vietnamese economy operated under a central planning system where the supply and demand sides were both controlled by the centralized command system. Following the Government's initiation of economic and political reform under a process termed 'Doi Moi' in December 1986, the country began its transitional process

toward having a socialist-oriented market economy. Since then, Vietnam's economy has achieved significant development. The country is now classified as a lower middle-income country, a remarkable achievement in comparison to its position as one of the world's poorest countries thirty years ago (World Bank 2015).

Even though the official milestone of Doi Moi was marked in 1986, it was only in 1989 that the country effectively started a comprehensive and radical reform package, which has often been referred to as a turning point in the history of Vietnam's economic development. Prior to 1989, the country was entangled by severe internal economic problems such as hyperinflation and famine, as well as, with regard to external economic activities, drastic cuts in Soviet Union aid and an embargo by the Western countries. In such a situation, reform was aimed primarily at stabilizing the economy and opening up international trade and investment activities. It also initiated more freedom for economic entities, as well as enhanced market competition (Vo, TT 2005; Vu, VH 2012). As a result, between 1989 and 2015, Vietnam's economy achieved the impressive growth rate of 7.3% on average. At the same time, its income per capita increased approximately nine times (or five times, according to purchasing power parity method) from US$220 in 1989 to around US$1,990 in 2015 (World Bank 2015). Similarly, during the period from 1991 to 2015, the country also attained remarkable growth with regard to trade and investment, as presented in Table 2.1.

Notwithstanding the above achievements, the reform process has experienced some critical delays, especially during 1997-2000 as a consequence of the Asian Financial Crisis. Afterward, economic reform in Vietnam entered a new and more comprehensive stage. This new stage focused on developing the private sector, promoting trade and investment liberalisation, and integrating further into the international economy (Vu, VH 2012). One of the most remarkable achievements of this stage was the accession of Vietnam to the World Trade Organization (WTO) in January 2007, marking a new level in the economic reform and international integration of the country. The market-oriented reforms combined with WTO–driven adjustments have been reported to make a major contribution to the economic development of Vietnam, including steady and stable GDP growth, international trade expansion, foreign investment attraction, poverty reduction, and improvement in various aspects of human development (Vu, DC 2016; Vu, VH 2012).

Table 2.1: Key macroeconomic indicators of Vietnam from 1991 to 2015

	Indicators	1991	1996	2000	2005	2010	2015
1	Annual GDP growth *(%)*	5.96	9.34	6.79	7.50	6.40	6.70
2	Inflation, consumer prices *(%)*	-	5.67	-1.71	8.29	9.19	0.63
3	Total exports *(mil. US$)*	-	9,498	17,150	36,623	79,697	162,017
4	Average Exports growth *(%)*	29.86	24.00	20.14	22.70	23.52	20.66
5	FDI, registered *(mil. US$)*	1,284	9,635	2,762	6,840	19,886	24,115
6	(Export + import)/GDP *(%)*	66.95	92.71	112.53	142.90	165.34	178.77

Source: Author adapted from Vu, DC (2016) and compilation from and Vietnam GSO's data (General Statistics Office of Vietnam 2017)

It is worth noting that the overall commitment of the Vietnamese Government to the reform process has proven to be enduring and consistent, which was re-emphasized in Vietnam's 2011–2020 Socio-Economic Development Strategy (SEDS). Apart from the 'umbrella objectives' of structural reforms, environmental sustainability, social equity and emerging issues of macroeconomic stability, the SEDS identifies three 'breakthrough areas': (i) promoting human resources/skills development (in particular, skills for modern industry and innovation); (ii) improving market institutions; and (iii) infrastructure development (World Bank & Ministry of Planning and Investment of Vietnam 2016). The ten-year strategy was elaborated into two, detailed, five-year Socio-Economic Development Plans (SEDP). The most recent five-year plan was for the period of 2011-2016, with a critical focus on three restructuring areas: banking sector, state-owned enterprises, and public investment. However, certain priorities within two of these areas, state-owned enterprises and public investment, were perceived to have underperformed compared to expectations. As such, the SEDP for 2016-2020, approved in April 2016, acknowledges slow progress on certain SEDP reform priorities, and emphasizes the need to accelerate these reforms over the next SEDP period, 2016-2020, to achieve targets set out in the 10-year strategy (World Bank & Ministry of Planning and Investment of Vietnam 2016).

2.2.2 Trade liberalization process

There are various ways of dividing the stages of Vietnam's trade liberalization process. Chronologically, Leung (2010) divides Vietnam's trade reform process into two phases.

The first phase happened during the first decade of Doi Moi. It started in 1989 and ended just before the East Asia financial crisis in 1997-1998.

The first phase had three distinctive characteristics. Firstly, the expansion of cultivated area and the formation of markets for agricultural produce contributed the largest share to the economic growth for this phase (Vu, DC 2016). Secondly, the opening of the country's borders to relatively free trade in 1989 impacted greatly on the agricultural sector (Fforde 2012). As such, the contribution of agricultural exports (rice, coffee, rubber, tea, etc.) to the total foreign exchange revenue of the country increased heavily and accounted for a significant share. Thirdly, during this first phase, the international trade and investment laws and regulations were systematically established to protect the state sector. The first phase had ended by the East Asia financial crisis in 1997-1998 (Vu, VH 2012).

The second phase of reforms started in 2000. This phase was characterized by the implementation of various laws, creating a more comprehensive legal environment, enabling fairer treatments between the state-owned and the private sectors, and between local firms and foreign ones (Leung 2010). During this second phase, the international integration of Vietnam was accelerated, with the signing of many trade agreements (Abbott, Bentzen & Tarp 2009). One of the remarkable milestones of this phase was the accession of Vietnam to the WTO in January 2007, after more than eleven years of negotiation. In the following year, the economic growth accelerated, being ranked globally as second only to China's growth (Vu, DC 2016). Vietnam was also named as an attractive destination for foreign direct investment (United Nation Conference on Trade and Development 2008, p. 8). However, economic growth still substantially depended on natural resources exploitation and low labour costs rather than on creativity and innovation (Vuong 2014). Hence, as the macroeconomic turbulence exploded in Vietnam in 2007 in the form of a stock market bubble (with the VN-index reaching its peak of 1170 point in March 2007) so too were the expectations of a stable and sustained rapid growth economy thwarted. The limitation in this phase showed that a reform strategy that simply unleashed the domestic private sector does not appear sufficient for a stable economic growth, especially in the globally integrated market (Leung 2010).

Another approach in reviewing Vietnam's trade liberalization and international integration process is to analyse the key dimensions of the liberalization (see, for example, Athukorala 2006; Auffret 2003; Vu, DC 2016; Vu, VH 2012). For that, the trade reform

process in Vietnam is generally considered to be parallel with the country's economic reform efforts, which in particular include three core aspects, of (i) broadening trading rights to various economic entities, (ii) entering bilateral and multilateral trade agreements, and (iii) implementing policies to protect domestic production and promote exports (Vu, DC 2016). The following sections discuss these three significant aspects of trade reform in detail.

2.2.2.1 Trading right reform

The granting of trading rights to non-state firms was one of the most important aspects of the trade reform process. Before Doi Moi, private ownership was seen as being associated with capitalism, and hence was considered the 'enemy' of socialism (Vo, XH & Baumgarte 2000). Consequently, before 1989, foreign trade activities of the country (with its main trading partners being in the Soviet bloc) were completely monopolized by state-owned corporations (SOCs). Even with the trade reform in progress, trading activities remained severely limited during the first phase (1989-1997), because of the restrictive conditions applied to the non-state sector (Vo, TT 2005). Nevertheless, these restrictive conditions were progressively weakened and eliminated in 1998, marking the final day of SOC's monopoly position in foreign trade activities (Vietnamese Government 1998).

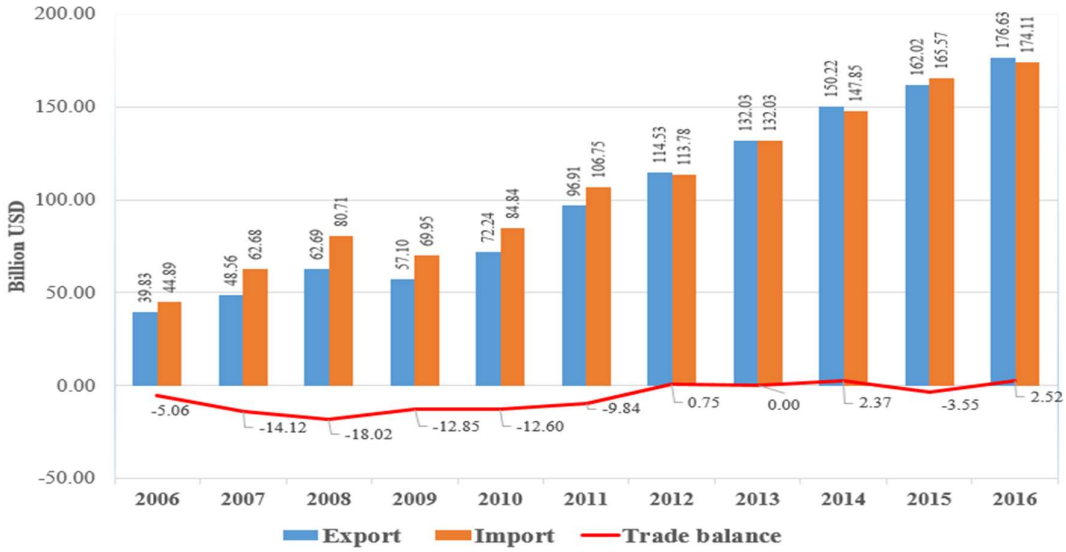
Since 2001, with the implementation of Decision 46/2001/QD-TTg of the Prime Minister, private enterprises have been able to participate in any foreign trade activities, excluding those under the list of prohibition or specialized management. As a result, from 2001 onwards the number of trading enterprises grew dramatically. The number of enterprises registered for international trading activities increased by almost ninefold, from 2,400 in early 1998 to approximately 18,000 in early 2004 (Vo, XH & Baumgarte 2000). With regard to foreign-invested enterprises (FIEs), from 2002, further liberalization was extended to these firms; and following that, FIEs were allowed to export goods other than those they produced themselves (Vu, DC 2016; Vu, VH 2014).

2.2.2.2 International economic integration

Active global economic integration has always been an important orientation since the beginning of Vietnam's renovation. As such, the signing of multiple bilateral and multilateral trade agreements has marked significant progress in the trade reform roadmap of the Vietnamese economy. According to Abbott, Bentzen and Tarp (2009), the trading value of Vietnam with its partnering countries or country groups increased significantly

once Vietnam established bilateral or multilateral trade agreements with such respective countries or groups. Moreover, deeper integration into the global economy has meant not only increasing trade volume but, more importantly, convergence with international standards. The latter includes commitments on institutional improvements, protection of intellectual property rights, conformation to international standards on labour, and engaging with environmental issues. These factors, in turn, have contributed greatly to efficiency enhancement and economic growth (Vo, XH & Baumgarte 2000). As a result, both imports and exports increased threefold over the 2006-2013 period (Figure 2.1).

Figure 2.1: Vietnam's exports and imports from 2006 to 2016, billion USD



Source: Vietnam General Department of Customs 2017

On a bilateral basis, the earliest preferential trade agreement (PTA) of Vietnam was signed in 1992, with the European Economic Community (now the European Union - EU). This PTA inaugurated cooperation between Vietnam and the member nations of the EU. Similarly, after five years of negotiation, Vietnam signed its first bilateral trade agreement with the United States ('BTA') in 2000. At that time, the BTA was the most comprehensive trade agreement by Vietnam, which set the ground for the later WTO negotiations, as this bilateral agreement with the US covers all areas of the WTO agreements such as trade in goods and services, intellectual property, and investment issues (VCCI, WTO centre 2011).

With regard to free trade agreements (FTAs), which is the higher level of economic integration in comparison to trade agreements, Vietnam has signed four

bilateral FTAs that the country represents as a signing party (rather than as a member country of an economic association, which will be discussed below). In 2008, the country signed its first bilateral FTA with Japan, known as the Vietnam–Japan Comprehensive Economic Partnership Agreement (VJEPA). Later, in early 2014, Vietnam signed an FTA with Chile, concluded after more than six years of negotiation. One year later, an FTA between Vietnam and Korea was signed, in May 2015, which came into effect in December 2015. Also in May 2015, Vietnam signed a comprehensive FTA with a high level of commitment with the Eurasian Economic Union (EAEU, including Federation of Russia, Belarus, Kazakhstan, Armenia and Kyrgyzstan), which came into effect on 6 October 2016 (Vietnam Chamber of Commerce and Industry - WTO Centre 2016).

On a multilateral basis, as an active member of the Association of South East Asian Nations (ASEAN) and the ASEAN Free Trade Area (AFTA) since 1995, Vietnam and other ASEAN members initiated and implemented the 'ASEAN plus' strategy. The 'ASEAN plus' strategy promotes ASEAN as a trading bloc by signing various FTAs with its significant trading partners in Asia and the Pacific region. Until now, Vietnam has entered six 'AFTA plus' agreements, which are detailed in Table 2.2. Apart from the multilateral trade relationships as a member of ASEAN, Vietnam is an official member of the WTO since 2007, after more than eleven years of negotiation. Table 2.2 shows a brief chronology of Vietnam's trade agreements and integration milestones since Doi Moi in 1986.

Table 2.2: Vietnam's trade agreements and integration milestones from 1986 to 2018

Year	Event
1986	Doi Moi (the Renovation) - Economic reforms begin
1992	Trade agreement with European Union (EU)
1995	WTO accession working party established Joined Association of South East Asian Nations (ASEAN)
1998	Joined the Forum of Asian Pacific Economic Cooperation (APEC)
1999	MFN agreement with Japan
2000	US-Vietnam Bilateral Trade Agreement (UVBTA) signed
2001	CEPT/AFTA implementation plan under ASEAN begins
2002	ASEAN-China Free Trade Agreement (ACFTA) signed
2003	ASEAN-Japan Comprehensive Economic Partnership (AJCEP) signed
2004	EU-Vietnam bilateral agreement on WTO accession
2006	CEPT/AFTA under ASEAN implementation completed ASEAN-Korea Free Trade Agreement (AKFTA) signed (in May)
2007	Joined World Trade Organization (WTO) (on 11 January)
2008	Vietnam-Japan Economic Partnership Agreement (VJEPA) signed ASEAN-Japan Comprehensive Economic Partnership Agreement (AJCEP) goes into force.
2009	ASEAN-Australia-New Zealand FTA (AANZFTA) signed (in February) ASEAN-India FTA (AIFTA) signed (in August)
2011	Started negotiation of Trans-Pacific Strategic Economic Partnership Agreement (TPP).
2014	Completed negotiation process of FTA with customs union with Russia-Belarus-Kazakhstan (VCUFTA)
2015	Completed negotiation of FTA with Eurasian Economic Union (EVFTA) Completed negotiation process of TPP Signed Vietnam-Korea trade agreement
2017	On-going negotiation (19th round) of the Regional Comprehensive Economic Partnership (RCEP) – A Free Trade Agreement between ASEAN and existing FTA partners (China, India, Japan, South Korea, Australia and New Zealand)
2018	Concluded the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) – the former TPP renamed after Washington's withdrawal.

Source: Author's adaptation and update, based on Abbott, Bentzen & Tarp (2009)

2.2.2.3 Trade policies reform

The last aspect of trade liberalization in Vietnam has been implementation of reformed trade policies and management measures, which over time has seen the import-substitution strategy replaced by an export-promotion strategy.

In the first stage of trade liberalization, Vietnam still pursued an import-substitution strategy which focused on developing and protecting domestic production. However, Vietnam has gradually adjusted both tariff and non-tariff measures which had been heavily imposed in the past to control the flow of imported products. For example, in 1988, import tariffs were imposed on 130 categories of goods. Nonetheless, tariff regulations have been amended several times toward lowering of the tariff rates, with the implementation of a new law on import/export in 1991 and the introduction of the harmonized commodity description system (HS) in 1992 (Vo, TT 2005). Quantitative restrictions (quota) were also imposed as non-tariff barriers in controlling imports to Vietnam. For example, Vo, TT (2005) detailed nine major products covered by import quotas in 1998: petroleum, steel, cement, construction glass, motorcycles, 12-seater vehicles, paper, sugar, and liquor.

The implementation of a strict foreign exchange management policy was considered as an additional shield to protect domestic market and pursue the import-substitution strategy. The Decree 161/ HDBT in October 1988 was the most important regulation to strictly control foreign exchange, requiring foreign exchange from export activities to be completely surrendered to the Central Bank (the State Bank of Vietnam). In August 1998, Decree 63/1998/NĐ-CP made it possible for exporting firms to open a foreign exchange savings account. However, after the Asian financial crisis in 1998, a foreign exchange surrender requirement was imposed on exporters, for which the Central Bank (the State Bank of Vietnam) required exporters to sell 80% of their foreign exchange earnings to banks.

During the second phase of reform, the trade liberalization process was accelerated, marking a shift from an import-substitution policy to an export-promotion strategy. In terms of policy reforms, this stage underscored the consistent efforts of Vietnam in undertaking its commitments in the signed trade agreements. Firstly, the use of non-tariff barriers such as quantitative restrictions and foreign exchange control was dramatically reduced or removed. For example, most quantitative restrictions were

replaced by the tariff structure by 2001 (Vo, TT 2005). Similarly, the foreign exchange surrender requirement restriction was reduced (to 50%, then to 40% and 30%, in 1999, 2001 and 2002, respectively) and finally removed in 2004 (Athukorala 2006; Vu, VH 2014). Secondly, Vietnam has committed to improving transparency and eliminating discrimination between domestic and foreign investment, as well as between domestic and imported products, conforming to the non-discriminative and WTO-compatible pricing policy (Vu, DC 2016).

Table 2.3. Vietnam's Top 10 export products in 2016

Products	Billion USD	Percentage of total export turnover (%)
Mobile phones and phone accessories	34.32	19.4%
Textile and garment products	23.84	13.5%
Computers, electronic devices and accessories	18.96	10.7%
Footwear	13.00	7.4%
Agricultural products	12.45	7.0%
Machines	10.14	5.7%
Fishery products	7.05	4.0%
Wood and wooden products	6.97	3.9%
Transport vehicles and accessories	6.05	3.4%
Suitcases, bags and headwear	3.16	1.8%
Total	135.94	77.0%
Total export turnover	**176.63**	**100%**

Source: Calculation from statistics report by the General Department of Customs (2017).

In implementing an export-promotion strategy, Vietnam has applied a variety of export promotion measures, such as export duty reduction and tax exemption, as well as the provision of export credits[3] and a duty drawback scheme[4]. It is notable that the export promotion program of Vietnam has been designed to fully conform to the country's scheduled commitment in WTO. For example, domestic support for agriculture has been kept below 10% of production value, and all prohibited industrial subsidies have been eliminated upon accession (CIEM, DoE & ILSSA 2010).

[3] Export credit is an export promotion program that granting credit access to exporting firms on a non-discrimination basis. In Vietnam, the state-owned commercial banks (SOCBs) have generally only accepted land and Treasury Bonds as collateral for lending (Vo, TT 2005). Hence, SOEs (including joint ventures of foreign companies with SOEs) normally have privileged access to the SOCBs.

[4] The duty drawback scheme allows exporters to get refunds for the paid import duty of the imported inputs being used to produce exported goods.

2.3 Overview of the institutional context

2.3.1 Formal institutional context

Institutions are defined as the "humanly-devised constraints that structure human interaction" (North, Douglass Cecil 1990, p. 3), and conventionally have three pillars: regulatory, normative and cognitive (Scott 1995). In international business, the institutional context has both formal and informal dimensions. Formal institutions are the formal rules in a society, which comprise the legal systems, government policies, and business regulatory systems, and these formal rules are legally enforceable. On the other hand, informal institutions are the "humanly devised constraints that are not formally codified" (North, Douglass Cecil 1990, p. 3). Informal institutions comprise norms, culture and ethics, which are more normative and cognitive than legally enforceable. Nevertheless, informal institutions play an important role in shaping the business environment, especially in emerging economies, where formal institutional frameworks have not been fully developed or remain inefficient (Peng & Zhou 2005; Rottig 2016).

For the case of Vietnam, the transitional process has witnessed the evolving of the formal institutional frameworks. The institutional reform was applauded for the degree of stability maintained during the transition process, which was perceived as crucially important. Instead of the 'root and branch' destruction of old institutions as a prelude to the implementation of new mechanisms, many reforms were directed at improving the existing institutions, while gradually introducing new market institutions (Van Arkadie & Mallon 2003). This step-by-step approach to reform was based on continuity in the political system, which operated through building and maintaining consensus on economic and institutional reforms (Van Arkadie & Mallon 2003). The improvements enhanced the new economic development pathway of Vietnam, and implemented its international commitments in the international integration process (Vo, 2005). However, these formal institution improvements have not yet become fully compatible with those of a market economy, such as in the inadequacy of property rights, and the inefficiency of both the legal system regulating financial markets and the public service sector (World Bank & Ministry of Planning and Investment of Vietnam 2016).

2.3.2 Informal institutional context

With regard to informal institutions, it is notable that informal institutions in Vietnam are also transforming with the economic development process, although at a slower speed

(Meyer & Nguyen 2005). Vietnam serves as a unique context for informal institutional research, with some of its key characteristics including: (i) its rare combination of collectivist culture and the rise of individualism; (ii) the emergence of a new crony capitalism; and (iii) the perception of firms of bribery and corruption.

2.3.2.1 Collectivism culture in the rise of individualism

Like many other Asian countries, Vietnam's culture is described as collectivist rather than individualistic. Vietnamese society is traditionally structured by the community, comprised of interconnected networks of personal relationships (Nguyen, DL 1994; Pham 2008). The personal relationships and collectivist culture seem to radiate strong influence on all social and economic activities, for links between individuals are strong. Personal ties are sustained by shared understanding, trust and credibility, which are generally considered as prerequisites for longer-term relationships (Nguyen, DL 1994; Pham 2008).

The introduction of economic reform has, to some degree, impacted on the collective culture of Vietnam. The rise of private economic activities has transformed business relationships to a certain extent. As a result, the rich community culture has been challenged by the rise of individualism and the lack of an environment for that community culture to develop (Do & Phan 2002). Economic development over time has created a somewhat too hybridised environment for collectivist culture to develop healthily.

Firstly, the prolonged central planning economy and communist ideology gave an unnecessarily strong power to civil servants and public officials in allocating economic resources as well as in providing public services for firms. As a result, the power distance between civil servants and businesses has been huge, especially for businesses in the immature private sector (Nguyen, VT et al. 2016). This prolonged practice has gradually formed a mindset in the society that civil servants do not provide public services as part of their duties but have the 'power' to grant an advantage to firms. Therefore, until now, when the economy has undergone a transition toward being a market-oriented economy, the remains of the central planning ideology are still active. Civil servants and public officials are accorded certain levels of power, and thus can bring certain benefits for firms (De Jong, Tu & van Ees 2012). This mindset has fashioned the desire to establish personal ties with public servants to pursue personal benefits, which has thus diverged from the collectivist culture. The relationship between community members and civil servants

may, therefore, reflects a combination of a fading community spirit and the rising individualism.

Secondly, the lack of separation between personal emotional relationships and business issues may have created confusion and degraded community development. In other words, while community culture appreciates trust and reciprocal support among members, the associated actions might be confusing: for example, a focal community member who voluntarily and sincerely radiates these values might be proclaimed as pursuing his personal business intention for self-benefit rather than for community interest. In such a situation, a genuine focal member might refrain from doing community work. In contrast, there exist other community members who intentionally take advantage of community development activities to establish their own relationships for personal benefit. Consequently, the traditional collectivism, where community success was prioritized over individual achievement, has been challenged. More importantly, while the rise of individualism has been pervasive, and the importance of personal networking and relationships in various aspects of doing business in Vietnam has been profound, this is often not publicly recognized (Nguyen, DH 2016).

2.3.2.2 The emergence of the new crony capitalism

During the transition process, the development of the Vietnamese economy has exposed various gaps, especially in the distribution of scarce economic resources. One problem of the early transitional economy was that the formal institutional framework had not been fully developed to reflect and regulate the newly-introduced economic ownership, such as for private enterprises. Hence, distribution of economic resources (such as land, finance, or other manufacturing facilities) has been described as being in favour of the state sector (Napier & Vuong 2013). This ineffective and unfair distribution system has given rise to enormous rent appropriation and capital accumulation opportunities.

Initially, rent appropriation was mostly captured by a specific group whose positions allowed them to control the rent appropriation apparatus, such as politicians, government officials, or civil servants. Gradually, it became clear that rents could be channelled, and commercial benefits be gained by networking and relationship building with those government officials (Fforde 2002). In other words, rent appropriation opportunities have been channelled to the cronies of the above-described group. This channelling has gradually degraded into the problem of 'crony capitalism', interest groups

and corruption (Vuong 2014). However, the 'crony capitalism' phenomenon in Vietnam has not been explicitly recognized (admitted) or depicted with sufficient clarity.

2.3.2.3 Bribery and corruption

One of the notable aspects of the informal institutional context in emerging economies is the lack of transparent policies and inefficient monitoring systems, coupled with the existence of rent appropriation opportunities, as well as pervasive administrative red tape, and hence the existence of bribery and corruption. In a recent report of the World Bank on transparency, accountability and corruption in the public sector, the index for Vietnam maintained an average of 3 (1=low, 6= high) for the ten years from 2005 until 2015 (World Bank 2017). The index has thus not improved despite the announced efforts of the lead Communist Party to combat corruption and the implementation of anti-corruption measures by the Government.

In a recent report of the Vietnam Chamber of Commerce and Industry (VCCI), in March 2017, approximately 66% of 10,000 surveyed enterprises revealed that they had to offer bribes or pay informal fees to public officials. The proportion of firms saying that they had to regularly pay such charges was 12%-15% higher than in the previous survey of 2008-2013. With regard to the amount of informal charges, surveyed firms said that, in the 2014-2016 period, they saw a level comparable to the 2006 baseline, and observed no signs of this lessening. Moreover, it was common for businesses to experience harassment while performing administrative procedures. This indicator significantly dropped from 65% in 2013-2014 to 58% in 2016, but remained higher than the finding in the previous survey (2006-2012) (Malesky 2017).

As reported by Nguyen, VT et al. (2016), bribery and corruption in Vietnam have been viewed by firms as being 'part of the game', and many firms have paid bribery so as to 'feel inclusive' and to avoid the administrative burden that they would otherwise encounter. However, this phenomenon has degraded the business environment, and can crowd out genuine entrepreneurship and limit its development.

2.4 Vietnamese SMEs in the trade reform era

2.4.1 The development of SMEs in Vietnam

Under the central planned economy prior to Doi Moi, the two dominant types of business ownership in Vietnam were State Owned Enterprises (SOEs) and collectives (Fforde &

Paine 1987). During this period, the system attempted to eliminate capitalism, as it was considered the 'enemy' of the socialist ideology. Therefore, the economy did not encourage the existence of the non-state sector, and the state controlled most major inputs and means for production, determined almost all prices (including wages), and allocated virtually all labour (Fforde 2005). Despite these unfavourable conditions, there still existed some popular private ownership types such as family business and household enterprises (Le, V & Harvie 2010b; Vu, VH 2014) in parts of the agricultural, handicraft and consumer goods retail sectors.

The development of the private sector in Vietnam commenced with the recognition of a multi-stakeholder economy under the Doi Moi policy in 1986, then with the formal acknowledgment made in the revision of the 1992 Constitution. Along with recognizing the existence of the private sector, the Vietnamese Government committed to protecting private ownership and restructuring the state-owned enterprises (SOEs). Another important milestone for the development of the private sector was the promulgation of the Enterprise Law (1999), which significantly simplified business registration processes (Tran, C, Le & Nguyen 2008). Furthermore, after the WTO accession in January 2007, Vietnam adopted more in-depth reforms in accordance with these commitments, include amending of laws and regulations, creating a fairer playing field and more comprehensive market-based competition. These further reforms contributed significantly to private sector development.

However, although the majority of firms in the private sector were of a small and medium scale, a formal definition for these firms was absent. It took fifteen years (from Doi Moi) for a formal definition of SMEs to be announced. In November 2001, the Government Decree on support for development of small- and medium-sized enterprises officially defined an SME as "a business establishment with registered capital of no more than Vietnam dong (VND) 10 billion (equivalent to USD 630,000) or with a workforce of no more than 300 regular employees" (Decree 90/2001/ND-CP, Article 3).

The SME definition in Decree 90/2001/ND-CP, however, was not specific enough to support policy formulation, since it did not clearly distinguish between small- and medium-size firms. Hence, in June 2005, a further classification was introduced in the SME Development Plan 2006-2010, in which SMEs were categorized into micro enterprises (less than 10 employees), small enterprises (10 to 49 employees), and medium-sized enterprises (50 to 299 employees). Nevertheless, with the development of

SMEs, both practitioners and policy makers required further clarification in SMEs categorization. Essentially, the 2005 classification did not effectively distinguish SMEs operating in different sectors, which clearly require different levels of capital and employees for their operations. For example, it is unreasonable to categorize the size of a service firm and a manufacturing firm by the same threshold of capital, because a service firm does not normally need as much capital as the production firm does (Tran, C, Le & Nguyen 2008).

The most recent definition provides a more detailed and precise segmentation than the previous one. It was introduced by the Government under Decree No. 56/2009/ND-CP on 30 June 2009. In this latest definition, SMEs are categorized as micro, small, and medium enterprises, based on the number of employees or total capital, and distinctions are made across industries, as shown in Table 2.4.

Table 2.4: The recent definition of small and medium enterprises in Vietnam

	Micro enterprises	**Small-sized enterprises**		**Medium-sized enterprises**	
Sector	*Number of laborers*	*Total Capital* (billion VND)	*Number of Laborers*	*Total Capital* (billion VND)	*Number of laborers*
Agriculture, forestry and fishery	⩽10	⩽ 20	11 - 200	20-100	201 - 300
Industry and construction	⩽10	⩽ 20	11 - 200	20 -100	201 - 300
Trade and service	⩽10	⩽ 10	11 - 50	10 -50	51 - 100

Source: Article 3-Decree 56/2009/ND-CP of Vietnamese Government

With regard to the development in quantity and scale of SMEs following the improvement of the formal institutional framework, the Vietnamese General Statistics Office reports that, after the Enterprise Law 2005 was enacted, the number of SMEs had by 2011 increased 2.6 times in comparison with 2006, an annual increase of 21% on average for the period from 2006 to 2011. The SME sector attracted 5.06 million employees as of 31 December 2011, which is more than double the figure of 2006. With regard to total capital, it is observed that SMEs' total capital in 2011 reached 5442.9 trillion VND, 5.7 times higher than 2006, an annual increase of 41.6% on average.

Turnover in 2011 reached 4,690.6 trillion VND, nearly 4.3 times that in 2006, an annual increase of 34% on average. Profit before tax for the year 2011 reached 46 trillion VND, 1.3 times that of 2006, an annual increase of 4.8% on average. Contributions to the state budget in 2011 reached 177.8 trillion VND, nearly 4 times those in 2006, a yearly increase of 31.7% on average (Vietnam General Statistics Office 2013).

2.4.2 Overview of SME exports

According to the VCCI, small and micro enterprises make up the majority of Vietnamese enterprises (VCCI, 2014). However, almost all these enterprises are only serving the domestic market, and their involvement in international markets has been very limited. While SMEs contribute approximately 50% of total GDP, their contribution to total exports of the country is less than 10%[5]. Besides this, the linkage between Vietnam's SMEs and world trade through FDI enterprises and state-owned enterprises is very loose (World Bank 2013).

A recent report of the Vietnam Trade Promotion Agency (2015)[6] has analysed the current export performance and assessed the export potential of Vietnam. The report argues that the SMEs' contributions to exports are currently underperforming, and that the potential export capacity of Vietnamese SMEs is much higher. There are several reasons often cited for the underachieving export performance of Vietnamese SMEs.

First and foremost, from the value chain analysis, it is claimed that exports from Vietnamese SMEs, similar to the export pattern of Vietnam in general, mostly comprise low-cost, labour-intensive or resource-intensive products, hence the value added is minimal, and the stability and future growth potential are questionable. For example, approximately 72% of exporting firms remain highly dependent on their foreign trading partners for product specifications, designs, or materials, and 76% for technology or expertise (Tran, C, Le & Nguyen 2008). This is particularly difficult for Vietnamese SMEs, because they have to compete not only among themselves but also with the larger scale, state-owned enterprises, and more importantly with other international competitors.

[5] Total exports of SMEs have been calculated using the data from the General Statistic Office of Vietnam Ministry of Industry and Trade and the SME survey results co-conducted by the Central Institute of Economic Management and Copenhagen University.

[6] The project, "Decentralized Trade Support Services for Strengthening the Competitiveness of Vietnamese SMEs", was conducted by VieTrade under sponsorship of the Swiss Government, State Secretariat for Economic Affairs-SECO.

Therefore, some suggest that SMEs should focus on improving the competitiveness of their products, and to move up the value chain to achieve stable competitive advantage in the international market[7]. However, SMEs find it challenging to balance between surviving the current fierce competition and investing in innovation activities to increase this competitiveness, particularly with their limited resources.

Another reason often cited for the relative inactivity of SMEs in export business is their high liability of foreignness and smallness (Zaheer 1995; Tiwari, Sen & Shaik 2016), which refers to the additional costs incurred by SMEs for operating in foreign markets due to their unfamiliarity with the business environment, low level of brand awareness, and lack of economy of scales (Tiwari, Sen & Shaik 2016). As such, Vietnamese SMEs face additional challenges when entering a foreign market, especially for micro and small firms. For example, Rand et al. (2008) found a positive relationship between firm size and their probability of exporting. In addition, exporting firms have in general not diversified their export markets or customers but relied on relatively few foreign trading partners (i.e. only five foreign customers on average) when engaging in direct exports.

Finally, there are critical problems concerning the proactiveness of Vietnamese SMEs, although this has been changing. Although Vietnam has been a WTO member for more than ten years now, SMEs' awareness and knowledge of economic integration remain elusive. Hence, readiness to internationalize is still very limited. Kokko and Sjöholm (2005) reported that, in a 2003 survey, a majority of rural household enterprises (70%) did not know what liberalization meant, and SMEs perceived there to be no expectation of any notable changes from internationalization. In a 2005 survey, a positive perception and knowledge of internationalization had emerged: 72% of the enterprises had information on economic integration (Kokko & Sjöholm 2005). However, 15% of managers did not know the challenges they would be facing in the future; and 31% of firms did not know about WTO issues (Tran, C, Le & Nguyen 2008). Surprisingly, a survey by the VCCI (2017) recently revealed little changes in the perception of SMEs toward internationalization, with more than 80% of domestic SMEs being unaware of the trade agreements that Vietnam had signed, and that these firms had not prepared for the impacts of those trade agreements.

[7] http://vietnamsupplychain.com/en/share/news/smes-need-to-move-up-the-value-chain/13765.

2.5 Chapter summary

This chapter has shown the evolving nature of the SME sector and the changing export activities of SMEs during the transitional process of the Vietnamese economy. By providing general and historical descriptions of the economy, this chapter has shown that the development of the institutional conditions anchored by Doi Moi, and the expansion of the private sector, with the backbone of this expansion being through SMEs, have together formed a core trajectory for Vietnamese economy.

In the era of globalization, Vietnam has achieved remarkable progress in economic integration. More bilateral and multilateral trade agreements have been negotiated and come into effect, opening up enormous opportunities for Vietnamese enterprises to participate in the global market. Nevertheless, the export performance of SMEs has been widely viewed as being one of underachievement to some extent. The chapter also provided a brief overview of some common reasons cited for the relatively poor performance of SMEs in their export ventures.

CHAPTER 3: LITERATURE REVIEW

3.1 Introduction

This chapter systematically reviews the key studies related to the research problem set in the present study on the roles of social capital in the export success of SMEs in Vietnam. The chapter reviews the state-of-the-art literature in order to position the present research within the context of the vast literature on social capital and its impacts on firm's internationalization and export performance. The literature review aims, firstly, to introduce and relate the research topic to existing literature and to identify the gaps that the present research addresses. Secondly, this literature review chapter also helps to refine the theoretical framework for the present research.

Topics covered in this chapter range from the 'umbrella' topic of export propensity and export performance (concept, determinants and measurements) and social capital (concept, dimensions and measurements), to the narrower range of literature on the linkages between social capital and export success (export propensity and export performance) and, more specifically, the export success of SMEs in developing countries. In parallel with the topic-related literature, this chapter also reviews literature on the key theoretical frameworks, of the resource-based view, the dynamic capabilities school of thought, and the transaction cost and rent seeking theories, in order to provide a multi-dimensional viewpoint for the present research. The review then recaps key contributions of the existing literature in connection with the main research issues addressed in this research.

The review was performed using the 'systematic literature review' methodology. At the initial stage, expert recommendations of key authors were used; then, a searching strategy was designed to include both electronic search engines and manual searching, to ensure adequate coverage in the review. Electronic search engines were mainly used to identify relevant literature from major social science databases such as the EBSCO, Science Direct, Sprinkles, Emerald Insight, and Google Scholar[8]. These databases cover various types of publications such as books, a wide range of journal articles, and project reports. In addition, to avoid missing more recent works in the field, the search strategy

[8] These computerized databases are directly linked with the library searching tool of Victoria University, Australia.

also covered the Social Science Research Network database (SSRN) for studies under the publication process.

The electronic search was conducted with a list of keywords related to the stated research objectives. The list of keywords used to search for relevant literature were 'social capital', 'social capital measurement', 'networks', 'export performance', 'export propensity', 'export performance determinants and measurements', 'small and medium sized enterprises', 'small firms', 'small firm's internationalization', 'transitional economies', 'Vietnam', 'resource based view', 'dynamic capability, 'transaction costs theory', and 'rent-seeking theory'. These keywords were used both individually and simultaneously in searching for relevant papers.

Regarding time frame, as the review covers all relevant literature related to the topic, including the origin of key concepts and their development over time, no limitation regarding time of publication was set while searching for keywords. Manual searching was mainly done by following repeated references that were encountered across different articles, and in publications of major contributors. These manually searched materials are either available at the Victoria University library or made available upon request through the library service.

3.2 Export performance

3.2.1 Overview of research on export performance

The topics of firm internationalization and export as a firm's primary mode of going global have been attracting considerable attention from scholars. Tookey (1964) is often cited as the pioneer scholar who initiated research on export performance with the innovating article titled, *'Factors associated with success in exporting'* (Lages, Lages & Lages 2004; Sousa 2004). Since then, with the increased globalization trend, researchers have conducted extensive research on export performance from various perspectives, of international business, international marketing, and international management[9] (Bilkey

[9] An electronic search (performed on 9 October 2017) for the key term, "export performance concept", using the Victoria University library search tool yielded 683 results from all available resources. Most of these studies (537 publications, or approximately 79%) are in the English language. The topic was most studied during the last two decades, where 623 works (or more than 92% of the total) were published during the period of 1998-2017.

1978). However, an agreement on the concept of export performance has not yet been reached.

Export performance is a multilayered topic which can be covered at different levels, such as at macro, region (Hoekman & Nicita 2011; Kesidou & Szirmai 2008; Yang, Y & Mallick 2014), country (Kumar & Siddharthan 1994), (Dijk 2002) or industry levels. It also can be done at micro level, such as at firm level (Carneiro et al. 2016; Carneiro, Rocha & Silva 2007; Carneiro, Rocha & Silva 2011; Papadopoulos & Martín Martín 2010; Singh 2009; Sousa 2004; Sousa, Martínez-López & Coelho 2008) or export venture level within the firm (Cavusgil & Zou 1994; Katsikeas, Leonidou & Morgan 2000; Lages, Lages & Lages 2004). As discussed in Chapter 1, Section 1.2.1, the present research is concerned with export performance at firm level only.

Regarding the geographical distribution of the research surveyed, it is noted that the majority of studies, both theoretical and empirical, have been conducted in developed countries. Where comparative studies between developed countries and developing ones are concerned, these have also been conducted in the developed world. To the best of the author's knowledge, the first study of export performance concerning developing countries was by Brodsky and Sampson (1980), who studied the retained value of export activities in developing countries. Only in the last two decades have we seen the emergence of firm-level empirical research from developing countries. Literature review work has also started, including empirical studies from developing countries. For example, the share of these studies increased from 10% in the period, 1987-1997 (Zou & Stan 1998), to 20% in the period, 1998-2005 (Sousa, Martínez-López & Coelho 2008). Nevertheless, there is a relative absence in the literature on export performance of certain part of Asia, South and Central America, the Caribbean and Africa (Sousa, Martínez-López & Coelho 2008; Sharma, Sraha & Crick 2018).

3.2.2 Export performance concept

Despite the popularity of the topic of export performance, it is argued here and elsewhere that this concept has neither been well-developed nor gained agreement among scholars. Katsikeas, Leonidou and Morgan (2000) review 93 empirical studies on export performance since the inception of the concept until the 1990s, and conclude that most of the reviewed research suffers from serious conceptual limitations. In consequence, the lack of consensus on the concept of export performance has resulted in differences in

operationalization of the term and its measurements, which, in turn, may have contributed to confusion in empirical findings (Carneiro, Rocha & Silva 2007).

At firm level, export performance is generally defined as "the composite outcome of a firm's international sales" (Shoham 1998, p. 61). The 'outcome' is generally agreed to cover both financial and strategic facets of performance in terms of effectiveness, efficiency, and adaptiveness of the firm (Katsikeas, Leonidou & Morgan 2000; Shoham 1998). However, the review conducted by Katsikeas, Leonidou and Morgan (2000) shows that, while most empirical studies focus on effectiveness, and to a lesser extent efficiency, very limited attention has been placed on adaptiveness, which is a critical aspect for evaluating the success of firm in international market.

Carneiro et al. (2016) note that most of the conceptual work on export performance has been done by academicians who, by and large, put forward their prior knowledge of the term while attempting to conceptualize it. Despite the pre-test and pilot test efforts, there is a lack of contribution from practitioners in the beginning stage of conceptualization work. In their recent review, Carneiro et al. (2016) found only two empirical qualitative studies that endeavoured to explore managerial perceptions of export performance. Thus, it is suggested here that more attention should be given to understanding the way managers conceptualize and measure export performance. Managers' perceptions influence their evaluations of exporting ventures, and their commitment to exporting, which might thus have an impact on export performance itself (Carneiro et al. 2016). In order to address this gap, the present study includes an exploratory qualitative study of managers' perspectives on export performance.

3.2.3 Export performance determinants

There has been a substantial literature exploring the determinants of export performance at firm level. The findings are quite diverse, and the conclusions regarding the impact of any individual factor are not always consistent. Similar to the disagreement over concepts, researchers studying export performance determinants have not yet reached agreement on such determinants (Sousa 2004). For example, contradictory results have been found in different researches with regard to some well-studied determinants such as firm size, international experience, pricing strategy, or market competitiveness (Sousa, Martínez-López & Coelho 2008).

Attempts to synthesize and conduct meta-analysis on export performance determinants have evolved over the past four decades, from the first review of Bilkey (1978) through those of Aaby and Slater (1989), Gemunden (1988) and Zou and Stan (1998). In the late 1980s, most research focused on exploring and developing explanatory variables (Dhanaraj & Beamish 2003). For example, Gemunden (1988) claimed in his meta-analysis that over 700 indicators of export success had been introduced in the 50 studies under review. Until the late 1990s, efforts had been placed on evaluating the impact of explanatory variables (Dhanaraj & Beamish 2003; Sousa, Martínez-López & Coelho 2008) rather than on the relationships among them (Dhanaraj & Beamish 2003).

Recently, the growing interest in the topic from both academics and practitioners, placed under the changing dynamics of globalization, has shifted the focus of export performance research from developing more explanatory variables to integrating and developing comprehensive models to assess export performance. For example, Sousa et al. (2008) surveyed 52 researches published between 1998 and 2005, and acknowledged the emergence and influence of control and moderating variables. In the meantime, their review reported the advancement in use of more sophisticated statistical methods with the increasingly popularity of structural equation modelling, which in turn showed the complication in the models used in the literature.

Sousa, Martínez-López and Coelho (2008, p. 353) reported 44 determinants of export performance, comprising 10 external and 34 internal factors. External factors determining export performance of firms include foreign market characteristics and domestic market characteristics; while internal factors include export marketing strategy, firm characteristics, and management characteristics. The frequencies of use of the above 44 determinants were ranked from 2% (equivalent to one research using a determinant) to 38% (equivalent to twenty researches using a determinant). Almost all studies examined or tested more than one determinant, yet there is no clear indication about how researchers combine these determinants in their research models or whether there exists a pattern of combination. Furthermore, there is no consensus on the theoretical framework.

In the fragmented and diverse picture of the export performance determinants research, social capital did not catch the early attention of researchers. Firms' social capital or firms' networks were not examined as explanatory variables in any literature within the reviews by Bilkey (1978), Zou and Stan (1998) or Zou and Stan (1998). Only

within the review by Sousa, Martínez-López and Coelho (2008) was 'connectedness' found to be examined in a study. This social capital-related variable was classified as a firm characteristic, and was reported to be positively associated with export performance of the firm. Nevertheless, the relationship between social capital and export performance at firm level has attracted additional attention recently at both the conceptual and empirical levels. For example, at the conceptual level, Pinho (2011) develops a conceptual framework and set of hypotheses to examine impacts of social capital on the international performance of SMEs from the dynamic capabilities perspective. At the empirical level, Kontinen and Ojala (2011) explore various impacts of social capital on market entry and post-entry, for a set of Finnish family SMEs in the French market; and Roxas and Chadee (2011) investigate the impact of social capital on building export knowledge for a set of 175 exporting SMEs in the Philippines. However, more study is still needed to establish the dynamics of social capital's impacts on firms' international performance (Roxas & Chadee 2011).

3.2.4 Export performance measurements

Regarding export performance measurement frameworks, in the current stage of the literature agreement has not been reached on how to assess export performance, which leads to inconsistences and sometimes conflicting findings for empirical results. There are two divergent perspectives for advancing the current theory of export performance measurements. The first school of thought claims that the fragmentation in empirical results is due to the lack of a consolidated measurement model, and hence, attention should be paid to developing such a model (see, for example, Cavusgil & Zou 1994; Sousa 2004; Sousa, Martínez-López & Coelho 2008). In contrast, the second school of thought advocates that a single model cannot help consolidate and compare empirical results or advance theory in the field. One of the main reasons given is that no single model could cover the variety of research contexts, and that "export performance is a multifaceted phenomenon and individual measures of performance exhibit unique conceptualization and operationalization characteristics" (Katsikeas, Leonidou & Morgan 2000, p. 505). A brief discussion of each perspective is presented below.

3.2.4.1 The consolidated measurement model

For the supporters of a consolidated measurement model, the existence of a valid and reliable measure of export performance is vital in analysing export determinants.

However, it is claimed that, in the current stage of literature, consensus has not been reached on such a model, due to the insufficient efforts to develop a reliable framework of measurement (Carneiro, Rocha & Silva 2007; Sousa 2004). Without such a framework, different researchers tend to establish their own conceptual framework and their own operationalization of export performance, hindering comparability among studies.

At firm level, apart from the classes of measures, the literature on measurement of export performance includes four other aspects: (1) the frame of reference, i.e. how measurement is performed; (2) temporal orientation, i.e. whether static or dynamic measurement is used; (3) mode of assessment, i.e. whether objective or subjective data are used; and (4) indicator structure, i.e. whether independent indicators or aggregated scales (Carneiro, Rocha & Silva 2007). Carneiro, Rocha and Silva (2007) conducted a critical review of 37 empirical studies on export performance published between 1999 and 2004, and conclude that none of the studies in review appear to have covered all aspects of the analytical framework mentioned above. The majority (59%) of the empirical research in review used multiple classes of measures. Amongst those, economic measures (such as export sales, export sales growth, profits) were the most popular, being used by 33 out of 37 studies (89%), while thirteen studies (35%) used market measures (such as market share, market share growth). On the downside, nine studies (nearly 25%) used strategic measures (such as export expansion), and only one study reported using behavioural/situational measures.

Regarding the frame of reference, absolute reference denotes the report of value itself (for example, total export revenue, export percentage, number of markets), whilst relative reference denotes the comparison of the export performance indicators to a point of reference such as compared to the average market or to competitors. The absolute reference was most popular, which was used in twenty-two studies (59%). In contrast, relative reference was used in only seven studies (19%), whilst eight studies (22%) used both types of reference. Carneiro, Rocha and Silva (2007) argue that the wide use of the absolute reference may not be sufficient and reflective because absolute reference fails to incorporate the management's perception of export performance. However, this preference in using absolute rather than relative frame of reference may reflect a limitation in data collection, where competitors' performance data appear to be difficult to collect, especially for SMEs. It may also indicate the void in measurement theory, where a reliable benchmark has not yet been developed and used as a relative reference.

Regarding the mode of export performance assessment, which refers to the use of objective or subjective measures, or both, Sousa (2004) reports that a majority of studies used both objective and subjective modes of assessment. On the other hand, Carneiro, Rocha and Silva (2007, p. 8) report "a fairly even distribution between only objective, only subjective (perceptual) and both modes of assessment".

Regarding the temporal orientation, Carneiro, Rocha and Silva (2007, p. 8) report a dominance in the use of historical data (33 out of 37 studies), and that static analysis is more popular than dynamic analysis (54% and 11%, respectively). Efforts combining both static and dynamic methods are reported in only thirteen studies (35%) surveyed. Similarly, Sousa (2004, 2008) claims that, although dynamic measurement of export performance is ideal, the majority (43) of studies in his review used only static measurement, which includes mostly past and current export performance measurement. This highlights the necessity of including future orientation or expectations in export performance measurement. Essentially, empirical results should produce meaningful information for making managerial decisions (Sousa 2004). However, there appears to be a gap in conceptualization of the time span needed to assess export performance, and a framework that combines past, present and future performance indicators has not been successfully advanced.

3.2.4.2 The contingency approach

As discussed in Section 3.2.4.1, although the export performance measurement topic has been examined and discussed extensively in the literature (Katsikeas, Leonidou & Morgan 2000; Shoham 1998), the effectiveness and adequacy of those measures remains controversial (Sousa 2004). In that context, several studies have attempted to examine and establish multi-item measures of export performance (Lages, Lages & Lages 2004; Sousa 2004; Zou & Stan 1998). These studies report that export performance is a multidimensional concept and, hence, the use of a single measurement model is inadequate for a reliable assessment (Katsikeas, Leonidou & Morgan 2000; Shoham 1998).

Katsikeas, Leonidou and Morgan (2000) extend the argument further by emphasizing the unique conceptualization and operationalization characteristics of each individual study. Katsikeas, Leonidou and Morgan (2000) propose the use of a contingent approach, in which researchers can focus on measuring relevant aspects of export

performance depending on the research context. For example, studies on small firms are more likely to be concerned about economic indicators and strategic indicators rather than market indicators (Carneiro, Rocha & Silva 2007; Roxas & Chadee 2011), since market indicators are neither available nor meaningful for small firms.

In terms of the modes of performance assessment, Sousa (2004) reports that subjective indicators are preferred over objective by some scholars (see, for example, Katsikeas, Piercy & Ioannidis 1996). There are various reasons to support this view, one of which is the unavailability of reliable and objective data. Some scholars claim that exporting firms are extremely unwilling to disclose their objective data. Others claim that, even when objective data are collected, they are more often in the form of self-reported data rather than publicly available secondary data. Therefore, the accuracy of any objective data collected from firms is subject to validation (Carneiro, Rocha & Silva 2007).

However, when considering characteristics of firms in empirical studies, the adoption of objective or subjective mode of measurement needs to be reconsidered. For example, a focus on short-term export performance measurement is found to be relevant to small export firms, since the managers of these might reckon their financial shortage in pursuing a low margin strategy in the foreign market (Sousa 2004). Thus, the use of objective measures would be more suitable than subjective ones, because objective measures are more reliable in determining short-term performance (Sousa 2004).

The selection of measurement class also depends upon characteristics of firms being studied, because firms of different sizes and different levels of export experience have different focuses. For example, market share-related measures may only be relevant to large and experienced firms, while economic measures (such as export sales, export sales growth, and profits) are more relevant for new firms and/or small firms.

In summary, the relevant export performance literature is fragmented, both conceptually and methodologically. As proposed by Katsikeas, Leonidou and Morgan (2000), a contingency approach should be considered when selecting measures of export performance. Despite increasing interest in empirical studies and the advancement in statistical methodologies, the current stage of literature on export performance of SMEs has exposed critical gaps, as listed following, suggesting that further research would be needed to advance understandings in the relevant fields:

- The limited number of studies of export performance in emerging markets / economies (Singh 2009) hinders thorough understanding of the export performance phenomenon and the comparison between different regions in the world.
- The lack of combination between survey and secondary data.
- In collecting data for subjective mode of measurement, research generally only uses surveys of one informant rather than triangulating between different informants in a firm. However, the tendency to view firms as having only one decision maker is misleading, since decisions are often made by more than one person, especially in larger firms (Katsikeas, Piercy & Ioannidis 1996; Sousa 2004).
- There is an absence of panel data for export performance analysis at firm level. Limited studies use longitudinal data in order to objectively measure export performance by economic measures (such as export sales, export sales growth, export percentage over sales, export percentage growth, export market diversity) over time (Carneiro et al. 2016). This absence of longitudinal studies impedes dynamic model building and limits effective measurement of performance. Therefore, a well-designed longitudinal research would contribute greatly to the literature by testing the long-term stability of export performance and its determinants

3.3 Export propensity

According to Fernández and Nieto (2006), export propensity is defined by whether foreign sales of a firm are greater than or equal to zero in a given time period; whereas Estrin et al. (2008, p. 576) define it as "whether or not firms export at all". For research using self-report information on the export participation of firms, the definition of Estrin et al. (2008) is perceived to be more relevant, since it allows the inclusion of firms that have been involved in export activities at a certain point in their operation history, regardless of current export revenue figures.

The export propensity literature has in general contended that a firm's export potential is mostly placed at the pre-export phase (Parish & Freeman 2011). Nevertheless, Parish and Freeman (2011) argue that the pre-export phase has received little attention from the academic world, especially in comparison with the enormous dedication shown

in the research on export performance of firms. Similarly, in a recent systematic review of 121 articles, Martineau and Pastoriza (2016) reveal that, while international involvement research has attracted increasing interest since the 2000s and has progressed remarkably in recent years, there are many important areas such as the pre-export phase that have been left unexplored.

The literature on international entrepreneurship has in general established that export involvement of SMEs is explained by characteristics of firms such as firm size and age (Cavusgil & Nevin 1981; Dhanaraj & Beamish 2003), as well as innovation characteristics and risk-taking attitude (Ganotakis & Love 2012; Javalgi, White & Lee 2000; Love & Roper 2015; Zhang, X et al. 2016). Determinants such as firm size and firm age have been the most closely examined predictors, because of the perception that international involvement requires extra resources from firms, and thus larger and more experienced firms enjoying large economies of scale and accumulated knowledge are expected to have a higher propensity to export (Correa, Dayoub & Francisco 2007; Javalgi, White & Lee 2000; Love & Roper 2015).

Nevertheless, with the increasing participation of SMEs and born-global firms in international business activities, literature on export involvement focusing on demographic and innovation characteristics as explanatory determinants has been challenged. Since the mainstream theory explains export involvement primarily by the logic of internal resource abundance, participation of SMEs and born-global firms appears to be "completely lacking in rhyme or reason" (Ellis & Pecotich 2001, p. 119). SMEs, in particular, usually lack characteristics such as scale, international experience, innovation capability, and resources that would explain their international involvement (Ellis & Pecotich 2001; Manolova, Manev & Gyoshev 2014; Martineau & Pastoriza 2016). Interestingly, this real but apparently irrational phenomenon has called for a change in research focus toward one on the social context of economic transactions, and highlights the importance of social network research. As a result, more research has focused on the importance of networking and relationship building, both informal and formal business relationships, and with both foreign partners (Sjöholm 2003) and home-based ones (Ellis & Pecotich 2001; Zhou, Wu & Luo 2007). In their systematic review, Martineau and Pastoriza (2016) report that 'networks' has emerged as the second most popular organizational characteristic variable, which has been included in 16 studies,

second only to the most common variable of 'demographics of firms' (e.g. firm size) which was used in 26 studies.

3.4 Social capital

3.4.1 Social capital concept

3.4.1.1 The development of the social capital concept

Although the concept of Social Capital (henceforth, SC) has attracted prominent attention only relatively recently, the term has been in use for a century now, while the underlining ideas may go back further still (Narayan 1999). The term SC may first have been introduced in a book titled *The Rural School Community Centre* by Hanifan (1916) in the United States, which discussed the importance of community involvement in overseeing schools and providing quality education (Putnam 1993). Hanifan (1916, p. 130) referred to social capital as:

> "that in life which tends to make these tangible substances [real estate, personal properties, cash] count for most in the daily lives of people: namely goodwill, fellowship, sympathy, and social intercourse among the individuals and families who make up a social unit".

The term SC then emerged again when it was used systematically in the analysis of the role of networks in city neighbourhoods by Jacobs (1961) (Crudeli 2006). Nevertheless, the French sociologist Pierre Bourdieu is usually referred to as the father of the concept in terms of its modern usage. Bourdieu started referring to SC in the 1970s, then in his later systematic analyses of SC (1980, 1986). In particular, Bourdieu's contribution on SC in conjunction with cultural and symbolic capital, and its conversion to economic capital, in the book titled, *The forms of capital* (1986), has been widely considered as laying the first stone in shaping SC as an established concept in sociology (Crudeli 2006; Lock Lee 2008).

Inspired by sociology, the term SC has attracted attention across a wide range of disciplines such as political science, anthropology, and economics. With major contributions from Coleman (1988, 1990), Putnam (1993) and Putnam (1995, 2000), SC has become one of the most powerful and popular metaphors in current social science research (Durlauf & Fafchamps 2004). Specifically, SC became a 'hot topic' with the publication in 2000 of Putnam's bestseller, *'Bowling Alone: The Collapse and Revival of*

American Community', where he argued for the divergence between Americans' wealth and their sense of community.

Recently, a large and growing body of literature has investigated SC within the discipline of economics (Crudeli 2006; Działek 2014). The number of publications on SC has been increasing every year. An electronic database search with the keywords, "Social capital + economics", limited to only peer-reviewed journal articles, resulted in 5,011 articles published in the last decade, which account for more than eighty percent of the total of 6,241 articles published on the topic since 1959[10].

Despite the popularity of research on SC, its definition remains vague. There has been no consensus on the concept or definition of SC within any single discipline, not to mention across disciplines (Adler & Kwon 2002; Crudeli 2006; Durlauf & Fafchamps 2004). In a state-of-the-art study, Adler and Kwon (2002) criticise the confusions of the various definitions and proposed theoretical frameworks for the new concept, so as to provide a common identity regarding the sources, benefits, risks and contingencies of social capital. Adler and Kwon (2002) synthesize definitions from multiple disciplines to show the complexity in approaches (external or internal, or both) of various scholars in different disciplines toward the single concept of SC. A detailed list of social capital definitions can be found in Appendix 1.

3.4.1.2 The three "pillars" of SC: Bourdieu, Coleman and Putnam

In a more recent article, Andriani & Christoforou (2016) map out the development of the SC concepts that are relevant to economics. Their work only considers definitions that are relevant to economic purposes and that relate to the central idea of the value of social networks (Andriani & Christoforou 2016), such as those of Bourdieu (1986); Coleman (1988); Granovetter (1985); Lin, Burt & Cook (2001); Putnam (1993). The development trail of these definitions, however, has not yet been clearly depicted. Each scholar has established a definition based on their own assumptions and perspectives. The following

[10] The updated electronic search was performed on 16 December 2017, with the combination of key terms "social capital" and "economics", using the Victoria University library online search tool, yielding 9,442 peer reviewed articles from all available resources, of which approximately 75% (6,937 articles) were published in the last ten years. When limited to the databases of Business Resource Complete, Academic Search Premier, Scopus; Education Research Complete, and Science Direct, the search resulted in 5,011 articles published between 2007 and 2017, equivalent to over 80% of the 6,241 articles published since 1959 to date.

section discusses the SC theoretical formulations of Bourdieu, Coleman and Putnam, who have greatly contributed to the development of the concept.

Looking at SC from a sociologist's point of view, the influential French sociologist Pierre Bourdieu is perhaps the first scholar to consider SC as a resource, which can be transformed into economic resources. In his famous work on the reproduction characteristics of society and the position retention of the elite classes, Bourdieu (1980) argued that economic status alone could not explain these sociological phenomena, but rather that cultural capital has a voice, as people would use cultural knowledge to maintain their positions in the social hierarchy (Andriani & Christoforou 2016). Bourdieu (1986) later wrote about SC in conjunction with cultural and symbolic capital and its conversion to economic capital. Bourdieu (1986, p. 248) defined SC as:

> "The aggregate of actual or potential resources which are linked to possession of durable networks of more or less institutionalized relationships of mutual acquaintance and recognition".

In a co-authored study in 1992, Bourdieu refined his earlier definition of SC and emphasized the type of resources that are associated with SC:

> "Social capital is the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition." (Bourdieu, in Bourdieu and Wacquant (1992, p. 119)).

While Bourdieu (1980, 1986, and 1992) is generally acknowledged as the first author who identified SC as an economic 'resource', the work of James Coleman from the University of Chicago has proven central to the development of SC in the corporate context. This school has looked at markets as social constructs, identifying SC as a key source of economic value (Lock Lee 2008).

The way Coleman linked social capital with economics is different from Bourdieu's definition. Bourdieu is critical of network approaches in sociology that adopt the 'rational choice' assumption in explaining an individual's behaviour (Andriani & Christoforou 2016). In contrast, Coleman attempted to combine perceptions of sociology and economic theory, using social capital to explain rational choice theory in a social

context (Gauntlett 2011; Portes 1998). For Coleman, SC is a 'public' good, the benefits of which depend on the willingness of the members of the network or community:

> "As an attribute of the social structure in which a person is embedded, social capital is not the private property of any of the persons who benefit from it." (Coleman 1990, p. 315)

Coleman (1990) proposed a framework which recognizes social capital as one of the potential resources that can be used by economic individuals, in conjunction with other resources such as their own skills and expertise (human capital), tools (physical capital), or money (economic capital). However, the difference between social capital and other types of capital is that social capital is not necessarily 'owned' by the individual, rather it arises as an available resource when needed.

Coleman argues that SC, then, in any context, relies on people looking beyond themselves and engaging in supportive or helpful actions, not because they expect a reward or immediate reciprocal help but because they believe such actions are good things to do. To this end, however, Coleman isn't able to fully justify this argument with the rational action that his theory assumes:

> "[Social capital] is an important resource for individuals and may affect greatly their ability to act and their perceived quality of life. They have the capability of bringing it into being. Yet, because the benefits of actions that bring social capital into being are largely experienced by persons other than the actor, it is often not in his interest to bring it into being." (Coleman 1988, p. 118)

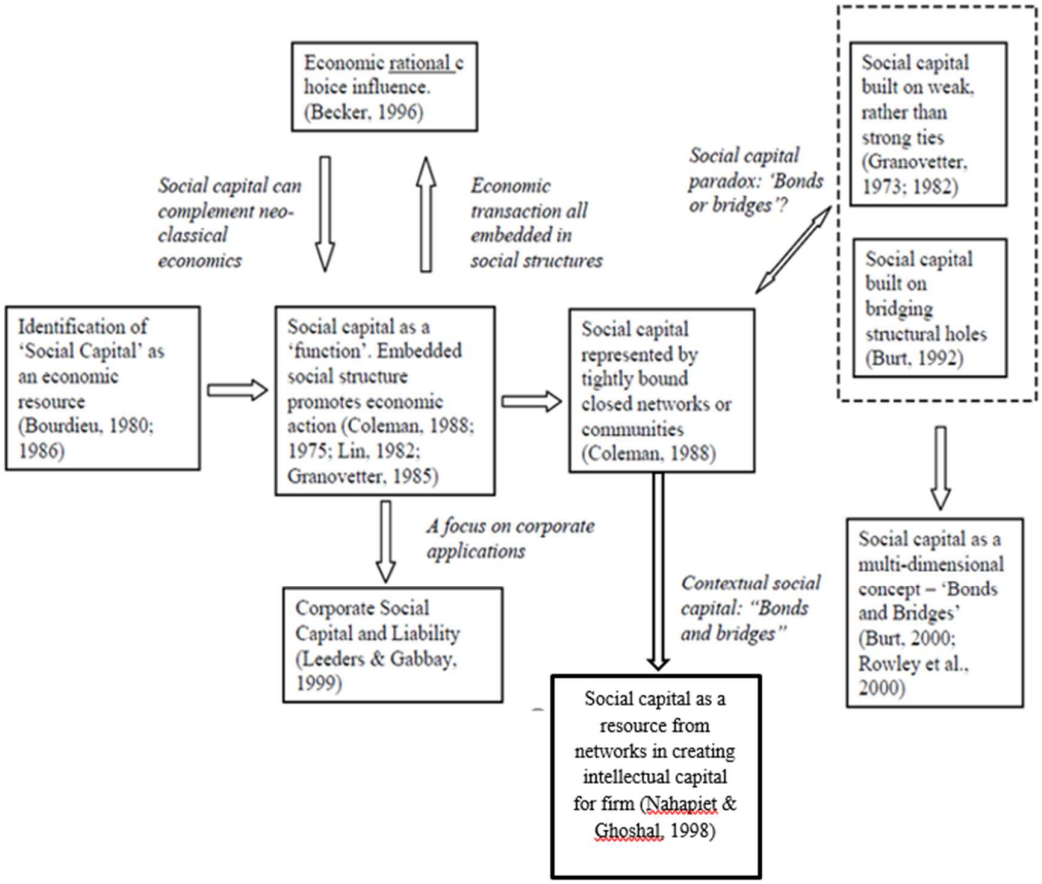
While Bourdieu and Coleman are well known within academic circles, Robert Putnam is acknowledged as the popular, public face of 'social capital' theory (Gauntlett 2011). Putnam's formulation of social capital is based on the theoretical principles suggested or implied by Coleman (Tzanakis 2013). For Putnam (1993, p. 35), social capital refers to "features of social organizations, such as networks, norms and trust that facilitate action and cooperation for mutual benefit". Putnam (1993) builds on Coleman's insights on the reciprocity characteristic of social capital, and highlights that "working together is easier in a community blessed with a substantial stock of human capital" (Putnam 1993, p. 35). In Putnam's view, "[w]hereas physical capital refers to physical objects and human capital refers to the properties of individuals, social capital refers to

connections among individuals - social networks and the norms of reciprocity and trustworthiness that arise from them" (Putnam 2000, p. 19).

The work of Putnam (1993, 2000) provided a novel measurement of SC, and inspired more empirical works to be produced. Nevertheless, Putnam (1993; 2000) is mainly critiqued for his treatment of trust as an aggregate indicator of social capital, and for the ways this is linked to associational participation, economic growth, and democratic ethos, at regional or national levels (Tzanakis 2013). While this treatment is argued to exhibit fundamental conceptual and methodological flaws, it has attracted attention across disciplines and given rise to further research on the topic, in particular on the development of measurement indicators of SC and validation for empirical studies.

The identification of SC as an economic resource and its development is presented in Figure 3.1.

Figure 3.1: Development of social capital concept and application



Source: Author adapted from Lock Lee (2008)

3.4.1.3 Nahapiet and Ghoshal's formulation of SC

Nahapiet and Ghoshal (1998) formulation of SC has been perceived as one of the most persuasive definitions and has been widely cited in the literature.[11] Nahapiet and Ghoshal's (1998) concept of SC is more balanced and integrates both the 'internal view' of Coleman (1990) and the 'external view' of Bourdieu (1986). According to Nahapiet and Ghoshal (1998, p. 243), social capital is:

> "the sum of the actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual or social unit".

This definition captures three facets of social capital: the structural, the relational and the cognitive. It also covers multiple focal actors of social capital, and as such the definition can be used at micro level, as for individuals or firms (a firm can be considered a social unit), multi-firm level, and even at macro level. As members of the Chicago School of Social Capital, their definition emphasizes that social capital is an economic 'resource'. More importantly, it infers that social capital is a dynamic economic resource rather than a static one, by which SC can be 'actual' or 'potential', or both.

Nahapiet and Ghoshal's (1998) definition of SC was used as the working definition of social capital in the present research.

3.4.2 Social capital dimensions

Since an agreed definition of social capital remains elusive, its dimensions or attributes also continue to be a subject of debate. Although scholars contend that social capital is a multi-dimensional concept, each scholar defines social capital and thus its dimensions differently. Putnam (1995) has argued that research on the clarification of social capital dimensions should be prioritized. In response to Putnam's call, Nahapiet and Ghoshal (1998) have established the most influential definition of social capital with its distinguishing dimensions.

In their major study on the impact of social capital in creating intellectual capital, Nahapiet and Ghoshal (1998) distinguished the three dimensions of social capital as being the structural, the relational, and the cognitive dimensions. Here, the categorization of the

[11] Nahapiet and Ghoshal's (1998) article, *'Social Capital, Intellectual Capital, and the Organizational Advantage',* has been cited more than 14,600 times, as of November 2016.

three dimensions of social capital mainly focuses on the important facets of each dimension, allowing clarity in analysis of the impact of each dimension. Nahapiet and Ghoshal (1998) went even further, to present the interrelation of these three dimensions, suggesting that analysis of these dimensions of social capital should be conducted concurrently rather than separately.

3.4.2.1 Structural dimension

Nahapiet and Ghoshal's (1998) discussion of the structural dimension of social capital was built on the relational and structural embeddedness discussion of Granovetter (1985). For Nahapiet and Ghoshal (1998), the structural dimension of social capital refers to the overall network's configuration or pattern of connections and the way individual members interact with each other. In other words, it exemplifies who are involved and how they are reached in the network (Burt, 1992).

One of the most importance aspects of the structural dimension is the existence of network ties among its members: that is, the existence of networks created for one purpose yet useful beyond the original purpose (Coleman 1988). The structural dimension is often measured by network density, connectivity and hierarchy (Nahapiet & Ghoshal 1998).

From the international business perspective, the structural dimension of social capital has been analysed to understand how the position of entrepreneurs in a structure of connections creates advantage (Stam, Arzlanian & Elfring 2014). The underlying theoretical views of the way advantages are created have divided researchers into two main streams. The first stream of research has taken Burt's (1992) view of 'structural holes', which are defined as the absence of direct relations between a focal actor and his network contacts. This stream suggests that firms' strategic benefits are obtained by building relationships with other people or contacts that are otherwise unconnected. This is because firms can access external resources and control those resources more efficiently when dealing with partners who are not connected to firms directly (Burt 2005).

The second stream of research, in contrast, has built on the 'network closure' theory of Coleman (1988), which refers to networks where members are directly connected and structural holes are absent. This stream of research emphasizes that cohesive networks of contacts create benefits for entrepreneurs, because closed networks

generate trust, social support and shared norms of reciprocity which promote mutual cooperation among network members (Stam, Arzlanian & Elfring 2014).

3.4.2.2 Relational dimension

In contrast to the structural dimension, the relational dimension is the substance of the connections (or *'ties'*) (Nahapiet & Ghoshal 1998) that individuals (or *'nodes'*) develop through repeated interactions with each other (Granovetter 1992). The relational dimension focuses on the particular relations between people, such as friendship, respect, trust, and trustworthiness, which shape the way they interact with each other (Coleman 1990; Tsai & Ghoshal 1998).

Research on the relational dimension of social capital often classifies these interactions in two types: strong and weak ties (Granovetter 1973; Peng & Zhou 2005; Salaran & Maritz 2013; Yang, Ho & Chang 2010). 'Strong ties' social capital refers to cohesive and close-knit relationships, which are more likely to be found among individuals interacting frequently and for extended periods of time such as family members (Pinho 2011; Yang, Ho & Chang 2010). 'Weak ties', on the other hand, refers to highly dispersed networks, which have low density and are more likely to be found among friends, acquantainces (Sabatini 2009; Yang, Ho & Chang 2010).

Extant literature suggests a possible trade-off between strong ties and weak ties (Stam, Arzlanian & Elfring 2014). Based on the weak tie theory of Granovetter (1973), some researchers claim that entrepreneurs can access more novel information through weak ties rather than strong ties (Granovetter 2005; Salaran & Maritz 2013). Moreover, due to the similarity and overlapping of information and knowledge amongst close relationships, strong ties may even limit the international opportunities of firms, as firms may become extensively reliant on information from internal networks (Laursen, Masciarelli & Prencipe 2012). In contrast, other researchers emphasize that strong ties are more willing to provide and more capable of providing needed resources for firms (Peng & Zhou 2005). This is because frequent and close interactions generalize trust that facilitates finer-grained information exchange and tacit knowledge transfer (Peng & Zhou 2005; Yang, Ho & Chang 2010).

3.4.2.3 Cognitive dimension

The cognitive dimension of social capital refers to the perspectives, representation, values, norm, language, and motivations that are shared amongst individual members of a network (Nahapiet & Ghoshal 1998). As discussed in the 'network closure' theory above, the cognitive dimension facilitates cooperation among individual members by promoting a sense of shared understanding of appropriate ways to interact. Hence, the cognitive dimension has been claimed to affect the way individual members acquire and exchange resource within networks (Tsai & Ghoshal 1998). Similarly, Adler and Kwon (2002) asserts that shared perspectives, interpretations and goals help individuals to understand and learn from one another.

The cognitive dimension of social capital has been developed over time; and recently, scholars have started to adopt the use of a 'resource dimension' which captures a broader view than 'cognitive' does. While the cognitive perspective emphasizes the value of homogeneous networks, the resource perspective includes both homogeneous and diverse networks. Drawing on the social resource theory (Lin, Burt & Cook 2001), it is suggested that diverse networks are advantageous since they allow entrepreneurs to locate needed resources quickly from diversified members (Birley 1985).

The three dimensions - structural, relational and cognitive - of social capital have been adopted widely in research on social capital and firms' performance. For example, Presutti, Boari and Fratocchi (2007) analyse how each of the three dimensions supports focal start-up firms to acquire knowledge from their key foreign customers to develop their international performance. Pinho (2011) builds on the three dimensions of social capital to look at the international performance of SMEs from a dynamic perspective, where each of these dimensions is argued to positively impact the exploitative and explorative capabilities of small firms and hence their international performance.

The theoretical foundation of social capital dimensions has evolved over time, with increasing attempts to develop and modify the three dimensions of Nahapiet and Ghoshal (1998). Among the three dimensions of social capital categorized by Nahapiet and Ghoshal (1998), the structural dimension has received the most consistent agreement of later scholars, and has been included in many studies (for example, Agndal 2008 separates social capital into structural and economic dimensions). Here, the structural dimension of social capital refers to the direct and indirect relationships; which is at a

more operationalized level than in the original view of Nahapiet and Ghoshal (1998) discussed above.

Recently, in a meta-analysis of the impact of social capital on small firm performance, Stam, Arzlanian and Elfring (2014) also build on the view of Nahapiet and Ghoshal (1998) on multi-dimensional social capital. However, in developing the theoretical framework and dimensions of social capital, Stam, Arzlanian and Elfring (2014) argue that, while the structural and the relational dimensions have been consistently included in a range of studies, the cognitive dimension appears not to receive much attention from researchers on small-firm performance. Instead, scholars have begun to examine the resource dimension of social capital by directly considering the resources held and implied by entrepreneurs' network contacts (Batjargal, 2003).

3.4.3 Social capital measurement

Since social capital has long been considered a concept that is dynamic and multidimensional in nature, its measurement is inevitably controversial (Natoli 2008; Sabatini 2009). In fact, many proxies proposed to measure SC have been openly criticized. Nevertheless, the measurement of social capital is still being developed. For each contextualized definition of social capital, the progress of social capital measurement has reached a different level of advancement.

With the acceptance of SC as a concept that potentially provides benefits to 'social units' such as individuals, communities, organizations, firms and even nations (Nahapiet & Ghoshal 1998), the methods for measuring SC are argued to have taken two distinct paths (Lock Lee 2008). The first path has adopted the Social Network Approach (SNA) technique (Carrington, Scott & Wasserman 2005) in which information about ties or links between individuals is collected and then analysed or interpreted into various dimensions of social capital. The second path of measurement is credited to the work of Putnam (1995), which utilizes the survey methods approach. In this method, particular dimensions of SC (such as structural, relational, and cognitive dimensions) are identified, and then Likert-type scales are applied to quantify the level of social capital through these dimensions.

The most renowned representative of the survey method approach is the Social Capital Assessment Tool (SCAT) developed by the World Bank (WB), which is used to access levels of SC in the countries or regions where the WB operates (Lock Lee 2008),

and which has also been adopted frequently in empirical studies (Natoli 2008). This assessment tool highlights the importance of context and process in understanding and assessing social capital levels, thus integrating both qualitative and quantitative methods to reflect the dynamic and multidimensional nature of SC (Dudwick et al. 2006). SCAT provides a framework for macro and micro assessment based on its six intersecting aspects of social capital, namely: (i) groups and networks, (ii) trust and solidarity, (iii) collective action and cooperation, (iv) information and communication, (v) social cohesion and inclusion, and (vi) empowerment and political action (Dudwick et al. 2006).

With regard to studies on impacts of social capital on the internationalization process and international performance of firms, measurements of social capital are even more diversified. No single measurement scale has been found to be replicated in more than one study. This, again, underscores the fluid and dynamic nature of the SC concept and its dimensions.

In summary, survey-based SC benchmarking systems have emerged and have been shown to be a popular activity for SC researchers. At the community level, with the anchor of the WB's SCAT, it is argued that the benchmarking tools do appear to be converging to the extent that a standard toolset is probably within reach (Lock Lee 2008). Outside the community level, other SC survey designs are still at the exploratory or emergent stage. This suggests that further attention should be paid to the development, justification and validation of a standard toolset for application to firms and entrepreneurs.

3.4.4 Operationalization of social capital: Social network ties

Thus far, several studies have indicated that social network relationships, both personal and organizational, are important for starting export ventures (Andersson & Wictor 2003; Pinho 2011). The role of social networks is argued to be even more important for small firms, since "networks can provide small firms, to varying degrees, with access to a diverse range of resources" (Shaw 2006, p. 19). Social network relationships help firms to access information and build specific knowledge about foreign markets, thus improving their business opportunities abroad (Coviello, NE & Martin 1999). Social relationships also assist firms in minimizing costs in collecting information on new markets, as well as reducing transaction costs relating to negotiation and monitoring export contracts (Granovetter 1985; Peng & Zhou 2005). Moreover, long-term

commitments and strong relationships with international partners have a significant positive impact on a firm's export propensity (Pinho 2011), which is believed to outweigh the costs associated with establishing and sustaining such relationships (Sjöholm 2003). Thus, in the long term, decent relationships benefit both exporters and importers, as firms' resources are leveraged through joint efforts (Parish & Freeman 2011; Pinho 2011).

In organizational settings, relationships and networks of firms sometimes refer to the broader notion of firms' social networks, which are defined as a web of connections and relationships that help in securing favours in personal and/or organizational action (Burt 1992; Granovetter 1985). Social networks are considered the core of network resources for firms (Adler & Kwon 2002), and can be categorized as formal and informal. Formal networks are often referred to as business networks, or the network relationships in a formal business structure (Santarelli & Tran 2013). Informal social networks refer to any remaining, informal structure of personal relations (Zhou, Wu & Luo 2007). The use and categorization of social networks terms are flexible and in general context-based. For example, Björkman and Kock (1995) focused on the social and personal aspects of relationships between buyer and suppliers of Western companies in China. For their study, the informal social network relationships were intertwined in a formal buyer-supplier business relationship. Hormiga, Batista-Canino and Sánchez-Medina (2011) were concerned with the informal structure of personal connections bounded in geographical, social or institutional space, which can be referred to as informal social networks; while Manolova, Manev and Gyoshev (2010) found that the domestic personal networks (which bear the substance of 'the informal social network') have positive impact on internationalization of Bulgarian new ventures.

In summary, for the internationalization process of firms, where export represents a dominant entry mode, the benefits of network relationships are said to include: (i) the reduction of transaction costs related to export activities or increased transaction value (Adler & Kwon 2002; Baughn et al. 2011; Hayami 2009; Putnam 1993; Roxas & Chadee 2011); (ii) the increase of export opportunities (Coviello, N 2006; Ellis & Pecotich 2001; Zhou, Wu & Luo 2007); (iii) the facilitation of knowledge for the internationalization process (Coviello, NE & Martin 1999; Roxas & Chadee 2011); and (iv) assisting with export procedures and providing access to export assistance in the home country (Shamsuddoha & Ali 2006).

3.5 Social networks theory and the resource-based view

From the theoretical viewpoint, current literature on firm's internationalization shows that social networks theory and the resource-based view (RBV) theory are among the most widely used theories used to examine the inter-relationship between social networks and export success (Martineau & Pastoriza 2016). These two theories will be discussed in detail below.

For the social networks theories, their main thesis is that knowledge or valuable information is transmitted through interpersonal ties and social contacts between individuals (Coleman 1988). Loane and Bell (2006) find that, in the internationalization process, SMEs have utilized their networks to connect with decision-makers in target firms, and thereby gathered knowledge and resources. It has also been argued that social networks are an effective means for SMEs to enter export markets, since such networks help identify global market opportunities (Zhou, Wu & Luo 2007; Chang, Jack & Webster 2016), reach foreign partners (Ellis & Pecotich 2001), and facilitate the speed and flexibility of responses to the global market (Oviatt & McDougall 2005). Moreover, according to Zhou, Wu and Luo (2007), the benefits from social networks, particularly home-based ones, can ease information and knowledge barriers, thus reducing transaction costs and supporting export business.

For the RBV theory, this paradigm argues that a firm gains and eventually retains competitive advantage by creating and maintaining valuable resources and capabilities that are rare and not imitable (Dhanaraj & Beamish 2003). Hence, the RBV highlights the importance of firm resources and capabilities in the competitive environment (Roxas & Chadee 2011; Díez-Vial & Fernández-Olmos 2014). From the RBV view, social networks are believed to support export involvement of firms through various knowledge creation mechanisms. Social networks provide experiential knowledge about export markets, thus converting implicit knowledge into explicit knowledge (Johanson & Vahlne 1977). As knowledge grows out of experience in foreign markets, new capabilities are acquired, and subsequently the degree of market commitment also increases, facilitating more learning and knowledge spillover (Johanson & Vahlne 1977; Pinho 2011).

3.6 Social capital and internationalization process

Although network relationships have long been considered a vital factor for SMEs in internationalization processes (Coviello, N & Munro 1997), it is observed that this topic

has only received increased interest in recent years (Martineau & Pastoriza 2016). For example, Mesquita and Lazzarini (2008) analyse 232 Argentine furniture SMEs, and report various roles for network ties in supporting SMEs to enter the global market. The authors also explain their model of collaboration, where SMEs in an economy with weak infrastructure and institutions collaborate to better improve efficiency and achieve their internationalization objectives. Their research, however, focuses only on business ties and disregards other informal networks. Another study found that domestic inter-firm networks were a major factor in the decision to internationalize for Taiwanese SMEs in the automobile and textiles sectors. The interactions and cooperative behaviour of the entire network provided the SMEs with market knowledge and technology knowhow for this process (Ku-Ho & Chaney 2007). More recently, Zhang, X et al. (2016) examine a sample of 117 Chinese SMEs, analysing the mediating effects of network ties and international entrepreneurship in their internationalization process. Although the (Zhang, X et al. 2016) study is concerned with both business ties and political ties, it does not include firms' informal network relationships and the relationships between firms and banks.

As shown in Table 3.1, the literature thus suggests that different network ties can provide SMEs with the resources needed to become exporters and internationalized. This appears to apply in various country contexts.

Table 3.1: Summary of empirical results - Network impacts on SMEs' export propensity

Author	Year	Country	Network ties examined	Results / findings
Ellis, P. and Pecotich, A.	2001	Australia	Social ties	Positive impacts of social relationships on export initiation, market selection and risk minimization.
Ibeh, K. and Kasem, L.	2011	Syria	Social and business networks	Firms either reacted to the overseas opportunities offered by their relational contacts or proactively pursued cross-border opportunities through existing and newly developed relationships.
Lindstrand, A., Melén, S. and Nordman, E. R.	2011	Sweden	Three dimensions of social capital	All dimensions (structural, relational, and cognitive) of social capital affect the acquisition of foreign market knowledge and financial resources. The usefulness of individuals' social capital often changes during SMEs' internationalization.
Loane, S. and Bell, J.	2006	Australia, Canada, Ireland and New Zealand.	Existing and new networks	Managers use their own social or business networks to gain knowledge and access to international markets. Firms are commonly forced to build their own networks rather than using existing ones when they enter new markets.
Manolova, T. S., Manev, I. M. and Gyoshev, B. S.	2014	Bulgaria	Financial networks	The diversity of the domestic financial network has a positive effect on internationalization, and that its role increases with the size of the new venture.

Author	Year	Country	Network ties examined	Results / findings
Manolova, T. S., Manev, I. M. and Gyoshev, B. S.	2010	Bulgaria	Personal and inter-firm networks	Domestic personal networks have a positive effect on internationalization. Firm age negatively moderates the effect of inter-firm networks: the earlier the new venture engages in inter-firm collaboration, the higher the degree of its internationalization.
Mesquita, L. F. and Lazzarini, S. G.	2008	Argentina	Home-based horizontal and vertical ties	Different types of ties affect differently SMEs' collective efficiencies. For instance, vertical ties yield manufacturing productivity along the supply chain, while horizontal ties enable collective resource use as well as joint product innovation. These collective efficiencies, in turn, serve as competitive currencies helping SMEs access global markets.
Zhang, X., Ma, X., Wang, Y., Li, X. and Huo, D.	2016	China	Home-based business and political ties	Different levels mediating impacts of political ties and business ties on SOEs and non-SOEs. Business ties do not support internationalization of SOEs but do support that of non-SOEs.
Zhou, L., Wu, W and Luo, X.	2007	China	Home-based social networks	Support for the mediating role of social networks for outward internationalization (both export and profitability, but not sales) and inward internationalization (only export).

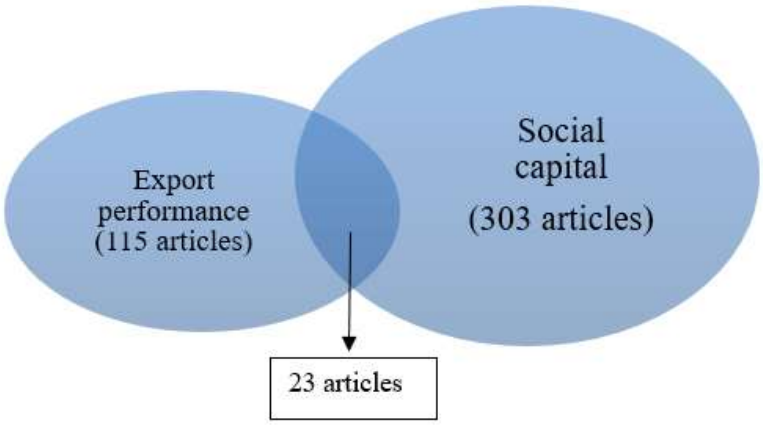
Source: Author's summary based on available literature

In short, research that focuses particularly on network ties of exporting SMEs in emerging markets appears to be limited, to date. The literature has not yet reached consensus on classification of network relationships. Owing to the absence of a clear classification, we know little about how exactly each tie of social networks impacts on the export propensity of SMEs in emerging markets. The present study thus aims to provide some empirical evidence of the effect of different network ties on the propensity to export of SMEs, and to add to the limited body of knowledge on this topic.

3.7 Social capital and export performance

Figure 3.2 illustrates the intersection of references that address both the areas of export performance and SC as a resource for economic development or firm performance, showing that the intersection between the two main bodies of literature are relatively light.

Figure 3.2: Literature on export performance and social capital



The core focus is the intersection between the SC and firm-level export performance, which produces only 23 references. This analysis helps reinforce the view that a sizeable gap exists in the literature linking SC and export performance of SMEs in transitional economies; and therefore, that the focus of this thesis is justified.

References were selected based on their relevance to the core topic and their importance as a scholarly article, as determined by the number of times cited.

Table 3.2 lists the 23 references found for critical review, sorted by year of publication. Coverage for the SC concept from the approach of either Transaction Cost Economics (TC), Rent Seeking Theory (RS), or the Resource-Based View (RBV), are arranged in conjunction with coverage on firm-level export performance in general, or on

SMEs specifically. The number of citations for each reference (provided by Google Scholar) are presented in Table 3.2, in which articles with more than 200 citations were particularly influential.

Table 3.2: Summary of empirical results – Social capital and export success

						Impacts		Theoretical approach			
No	Author	Year	Cited	Social capital	SME	Internationalization	Export performance	TC	Rent seeking	RBV	knowledge-based
1	Zacharakis	1997	267		x	x		x			
2	Chadee and Zhang	2000	39	x			x				
3	Ellis and Pecotich	2001	298	x	x		x				
4	Yli-Renko et al	2002	576	x		x				x	x
5	Haahti et al	2005	136	v	x		x			x	x
6	Loane and Bell	2006	297	x		x				x	x
7	Zhou et al	2007	677	x	x	x					
8	Presutti et al	2007	148	x		x				x	x
9	Agndal et al	2008	68	x	x						x
10	Prashantham and Dhanaraj	2010	105	x							x
11	Manolova et al	2010	42	x	x	x				x	
12	Yang et al	2010	24	x		x		x		x	
13	Lindstrand et al	2011	51	x	x	x					
14	Roxas and Chadee	2011	22	x	x		x			x	
15	Pinho	2011	15	x	x	x				x	
16	Ibeh and Kasem	2011	135	x	x	x					
17	Kontinen and Ojala	2011	47	x	x	x					
18	Chauvet et al	2011	27	x							x
19	Laursen et al Prencipe	2012	34	x		x					
20	Kontinen and Ojala	2012	26	x	x	x					
21	Gashi et al	2014	34	x	x	x					
22	Charoensukmongkol	2015	3	x	x		x				
23	Zhang et al	2016	3	x	x	x					

Source: Author's summary based on available literature

Regarding the concept of social capital, the SC definition of Nahapiet and Ghoshal (1998) has been widely acknowledged by later scholars, with more than 14,600 citations to date. In this critical reflection, eight out of twenty-five studies have fully adopted the SC formation by Nahapiet and Ghoshal (1998), such as Agndal, Chetty and Wilson (2008), Kontinen and Ojala (2011); (Kontinen & Ojala 2012), Laursen, Masciarelli and Prencipe (2012), Pinho (2011), Prashantham and Dhanaraj (2010), Roxas and Chadee (2011), and Yli-Renko et al. (2002). The remaining studies consider the social networks (Lindstrand, Melén & Nordman 2011) social relationships (Ellis & Pecotich 2001), or

network ties (Haahti et al. 2005; Yang, Ho & Chang 2010), as representing social capital. In particular, the concept of 'guanxi' has been viewed as an 'Eastern' version of social capital for research in the context of China (Chadee & Zhang 2000). 'Guanxi' is broadly referred to as personal and interpersonal relationships or connections among people, which places high values on network, trust, commitment, favor, mutuality, reciprocity, and long-term benefits (Chadee & Zhang 2000). For the purpose of the present study, the definition of Nahapiet and Ghoshal (1998, p. 243) is adopted, that *"social capital is the sum of the actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual or social unit*". Nevertheless, depending on context, where referring to the nature of the network contacts, rather than emphasizing the resources or benefits received by those contacts, the terms social networks and network ties will be used to represent social capital.

In the context of Vietnamese SMEs, there have been several studies on the impact of social networks on business activities, such as between social networks and young entrepreneurs in Hanoi (Turner & Nguyen 2005), the interaction between social capital and human capital in their impacts on new-born firms (Santarelli & Tran 2013), or the relationship between relational capital and performance of international joint venture companies (Lai & Truong 2005). Regarding SME exports, Nguyen, AN et al. (2008) examined the impact of innovation on export performance of SMEs; while Vu, VH (2012) and Vu, VH (2014) studied the productivity level of Vietnamese exporters and the relationship between export and employee benefits. To the best of the present author's knowledge, however, there is no existing research on the impact of network tie on export performance in Vietnamese SMEs.

3.8 Chapter summary

The review presented in this chapter aims to position this research with respect to the current discussions on the topics of concern, being organized into the key themes of (i) export performance, (ii) social capital, and (iii) impact of social capital on export success. The key points of each theme are summarized below.

- The export performance literature is fragmented, both conceptually and methodologically. As proposed by Katsikeas, Leonidou and Morgan (2000), a contingency approach should be considered when selecting measures of export performance. Despite increasing interest in empirical studies and advancement in

statistical methodologies, the current state of the literature on export performance of SMEs shows critical gaps. One of the identified gaps is the limited work conducted in the context of emerging economies, suggesting further research is needed to advance understanding in the field.

- Social capital is a broad and controversial concept, and its dimensions and measurements lack an agreed conceptual framework. The need to contextualize the concept has been urged by (Durlauf & Fafchamps 2004), who showed a critical need to integrate qualitative studies to understand further social capital in certain contexts, before applying the concept deliberately. However, in the international business literature, social capital generally means the network contacts of firms/entrepreneurs, which follows the concept of Nahapiet and Ghoshal (1998).
- Social capital has emerged in the literature as a determinant of export performance, but the number of empirical researches is quite limited. Most researches only use either qualitative (interview) or quantitative (questionnaire) methods, so there are gaps in triangulation between the two types of methodology. For quantitative empirical studies, self-reported survey data is commonly used, and research combining both self-reported and secondary data is rare. Moreover, where temporal performance is analysed, there is no research looking at impacts of social capital and export performance over time to identify the possible lagged effects of social capital. The review of this literature, thus, suggests potential for further research.
- From the resource-based point of view, social capital has been added as a unique, intangible resource that supports firms in identifying new business opportunities, accessing foreign markets, and facilitating business transactions. In the international business literature, social capital has been found to be positively related to firm internationalization (Ellis & Pecotich 2001; Loane & Bell 2006; Yli-Renko, Autio & Tontti 2002), especially during the market entry period of firms (Agndal, Chetty & Wilson 2008; Manolova, Manev & Gyoshev 2010). However, the literature also points out that social capital may limit the international opportunities of firms, so that firms can be trapped in domestic market by extensively relying on information from internal networks (Laursen, Masciarelli & Prencipe 2012).

- From the perspective of the institutional approach, however, the comparative impact of social capital on export performance of firms in different sectors has not been examined; especially, the comparison between unrestricted sectors and restricted sectors, where the levels of administrative controls have influenced the distribution of information and other resources. This indicates that further research is needed to include rent seeking theory and the institutional approach in parallel with the resource-based view, to better understand how social capital may relate to rent creation and rent appropriation.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

The focus of this chapter is on providing details of the methods used to examine the value of social capital in the export business of Vietnamese SMEs during the economic transition process, which is the stated objective of the present study.

In the preceding Literature Review chapter, I reviewed the related literature about impacts of social capital on export propensity and export performance of firms from different theoretical viewpoints. I also underscored the diversification in measurements of both social capital and export performance. As identified earlier in Chapter 3, the debate over measurements of social capital originated partly from the lack of integration between qualitative and quantitative surveys, wherein the substance or content of social capital have not been adequately accessed.

Inspired by such debate, and drawing on the pragmatic research paradigm as mentioned in the Research design and methodology section (Chapter 1, Section 1.5), this study attempts to incorporate both qualitative and quantitative investigation to allow more thorough understanding of the impacts of social capital on export endeavours of SMEs in the research setting of Vietnam. As suggested by Creswell (2014), mixed methods design is useful in this type of study because neither the quantitative nor the qualitative approach alone are adequate to best understand the stated research problem. Hence, the combination of the strengths of both quantitative and qualitative research (and their data) can help this study to provide a more comprehensive understanding.

This chapter commences with the general justifications of the research design, research settings and the selection of variables, constructs and concepts. This will be followed by the discussion of the detailed procedures and justifications of the qualitative method, including: (i) justification of the industries and regions chosen; (ii) data collection strategy and procedures; and (iii) data transcribing, coding and analysis. The next section then presents the general features of the quantitative study, including: (i) the selection of the secondary data source; (ii) sampling and data collection methodology; and (iii) the selection of statistical tools. Since the quantitative analysis includes two distinct models (for export propensity and export performance), the detailed justifications of each quantitative model, as well as the strategy on data screening, data validation and

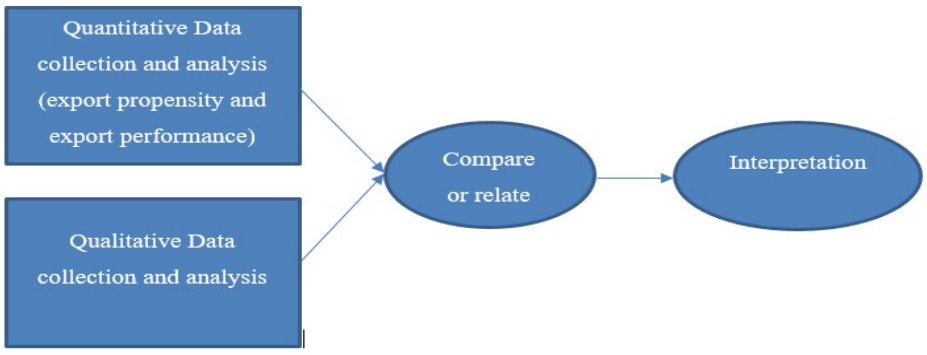
statistical approach in the data analysis, are presented separately in the respective sections.

4.2 Mixed methods research design

A mixed methods study is made up of both qualitative and quantitative strategies and tools (Goodrick & Nolte 2014). A mixed methods approach has been advocated as a research methodology because of its advantages in balancing strengths and limitations of quantitative and qualitative approaches. Mixed method studies are also able to address the complexity of a research problem from different perspectives (Creswell 2014; Goodrick & Nolte 2014). A mixed methods approach enhances credibility and rigour of the studies as it applies both qualitative and quantitative techniques to a comprehensive and complete dataset, thus resulting in more reliable results during data analysis (Bryman 2006; Goodrick & Nolte 2014), particularly when the research stream has been considerably matured (Edmondson & McManus 2007).

The use of a mixed methods approach can help increase the robustness and validity of the research findings because it combines the statistical evidence from quantitative method with the rich and detailed description of the research problem from qualitative method (Creswell 2014). For the present study, the mixed methods design allows a thorough examination of social capital and its impacts on export success of Vietnamese SMEs from the perspectives of local SMEs in the sample, as well as through the statistical testing of mass quantitative data from a ten-year period.

Figure 4.1: Mixed methods: Convergent parallel design



Source: Adapted from Creswell (2014, p.220)

Creswell (2014) points out various types of mixed methods designs such as the convergent parallel or triangulation design, explanatory sequential design, and exploratory sequential design, as well as embedded design, transformative design, and multiphase design.

The decision for a mixed methods design is based on three main considerations: (i) the timing of the quantitative and qualitative methods; (ii) the weighting of the quantitative and qualitative methods; and (iii) the mixing of the quantitative and qualitative methods (Creswell 2014; Goodrick & Nolte 2014). For the present study, the convergent parallel mixed method was found to be appropriate because it considers qualitative and quantitative components to be of equal importance. The collection and analysis of both forms of data are conducted separately, then results of both are compared and triangulated to see if the findings confirm or disconfirm each other (Creswell 2014).

Table 4.1: Application of convergent parallel mixed methods design

Types	Qualitative	Quantitative	
Timing	Parallel		
Weighing	40%	60%	
Data	Interview data	Pre-exist SMEs data (2007-2015)	
	19 SMEs	Export propensity 5,791 observations	Export performance 147 observations
Mixing	Convergence / triangulation / relation of results		

Source: Author's illustration

4.3 Research setting and variable selection

4.3.1 Research setting

Our core research setting is Vietnam in its transitional economic process, with combined characteristics of a centrally planned and a market-oriented economy. During the process of transition, legal and institutional frameworks have been gradually developed toward a more competitive and transparent system. In the export sector, the institutional development, especially the implementation of new laws and regulations, has paved the way for the private sector to participate in export activities. The right to export was

granted for various types of enterprises rather than being strictly under the control of specific, state-owned import-export firms. Export quota and other export restrictions have been gradually removed.

This period has witnessed the downscaling of the predominant State Own Enterprises (SOE) sector, following the so-called 'equitization' process. 'Equitization' is the euphemism used out of consideration for political sensitivities, since this process essentially means 'privatization' (De Jong, Tu & van Ees 2012). Resulting from the equitization process, the number of private firms has increased dramatically. However, this transformation offers favourable conditions for rent seeking and rent appropriation. There are inconsistencies between the old and the renovated sets of laws and regulations. These inconsistencies and lack of uniformity have given opportunities for rent-seeking behaviours.

In such a research setting, I concentrate on domestic SMEs in the manufacturing sector. Unlike foreign-invested SMEs which have extensive reach to foreign markets, including their home market, local manufacturing SMEs can be depicted as lacking market information and knowledge, besides experiencing various other barriers; thus, how they tackle these difficulties to participate in export activities is worth examining.

There are many definitions of small- and medium-sized enterprises. According to the World Bank, micro enterprises are those having less than 10 employees, small enterprises are those having from 10 to 49 employees and medium-sized enterprises have from 50 to 300 employees. This definition is the most common one and it is also consistent with that used by the European Union (Tewari et al 2013).

In Vietnam, the current definition of small- and medium-sized enterprises is stated in Article 3 of the Decree 56/2009/ND-CP of the Government, where small- and medium-sized enterprises are legally registered enterprises which are classified in three categories, micro enterprises, small enterprises, and medium enterprises, according to the size of their total capital or total average number of employees, with preference given to total capital. According to the same regulation, a further classification distinguishes firm size according to sector; and that an SME in the manufacturing sector would have up to 300 labourers. The detailed classification of SMEs is presented in Table 2.4, Chapter 2, Section 2.4.1.

The present study uses the total number of employees as the primary criterion to select SMEs eligible for the qualitative research. Similarly, this criterion was used to screen the quantitative data, so that only SMEs with less than 300 employees are included in the quantitative dataset for the present study.

4.3.2 Variables, constructs and concepts

The key idea of parallel design is "to collect both forms of data using the same or parallel variables, constructs, or concepts" (Creswell 2014, p. 222). This approach allows a valid comparison between qualitative and quantitative results. For this study, I use the same key concepts, constructs and variables in both qualitative and quantitative approaches. The working concepts of social capital and export performance have been defined earlier, in Chapter 1. For that, social capital is defined as "the sum of the actual and potential resources embedded within, available through and derived from the network of relationship possessed by an individual or social unit" (Nahapiet & Ghoshal 1998, p. 243); whereas export performance is defined as "the composite outcome of a firm's international sales" (Shoham 1998, p. 61).

The constructs of social capital, and its measurement variables, in both the qualitative and quantitative studies measure the size of networks and the quality or resources that SMEs have obtained from such networks. I note, however, that the measurement of social capital from the two methods might not completely overlap. Several aspects of social capital viewed qualitatively cannot be portrayed quantitatively; thus, I expect the qualitative study to provide more insightful explanations to complement the quantitative study.

A summary of the concepts, constructs and variables for the qualitative and quantitative studies is presented in Table 4.2.

Table 4.2: Concepts, constructs and variables

Concepts / constructs/ variables	Qualitative	Quantitative
Social capital concepts	"the sum of the actual and potential resources embedded within, available through and derived from the network of relationship possessed by an individual or social unit" (Nahapiet & Ghoshal 1998, p. 243)	
Social capital constructs/ measurement	Network size Network resources	Number of contacts Number of assists from such network contacts
Network types	Business network Bank network Authority (or political/public officials) network Other social networks	
Export propensity	Experience of the first export venture and the impact of social capital on such experience	Propensity to export (yes / no)
Export performance	"the composite outcome of a firm's international sales" (Shoham 1998, p. 61)	
Export performance measurement	Subjective measurement / Comparison with expectation: - Export revenue growth - Export profit - Export market access	Objective economic measurement / financial data: - Export revenue - Export intensity (percentage) - Export market diversity

Source: Author's illustration

4.4 Qualitative methodology approach

In his influential article, *'The prosperous community: Social capital and public life'*, Putnam (1993) initiated the measurement of social capital. By looking at the number of community members attending public activities and participating in charitable events, Putnam developed the very first measurement of social capital at the community level and opened a new avenue for empirical social capital research.

One of the strongest supporters in applying social capital concepts to the economics and development studies disciplines is the World Bank. The World Bank has been investing tremendous effort in developing social capital indicators and using such indicators to research economic development and poverty reduction (Narayan 1999). The World Bank's recent discussions on social capital emphasize the need to integrate

qualitative investigation in measuring social capital, as it helps complement the quantitative measurement method.

Similar to the approach of the World Bank, some researchers agree on the inclusion of the qualitative survey process, since it is believed that social capital is a context-based concept (Crudeli 2006; Kontinen & Ojala 2011) and that more qualitative work is needed to enhance statistical hypotheses (Durlauf & Fafchamps 2004). Therefore, in the present study, the qualitative stage is designed to understand local perspectives on social capital, and its impacts on export performance, in comparison with the reviewed literature. Ultimately, the goal of the qualitative study is to understand how the participants, at the time of their interview, understood and created meaning out of their experience, through language. In short, the interview is a powerful tool for gaining insights into the research problems through understanding the experiences of the individuals whose lives reflect those issues (Creswell 2014; Seidman 2013).

4.4.1 Rationale for the selection of research setting and data source

The participating SMEs selected in the present study are domestic SMEs that have been involved in export activities or export marketing and promotional activities. This group of SMEs is appropriate to the research objectives of this study because they potentially allow the exploration of how private local SMEs have experienced changes in formal and informal institutional environments, and how these changes have possibly adjusted the way SMEs have utilized their social capital to deal with export challenges.

This qualitative research focuses on three sectors: (i) Handicraft, (ii) Agriculture and Food Processing, and (iii) Furniture and Wood Processing. These three sectors allow the comparison of one sector under certain restrictions[12] on production and exportation (furniture and wood processing) with two sectors under export encouragement (handicraft and food processing). They also allow the comparison and contrast of standardized products (low level of processed commodity – in agriculture and food processing) and highly customized products (handicraft and furniture processing). The participating

[12] Under the current regulations, wood and wood products face export restrictions in the form of a variety of export tariffs and the outright ban of timber exports (rough or sawn). Details on export restrictions can be found in Decree 187/2013/NĐ-CP dated 20/11/2013, and details on export tariffs in Circular 182/2015/TT-BTC dated 16/11/2015.

firms' sectors are categorized according to the Vietnamese sector identification codes (shown in footnote[13]).

The key informants are owners or managers of SMEs, each informant represents one firm. In larger firms, where the separation of ownership and management is common, the owners of a firm may not directly manage the firm or have detailed information about its daily operation. However, in Vietnam, private SMEs are generally run by their owners. Thus, the owners would be the most relevant informants regarding both strategic and operational information on the firm. Owners also develop and utilize their social capital to support their own business. There is thus no separation of objectives between owners and management.

4.4.2 Data collection method

To answer the main research questions, I collected data related to various aspects of firms' export performance, such as export growth, profit, market access, as well as information about firms' social capital, such as information on firms' relationships with their business partners, relevant authorities and other social relationships. I also aimed to obtain historical data on business performance to understand the changing roles of social capital in export performance. As guided by the literature review, measures of export performance pertained not only to objective financial indicators but also to subjective strategic indicators such as perceptions or expectations of the firms' owners. Hence, desired data could be best obtained from owners or managers of SMEs.

Since the requirement of the qualitative study is to conduct interviews with one representative being owner or manager from each participating firm, who are generally busy and not easy to approach, I decided to seek support from relevant authorities and trade associations such as the Vietnam Trade Promotion Agency (VieTrade) or the Handicraft and Wood Industry Association of Ho Chi Minh city (HAWA). I aimed to obtain references from the above-mentioned organizations to approach their member firms.

The number of interviews was set in line with the recommendation of Creswell (2014), where the sample size is considered adequate when information collected has

[13] C1030: Fruit and vegetable processing; C16: wood and related materials (sedge, rattan, straw, stubble, bamboo) processing – except furniture; C16210: plywood and panel wood; C31-310-3100: wooden furniture processing; G46324: coffee wholesales; G46325: tea wholesales (Decision No.10/2007/QD-Ttg dated 23/01/2007 issuing the system of economic branches of Vietnam).

been ‘saturated’, and that the sample size of twenty cases should be sufficient for most qualitative design. In this study the number of intended interviews was nineteen (as presented in Section 4.4.3.2), it was appropriate that I would be able to conduct all the interviews myself rather than having more interviewers involved in the interview process.

Based on the objectives of the qualitative study, the number of identified participants, and the single interviewer approach, I decided to collect data by semi-structured interviews. This method of data collection is generally considered to be suitable for a primary or a single method of investigation for some research situations (Seidman 2013), capable of generating rich data if conducted skilfully (Gillham 2010). For the present research, the selection of semi-structured (or qualitative) interview method is in line with the recommendation of Yin (2016), and appropriate for the following reasons:

i. Semi-structured interviews, using open-ended questions, enabled me to obtain participants’ own perspectives regarding the research problems;

ii. Semi-structured interviews are more flexible and were expected to capture the participants’ stories and experiences, from which I could categorize, develop themes and narratives, and analyse or generate emerging themes for discussion;

iii. Although the use of a structured questionnaire would be easier to manage and classify, it would not allow me to capture the different perspectives of the participants;

iv. The limitation from inconsistencies between interviewers would not exist, because the student researcher was the only interviewer for the process.

Thus, it was decided that use of a semi-structured questionnaire was the most appropriate method for collecting data for this qualitative phase of the research.

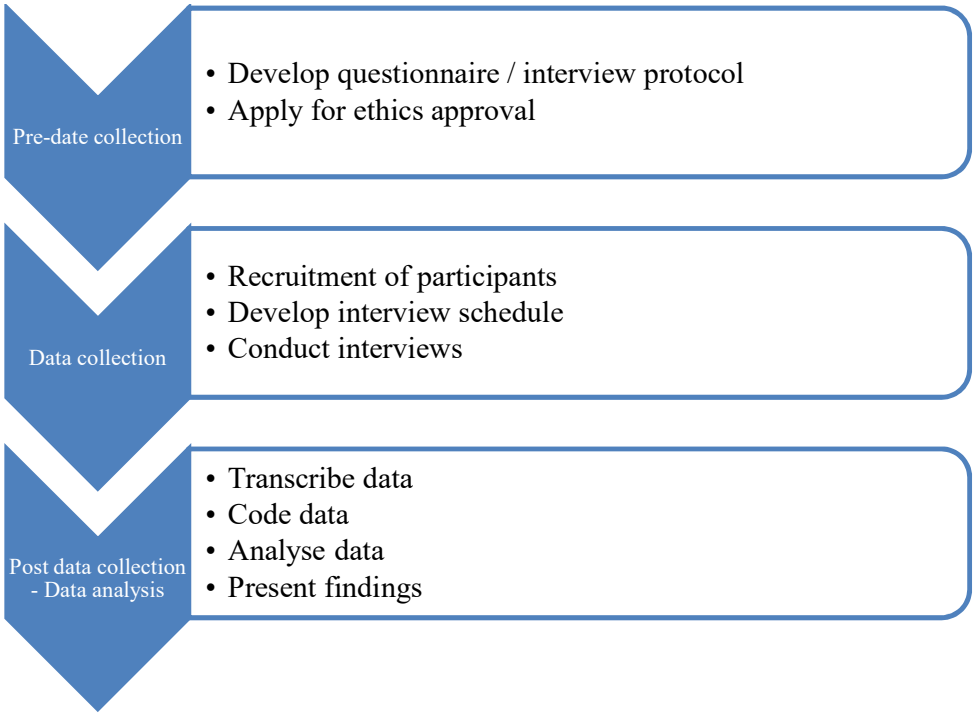
4.4.3 Data collection procedure

Unlike publicly listed companies or large-sized enterprises, where a company’s information can be retrieved from the Internet, information on SMEs in Vietnam is not readily available from such public sources. Therefore, a data collection strategy was set up following three steps. Firstly, I identified several sources that might allow me to gain access to information on firms, including the Vietnam Chamber of Commerce and Industry, Vietnam Association of Small and Medium Sized Enterprises, and the Vietnam

Trade Promotion Agency (VieTrade) under the Ministry of Trade. Next, I arranged meetings with representatives from these organizations to obtain relevant databases of exporting SMEs in various sectors. Finally, I obtained consent from the respective organizations to access their databases to identify potential participating firms for the research.

The data collection process was divided into three consecutive stages, in which the post-data collection was essentially data analysis, as presented in Figure 4.2.

Figure 4.2: Data collection and processing



4.4.3.1 Development of questionnaire and interview protocol

One of the critical research activities is developing the questionnaire. Since this qualitative study is designed to use semi-structured interviews, the questionnaire was developed to include open-ended questions, and these questions are grouped by category, which I also refer to as the 'interview guidelines' or 'interview protocol', as suggested by Creswell (2014). The questionnaire was designed to indicate a flow from general to specific issues. It also encouraged participants to share their own stories, experiences and reflections. For example, to explore the importance of social capital during the starting-up phase of the export business, I asked participants to share how they started their export

venture. Depending on the content of the stories told, I could opt to clarify by asking such questions as, *"how did you have your first export contract?"* or *"how did you start working with your suppliers?".*

The questionnaire was initially developed in English, and was reviewed by the supervisory team. The second draft was then refined, incorporating comments from the supervisory team. Afterward, I tested its reliability by conducting trial interviews with three volunteers at my university. These trial interviews helped to identify unclear terms and unclear questions, which then were revised and fine-tuned accordingly. Finally, the refined questionnaire was validated again by the principal supervisor.

We decided to use Vietnamese in interviewing participants. Since Vietnamese is the mother tongue of all participants, it is most relevant to have their stories told in their native language. Conducting the interviews in Vietnamese could help the interviewees to overcome difficulties or barriers in language expression, and thus data would be best captured qualitatively. The questionnaire, therefore, needed to be translated into Vietnamese.

Once the English version of the qualitative interview schedule had been validated, it was translated by the student researcher into Vietnamese. The researcher in this project is Vietnamese, who uses English as a second language but who has been residing for several years in an English-speaking country. The researcher also possesses both the necessary language skills and understanding about the project, in order to translate the questionnaire to its best conformity with the original English version. The translated version was validated by the principal supervisor. The principal supervisor is Australian with English as native language and Vietnamese as a second language, who has been learning Vietnamese language and conducting extensive research about the Vietnamese economy since 1977.

The process of translation validation was conducted as follows. The principal supervisor read the Vietnamese version of the questionnaire and checked the English version, then both the principal supervisor and the student researcher compared the translated English version with the original English version to identify any discrepancies. Where discrepancies were identified, the student researcher and the principal supervisor discussed these to find the most appropriate word choices.

The reliability of the refined Vietnamese version was tested again with three Vietnamese SME owners and one Vietnamese SME expert. The reliability test was conducted with the prior consent of the volunteer participants. These pilot interviews were conducted via the telephone. The reliability test was designed to test the clarity of the questions and the duration of an actual interview. However, to avoid possible disruption caused by limited quality of overseas phone calls, a copy of the interview schedule (in Vietnamese) was sent by email to each participant prior to the interview. Feedback from participants was recorded by the researcher. Any ambiguous or unfamiliar terms, jargon or questions recorded during the pilot interviews were then discussed and finalized by the student researcher and the principal supervisor.

4.4.3.2 Data collection

Participant recruitment

The qualitative data collection for this study was conducted in Vietnam during the period 17 September 2015 to 7 October 2015.

Participants were sourced from three channels. Firstly, contact information of potential participants was obtained through the Directory of Export SMEs from the Vietnam Trade Promotion Agency (VieTrade) and the member directory of Ho Chi Minh City Handicraft and Wood Industry Association (HAWA). With prior consent of these organizations, invitations to participate, with information about the research, were sent by email. Follow-up phone calls were also made to encourage participation. This follow-up process gathered initial business information on the firms and allowed me to decide whether a firm was suitable for the research participants' selection criteria specified in Section 4.4.1. The access to the three business directories above allowed for approaches to a large quantity of potential participants; but this method was time consuming, and the response rate was relatively low. I sent out 105 emails to potential participants, and received 14 responses, equivalent to 13%. The follow-up calls then identified that only nine (9) firms matched the selection criteria.

The second source of participants came from workshops and conferences. I attended two industry workshops, and invited potential firms to participate. These were the Conference on Compliance Requirements for Handicraft Products Exporting to the European Union (Hanoi, March 2015), and the Supply-Demand Connection Affair where firms showcased their products and seeking for suppliers or customers (Danang, 29

September 2015). Participants were interviewed either after the workshops or at their office, at the discretion of the participants. Five participants were recruited and interviewed from these two conferences in Hanoi and Danang.

The third source was snowballing from existing participants. Five out of nineteen participants in this qualitative interview stage were referred by existing participants. The success rate of referrals was 100%. This success rate may serve as a proof of the importance of 'social capital' in Vietnam. One may argue about the potential bias of this referral practice. However, the referrals in this research were reflected in the last part of the questionnaire, where participants were asked to recommend an SME that the researcher could interview in order to understand better the research problem. (For more information, please see the questionnaire in Appendix 4).

Conducting interviews

Information about the research project and an informed consent form were forwarded to each prospective participant, and a tentative schedule was then set up. Participants decided the interview time and venue that were most convenient for them. This practice follows the suggestions of Kvale (1996), indicating that the comfort of the participants is critical to improving interview quality.

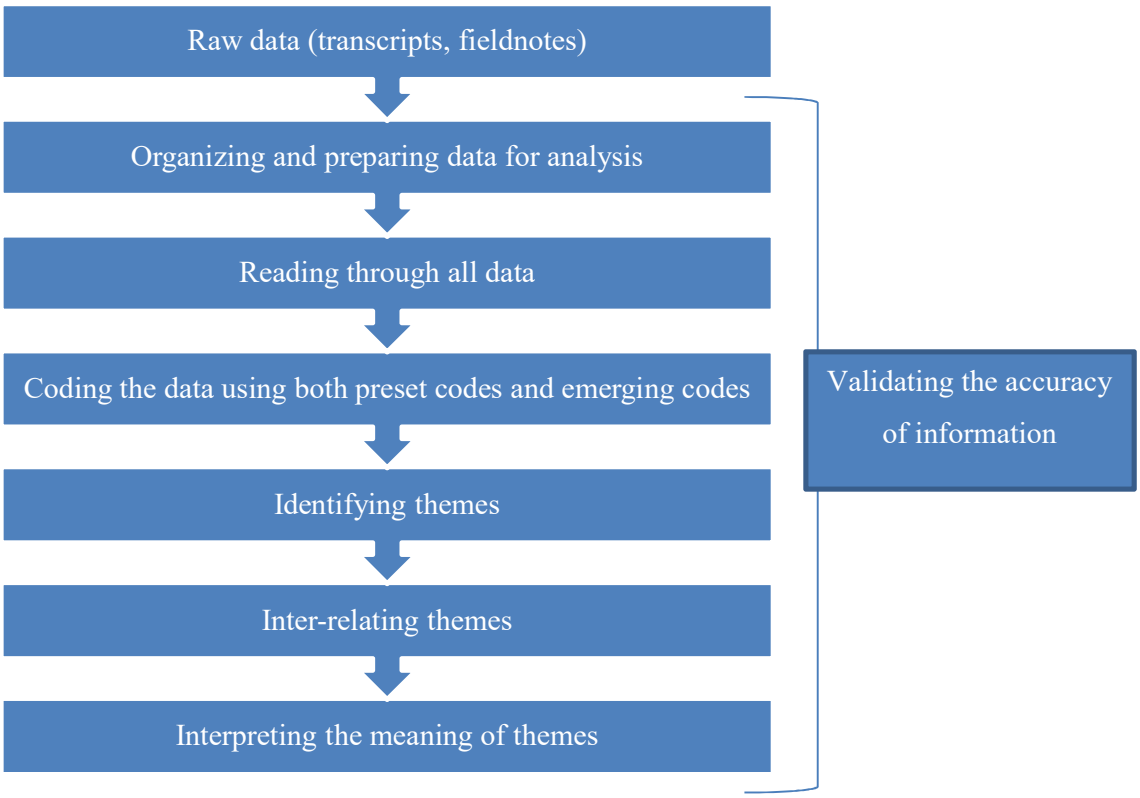
The interviews were conducted based on the interview questionnaire protocol approved by the Victoria University Ethics Committee (Ethics Clearance Reference Number, HRE15-153). At each interview, the researcher strictly followed the protocol, as recommended by Creswell (2014). The interview started with the researcher's self-introduction and briefing about the interview, then some ice-breaker questions, followed by the sub-questions from the qualitative research plan.

The researcher also made it explicit that participants were welcome to ask for repetition of any questions and could skip any questions they did not want to answer. It was clear to both interviewer and interviewees that participation in the research was voluntarily, and all participants had the right to stop the interview at any time without any obligation. All interviews were recorded with prior permission of participants. Besides recording, I also took notes during the interviews.

4.4.4 Data analysis procedure

I transcribed each recorded interview separately and stored the transcriptions in a Word document. Demographic information about the participating firms and the key informants was entered into an Excel spreadsheet. The interview transcripts were then analysed line-by-line, using the data analysis procedure recommended by Creswell (2014). The contents of the interviews were encoded using the strategy recommended by Saldana (2009). For this, the coding of the interview transcripts started with a provisional list of codes (the 'pre-set' codes). These pre-set codes derived from related themes covered in the theoretical frameworks of the study, which themes were derived from the literature review in response to the research questions. During the coding process, each single statement from the interviewees was treated as a unit of analysis to explore topics and themes that emerged in the transcriptions, following the Values Coding method (Saldana 2009); hence, there were various emerging codes. These emerging codes were then categorized into both existing and new themes. Therefore, this research included both pre-set codes and emerging codes, with several reviews and merging of codes to arrive at the final themes for analysis. The basic steps in the data analysis process are presented in Figure 4.3.

Figure 4.3: Data analysis process



Source: Author adapted from Creswell (2014)

As mentioned earlier, the interviews were conducted in Vietnamese. This allowed the participants to express their ideas in the most precise way, as not all of them had a high level of English proficiency. It is important to note that the transcripts were not entirely translated. Only the quoted phrases were translated by the researcher, and verified by the principal supervisor, as specified in the approved ethics procedure.

This research utilized the NViVo (version 11) software to support the data coding and analysis process. Firstly, all original versions of the transcribed interview files were imported into the 'Internals' folder of the 'Sources' of research material for the project. Secondly, the coding process was then performed with each of the first five interviews, starting with the identification of the topics from the interview transcripts. The codes and themes were then refined, and I then coded the rest of the fourteen interviews. The use of NViVo software in coding allowed the researcher to group similar concepts (known as 'nodes') within a hierarchy of broad topics (known as parent nodes) and sub-topics (known as child nodes). The list of nodes from the interview transcripts is presented in Figure 4.4.

Figure 4.4: Broad nodes from interview transcripts

Nodes

Name	Sources	References
SC impacts on firms' export participation	18	105
The importance of SC	18	56
SC - Concept	16	21
SC impacts on firms' export performance	16	61
Changing of social capital over time	15	34
SC - sources	13	16
The limit of social capital	12	37
Institutional impacts	11	18
The role of management	9	14
SC - measurement	7	7
SC - regional differences	5	6
SC - network size vs network quality	4	5
SC and culture	1	1

Source: extracted from the qualitative study project in NVivo

Coded data were stored in the project folder for data analysis and presentation of results at the later stage. The research findings were generated from the statements pertaining to each topic and theme (Creswell 2014; Saldana 2009).

4.4.5 Ethical considerations

4.4.5.1 Ethics application

Before conducting data collection, an application dossier for ethics approval was prepared by the student researcher, addressing all possible risks for participants and the student researcher. The ethics application also contains proposed risk management measurements.

The ethics application dossier contains two supporting letters. The first letter is from the Vietnam Trade Promotion Agency allowing the student researcher to access their SMEs database and contact suitable SMEs to invite for participation in the research. The second supporting letter is from the Foreign Trade University (Vietnam) agreeing to be the contact point while I was conducting field trips in the country.

The *Information to participants* and *Informed Consent* forms were prepared in both English and Vietnamese. All bilingual documents were checked and authorized by the Principal supervisor, as presented earlier in Section 4.4.3.1. The application and approval for ethics in conducting this research was done electronically through the website, www.quest.vu.edu.au (Ethics approval can be found in Appendix 5).

4.4.5.2 Anonymization and pseudonymization

As participants are business owners and managers, information disclosed during interviews should be treated with care. Although this research does not involve disclosure of any business secret that requires participants to be anonymized, it may contain some sensitive information such as the relationship with political ties; thus, I keep and have kept all information about participants confidential. I pseudonymized all participants, and only show their sequencing number (for example: Participant #1). A list of respective participating companies, their business sectors, and a brief outline of demographic characteristics, can be found in Chapter 5, Table 5.1.

With regard to managing information related to participants, I created a separate and secure folder to keep all files related to the interview data, such as signed consent forms, recording audio files, and transcription documents. All such documentation of the research, including data collection schedule, letters of reference, and interview guide, is stored securely.

4.4.6 Validity and reliability issues

According to Creswell (2014), validity in qualitative research refers to the accuracy of the findings (i.e. the correctness, trustworthiness and credibility) from the standpoint of the researcher, the participants or the readers. Reliability, on the other hand, refers to the stability and consistency of the findings.

This research used a mixed methods approach, in which the results of the qualitative findings would then be triangulated with findings from the quantitative analysis. A mixed methods approach helps ensure the reliability of the research findings (Creswell 2014). Moreover, in each phase of the study, the issues of reliability and validity have been considered as thoroughly as possible.

For the qualitative study, in order to ensure the quality of the collected data and the trustworthiness of the research findings, this research vigorously addresses the issue

of reliability and validity. I applied practices recommended by Creswell (2014) and Yin (2009) in sample selection, collecting data, coding and analysing data. For example, this research applied strictly the procedure in developing and validating the interview questionnaire, with special diligence in the requirement of translation, as the data has been collected in another language than English.

In addition, relevant to securing validity, the interviewer structured the interview with a set of ready-designed questions, with spontaneous probing and scaffolding questions. The interviewer also applied specific interview techniques, such as keeping quiet, maintaining rapport, not interrupting, and staying neutral rather than trying to redirect the participant's flow of thoughts. These tactics allowed the participants to make sense to themselves and to the interviewer (Seidman 2013; Yin 2016).

One purpose of the qualitative study is to explore the multiple realities and a diversity of perceptions, so I followed the suggestion of Yin (2016) that data should be collected from various sources and triangulated to verify the repeatability of the findings. In this study, apart from the interviews, I collected information from other possible sources such as websites of the participating firms, websites of the relevant trade associations, and from other available media such as newspapers. Hence, the perceptions of participants regarding the importance of social capital and impacts of social capital on the export success of respective SMEs were more reliably captured.

During the data collection and analysis processes, as mentioned earlier in this chapter, the researcher applied suggestions of Creswell (2014) on using interview protocols and protocols for recording information. In addition, the member checking technique was employed, involving sending interview transcripts to interviewees for verification. With regards to coding of the data, I also used random checking of the coding by another researcher to check for consistency and reliability of the coding process.

4.5 Quantitative methodology approach: general features

The quantitative studies are designed to include two different dimensions of the export success of SMEs in Vietnam: export propensity and export performance. Firstly, I test the hypothesis on the relationships between social capital variables and the propensity for export of the whole SMEs dataset. Then secondly, I test the hypothesis on the relationship between various social capital variables and the export performance of exporting firms extracted from the same dataset. The quantitative study employed Stata software version

13, in constructing and analysing the panel data. This consists of two distinct analyses for export propensity and export performance.

4.5.1 Data source

This study uses the existing secondary dataset from a series of SME surveys in Vietnam taken in 2007, 2009, 2011, 2013 and, most recently in 2015 (hereafter referred to as 'the surveys'). The surveys were conducted through collaboration between three partners: The Central Institute for Economic Management (CIEM) of the Ministry of Planning and Investment of Vietnam (MPI); the Institute of Labour Science and Social Affairs (ILSSA) of the Ministry of Labour, Invalids and Social Affairs of Vietnam (MoLISA); and the Development Economics Research Group (DERG) of the University of Copenhagen. The surveys were funded by the United Nations University and the Royal Embassy of Denmark in Vietnam under the Business Sector Programme Support (BSPS) (Brandt et al. 2016b).

The survey instrument consists of three modules of questionnaires: an economic accounts questionnaire; a main enterprise questionnaire module for owners or managers; and an employee questionnaire (Brandt et al. 2016b). These provide a rich dataset for the present research. For example, the Economic Account Questionnaire provides information such as revenues, costs, percentage of exports, total assets and liabilities, and total number of employees of the surveyed SMEs. The Enterprise Questionnaire contains information about firms' characteristics such as firm performance, enterprise history, operating sector, ownership structure, location, and information about export status. More importantly, the Enterprise Questionnaire includes a section about networks and relationships, which can be utilized to measure social capital of the surveyed firms.

Since the SME surveys have been conducted since 2002, the researcher has attempted to construct a panel data containing all waves of the data. However, the questionnaires for surveys done in 2002 and 2005 were less comparable with those used from 2007 onward. For example, the 2002 data do not include variables on networks of contacts, and the 2005 data include limited information about support from networks. These discrepancies make it less practical to merge the 2002 and 2005 data with the subsequent datasets; thus, this project examined databases of the five surveys taken in 2007, 2009, 2011, 2013 and 2015.

The survey questionnaires and survey data of the Vietnam SME surveys are available at the website of the Copenhagen University (at http://www.econ.ku.dk/derg/links/vietnam/), the United Nations University – UNU Wider (at https://www.wider.unu.edu/database/viet-nam-sme-database), and the Central Institute for Economic Management – Vietnam (at www.ciem.org.vn).

4.5.2 Sampling and data collection methodology

In each survey round, face-to-face interviews were conducted with more than 2,500 small and medium-sized non-state enterprises operating in the manufacturing sector in ten cities / provinces in Vietnam. The ten provinces comprise four representatives from the North (Hanoi, Phu Tho, Ha Tay, Hai Phong), two from Central Vietnam (Nghe An, Quang Nam), and four from the South (Khanh Hoa, Lam Dong, Ho Chi Minh city, Long An).

The surveys employed the stratified sampling method to ensure an adequate number of enterprises in each province with different ownership forms. The population of non-state manufacturing SMEs in the selected provinces are from the two data sources of the General Statistics Office of Vietnam (GSO) Establishment Census from 2002 and the Industrial Survey 2004-2006. As the surveys are concerned with domestic non-state SMEs, the sample framework was set to exclude all joint ventures, including those with state involvement. However, since the sampling scheme of the surveys is based on the GSO data, and information about informal businesses have not been fully recorded, the survey only covers part of the informal sector (Brandt et al. 2016b).

The surveys have been conducted biennially to track the performance and development of Vietnamese SMEs; hence, surveys conducted on repeat enterprises are ideal. In order to ensure the participation of the maximum amount of repeat enterprises, the enumerators went to the survey areas to identify the repeat enterprises and to obtain the complete lists of enterprises from the local authorities. The identification of the repeat enterprises was an important and time-consuming task. In many cases, the enterprises had changed location or owner since the last survey. On the basis of these visits, updated lists of the repeat enterprises were prepared, and random samples of the new enterprises to be surveyed were drawn. Therefore, the survey sample in each round consists of three subsets of SMEs: (i) the repeat enterprises still in operations; (ii) the repeat enterprises already exited; and (iii) the new enterprises participating for the first time.

As established in previous survey rounds, the 2007-2015 surveys followed the same steps of conducting a pilot survey, and organizing a workshop to analyse, discuss and fine-tune the actual questionnaire. Following the workshop, a training course was held with the enumerators to address any issue with possible ambiguities or misinterpretations of the questions. The actual survey was conducted afterward.

According to the survey handbook (Brandt et al. 2016b), the validity and reliability of the survey data were enhanced by an initial checking and cleaning undertaken in the field, then a second round of data cleaning was undertaken after data entry process. It is noted that, although the interviews were conducted in the Vietnamese language, the equivalent English version of the questionnaire was translated and ready for data entry before the actual data collection.

4.6 Export propensity model

4.6.1 Data screening

4.6.1.1 Exclusion of big firms from the sample

As mentioned earlier, in Chapter 2 on the definition of SMEs, SMEs can be categorized by either total number of employees or total capital. For this research, firm size is measured by total number of full-time employees, as this is the primary categorization criterion used in sampling by the survey. Even though the sampling process was designed to make sure that surveyed firms are SMEs using the criterion of the total number of employees, it has been observed that firms of more than 300 employees still exist in the survey result. This is particularly the case where firms have repeatedly participated in several survey rounds but in certain rounds the total of employees was over 300 employees. As such, the data were sorted by excluding five observations with more than 300 full-time employees.

4.6.1.2 Treatment of missing data

Missing data, where valid values of one or more variables are not provided, reduces the sample size available for analysis, possibly causing bias if much data are missing. Since this research utilizes a secondary dataset, the control of the data collection process is void. As such, techniques for dealing with missing data have been applied. Hair et al. (2010) suggest that the most popular method for missing value of metric variables is mean

substitution. The Stata package also offers a sophisticated method for treating missing data, namely the multiple imputation method, which allows the software to create plausible values based on correlations for the missing data, and then averages the simulated datasets by incorporating random errors into the predictions. For the present research, however, the dataset is sufficiently large to allow the use of the deletion method for cases with missing variables as suggested by Hair et al. (2010). As a result, 32 observations are dropped, when explanatory variables are systematically missed.

4.6.2 Method of estimation

In Chapter 6, when focussing on export propensity, descriptive statistics are used to explore the various characteristics of exporting SMEs, in comparison with non-exporting ones. The analysis then continues with the use of logistic regression models to estimate the probability of an SME participating to export. The estimations with logistic model are conducted in two steps: (1) performed on the pooled data, where each observation was considered as independent from each other; and (2) performed on the panel data using random effects logistic regression. The selection of random effects logistic regression model allows the study to analyse the variation among firms, rather than treat all observations as independent.

4.6.2.1 Binary logistic regression

The binary logistic regression model is a special case of regression analysis when the outcome variable is binary, and is different from linear regression in both the form of the model and its assumptions. The form of logistic regression model satisfies the constraint for the conditional mean of the regression equation to be bounded between zero and one. The distribution of the outcome follows binomial distribution rather than normal distribution as specified in the linear regression (Hosmer, Lemeshow & Sturdivant 2013).

Since the outcome (or dependent) variable of export propensity is a binary (or dichotomous) variable with two possible outcomes (0-1), the appropriate statistical technique for binary dependent variable (i.e. Logit or Probit models) will be employed to estimate the impact of social capital on the probability that firms export (Hosmer, Lemeshow & Sturdivant 2013; Wooldridge 2010). As suggested by Nassimbeni (2001) and Torres-Reyna (2007a), Logit and Probit models basically produce similar results for most of the cases. However, when the distribution is 'heavier' or more concentrated on one tail, the Logit model is more appropriate (Nassimbeni 2001). For the present study,

the distribution of the outcome variable is concentrated on the left (less likely to export), as the percentage of exporting firms is less than 7% of the total observations, hence a Logit model is preferred. Nevertheless, this study also carries out a Probit model to check the robustness of the estimated results from the Logit model, as recommended by Nassimbeni (2001) and Wooldridge (2010).

The logistic regression model for pooled data can be depicted as below:

$$\text{Prob (export)} = \frac{1}{1+e^{-z}}$$

where $Z = \beta_0 + \beta_1 X1_{it} + \beta_2 X2_{it} + e_{it}$

- *it* represents firm *i* at time *t*
- X1 is the vector of independent variables on firm characteristics such as firm size, location, ownership, sector and firm knowledge, as well as firm innovation capability as defined above
- X2 is the vector of independent variables on social capital
- e is the error terms

Binary logistic regression is estimated using Maximum Likelihood Estimation (MLE). MLE is an iterative procedure, starting with a guess as to the best weight (or coefficient) for each predictor (or independent) variable in the model. These coefficients are then adjusted repeatedly until they reach the 'maximum', that is when no additional improvement can be made in the ability to predict the value of the outcome variable (either 0 or 1) for each case (Statistic Solution 2016).

4.6.2.2 Binary logistic regression for panel data

This research uses panel data, in which observations of each entity (SME) have occurred at least twice. For that, we have the options to use the pooled logistic or the panel logistic regression with fixed effects or random effects (Allison 2009; Williams 2017). We first estimate pooled logistic regression, and then compare the result with panel logistic regression.

When selecting a suitable regression model for the panel data, it is considered important to estimate not only the time-varying variables (such as those proxies for social capital) but also the effects of firms' characteristic variables, which in this study are in the form of time-invariant dummies. Therefore, the random effects model is more appropriate than the fixed effects model, because fixed effects models are designed to

study the causes of changes within an entity, and technically they will omit all the time-invariant variables (Allison 2009; Torres-Reyna 2007a; Williams 2017).

The logistic regression model with random effects for panel data is depicted below:

$$\text{Prob (export)} = \frac{1}{1+e^{-z}}$$

where $Z = \beta_0 + \beta_1 X_{it} + \beta_2 Y_{it} + \varepsilon_i + u_{it}$

- *it* represents firm *i* at time *t*
- X1 is the vector of independent variables on firm characteristics such as firm size, location, ownership, sector and firm knowledge as well as firm innovation capability as defined above
- X2 is the vector of independent variables on social capital
- ε_i is the within-entity error
- u_{it} is the between-entity error

The random effects logistic regression model is referred to as an example of the cluster-specific logistic model (Hosmer, Lemeshow & Sturdivant 2013) or subject-specific model (Wooldridge 2010), which is typically designed to estimate not only the variability between entities (or cluster) but also the variability of the entities (or cluster).

In addition, the logit models are also performed on a reduced dataset, where all micro SMEs were excluded to avoid possible 'noise' that micro SMEs may cause to the regression results (this meant that 4,340 observations / 725 SMEs were excluded). Various goodness-of-fit and robustness checks were conducted to validate the results.

4.7 Export performance

4.7.1 Data source

For export performance regression models, this study uses the SME survey panel data described above in Section 4.5.1. The SME survey is a unique, rich database because it contains detailed information on SMEs' characteristics, including demographics such as size, age, location, sector, and ownership structure, as well as information on export performance of SMEs such as export revenue, export percentage, and export market diversity. In the meantime, the survey provides information on SMEs' resources such as knowledge, innovation activities, and most importantly, social capital constructs such as various network ties and network resources.

However, this section only focuses on examining factors influencing export performance of SMEs, while the inclusion of non-exporting firms (which account for more than 90% of the observations in the panel) may lead to bias in the estimation results. The study, therefore, uses the data screening technique to create a panel data of exporters only.

4.7.2 Data screening

In 385 firm-year observations of self-declared exporters, there are 229 observations having zero percent for export percentage, leaving only 156 observations with positive export sales. In justifying whether these 229 cases are in fact inactive exporters, individual observations are investigated, by following three steps, described as follows.

Firstly, the cases with relevant indicators of export performance were browsed, starting with export percentage and export revenue figures, then information on the number of export markets. It was found that the information related to inactive exporters was systematic. For example, if the export percentage of an individual case is nil, the number of export markets and export revenue for such a case is nil.

Secondly, we cross-checked with other indicators in the survey data related to export activities of firms, such as the first year of export. It was consistently found that information on export starting year was blank/missing for all the cases with zero percent on export intensity. Finally, we substantiated this with additional information related to export operational procedures, such as "the average time for customs clearance" and "average time of transportation to export market(s)"; and for those observations with no export revenue, the information was found to be void.

Thus, it is highly possible that the response "YES" to the question "Does your firm export?" for these firms may indeed refer to either their intentions of exporting or the inclusion of the 'export' function in their registration licenses, rather than indicate them being an actual exporter. Since the data justifying the inactive exporting status of these cases are systematic, it was decided to sort out these inactive exporters by dropping observations, to avoid bias in the analysis.

After excluding missing values and outliers and checking the consistency of time-invariant variables among the five survey rounds, this resulted in panel data of 147 observations in 74 groups, or 74 firm identities. Although SMEs in the panel had participated in all the five survey rounds, only observations of the years that export

revenue was positive are kept. Therefore, the frequencies of firm identity in this panel range from one to five, resulting in an unbalanced panel.

The dataset contains all interested dependent variables and explanatory variables. This makes possible a test of the influence of social capital on export performance of SMEs.

4.7.3 Method of estimation

The quantitative analysis reported in this section employed Stata software version 13 in analysing the data, and includes four stages. At the first stage, descriptive statistics were utilised to summarise and describe the firms' variables by sector and in total, to explore the data and to assist in identification of potential data errors. At the second stage, diagnostic tests were performed to check for various assumptions of the regression models. For example, correlation analysis was used to discover the links between, on the one hand, export performance and social capital, and on the other hand, between export performance, social capital, export knowledge, and innovation capability of firms. This step was used to check for the existence of multicollinearity among the variables. At the third step, regression analysis on the panel data was undertaken to investigate the degree and direction of the variables' relationships, after controlling for firm characteristics. At the final step, a robustness check was performed to reconfirm the results of the model.

4.7.3.1 Multiple linear regression

According to Wooldridge (2010, p. 54), ordinary least square (OLS) estimation is still "the workhorse in empirical economics". Given that the requisite assumptions hold, OLS regression provides an accurate estimation of the relationship between the dependent variables and the independent variables by minimizing the vertical distance between the observed responses and the responses predicted by the linear estimate (Hair et al. 2010; Wooldridge 2010). For data consisting of multiple variables, the OLS based multiple linear regression is commonly used (Hair et al. 2010). Literature on export performance also reports that multiple linear regression is one of the most common statistical techniques used in empirical analysis (Sousa 2004). For the present study, OLS can be useful because it allows the incorporation of both continuous and categorical independent variables in regression equation.

4.7.3.2 Pooled OLS regression models

In the traditional OLS model, the basic assumption is that the explanatory variables are fixed and not correlated with the unobservable random errors. However, in reality, the traditional OLS model often encounters endogeneity issues due to omitted variables, simultaneity or measurement errors (Wooldridge 2010). However, when panel data are available, since panel data combine the inter-independent differences and intra-individual dynamics, they help to resolve the issues of endogeneity in traditional OLS caused by omitted variables.

Panel data have several advantages over cross-sectional or time-series data. Regression using panel data produces more accurate inference of model parameters, since panel data usually contain more degrees of freedom and more sample variability than cross-sectional or time-series data. Panel data also better control for unobserved or omitted variables, as well as provide the ability to uncover dynamic relationships between dependent and independent variables (Wooldridge 2010).

In general, there are several estimation techniques for panel data such as pooled Ordinary Least Square (OLS), fixed effects (FE), and random effects (RE). Specifically, the linear model can be presented as follows:

$$Y_{it} = \alpha + \beta * X_{it} + \mu_{it}$$

where:
- α is the intercept
- β is vector of parameters
- i is firm and t is time
- Y_{it}: the dependent variable of firm i in year t
- X_{it}: K x 1 vector of explanatory variables
- μ_{it}: the composite error term, $\mu_{it} \equiv c_i + u_{it}$

The different regression techniques used in panel data are defined by the existence of the unobserved component[14] (c_i) and the correlation between c_i and observed explanatory variables (X_{it}).

[14] As noted by Wooldridge (2010, p. 285), the unobserved component **(c_i)** is also referred to as unobserved heterogeneity, and if i represents individual, the c_i is sometimes called an individual effect or individual heterogeneity.

OLS on pooled data is the direct extension of the traditional OLS model, and is straightforward as it considers each observation as independent. It is used in the case that, once account has been made for all observed explanatory variables in the model, there is no unobserved component or no individual effect of the entities that can affect the dependent variable. In other words, in the pooled OLS estimation, $c_i = 0$ (Wooldridge 2010).

4.7.3.3 Fixed effects regression model

When the unobserved component (c_i) exists, the pooled OLS is no longer appropriate. Rather, the random effects model or fixed effects regression model will be used instead, depending on the correlation between the unobserved component (c_i) and the observed explanatory variables (X_{it}).

The fixed effects model assumes that something within the individual may impact or bias the explanatory or outcome variables and is needed to be controlled for. In other words, a fixed effects model allows for arbitrary dependent between the unobserved effect (c_i) and the observed explanatory variables (X_{it}) (Wooldridge 2010).

The fixed effects regression model is specified as follows:

$$Y_{it} = \alpha_i + \beta_1 * X_{it} + u_{it}$$

where:

- α_i (i=1…n) is the unknown intercept for each entity (n entity-specific intercepts)
- Y_{it}: the dependent variable of firm *i* in year *t*
- X_{it}: K x 1 vector of explanatory variables
- β_1 is the coefficient for that explanatory variable
- *i* is firm and *t* is time
- u_{it} is the error term

4.7.3.4 Random effects regression model

In contrast with the fixed effects model, a random effects model means zero correlation between the unobserved component (c_i) and the observed explanatory variables (X_{it}) (Wooldridge 2010). In such case, the fixed effects model is no longer suitable because it may result in incorrect inferences.

The random effects regression model is specified as follows:

$$Y_{it} = \alpha + \beta * X_{it} + c_i + u_{it}$$

where:
- α is the intercept
- β is vector of parameters
- *i* is firm and *t* is time
- Y_{it}: the dependent variable of firm *i* in year *t*
- X_{it}: K x 1 vector of explanatory variables
- c_i is the unobserved effect (or within-entity error)
- u_{it} is the between-entity error

In order to identify the best statistical model of the three general regression models used for panel data, several tests recommended by Torres-Reyna (2007b) were conducted. The Hausman specification test was run to choose between a fixed effects model versus a random effects model. It tests the null hypothesis that the preferred model is the random effects one versus the alternative hypothesis of the fixed effects model (Torres-Reyna 2007b). Depending on the result of the test, either the fixed effects or random effects model will be selected.

In case the preferred model from the Hausman test is the random effects one, the next step is to select between the random effects model or the simple ordinary least square (OLS) model. This can be done by performing the Breusch-Pagan Lagrange multiplier (LM) test. The null hypothesis in the LM test is that variance across entities is zero, or no significant difference across units (i.e. no panel effect). The value of the test will be used to either reject, or fail to reject, the null hypothesis, indicating whether the random effects model is preferred (Torres-Reyna 2007b).

The selections of the appropriate regression models are presented for each dependent variable, of export revenue, export intensity and export diversity, in the respective sections in Chapter 7.

4.8 Chapter summary

This chapter has presented the overall methodology and specific research methods applied in the present study. It specified and justified the selection of the convergent parallel mixed methods approach to examine the research questions. With regard to the qualitative study, this research employed an in-depth, semi-structured interview method to collect data, and a thematic analysis procedure to analyse the collected data. In addition, ethical considerations and issues about reliability and validity were also discussed in this chapter. In the next chapter, the qualitative data analysis and findings are presented.

With regard to the quantitative study, this research utilized a published secondary dataset, namely the Vietnam SME survey. This longitudinal dataset allows the present study to capture the impacts of social capital on export performance of Vietnamese SMEs over time. Since the quantitative study includes two distinct models, of export propensity and export performance, this chapter only presented the general features of data sources, sampling method, and data collection, as well as the selection of the statistical tools. Detailed quantitative procedures are presented in the respective chapters (Chapter 6 on Export propensity and Chapter 7 on Export performance).

CHAPTER 5: QUALITATIVE FINDINGS ON THE IMPACTS OF SOCIAL CAPITAL ON SMES' EXPORT PERFORMANCE IN VIETNAM

"It's not what you know, it's who you know!"

5.1 Introduction

In order to investigate the perceived importance of social capital in doing export business in Vietnam, this chapter presents findings from the qualitative research. The qualitative study is designed to seek answers for the three key research questions: (1) How is social capital important in the export business of Vietnamese SMEs? (2) What are the impacts of social capital on export performance of Vietnamese SMEs? and (3) How have the roles of social capital been changing during the transitional processes of the Vietnamese economy?

By conducting a thematic analysis, this chapter presents the findings in the following order. Firstly, it explores and evaluates the perceived importance of social capital to exporting SMEs in different phases of business development (start-up versus established operation) under different markets (domestic versus export business) for different business sectors (restricted versus market-oriented) and different product characteristics (highly standardized versus customized products). Secondly, it identifies the sources of social capital according to the perceptions of firms' owners. Lastly, it determines and presents the various impact mechanisms of social capital in export performance from different standpoints, and highlights the changing impacts of social capital during the transitional processes of the Vietnamese economy.

5.2 Demographic description of the sample

The demographic description of the sample is presented in Table 5.1. As discussed in the Methodology Chapter (Chapter 4, Section 4.4.1), this research focused on three sectors: handicraft (five participants); agriculture and food processing (nine participants); and furniture and wood processing (five participants). These sectors were chosen in order to provide comparison between sectors where involvement in exports is still restricted (furniture and wood processing) and sectors that have official encouragement to export (handicraft and food processing). Comparisons were also made between standardized products (agriculture and food processing) and customized products (handicraft and furniture processing).

Table 5.1: Demographic description of the participating SMEs

Case	Industry	Pseudonym	Year started	Year Export started	Export (%)	Total employees	Region
1	Handicraft	HandicraftCo1	2009	2014	5%	3	North
2		HandicraftCo2	2009	2009	50%	20	North
3		HandicraftCo3	2000	2000	100%	130	North
4		HandicraftCo4	2004	2006	53%	70	Centre
5		HandicraftCo5	2006	2006	40%	12	North
6	Agriculture and Food Processing	AgriCo1	2011	2011	100%	40	North
7		AgriCo2	2007	2008 but not currently exporting	0	5	North
8		AgriCo3	1998	2001	99%	60	North
9		AgriCo4	1955	2000	70%	300	North
10		AgriCo5	2013	Not yet exporting	0	25	Centre
11		AgriCo6	2010	Not yet exporting	0	40	South
12		AgriCo7	1997	2006	91-92%	300	South
13		AgriCo8	2000	2008	40-50%	100	North
14		AgriCo9	2008	2008	100	50	North
15	Wood and Furniture Processing	FurnitureCo1	1980	2008	20-25%	80	North
16		FurnitureCo2	2004	2007	100%	30	North
17		FurnitureCo3	1976	2007	50%	10	North
18		FurnitureCo4	2001	2008	30-40%	40	South
19		FurnitureCo5	2006	2008	100%	25	South

Source: Author's compilation based on interview data

Of the nineteen surveyed firms, two were micro-, ten small-, and seven medium-sized firms. All firms were privately owned. Thirteen firms were from the north, two from the centre, and four from the south of Vietnam, thus ensuring a geographical spread, and with this, a spread across the divergent economic evolutionary history referred to earlier. Regarding export involvement, thirteen firms were confirmed as having more than 50% export sales of total sales, three firms as having export percentage of less than 50% exports, and three firms as not having exported but actively conducting export marketing activities. The majority of participants are male, with fourteen out of nineteen informants.

5.3 Results analysis

5.3.1 Vietnamese perceptions of the social capital concept

In Vietnamese, the word *'social'* means *'xã hội'*, and the term *xã hội hóa'* or *'socialize'* has been generally used to refer to contributions from various sources of the community / private sector rather than entirely from the Government's budget. Since the Vietnamese language generally interprets the word 'capital' (or 'vốn' in the Vietnamese language) in its narrow sense of "money which is used to create interest"[15], the concept of '*social capital'* or *'vốn xã hội'* has been associated with finance mobilized from sources other than the Government budget. During my interviews, most participants claimed the narrow use of the term 'capital' in Vietnamese, reflecting only financial capital. Nevertheless, interviewees admitted the existence and emergence of other types of 'capital' (such as human capital).

When given the working definition of Nahapiet and Ghosal (1998)[16] about 'social capital' and requested to name it, most participants referred to 'relationship', 'network and relationship' or 'social relationship'. While these terms might not be a direct translation of the term 'social capital', interviewees shared a similar notion, of components or dimensions of social capital, which according to Nahapiet and Ghosal (1998) contains three distinct dimensions, namely the structural, the relational, and the cognitive dimension.

The discrepancy in understanding of the 'social capital' term in its Vietnamese translation leads to the need for justification in using the term. Since almost all participants referred the working definition of Nahapiet and Ghoshal (1998) to 'relationship', 'relationship network' or 'social relationship', it is necessary to test whether the term 'social capital' can be used. The responses showed that, whilst five participants still preferred the used of the term 'social relationships' to represent 'social capital', the majority of participants (fourteen over nineteen) agreed that the term 'social capital' can be used as it reflects resources of firms more accurately, similar to the use of human capital and intellectual capital. The term 'social capital' also infers that social

[15] Page 639 Vietnamese Dictionary of Hội Khai Trí Tiến Đức defines: VỐN là tiền gốc, tiền bỏ ra để làm cho có lãi (http://www.vietnamtudien.org/vntd-kttd/TDKTTD_VOT.pdf).

[16] "*…the sum of the actual and potential resources embedded within, available through and derived from the network of relationship possessed by an individual or social unit."*

relationship needs certain forms of 'investment' and its return can be positive or negative. At firm level, the term 'corporate social capital' should be used to differentiate it from social capital at community level and to distinguish it from other sources of capital. Overall, the term 'social capital' is more precise than 'relationship'. In the long run, the term 'social capital' should be used since its connotation is broader than just 'relationship'.

5.3.2 Perceived importance of social capital in doing business in Vietnam

In answering the research question of what role does social capital play in SMEs' export performance, we first explore the value of social capital in the perception of firms' owners, by using a five-point Likert scale for the level of perceived importance of social capital, with 1 being "not important at all" to 5 being "extremely important". Responses were collected from the nineteen participants showing the frequencies of the perceived value of social capital in Vietnam, shown in Table 5.2.

Table 5.2: Perceived importance of social capital in Vietnam

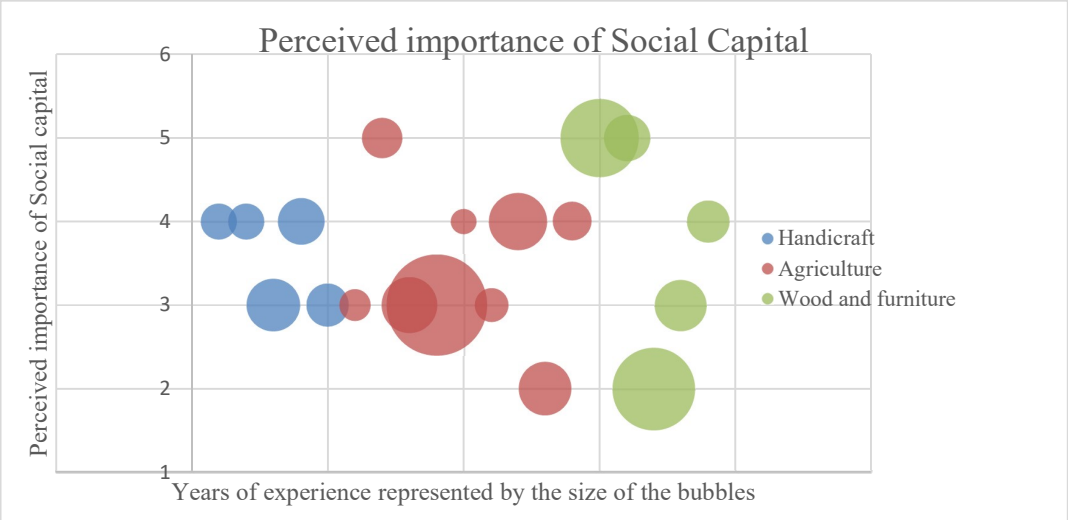
	Frequencies	Percentage
1 - Not important at all	0	0%
2 - Somehow important	2	10.5%
3 - Important	7	36.8%
4 - Very important	7	36.8%
5 - Extremely important	3	15.8%
Total	**19**	

Source: Author's compilation based on interview data

None of the participants denied the importance of social capital: *"In Vietnam, if you don't have relationships, you don't have a business… expertise is not enough"* (Participant #16). Smaller and newer firms tended to value social capital more highly, as did wood processor firms. It was critical at the start-up phase: *"financial capital will only count for approximately 10% of importance. The business relationships, social relationships or reputation would count for the majority"* (Participant #19).

The perceived importance of social capital to different business sectors with different levels of experience is presented in Figure 5.1.

Figure 5.1: Perceived importance of social capital



Source: Author's illustration from the interview data

Regarding the roles that social capital play in export performance, it was found from the interviews that social capital can in general be important to all parts of an exporting business, from realizing business opportunities, acquiring and retaining export customers and establishing a supply chain, to arranging finance needed for conducting export business. Social capital was also found to be critical for some SMEs to support them in dealing with authorities when processing export procedures. In addition, some participants also highly value the important of social capital in improving their knowledge, both specific export knowledge and general business management skills.

However, depending on characteristics such as firm size, stage of business, and business sectors, interviewed firms showed that they value each role of social capital at different levels. For small firms at the early stage of entering export markets, it is critical for them to connect with potential customers, thus they highly appreciated the significance of social capital in identifying business opportunities and acquiring new customers. In fact, these small firms utilized both institutional and personal networks that they had to access potential customers. For example, some surveyed firms opted to participate in export exhibitions and other trade promotion activities organized by trade associations to acquire new customers; whereas for others starting firms, support from institutional networks were out of reach. Thus, the latter found relying on their existing network contacts to be more practical and effective, as the following quote from the owner of a start-up agricultural processing firm, who was trying to export, shows:

"I rely on my friends who are overseas to help me promote my products... I do not have any support from trade promotion agencies or state organizations." (Participant #10)

Regarding sectors, interview data revealed that exporters of agricultural products mainly perceive social capital as being important in achieving price competitive advantage from supply chain management, rather than from marketing and promotion activities. In contrast, for firms in handicraft or wood and furniture processing sectors, access to that social capital is vital for them in both arranging supply side and marketing and promotion activities.

Table 5.3: Identifying roles of social capital in exporting SMEs

Theme	Handicraft (n=5)	Agriculture (n=7)	Wood and Furniture (n=5)	Total (n=17)
Identify opportunities	4	2	3	9
Acquiring customers	2	3	4	9
Identify and manage suppliers	3	4	4	11
Finance	4	1	2	7
Export procedures / authorities	1	1	3	5
Knowledge and Information	4	1	0	5

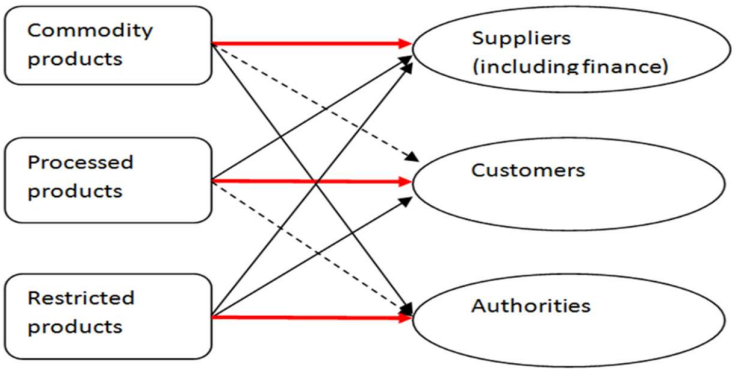
Source: Author's compilation based on interview data

As noted in the Methodology Chapter (Chapter 4, Section 4.4.1), exports of wooden products and furniture are more restricted than are handicraft and agricultural exports. Current restrictions are in the form of a variety of export tariffs and the outright ban of timber exports (rough or sawn). In comparison to the handicraft and the agricultural sector, wooden products' exporters highly value social capital, especially relationships with local authorities. Table 5.3 shows that three of the five respondents mentioning the roles of social capital in dealing with authorities were wood and furniture exporters, as in the following quote:

"[Firms] must have a very close relationship with authorities… legally they have the right to export, but that 'right' is only on paper. In reality, there will be so many more cumbersome 'procedures'… [from] export document dossiers to the very minor 'stamp' that may be required." (Participant # 7)

The importance of social capital is perceived differently in different types of firms. In summary, these relationships are described in the framework presented in Figure 5.2.

Figure 5.2: Firm sector and type of relationship



Key: major importance
moderate importance
minor importance

Source: Author's illustration

In this framework, the impacts of social capital on firms' export business can be classified into three categories: suppliers, customers, and authorities. The arrows represent the firms' perceptions of the importance of each relationship, with bold arrows depicting the most important, non-bold moderate importance, and dashes the least importance. For example, firms exporting commodity products highly appreciate relationships with their suppliers in order to achieve the price competition strategy; whereas firms exporting processed and customized products consider relationships with customers as being of the highest importance, while maintaining minimal connection with authorities. In contrast, relationships with authorities are vital to firms exporting restricted products such as wood and sea sand.

5.3.3 Social capital in domestic versus export business

Export ventures typically involve both domestic and overseas activities. As interactions occur between various parties both locally and internationally, firms are expected to maintain a broad set of relationships. The intensity and complication of such interactions between different parties leads to the perceived critical importance of social capital in export business (Lages 2009; Chadee 2000; Laursen 2012). However, from the interview data analysis, the perception of the critical importance of social capital in export business

is challenged, in particular when comparing with domestic business. Concrete evidence in the present study establishes that, although social capital plays a critical role in acquiring export customers for SMEs in the starting period, retaining export customers mostly depends on quality rather than merely on relationships. In contrast, with domestic business, social capital seems to be more important in both acquiring and retaining customers.

In acquiring new customers, social capital appears to be equally important in gaining both international and local customers. For small firms at the stage of entering the export market, it is vital for them to be connected with potential customers. Many start-up SMEs opt to participate in export exhibitions, and other online and offline promotional and advertising activities, to acquire new customers; whereas others find acquiring customers through existing network contacts to be more effective. One participant recalls their experience of starting an export venture: *"for our (export) sector, network relationships are very important, without them we could not have the starter for our engines"* (Participant #16). Another participant in the agricultural processing sector, who is targeting export markets, admitted: *"I rely on my friends who are overseas to help me promote my products... I do not have any support from trade promotion agencies or state organizations"* (Participant #10).

With regard to retaining customers, domestic customer retention appears to rely more on relationships, networks and connections; while export customers are often retained based on transaction history, with the key point being the credibility and capability of firms in delivering their commitments. During interviews with local firms, one participant said: *"export customers mostly rely on firm's capability...so 'social capital' is not that typical in export business, but it is very intense in domestic business. Currently, many of my domestic customers came from my relationships"* (Participant #2). A similar expression was found from other participant: *"In domestic business, social relationship is more important; in export business, clearly if you did not honour your agreements once or twice then you will never have that business opportunity again"* (Participant #13). Another participant claimed:

> *"even if we have very good relationships with our export partners, we still have to keep our credibility by supplying the best products. Even if we had an extremely close relationship, but were unable to fulfil our commitments on quality or quantity once or twice, that relationship would deteriorate"* (Participant #16).

5.3.4 Impacts of social capital on export performance: a transaction costs perspective

5.3.4.1 Identifying potential export partners

Gathering export information and acquiring export customers are challenging tasks for most SMEs (Moini 1997). Because of their small scale, export marketing resources can be proportionally limited, thus either limiting their exposure to potential markets or increasing their search costs relative to total revenue. In this dilemma, social capital can help reduce search costs by providing filtered and relevant information, including information about potential customers, potential markets, and how firms can access a potential market. It also helps increase perceived reliability and reputation for starting firms: *"if a foreign customer is introduced to us by our existing contact then we will surely trust them more"* (Participant # 12).

For sixteen existing exporters in the present research, there were only three firms (18.8%) reporting that their first export deals were secured from sources other than by reference from their existing relationships. In contrast, there were ten firms (62.5%) reporting that their first export contracts were signed with either direct or indirect support from references of pre-existing relationships. These relationships can be both personal and commercial. Personal relationships normally support firms by direct references; while for commercial relationships, social capital can create export opportunities in the form of trade fairs or export promotion activities:

> *"Social capital plays a very crucial role because when we started up, our capital was minimal; participation in overseas trade fairs organized by a trade promotion agency helped us improve our perceived reputation, professionalism and helped us in acquiring new customers."* (Participant #2)

Table 5.4 shows how participating SMEs have found their first export customer or secured their first export contract.

Table 5.4: How SMEs found their first overseas customer

Category	Number of firms	Percentage
By reference (direct / indirect)	10	62.5%
Not by reference	3	18.8%
Don't have information	3	18.8%

Source: Author's calculation from interview data

5.3.4.2 Identifying and evaluating potential suppliers

Management of supply chains is often vital for exporting firms worldwide, especially from the cost control perspective (Moini 1997). For the set of sampled SMEs in this research, regardless of whether they are manufacturers or traders, most of these SMEs rely on their own network of contacts to obtain information about potential suppliers and evaluation credibility of suppliers. Even in the case where potential suppliers are from well-known and easily identifiable traditional trade villages, such as the case of traditional handicraft and wood processing products, people still seek references from their contacts. Moreover, since a formal credit rating system has been neither readily available nor reliable[17], evaluation of a potential supplier's capability and credibility typically uses social networks, as mentioned by a participant: *"good reference from a reliable contact can increase (our) credibility and confidence in a business partner from 50% to possibly 80-90%"* (Participant #8).

5.3.4.3 Identifying and accessing finance resources

SMEs have many obstacles in reaching international markets. These constraints include lack of experience, know-how, management skills, time and information resources, and shortage of finance capital (Pinho 2011). For many firms from developing countries, shortage of finance capital appears to be one of the most critical limitations (Freeman, Edwards & Schroder 2006), as it blocks firms from investing to untie other constraints.

Nevertheless, evidence from the present research shows that social capital sometimes outweighs financial capital as a factor in success. Social capital not only supports firms in seizing their business opportunities and connecting with potential suppliers and customers, it also assists in identifying and accessing appropriate financial sources. For the case of SMEs, where their collateral assets are quite commonly insufficient to secure loans with formal financial institutions, and while venture capital activities are still very limited, firms' networks of contacts can be used to identify suitable financial arrangements.

[17] In Vietnam, domestic credit rating agencies (CRA) were established in the country for the first time according Decree No. 88/2014/ND-CP, dated 26/09/2014, of the Government on credit rating services. Prior to this, the Credit Information Centre ('CIC'), under the State Bank of Vietnam, was the sole state provider of credit ratings for enterprises; but the CIC's database is not up to date: they collect information from voluntarily participating firms only. Banks and other credit institutions provide credit ratings and assessment for their own and internal lending purposes, rather than for external concerns.

5.3.4.4 Reducing negotiating and contract costs

Research on social capital argues that it helps firms to strengthen their relationships with suppliers (Adler & Kwon 2002). In particular, in a changing or unpredictable economic and regulatory environment, firms prefer working with frequent partners and are hesitant to seek new ones (Heiman & Nickerson 2002; Sampson 2004; Gary & Spencer 2000; Yang, Ho & Chang 2010).

In the present research, one owner described how the firm had signed an export contract with a foreign partner only to find that their suppliers from a traditional trade village refused to participate, *"because they only trade with familiar buyers"* (Participant #16). Close ties such as these, then, are a competitive advantage only up to a point: their exclusive nature deflects competitors but can also inhibit agreements with suitable outsiders.

Overall, however, ongoing contacts create social relationships that range from casual friendships to long-term business alliances, contributing to significant reductions in transaction costs, as the need for negotiation and monitoring suppliers is reduced. All surveyed firms, regardless of sub-sector or size, stressed the need to maintain regular, cordial contact with regular suppliers, which gave them control over adequate and consistent quantities of input, prices and quality. In this sense, these SMEs inhabit an economic system that is self-regulating in lieu of regulation by government authorities. This regime, however, has its limitations: for example no mention is made of environmental protection or labour rights. Self-regulation, then, extends only so far as is required to grease the wheels of economic benefit, which it would seem to do quite successfully. Strong tie social capital, which offers "social cohesion and…exchange of finer-grained, high quality information and tacit knowledge" (Peng & Zhou 2005, p. 323), is more likely to be found among individuals interacting frequently and for extended periods of time (Yang, Ho & Chang 2010). These relationships provide an alternative to formal contracts, paradoxically lowering the risks of opportunism by providing a trust-based, social control mechanism (Granovetter 1985; Peng & Zhou 2005; Yang, Ho & Chang 2010). This general view is supported by interview data, for contract negotiation and monitoring procedures can be bypassed:

> *"I take a risk with the understanding that the bonding level I have with my contact is of great value, just as the deal itself is of great financial value. My contact would*

retain his reputation and ensure the partner he introduced to me would not cause any problem." (Participant #13)

In addition, social capital reduces the transaction costs of raising finance through both formal (banks and other credit institutions) and informal ('shop front' and 'off the record' contacts) means. Interviewees reported that the latter is more common at the start-up phase of SMEs, when collateral assets might not satisfy requirements for formal bank loans. Informal credit is mostly derived from personal networks of contacts, again illustrating the importance of social capital in engendering – and relying on – trust for economic development. Strong ties are more likely in these transactions, in particular amongst extended family. Indeed, strong ties allow firms to avoid the black market altogether, offering better rates and more flexible collateral assets. This fits with arguments that, worldwide, because of the high level of bonding and trust between creditors and firms, procedures of due diligence and contract negotiation can be simplified, minimising costs of transaction, compliance, monitoring and enforcement (Manolova, Manev & Gyoshev 2014). Firms believed that the execution of contracts was actually more likely when dealing with personal networks based on familiarity and trust, where reputations stand or fall: *"I have never been defrauded since I started my business"* (Respondent # 16).

However, respondents reported that social capital works for access to formal credit as well, spreading information about good rates and conditions along the 'grapevine'. The more people that can be accessed, the more options there are.

5.3.5 Impacts of social capital on export performance: a rent-seeking perspective

The alternative to avoiding conventional measures and institutions in order to maintain and grow a business, is in fact to engage such authorities. Social capital greases the wheel of rent-seeking, as it is a direct source of pressure to drive civil servants to grant advantage or favourable treatment: As one respondent put it: *'Vietnamese appreciate relationships'*. The same rules of networking apply: *"If they [the authority] feel we are trustworthy and they have a liking for the way we socialize or for our company reputation, then they would resolve any proposed issue by us in a prompt manner"* (Participant #12). In the case of Vietnam, rent-seeking behaviour is mostly in the form of bribery and corruption. Those participating in it nevertheless view it as illegitimate and immoral (Nguyen, VT et al. 2016). Social capital lends itself to such transactions, given their nature: referrals from

existing network contacts are required: "*If one doesn't have a relationship, he will definitely not be able to get the job done…"* (Participant #7).

Most surveyed exporters do not report much need for such under-the-table transactions to conduct their business. The exception is the restricted export sectors, where administrative controls are in place, and along with those 'controls' goes the right for officials to differently and unequally distribute or direct associated business opportunities. More unequal distributions of economic opportunities push for more cooperation among agents, whereas more equal distributions unleash incentives for opportunism (Crudeli 2006). In the absence of normal and fair competitive market conditions, firms rely on social capital to capture rent seeking opportunities.

Rent seeking extends to finance seeking: loan conditions, including interest rates and evaluation of collateral assets, are subject to 'negotiation': *"If you had a very good relationship but your figures looked bad, banks couldn't justify a loan. What they could do might be to alter the figures…"* (Participant #16). This evidence aligns with the conclusions of Malesky and Taussig (2008), that some banks in Vietnam place greater value on connections than on performance, but they also argue that firms with greater access to bank loans are not necessarily more profitable than firms lacking access.

Nevertheless, it is worth noting reports from interviewees that the rent-seeking role of social capital in export business has been steadily reduced during the transition period of the economy. While the significance of social capital in rent-seeking is associated with restrictions placed upon economic sectors, these restrictions have gradually been lifted, as both a facilitator and consequence of the emergence of the private sector and accompanying market forces. This use of social capital, then, is in decline:

> *"it would be pessimistic if we say [firms] only rely on [their] social capital. In reality, that reliance still exists because some firms have very strong top-down relationships. However, for the majority of SMEs, benefit of social capital is bounded to providing more information and viable options. The possibility of a firm gaining success with nothing but relationship is very rare, and can be classified as credit risk."* (Participant # 14).

Banking lending practices appear to have become more conventional. It is also apparent, however, that banks were severely 'burnt' by the bad debts, which, directly

linked to excessive and imprudent increase in poor quality loans, led to the banking crisis in 2010 (Tran, BT, Ong & Weldon 2015).

5.3.6 Impacts of social capital on export performance: a resource-based perspective

5.3.6.1 Information facilitation, knowledge creation and dynamic capability

Social capital has been added as one of the most recent explanatory factors for the performance of firms. It is argued to be a resource that firms can develop to continuously create competitive advantages to outperform their competitors (Roxas & Chadee 2011). In the internationalization process, social capital is believed to act as a dynamic capabilities that helps SMEs to create new resources needed to cope with an increasingly competitive international market (Pinho 2011; Roxas & Chadee 2011).

In Vietnam, the interviewees suggested that social capital has impacted positively on the export performance of SMEs through facilitating information and creating export knowledge. The majority of respondents learned about exporting opportunities from exchanging information with other members in the relevant trade associations. They also improved their knowledge of export procedures and market regulations, as well as of market preferences, by participating in activities organized by the trade associations. These activities include participating in overseas trade promotion activities to promote their products, and attending training, information sections or workshops on technical requirements for specific products or a specific market. In addition, firms also can gain general export knowledge as well as various aspects of business management, as mentioned by a participant: *"The most important role of social capital is that it affects the way we think about our firm's operation"* (Participant #3).

Table 5.5: Types of information and knowledge facilitated by social capital

Category	Number of firms (total 19)
Export opportunities (including promotional opportunities in overseas trade fairs)	17
Export market information (including market preference and regulations)	14
Business partners (including suppliers and finance providers)	16
Policies and procedures (for both export and general policies)	10
General knowledge on business and strategy management	11
Export specific knowledge (terms of trade, integration process of Vietnam)	8

Source: Author's calculation from interview data

The present study found that a majority of participants believed that social capital improved their generic export knowledge. They appreciated social capital as a facilitator for long-term intellectual creation and a supporter of a firm's sustainability. Social capital in the form of contacts within or via trade associations and other weak ties could provide firms with better export market information, including market demand and preferences:

> *"In my opinion, since Vietnam joined the WTO until now, the most important role of social capital is affecting firms' thinking."* (Participant #13)

> *"If a firm can utilize its social capital, I believe it will grow. Take a simple example, I will be able to improve sales. And even if it has not increased sales, then it will definitely improve knowledge, which is the foundation for a firm's sustainable success."* (Participant #1)

Training from the trade associations and knowledge exchange between social contacts can accommodate firms' needs in export market technical requirements and compliance procedures. Likewise, firms obtain other generic knowledge on internationalization processes, and the participation of Vietnam in those processes, from their connections. For many small firms, this information and knowledge coaching impact is typically useful because it is practical and efficient:

> *"It means the most important role of social capital is improving knowledge, especially in export business. For example, knowledge about how regulations work, how a certain market performs, which products would be on demand for which market, what the tariff rates are, how a certain entrepreneur works…"* (Participant #9)

> *"I can take a simple example, that through our connection with Vietcraft, I am able to approach many useful training courses. Essentially, if we can utilize those opportunities, we can extend and sustain our knowledge to operate in the international market. Information and training about international regulations, conventions or experience sharing from well-developed enterprises are all very helpful and valuable for firms in the export business."* (Participant #3)

This finding is consistent with the positioning of social capital within the resource-based view, where social capital is considered to support exporting firms' performance through various knowledge creation mechanisms. Social capital provides experiential

knowledge about the export market and helps to convert implicit into explicit knowledge (Johanson & Vahlne 1977). As knowledge grows out of experience in foreign markets, new capabilities are acquired, and subsequently the degree of market commitment also increases, facilitating more learning and knowledge spillover (Johanson & Vahlne 1977; Pinho 2011). Furthermore, social networks enable flows of valuable information or knowledge into firms and improve firms' strategic assets and processes to boost firms' proactivity and innovativeness (Luo 2003; Walter, Auer & Ritter 2006).

Again, Vietnamese experiences revealed by the interviews fit with the current literature arguing that the knowledge channelled by social capital into the firm may take various forms, such as information and knowhow (Luo 2003; Walter, Auer & Ritter 2006), business opportunities (Peng & Zhou 2005; Walter, Auer & Ritter 2006; Wu & Choi 2004; Yang, Ho & Chang 2010), skills or management capability, and market knowledge (Kale, Singh & Perlmutter 2000; Roxas & Chadee 2011). These help firms to overcome the export barrier of export knowledge shortage (Loane & Bell 2006; Presutti, Boari & Fratocchi 2007). More importantly, firms can create new knowledge, which is the central theme of product development (Luo 2003; Walter, Auer & Ritter 2006) as well as a vital element that leads the internationalization process (Johanson & Vahlne 1977).

5.3.6.2 The limits to social capital

Although the majority of participants acknowledged the positive impact of social capital on export performance via export knowledge creation, it is unclear how such a positive impact has changed over time. The interview data does indicate, however, a two-way causal link between entrepreneurs' intellectual capital and social capital. While it is established (see, for example, Nahapiet & Ghoshal 1998) that social capital creates intellectual capital, the converse also holds true, that more intellectual capital leads to better social networks (or social capital); and they both lead to better performance of firms.

Nevertheless, the data in the present study also evidence that the importance of social capital in facilitating export knowledge inflow can diminish over time. Diminishing returns for social capital can be explained from two different aspects. Firstly, the interviews provide evidence, in line with observations by Portes (1998), that where knowledge shared is redundant, a negative bonding effect is seen:

> *"The information and training that we received from them [trade associations] has been mostly repetitive… topics of [some] conferences are not updated. I decided to lessen my participation."* (Participant #5)

Secondly, diminishing returns from social capital result from firms' inability to transform resources from social capital into their own dynamic capabilities. It is questionable whether social capital can create opportunities for every firm, or that there exist certain criteria of firms that enable their transformation from network resources into firm-based dynamic capability. That is, while a firm may have the networks, the networks may not develop social capital. In this regard, it is critical that entrepreneurs have the capability of capturing and utilizing resources from social contacts and converting these resources into their own dynamic capabilities for sustaining a competitive advantage. Such capability, in turn, may depend on the intellectual capital and human capital of entrepreneurs. Specifically, the strategic thinking ability, or the 'soft' component of entrepreneurs' intellectual and human capital, defines how firms can exploit information and knowledge from relational resources and capitalize on it to develop their dynamic capability. As one respondent observed, *"social capital is very important but I do not appraise it as the most important factor…. intellectual and management principles are vital as well"* (Participant #3).

While it is established in the literature that the strategic thinking component of intellectual capital transforms resources from social capital into firms' dynamic capability, the data in the present study show that the technical knowledge, or the 'hard' component of intellectual capital, is believed to be the platform for absorption of information and knowledge. Without an initial knowledge base, entrepreneurs are less likely to capture new information and knowledge from social capital and are thus unable to create new knowledge or transform knowledge into their own dynamic capability. One respondent, indeed, suggested that intellectual capital is a prerequisite for the successful employment of social capital*:*

> *"If entrepreneurs don't have this knowledge threshold, resources from social capital can't benefit firms in the long run. If an entrepreneur runs an export business but doesn't have basic command of English, doesn't have basic financial management skills or market research skills, then he can't develop his business further…"* (Participant #3)

5.3.7 Transformation of impact channel from rent seeking to transaction cost reduction

In general, the interviews tend to show that firms' efforts in setting up and maintaining good relationships with relevant authorities have been reducing since Vietnam entered its late transitional economic status. With the integration of the country further into the global economy and participation in more bilateral, regional and international economic cooperation, export restrictions have been reduced dramatically, in particular since the participation of Vietnam in the WTO from 2007. Decree 12/ND-CP of the government granted the right to undertake import-export activities to all enterprises (Vietnamese Government 2006). As a common practice for any country's international trading policy, Vietnam reserves prohibition and conditions on certain 'sensitive' sectors; but despite such restrictions, Decree 12 has been considered a significant movement for Vietnamese enterprises toward the international market. Before that, enterprises had to obtain a special import-export license before conducting their international trade activities. The export license could have been considered as a rent creation tool for a limited number of state-owned firms, as revealed by one of the participants:

> *"…as you already knew, before, each province only had one state-owned import-export company, and I worked for a state-owned import-export company. Now there are much more freedoms in import-export activities so any firm can do it…Before, I worked for [Company Name] import-export company, its social capital was huge because it was a monopoly exporter in the province, any firm who wanted to export must go through such [Company Name] import-export company. Therefore, at that time we did not even have to work, we only came to office to collect fees from other firms, we considered those fees as authorization fees, and that was all we did… Since 2005, I started my own trading firm because [Company Name] import-export company no longer enjoyed its previous monopoly position, the right for export had been widely opened to any firms."* (Participant #16)

Apart from the right to export, represented by the export license, during operations, firms frequently deal with various public service providers and authorities, in which customs and tax officers are most important for exporting firms. Collected data show that firms acknowledged the improvement of service quality from public service providers such as tax or customs offices, "*as the government policy is to promote export*

in general" (Participant #14). With the implementation of electronic tax lodgment and online customs declaration, firms have experienced more transparency in the public service system:

> *"The relationships (with authorities) have been changing over time. Previously, before the implementation of electronic tax lodgment, I used to have an informal "meeting" with tax authorities. Now I don't have to keep those relationships."* (Participant #2)

Social capital is described as transforming a situation where the central issue was *"benefit granted from authorities"* into one more influenced by 'mutual benefit' relationships between firms. As such, the relationships are 'trust-based' and perceived to be 'healthier':

> *"The reliance on VIPs in Vietnamese society still exists but it was more dominant before 2000. The asked-granted mechanism was popular and typical because of the central-planning economy. Therefore, people sought to establish and rely on those relationships to be benefited, but the situation has changed since then. Particularly in the period of 2006-2010, the relationship had been transforming to be more transparent; and especially since 2010 up to now, social capital or the relationships have been mostly transparent…*
>
> *…The relationships that firms can rely on to be benefited might only be temporary, because society keeps changing, and the changes are advancing rather than going backward. Therefore, we need to compete, we can't rely on relationships to survive but we must accept competition to exist, and this competition is fair, transparent and refined."* (Participant #4)
>
> *"In our Vietnam society, the reliance on VIPs to obtain certain benefit (here we say under credit loan, for example) is not rare but it would not be sustainable. Because when you have a relationship or you pay certain under-the-table fees to obtain a loan but you could not manage your operations well enough, then that story would stop right there, it even brings serious consequences. Therefore, sustainability has to be built by a firm's own capacity."* (Participant #12)
>
> *"We need to truly and fairly compete in the export market. There are firms who only set up GlobalGAP (the Global Good Agriculture Practice) as a means to*

extract money from the Government's support program. They will cease once they have the transfer regardless of the consequences. However, in my view, the market economy is advancing gradually, and we will reach the point where firms are forced to genuinely create value." (Participant #9)

However, this positive trend does not, as reported, apply to all sectors equally.

As mentioned earlier, where export restrictions exist, the relationships with export authorities remain highly important. The incentive to nurture such relationships with authorities is particularly strong where restrictions are managed by administrative measures such as export licenses or export quota, rather than by economic measures (tariffs):

"The transparency of the Vietnamese business environment is weak. I have experienced the dilemma of quota trading when I worked for a textiles company. From 2007 up to now, Vietnam has abandoned quotas for the textile sector, but quota does remain in rice export sector. I do not work in that sector to know in detail, but I do know that rice export is currently in hand of a few big firms, hence the problem of unfair competition. As such we could not mobilize the resources from other small- and medium-sized enterprises, and it is unfortunate because big firms might miss potential customers from the niche market." (Participant #12)

Even in the case of no export restriction plus online customs readiness, most participants acknowledged the payment of informal (or small under-table) fees to customs and tax officers as being part of the unwritten regulations, which is widely accepted in the export community (Nguyen, VT et al. 2016). Many firms in the present study were of the same view, that informal fees for customs officers are common practice:

"It is (payment to customs) by default, for all other firms not only applicable to us." (Participant #14)

"Oh yes, we need to maintain our relationship with customs officers, we still need that contact. Of course, no one can be certain that we are always perfect, so they (contacts being customs officers) will give us better guidance… It is difficult to judge if that informal fee is appropriate or not, because our first priority is time, therefore such informal fee is not an issue comparing with our time we would otherwise spend." (Participant #6)

"We do not handle customs procedures ourselves, we instead outsource to a professional logistics company. It is not because we can't do customs procedure but because we want to utilize the advantages of a logistics company, since they have a very close relationship with the customs office." (Participant #5)

Under the framework of rent-seeking theory, where rent-seeking is defined as "the process of expending resources in an attempt to influence public policy outcome" (Mbaku 1998, p. 195), the present research argues that rent-seeking behaviours in export activities have been associated with the existence of export restrictions. The behaviours of Vietnamese enterprises trying to establish relationships with civil servants and paying informal fees, in order to obtain export licenses or export quota, can be considered rent-seeking behaviours. Although the paying of informal fees or bribes could also be considered corruption, it represents the incidence of bureaucratic corruption and is rent-seeking behaviour (Mbaku 1998). In this context, enterprises with a higher level of social capital in the form of closer relationships with relevant authorities, or of being members of the dominant interest group, can gain better rent-seeking opportunities and hence better performance. It is, therefore, reasonable to conclude that, only in the transitional process, social capital is positively correlated with rent-seeking behaviours and rent appropriation opportunities.

Despite the fact that payment of informal fees is common with certain public services such as customs procedures, it is argued that the role of social capital has been changing, from supporting rent appropriation to reducing transaction costs for exporting firms. When more export restrictions have been removed, and more firms compete to provide similar goods or services, increased entrepreneurship can also crowd out rent-seeking, as it supports the creation of more competitive goods and services, and destroys rents accruing to those holding licenses (Crudeli 2006). Mbaku (1998) claims that, basically, entrepreneurs pay bribes to bureaucrats in exchange for benefits they would not have otherwise received. However, export firms can decide to deal with bureaucrats not directly but via professional service firms, as shown in the example of using a logistics company for customs procedures. In deciding whether to outsource or to undertake any activity in-house, a firm is facing the decision about transaction costs. Clearly, a firm is more likely to outsource if it can save on transaction costs, and in this case, it uses its social capital to facilitate smooth transactions and be efficient. Social capital can support firms to search for the right business partners, and to negotiate and monitor contracts in

the most efficient manner. By aiming at efficiency, firms target to compete and therefore 'create' rent rather than seek for rent 'appropriation'.

In summary, this section argues that the roles of social capital have been changing through the transitional process of the Vietnamese economy. As the country departs from centrally planned to market-oriented economic system, rent associated with access to restricted economic activities through social relationships has been gradually swept away. The emergence of entrepreneurship and market competition, on the one hand, has reduced rent-seeking opportunities; on the other hand, it has transformed the roles of social capital toward facilitating and incorporating resources of firms to achieve competitive advantage.

5.3.8 The sources of social capital in SMEs

According to the interviewees, the social capital of a firm usually accumulates from two main sources: (1) personal relationships of the owner; and (2) relationships established during the operations of the firm. Furthermore, the bonding level of the community where a firm operates was also identified as a third source of social capital. I now discuss these in full.

5.3.8.1 Owner's personal relationships as a primary source of social capital

Personal relationships of an owner can reportedly include two sub-groups: inherited relationships with family and other relatives; and established social and work-related relationships. These can provide great resources for the successful operation of a firm. The development of such relationships does not usually depend on the existence of the firm, but on the owner's interest in preserving the relationships:

> *"In Vietnam, the personal relationship of the owner is very important; I think it is even more important than in Western countries. Relationships need to be originated by the owner because people don't care that much about SMEs' image. That means, with SMEs, people know about its owner before they get to know the firm itself. Therefore, social relationships of the owner are critical."* (Participant #5)

Within this group, many participants appraise the importance of family relationships as a major source of social capital. In other words, family relationships can be classified as strong tie social capital:

"Our (Vietnam) business is inherited. Father created the business and when he retires his son inherits and protects that capital. This is therefore an authentic source of social capital. No employee can be compared to your own child. Your child might not be that intellectually good but should be much better in protecting the established social capital. We would never share our business secrets with outsiders but only with your children." (Participant #9)

"I inherited this business (furniture processing) from my father who had been working in the sector for over 40 years. I have protected and sustained the social capital based on our family reputation, and also the quality of our products. Our ability to retain customers mostly depends on our quality and design, and we ensure the quality and design as a way to maintain our reputation." (Participant #17)

Besides family relationships, it is worth noting that professionally-related relationships are an important source of social capital, particularly for owners of spin-out[18] firms. Most of these participants established their own business after they had accumulated sufficient experience and business connections. Their work-related relationships, therefore, were then transformed into personal relationships, and are classified by SME owners as strong social capital ties:

"Social capital accumulated from my previous job has been unmeasurable because it has been huge. I was able to start my own business smoothly right away without any trouble, I didn't have to spend any time or pay any tuition fees to learn the business." (Participant #16)

"After graduation, I worked for a foreign trade promotion company where I established very good relationships with various importers. I have maintained those relationships and built up my own credibility. At the same time, I developed my own relationships with domestic manufacturers to play the connecting role between importers and exporters. I was able to manage those relationships and utilize them when I decided to set up my own business once I have realized my opportunity." (Participant #19)

[18] Spin-out firm: a business company that has developed from another organization (Cambridge Dictionary online).

5.3.8.2 Social capital accumulated through operations of firms

The second main source of social capital refers to relationships that arise during operations of firms, from both their owners and employees. These include the relationships of firms with relevant authorities, customers, suppliers, or any benefit-oriented individuals or groups. From a firm's perspective, these relationships can be categorized into 3 sub-groups: (i) relationships embedded in particular transactions of a firm, regardless who conducts the transactions; (ii) relationships brought in or established by a firm's employees, which remain as personal relationships of respective employees; and (iii) relationships brought in either through transactions or by employees, but gradually transformed into personal relationships of the owners.

For exporting SMEs, social capital can be established through firms' transactions. These transactions can be with suppliers, customers, or relevant authorities. Firms are the main actors in these relationships, not their owners or any employees in charge of particular transactions. For instance, Internet marketing is one of the powerful marketing tools for firms to attract customers, and once firms successfully acquire customers from this channel, normally customers have contact with a 'firm' as an entity rather than with a particular employee:

> *"In agricultural processing [and exporting] firms, the role of individual personnel [in attracting customers] is not substantial because customers only know and contact to the company."* (Participant #08)

> *"… if products are standardized and the management systems are highly automated and digitalized, then firms would not depend highly on key individuals…"* (Participant #13)

The customer retention strategy is by offering competitive price and delivering of commitments, including quality and other terms of trade. For some cases, they become frequent customers and develop good business relationships with firms even if they do not personally know about the owners of firm. This level of relationship can be classified as weak ties of social capital. For others, frequent customer relationships can take further steps forward to form a strategic partnership, involving other upstream activities of firms such as design, production, or even becoming shareholders of firms. This level of social capital can be classified as strong ties of social capital.

It is common that firms, especially medium-sized firms, have key persons in charge of the firms' activities. These key employees directly create value for firms, and are involved with daily operations, while the owners only manage the firms' strategy. During operations, these employees may establish or bring in their own social capital to support them in completing their assignments/tasks. These employees' social capital can also be considered a source of social capital for firms. Depending on the characteristics of the product, corporate culture and management system, the likelihood of employees' social capital being transferred to firms' social capital and remaining with firms can be high or low. It is argued that social capital is more likely to remain with firms rather than with its employees where firms have standardized products, open corporate culture, and a centralized management system. In contrast, employees' social capital is less likely to be transferred to firms if products are more customized firms are more reliant more on employees' reputation, skills and expertise:

> *"In a sector where personal reputation and personal contacts of employees are important, the departure of such key employees may cause negative impact for firms."* (Participant #13)

Firm owners, however, can transform the above operationally related social capital to their personal capital. This depends on the management style and proactivity of the owners:

> *"I used to process customs clearance at [a particular] customs office, and the person in charge [of such customs office] is still in a good relationship with me, although he has now relocated to another customs office... You can see how having a good relationship could support your business."* (Participant #16)

5.3.8.3 Community bonding as an additional source of social capital

Apart from the above two categories, another source that may create social capital for the firm has been identified: the level of social capital in the community in which a firm operates. In the present study, participants who are handicraft exporters revealed that social capital endowment in the traditional trade villages (where they outsource to produce the export products) can somehow affect the levels of social capital accumulated within their local firms. Exporting firms originating in traditional trade villages might have a higher endowment of community level social capital in comparison with external firms, holding other factors equal. Therefore, cooperation between local exporters and

local manufacturers is more efficient and easier to manage than cooperation between external exporters and local manufacturers.

The level of community bonding can refer to the way traditional skills and trade secrets are inherited from previous generations to the next, and the exclusion of outsiders in that heritage trail. I noted during my interviews that, for some trade villages, in this case a well-known wood processing village, it is difficult for outsiders (non-traditional villagers) to truly settle down as a community member. These outsiders may have come to seek a job or establish a new business, but *"they (outsiders) could only settle to provide machinery and supporting goods or services, not to produce the core traditional products of the community"* (Participant #16).

The level of community bonding also guides the way an individual sub-contracting community member responds to outsiders' orders or contracts. If the sub-contractor is from a traditional trade village that has a reputation of being more disciplined and having a high level of community bonding, external exporting firms will be more confident in entering into contracts and having them delivered properly. In contrast, in some villages with low levels of community bonding, local people can only consider the production of traditional products as a supplement to their income derived from agricultural crops. In such a case, it is very difficult for a firm to monitor sub-contractors, unless that firm has originated from the same community:

> *"To me the most importance source of social capital is my relationships with the traditional trade villages, where I outsource my production. I need to maintain good relationships with them to ensure they will take good care of my orders. It is because, during their harvest season, or when they are busy with other orders, priorities will automatically be given to [orders of] exporters within their villages. Therefore, when I place an order [for production], only good relationships will help to arrange a smooth processing of my order."* (Participant # 2)

In summary, in this study, participants have indicated that the level of community bonding or social capital endowment at community level can be an additional source of a firm's social capital, in at least two different ways. Firstly, there is the perceived level of competence associated with firms as being part of the community. This perception may either positively or negatively impact on firms that are building up their social networks. Positive perceptions can help firms have better assessments from potential partners, and

thus lead to an increased in export prospects. In contrast, poor endowment of social capital at community level may hinder local firms from establishing their own outside connections and/or further extending their reach. Secondly, as an identifiable community is easier for outsiders to access, it can attract more business opportunities for the whole community, and therefore improve the exposure of individual community members to further establishing their social capital.

The following example provides solid evidence of how community social capital can be a source of personal social capital:

> *"…I used to buy electronic products at a famous open market in Hanoi (Cho Gioi) where shops were in close proximity to one another, and they sold the same products. However, every seller looked very energetic and happy. I was wondering why, even though they did not compete, they were all successful? Afterwards, I realized that the community had its own unwritten law. The hidden rule was that they would only serve customers that came to their shop, but never attract customers from another. They understood that they were on the same boat; they needed to socialize in their bonded community and would be benefited by the business development of the whole community. Their community would support its members when needed and would exclude anyone who broke the rule…"* (Participant #1)

5.4 Discussion

The literature on the impact of social capital on firm performance has confirmed that social capital is one of the most significant factors contributing to competitive success in all types of firms (Burt 1992; Kontinen & Ojala 2012), for the following three reasons. Firstly, social capital provides firms with access to resources that are necessary for value-creating processes such as strategic knowledge and information (Roxas & Chadee 2011). Secondly, it can help improve firm performance by facilitating transactions between the focal firm and its partners (Burt 1992). Thirdly, it allows firms to reduce transaction costs relating to social interaction and exchange (Luo 2003; Roxas & Chadee 2011). Social capital, in the form of generalized trust, can help firms to reduce transaction costs in terms of searching and maintaining effective cooperation relationships, hence improving firms' economic efficiency (Adler & Kwon 2002; Baughn et al. 2011; Hayami 2009; Putnam 1993).

In the present research, our findings further current understandings on the different roles that social capital may play at different stages of SMEs' internationalization. Moreover, our identification of social capital's roles in different operation sectors, as well as to various firms' characteristics, can further explain the changing impacts of social capital on export performance of SMEs in developing countries.

In general, the interviews report that small-sized and newly established firms tend to value the influence of social capital more highly than do participants from larger and experienced firms. This result aligns with the extant literature arguing that social capital improves export performance of SMEs by enabling the inflow of information and knowledge to create more business opportunities (Loane & Bell 2006; Pinho 2011). Thus, for small and newly established firms, where financial resources and knowledge are both limited, SMEs would be more reliant on their social capital. SMEs can convert their relational resources, which are various supports from their network of contacts, into knowledge acquisition and exploitation by establishing relation-specific assets, knowledge-sharing schemes, and effective relational governance mechanisms (Yli-Renko, Autio & Tontti 2002, p. 587). Firms' competitive advantages and development potentials will depend on their speed in acquiring specific resources and transforming them into specific capabilities (Pinho 2011).

In the present study, the evidence suggests that, although social capital plays a critical role in acquiring export customers for SMEs in the start-up phase, retaining export customers mostly depends on quality rather than merely on relationships. In contrast to domestic business, where social capital appears to be more important in both acquiring and retaining customers, export customers are often retained based on transaction history, with the key point being the credibility and capability of firms in delivering their commitments. These findings suggest that, to be successful in export activities, Vietnamese SMEs not only may need to develop networks to include international business partners, but more importantly they need to sustain such network relationships by continuously improving their capability and competitiveness in the market. For that knowledge, innovativeness, information and skills are core values having dual relationships with social capital.

Regarding sectors, it is noted that wood processing firms (operating in a restricted environment) tend to appreciate social capital, especially networking with the authorities,

more highly than do handicraft and agricultural product exporting firms. This indicates that there are more rent-seeking opportunities for firms operating in an unstable environment, where restrictions and administrative measures are ambiguously used instead of effective and transparent economic measures. In such a situation, firms might be more incited to capture those available rents. Hence, firms could either utilize their social capital to influence public service providers or use any other substitutions such as the use of informal fees to 'get work done'. The leverage of social capital for such opportunistic behaviours is clearly unfair, and certainly unhealthy for the business environment in general. Therefore, it is recommended that the Vietnamese Government should focus not only on improving the transparency and comprehensiveness in the legal system but also on implementing an effective monitoring system to ensure equal treatment for all participants.

For the lower level of perceived social capital in acquiring export customers but higher level in identifying suppliers and managing the supply chain found in the agricultural exporters, this could be because these firms operate in a near-perfect competition market where entry barriers are low, products are identical (e.g. agricultural commodities such as coffee, tea, pepper and cinnamon), and suppliers are price takers; thus, social capital mainly supports firms in maintaining effectiveness and competitiveness in supply chain management. Relationships with firms' suppliers help ensure appropriate quantity and quality, competitive price, and right time delivery. Network relationships of firms also lubricate the local logistic activities provided by public service providers, such as customs clearance, technical and quality control, and certificate of origin.

For exporters of more differentiated goods, such as handicrafts, processed foods or processed wooden products, social capital plays a more important role. The deeper that firms are involved in a value chain, i.e. the more activities that firms perform in the value chain, the higher their appreciation of the importance of social capital. Such firms not only compete on price but also on product specification, product differentiation, and product perceived value.

Despite the existence of social capital being used for opportunistic motives, this research found that the previously pervasive use of social capital for rent appropriation has gradually reduced. The roles of social capital are changing through the transitional process of the Vietnamese economy. As the country moves from central planning to a

market-oriented economic system, rent-seeking associated with accessing restricted economic activities through social relationships has been gradually swept away. On the one hand, the emergence of entrepreneurship and market competition has reduced rent-seeking opportunities; on the other hand, it has transformed the role of social capital, in that it is more likely to be used in the service of facilitating and incorporating resources of firms to achieve competitive advantage.

5.5 Chapter summary

In summary, the qualitative analysis chapter explores the roles of social capital in business performance of small- and medium-sized enterprises in Vietnam. The main points of the chapter can be summarized as follows.

Firstly, this chapter analyses qualitative data and discusses the perceived importance of social capital in export business in comparison with domestic business; between different export business sectors; and between different phases of internationalization of firms. It then concludes that social capital is perceived as being more critical for domestic businesses rather than for export businesses, and more critical for firms at the beginning phase of export business rather than for experienced firms. This indicates that social capital is important to the export propensity of firms, rather than to the export performance of experienced exporters.

Secondly, regarding the value of different networks relationships among exporters, relationships with formal financial institutions (including banks) are consistently perceived as being important for most exporters. Nevertheless, the relationships with authorities and political connections are perceived as significant only for firms in the restricted sectors and starting firms, but not as significant for firms in restriction-free sectors and experienced firms. In addition, most exporters highly value the support from network contacts rather than the size of the networks; which indicates that the resources from networks have stronger impacts on export performance of firms in comparison with the broadness of the networks.

Thirdly, this chapter presents that, from different perspectives, the impacts of social capital on SMEs' performance can be explained differently. From a transaction cost perspective, a network of contacts helps to reduce search costs, negotiation/contract costs, and monitoring/enforcement costs; which in turn result in better performance. From a rent-seeking perspective, social capital could be seen as either direct pressure or an

indirect mediator to support firms in obtaining favourable treatment to outperform in the market place. From a resource-based view, social capital is considered an inimitable resource that increases competitive advantage of firms, hence improving export performance. From the dynamic capabilities perspective, social capital helps in mobilizing firms' resources more efficiently, thus creating new resources to facilitate firms' performance.

Finally, the chapter synthesizes and integrates the transactions costs perspective with rent theory, to explain the changing roles of social capital during the transitional economic period. Supported by extant literature and evidenced from the unstructured interviews conducted for this research, it concludes that, although social capital remains significant in doing business in Vietnam, market competition and institutional development have gradually transformed the impact channel of social capital from a rent seeking dominance to transaction cost reduction spectrum. This transforming process has been undertaken simultaneously with the gradual removal of various business restrictions and the development of the private sector, alongside the emerging and encouraging development of an entrepreneurship environment. In this process, opportunistic connections for rent appropriation have been gradually swept away, and trust-based, capacity-based and refined relationships have been emerging. For that, the saying, *"it's not what you know, it's who you know"*, might need to be revised, to *"It's not who you know, it's what you can do"*.

CHAPTER 6: IMPACTS OF SOCIAL CAPITAL ON EXPORT PROPENSITY OF SMES – EMPIRICAL EVIDENCE FROM A PANEL DATA ANALYSIS

6.1 Introduction

Considering the qualitative findings, and to triangulate those findings with quantitative empirical evidence, this chapter aims to extend our understanding of the impacts of social capital on the *export propensity* of Vietnamese SMEs. *Export propensity* is a popular indicator for international involvement of firms, and links closely with export performance discussed in the next chapter. Using a logistic regression model on the panel data of 1,166 non-state manufacturing SMEs over the five survey rounds, this chapter provides empirical analysis on the mixed impacts of various social capital variables on the *export propensity* of SMEs. Moreover, this chapter also examines the impacts of firms' characteristics on *export propensity*. Besides the introduction and summary, this chapter includes six other sections: Section 6.2 presents the development of the hypotheses by combining qualitative findings with relevant literature on export propensity; Section 6.3 discusses the selection of the statistical tools; Section 6.4 then presents data sources, data screening, data description, and relevant descriptive statistics. The regression models with details variables measurement, summary statistics are presented in Section 6.5, followed by empirical results, analysis and relevant robustness checks in Section 6.6. A regression model on a reduced dataset are presented in Section 6.7.

6.2 Hypotheses development

According to Fernández and Nieto (2006), export propensity is defined as a dichotomous variable that indicates whether or not an SME derives part of its sales from exporting (i.e. whether foreign sales are greater than or equal to zero); whereas Estrin et al. (2008, p. 576) define it as "whether or not firms export at all". For research using self-reported information on the export participation of firms, the definition of Estrin et al. (2008) is perceived to be more relevant, since it allows the inclusion of firms that have been involved in export activities at a certain point in their operation history, regardless of current export revenue figures.

6.2.1 Relationship between social capital and export propensity

According to Saglietto, David and Cézanne (2016), research in the fields of economics and management often focus on social networks to remove any ambiguity from the definition of social capital. For this, social capital is measured by the size of the personal (or corporation) network, volume of resources contained in this network, and opportunity to access these resources (Saglietto, David & Cézanne 2016). Following that, social capital in the present research is operationalized to include both the network size and the actual network support.

6.2.1.1 Business networks and export propensity

The literature on social capital argues that social capital helps firms strengthen their relationships with suppliers (Adler & Kwon 2002). Particularly in an unstable environment, firms prefer working with frequent partners rather than seeking new ones (Gary & Spencer 2000; Heiman & Nickerson 2002; Sampson 2004; Yang, Ho & Chang 2010).

Network relationship studies have established that home-based business ties help foster the international involvement of small firms in emerging markets (Mesquita & Lazzarini 2008; Zhang, X et al. 2016). For example, Xu, Lin and Lin (2008) report that SMEs can develop trust relationships with overseas customers through being referred by partners who have already gained a good reputation in foreign markets. This then facilitates SMEs in overcoming their liability of smallness, and to develop more suitable products for the targeted market and ease their access to foreign markets (Zhang, X et al. 2016).

For established SMEs, export decisions can be initiated by other, inward international activities such as outsourcing or importing, thus having a broader business network means increasing opportunities of exporting. Thus, Nassimbeni (2001) concludes that the propensity of small firms to export is strictly linked to their ability to develop valid inter-organizational relations. Similarly, as stated in the qualitative analysis (Section 5.3.2) about the "*crucial role"* of network relationships in starting export businesses, it is maintained in the present study that SMEs are more likely to export if they have a broader business relationship. Hence, the following hypothesis is proposed:

H1a: SMEs with more formal business relationships are more likely to export.

6.2.1.2 Social networks and export propensity

Literature shows that, when bounded by unreliable legal institutions or in the absence of formal contract enforcement, enterprises tend to rely on informal mechanisms, in particular personal relationships, to guarantee contractual performance (Durlauf & Fafchamps 2004; Malesky & Taussig 2008; McMillan & Woodruff 1999). Furthermore, Zhang, X et al. (2016) discovered that unexpected relationship dissolution happens in spite of the existence of formal contracts. This shows the limitation of formal contracts in their capacity to regulate international distribution relationships. More importantly, this indicates that formal contracts may not provide complete protection against unexpected litigated relationship dissolution, and thus other informal mechanisms such as socialization, relational norm and so forth are necessary (Zhang, C, Griffith & Cavusgil 2006).

From the perspective of local SMEs in Vietnam, where the legislation guiding enforcement for SMEs has been introduced only recently (CIEM, DoE & ILSSA 2010) and remains rather weak (CIEM, DoE & ILSSA 2014), formal contracts have been in place but enforcement measurements are vague, and firms are more likely to rely on personal network of connections to ensure execution of contracts, as demonstrated in Chapter 5, Section 5.3.4. For export contracts, which require more complex terms and conditions, the perceived uncertainty is even higher; thus, it is argued in the present study that SMEs with more social networks would find it less risky to enter an export contract, and so the following hypothesis is proposed:

H1b: SMEs with more social networks relationships are more likely to export.

6.2.1.3 Bank networks capacity and export propensity

Since finance inadequacy is one of the main obstacles for SMEs to expand their reach to the international market (Moini 1997; Pinho 2011), having well-organized access to finance is considered to be one of the most prioritized targets for SMEs. Because of their smallness, many SMEs find their collateral assets insufficient to support their required loans. Thus, those firms rely on relationships or connections to fulfil their financial needs, as showed in the qualitative analysis (Section 5.3.4.3). Malesky and Taussig (2008) argue that 'relationship lending' in developing countries is different from what is defined in developed countries. In the developing countries context, relationships refer to bonds that originate outside of banking relationships, such as family, friends, ethnic cohorts, and

political acquaintances, which are normally referred to as ‘connections’; thus, the term should be named ‘connections lending’ to reflect its unique characteristics.

For that, it is hypothesized that SMEs with a higher level of relationship with bank officials can be more efficient in arranging the finance required for export ventures, thus being more likely to enter export activities; hence, the following hypothesis is proposed:

H1c: SMEs with higher level of bank networks relationships are more likely to export.

6.2.1.4 Public officials network capacity and export propensity

According to Mbaku (1998), *rent-seeking* is the process of expending resources in order to impact public policy outcomes. He claimed, “the most important rent-seeking behaviours include the underwriting of the campaigns of legislators, bribery, lobbying, and political violence” (Mbaku 1998, p. 197). The inefficient legislatures in many developing countries have caused government officers to use the rules and regulations for their own benefit. These civil servants are in powerful positions of interpreting and implementing policies at their own discretion, thus creating and channelling a majority of rents to their cronies or group members (Mbaku 1998; Sheng, Zhou & Li 2011).

Therefore, to benefit from rent appropriation, interest groups in developing countries tend not to invest directly in lobby campaigns to influence the government or to alter policy for creating rents. Instead, they either seize the rent-creating tools from the government or opt to work with the civil servants whose job is to allocate rents to their supporters.

In the case of Vietnam, it is believed that the most important rent-seeking behaviour has been in the form of bureaucratic corruption, especially during the economic transitional process, which has created huge opportunities for rent appropriation (Nguyen, VT et al. 2016). Corruption as a rent-seeking behaviour involves the bribes and the use of other forms of pressure to persuade bureaucrats to grant entrepreneurs access to economic sectors closed by government regulation, to minimize the burden of government regulation on an individual’s enterprise, and to receive a public subsidy, or a transfer from the state (Mbaku 1998).

In this view, relationships with key politicians or government officers can provide great benefits for the internationalization process of firms. These benefits include ‘inside’

information on export policy intents, cheap credit, and timely approval (Chen & Wu 2011), as well as favourable treatments on regular export operational procedures such as customs, tax and other related administrative procedures. Therefore, the next hypothesis is proposed:

H1d: SMEs with better public official networks relationships are more likely to export.

6.2.1.5 Resource from networks and export propensity

While the network size, or the number of relations of firms, is established as representing the level of social capital, sociologists have shown that "social capital is not just about the number of contacts as not all contacts have the same value; it mainly depends on the structural characteristics of relations" (Saglietto, David & Cézanne 2016, p. 250). Social capital of firms, therefore, results from both the size of firms' networks and the volume of resources contained in their networks. Resources from networks include information, direct and indirect referrals to more relevant support, and the opportunity to access these resources (Saglietto, David & Cézanne 2016, p. 250).

Being able to connect to the relevant resources is critical for SMEs' internationalization process. On the one hand, through such network resources, SMEs can obtain refined information about foreign market demand and requirements, as well as connect with potential foreign partners. In the meantime, network resources help to improve SMEs' knowledge and reduce their perceived risk in entering the overseas market, which in turn may increase the likelihood of export. On the other hand, firms contemplating entry to foreign markets must engage in a wide range of activities, from market research, set up of new distribution networks, and negotiation with potential new partners, to various domestic export procedures; all of which needs time and effort, and imposes costs. As such, firms with better network resources may be able to facilitate the internationalization process more effectively, thus increasing their probability in exporting. Therefore, the next hypothesis is proposed:

H1e: SMEs receiving more support from their networks are more likely to export.

6.2.2 Relationship between firm's knowledge and export propensity

Participation of Vietnamese SMEs in the country's export activities has been minor. There are approximately 7% of local SMEs participating in export activities (Tran, C, Le

& Nguyen 2008; Vu, VH & Lim 2013), and SMEs' contribution to total export value of the country has been less than 10%, even though their potential is quite remarkable (CIEM, DoE & ILSSA 2014; Vietnamese Government 2006). A recent report by the Vietnam Chamber of Commerce and Industry (VCCI) reveals that more than 80% of domestic SMEs are not aware of the trade agreements that Vietnam has signed, neither have these firms prepared for the impacts of those trade agreements on their future operations. This implies that the inadequate knowledge of local SMEs of the trade integration process is hindering their participation in the international market.

On the other hand, from the resource-based view, knowledge has been established as one determinant of export propensity of firms (Lindstrand, Melén & Nordman 2011; Loane & Bell 2006). As knowledge grows out of experience in foreign markets, firms acquire new capabilities, and subsequently their market commitment level increases, facilitating more learning and knowledge spillover (Johanson & Vahlne 1977; Pinho 2011). To this end, the following hypothesis is proposed:

H2: SMEs with better knowledge are more likely to export.

6.2.3 Relationship between firm's innovation and export propensity

The current literature has in general established that a firm's innovation is positively related to its export propensity (Bleaney & Wakelin 2002; Roper & Love 2002). The rationale for that is twofold. On the one hand, exporting provides greater incentives for firms to invest in R&D and innovation, because extending to the international market helps firms to increase sales volume to compensate for the high and mostly fixed costs of R&D (Ganotakis & Love 2012). On the other hand, highly efficient and innovative firms may be more likely to become exporters because of their capability in adapting to the new market requirements and absorbing the market entry costs (which include but are not limited to market research, distribution networks establishment, and product modifications) (Clerides, Lach & Tybout 1998; Ganotakis & Love 2012; Roberts & Tybout 1997).

Nevertheless, when it comes to the case of SMEs, the existing comparative and international literature on empirical studies yields somewhat mixed results. For example, Nassimbeni (2001) examined the effect of several technological indicators on export propensity, for a sample of small and medium firms in Italy. Nassimbeni (2001) reported that the R&D and product innovations were positively related to export propensity. In

contrast, Wakelin (1998) examined two different samples, of small innovative firms and non-innovative firms in the UK. She found that, although the number of past innovations was positively related to export propensity of small innovative firms, in general those small innovative firms are less likely to export than are non-innovative firms of the same size. Wakelin (1998) further explained that exporting of innovative firms was more dependent on firms' characteristics, while export probability of non-innovative firms was determined by market characteristics.

In the context of Vietnamese SMEs, studies by Nguyen, AN et al. (2008) and Vu, VH (2012) both conclude that innovation of SMEs is positively related to their export propensity. Whilst Nguyen, AN et al. (2008) measure innovation by the introduction of new products, and/or by improvement of existing products and/or the production process, Vu, VH (2012) only concentrates on the introduction of new products. However, neither of these studies includes R&D in their empirical estimations, and thus may not have captured the complete impacts of both innovation activities of SMEs. Thus, the following hypothesis is proposed:

H3: SMEs with innovation capability are more likely to export.

6.3 Selection of statistical tools

Export propensity is often examined with other international involvement variables, such as export intensity (Correa, Dayoub & Francisco 2007; Estrin et al. 2008; Ganotakis & Love 2012). In these studies, the dependent variable of export propensity is either specified by a dichotomous variable or is expressed as the proportion of total sales derived from exporting, which are typically estimated by the Tobit model (Love & Mansury 2007; Roper, Du & Love 2008). However, one of the limitations of the Tobit model is that it makes the implicit assumption that the signs of the coefficients of the explanatory variables are the same both for the probability of being an exporter and for the extent of exporting, such as intensity and volume (Ganotakis & Love 2012). Since this research is interested in how a range of variables affects export propensity, intensity and revenue separately, we adopt the approach of Ganotakis and Love (2012) to test the two models on export propensity and export performance (intensity, diversity and revenue) separately.

In this chapter, various statistical techniques are used to estimate the impacts of social capital variables on export propensity of SMEs. At the first stage, descriptive

statistics are used to compare characteristics of exporting SMEs versus non-exporting SMEs. The classical T-test is also used to examine the difference in mean of the above two groups of SMEs. At the second stage, a predictive model of export propensity is estimated using the logistics regression, where the dependent variable is a dummy exporter variable.

6.4 Dataset description and descriptive statistics

6.4.1 Data description

The estimation of export propensity in this study deploys the dataset from the series of SME surveys in Vietnam conducted biennially from 2007 to 2015, as described in Chapter 4, Section 4.5.1. These surveys focus on non-state manufacturing SMEs in Vietnam.

In each round, questionnaires were distributed to more than 2,500 small- and medium-sized, non-state enterprises operating in the manufacturing sectors in Vietnam. The ten provinces include four representatives from the North (Hanoi, Phu Tho, Ha Tay, Hai Phong), two from the Centre (Nghe An, Quang Nam), and four representatives from the South (Khanh Hoa, Lam Dong, Ho Chi Minh city, Long An). Details of observations in each province for each round are presented in Table 6.1.

Table 6.1: Total observations of each survey by province

		Year					
Region	**Province**	**2007**	**2009**	**2011**	**2013**	**2015**	**Total**
North	Hanoi	296	298	293	285	298	1,470
	Phu Tho	254	271	254	262	255	1,296
	Ha Tay	394	383	350	347	371	1,845
	Hai Phong	204	227	222	203	223	1,079
Central	Nghe An	359	370	354	358	343	1,784
	Quang Nam	173	167	166	167	171	844
South	Khanh Hoa	92	97	99	90	99	477
	Lam Dong	88	76	84	88	94	430
	Ho Chi Minh City	624	635	602	637	656	3,154
	Long An	138	133	126	136	133	666
	Total	**2,622**	**2,657**	**2,550**	**2,573**	**2,643**	**13,045**

Source: Author's calculation based on the SME surveys

The SME surveys are distributed across approximately eighteen sectors, and the dominant ones are: food processing, fabricated metal products, and manufacturing of wood products. Enterprises are classified as micro, small, medium, and large, according to the current World Bank definition. Micro-enterprises have up to 10 employees, small-scale enterprises up to 50 employees, medium-sized enterprises up to 300 employees, and large enterprises have over 300 employees (Tewari et al 2013; United Nations University 2017).

During the period of nine years and between five survey rounds, there are repeat firms, dropped-off firms, and new firms. Since this project aims to examine the dynamic of firms' export performance over time, it is decided to keep only firms that participate in all five surveys. After the data screening process, a panel data of 5,791 firm-year observations, or 1,166 firms over five survey rounds is created. In those 1,166 firms of the panel data, there are 134 firms (or approximately 11.5% of total firms) that participate in export activities. However, the involvement in export of those firms has not been stable, as some firms only export once over the five survey periods. Therefore, we only have 385 firm-year observations on exporting.

Table 6.2 presents the number and percentage of exporting firms in each survey interval, in comparison with non-exporting firms and the total sample.

Table 6.2: Frequencies of exporting and non-exporting firms by year

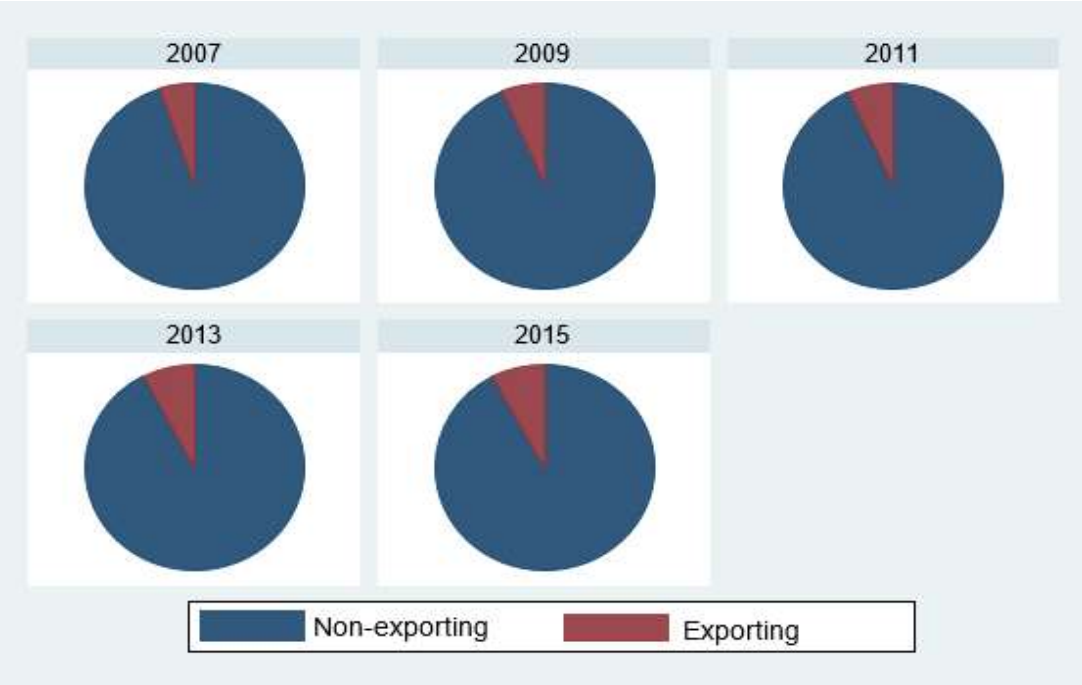
Year	Exporting		Non-exporting		Total		% exporting firms over total firms
	Freq	%	Freq	%	Freq	%	
2007	59	15.3	1107	20.5	1166	20.1	5.1
2009	72	18.7	1094	20.2	1166	20.1	6.2
2011	79	20.5	1083	20.0	1162	20.1	6.8
2013	90	23.4	1076	19.9	1166	20.1	7.7
2015	85	22.1	1046	19.4	1131	19.5	7.5
	385	**100**	**5406**	**100**	**5791**	**100**	**6.6**

Source: Author's calculation based on the SME surveys

Although the percentage of SMEs participating in exporting activities slightly increased over time (from 5.1% in 2007 to 7.5% in 2015), the overall percentages of exporting firms in the sample panel data are quite small. This reflects the current low involvement of Vietnamese SMEs in export activities, which has been pointed out by

previous studies (Tran, C, Le & Nguyen 2008; Vu, VH 2014), and is consistent with other reports on SMEs by the Vietnam General Statistics Office (Vietnam General Statistics Office 2013).

Figure 6.1: Percentage of exporting SMEs over years



Source: Illustration by author, based on the SME survey data

6.4.2 Demographic characteristics of exporting SMEs in the panel data

It is noted that Ho Chi Minh city and Ha Tay have the highest numbers of firms in the dataset, with 21.5% and 17.1% of the total sample being firms from Ho Chi Minh city and Ha Tay, respectively. Firms from these two provinces were dominant in exporting activities as well, with 35.3% and 25.7%, respectively, of exporting firms locating in Ho Chi Minh city and Ha Tay[19].

[19] Ha Tay used to be a province adjacent to Hanoi, and was officially merged as a part of Hanoi in 2009 by Decision 15/2008/QH12 of the National Assembly of Vietnam. However, because previous surveys have been using a different province code for Ha Tay, it is reasonable to keep Ha Tay separate to examine the movement/changes of businesses in this area after the combination with Hanoi.

Table 6.3: Frequencies of exporting and non-exporting firms by provinces

Province	Exporting		Non-exporting		Total		% exporting firms over total firms
	Freq	%	Freq	%	Freq	%	
Hanoi	39	10.1	444	8.2	483	8.3	8.1
Phu Tho	22	5.7	494	9.1	516	8.9	4.3
Ha Tay	99	25.7	890	16.5	989	17.1	10.0
Hai Phong	24	6.2	441	8.2	465	8.0	5.2
Nghe An	17	4.4	837	15.5	854	14.8	2.0
Quang Nam	9	2.3	459	8.5	468	8.1	1.9
Khanh Hoa	20	5.2	220	4.1	240	4.1	8.3
Lam Dong	6	1.6	144	2.7	150	2.6	4.0
Ho Chi Minh city	136	35.3	1,110	20.5	1,246	21.5	10.9
Long An	13	3.4	367	6.8	380	6.7	3.4
Total	**385**	**100**	**5,406**	**100**	**5,791**	**100**	**6.6**

Source: Author's calculation from the SME survey data

6.4.2.1 Ownership type and export engagement

The dataset is dominated by family business households, with more than 75% of the total observations being from this type of business ownership. In contrast, only approximately 1.7% of firms in the data belonged to non-state joint-stock companies.

Table 6.4: Frequencies of non-exporting and exporting firms by types of ownership

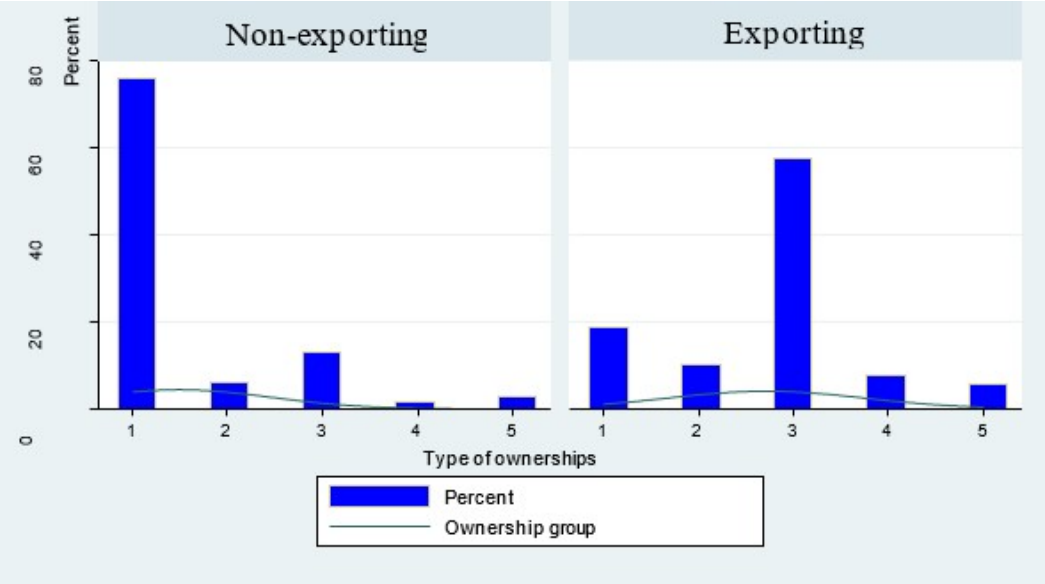
Type of ownerships	Exporting		Non-exporting		Total		% of exporting over total firms
	Freq	%	Freq	%	Freq	%	
Household business (1)	73	19.0	4,098	75.8	4,171	72.0	1.8
Private Proprietary (2)	41	10.7	345	6.4	386	6.7	10.6
Liability Limited Co (3)	219	56.9	723	13.4	942	16.3	23.3
Non-state Joint Stock (4)	30	7.8	93	1.7	123	2.1	24.4
Others (5)	22	5.8	147	2.7	169	2.9	13.0
Total	**385**	**100**	**5,406**	**100**	**5,791**	**100**	**6.6**

Source: Author's calculation from the SME survey data

Limited liability and non-state joint stock companies appear to be more actively participating in export activities, with 23.6% and 24.2% of these types of firms, respectively, involved in exporting. In particular, limited liability companies account for only 13.4% of the total sample, but represent 57.4% of exporting firms.

The Chi-square test result (Pearson chi2(4) = 679.0340 / Pr = 0.000) suggests that there is a relationship between type of ownership and export involvement of SMEs.

Figure 6.2: Comparision of non-exporting firms and exporting firms by types of ownership



Source: Illustration by author, based on the SME survey data

6.4.2.2 Firm size and export engagement

According to The World Bank SME department, there are three types of SMEs: micro-, small- and medium-sized enterprises (recently the World Bank started to use the acronym, MSMEs). The classification of SMEs is based on the total number of employees, in which micro enterprises have up to 10 employees, small enterprises have up to 50 employees, and medium-sized enterprises have up to 300 employees.

In Vietnam, the World Bank classification of small- and medium-sized enterprises was used before 28 August 2009 (see Decree No.90/2001/NDCP of the Vietnamese Government). After that date, when Decree 56/2009/NDCP came into effect, a new classification of SMEs was adopted. The new classification amended the World Bank classification of small- and medium-sized enterprises, by which small-sized enterprises in the manufacturing sector have up to 200 employees and medium-sized enterprises have up to 300 employees. The size of micro enterprises remains unchanged (less than 10 employees).

Since the scales of small enterprises under the previous and current classifications are quite different (from 50 to 200 employees), it was decided to group the firms in the present study into four groups, with a subgroup of firms having from 50 to 200 employees. This group has been reclassified from medium-sized to small-sized enterprises under the new regulations. This classification retains the flexibility in analysing our data in line with various reports about SMEs from secondary sources, both before and after the execution of the new regulations. It is also compatible with the classification used by the Vietnamese General Statistics Office (Tran et al., 2008).

While micro firms account for over 75% of the total sample, only 1.5% of these firms were participating in export activities, which accounts for less than 17% of the total export firms in the sample. In contrast, the majority (more than 89%) of exporting firms had total employees of between 10 and 199. The frequencies of exporting and non-exporting firms by firm size are presented in Table 6.5.

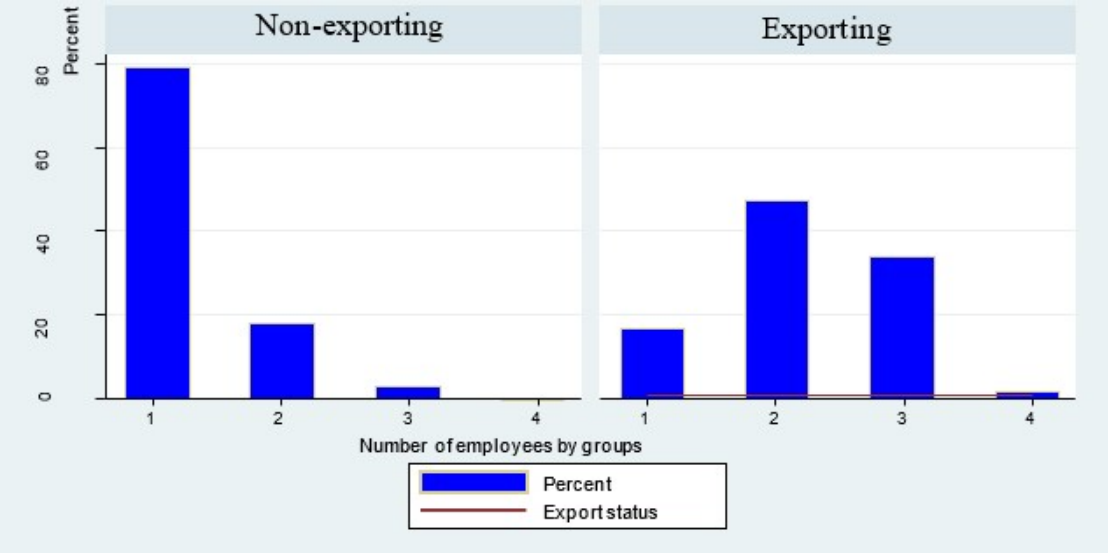
Table 6.5: Frequencies of non-exporting and exporting firms by firm size

Number of employees	Exporting		Non-exporting		Total	
	Freq	%	Freq	%	Freq	%
up to 10 employees (1)	66	1.5	4,274	98.5	4,340	100
from 11 to 50 employees (2)	182	15.9	962	84.1	1,144	100
from 51 to 200 employees (3)	130	44.2	164	55.8	294	100
from 201 to 300 employees (4)	7	53.9	6	46.2	13	100
Total	**385**	**6.6**	**5,406**	**93.4**	**5,791**	**100**

Source: Author's calculation from the SME survey data

It is noted that firms of 51-300 employees have the highest propensity for exporting, with an average of 45% firms participating in export activities over five surveys, and the percentage of these firms participating in export activities is increasing, in particular with 63% of these firms exporting in 2015.

Figure 6.3: Comparison of non-exporting and exporting by firm size



Source: Illustration by author, based on the SME survey data

6.4.2.3 Export products

Table 6.6 shows the main export products of SMEs in the sample, according to the Vietnamese sector identification code; and the panel data contains 153 product codes as main products of SMEs participating in the surveys. However, exporting firms are limited to only 65 product codes. These product codes are grouped into five different sectors: (1) food and beverage; (2) garment, textile and clothes; (3) wood processing and furniture; (4) rattan and bamboo related; and (5) others.

Table 6.6: Frequencies of non-exporting and exporting firms by types of product

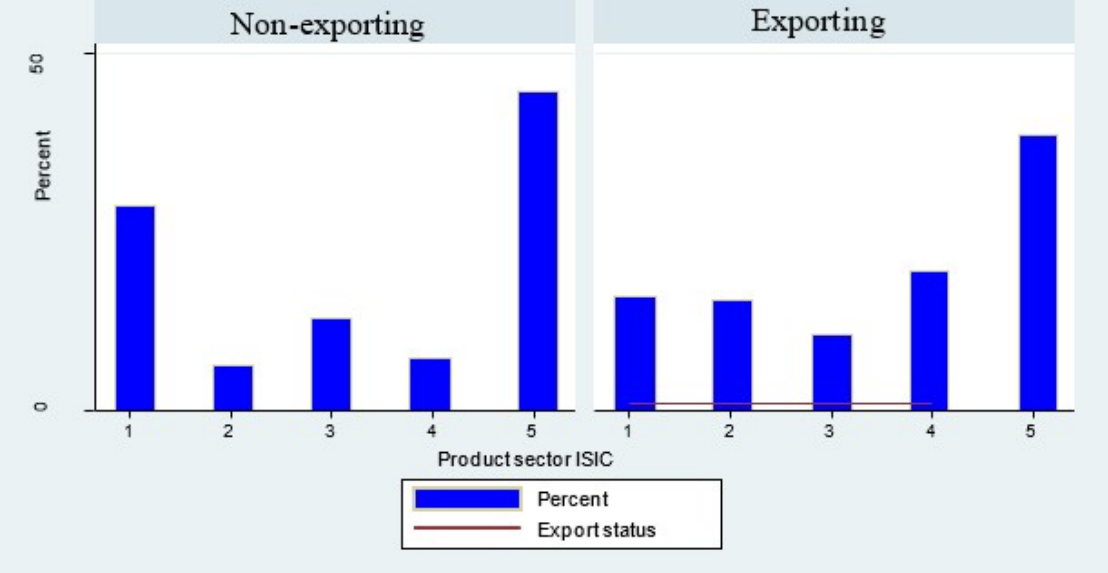
Product sector	Exporting		Non-exporting		Total		% of exporters
	Freq	%	Freq	%	Freq	%	
Food and beverage (1)	62	16.1	1,557	28.8	1,619	28.0	3.8
Garment, textile and apparels (2)	60	15.6	342	6.3	402	6.9	14.9
Wood processing and furniture (3)	41	10.7	695	12.9	736	12.7	5.6
Rattan and bamboo product (4)	74	19.2	391	7.2	465	8.0	15.9
Others (5)	148	38.4	2,421	44.8	2,569	44.4	5.8
Total	**385**	**100**	**5,406**	**100**	**5,791**	**100**	**6.6**

Source: Author's calculation based on SME surveys

It is noted that *Rattan and bamboo related products* is the single product code that shows the highest frequency of participation in exporting (19.2%) where wood processing and furniture shows the lowest frequency (41 firms and 10.7%). The 'others' sector contains 39 different codes, in which plastic product code is of the highest frequency in export participation (6.4%), all remainders showing less than 3%.

The Chi-square test shows that at $p<0.001$, product sector and export participant appear to be related; and Pearson chi2(4) = 133.9439 Pr = 0.000.

Figure 6.4: Comparison of non-exporting and exporting by business sector



Source: Illustration by author, based on the SME surveys data

6.4.2.4 Export and Innovation activities

The Vietnamese SME survey data is a uniquely rich database that provides variables to distinguish different forms of innovation, i.e. product innovation, process innovation, and modification/improvement of existing products (Nguyen, AN et al. 2008). The differentiation is essential for analysing the impact of innovation activities on export propensity and performance at the firm level.

In general, exporting firms are found to be more active in engaging in innovation activities such as introduction of new products, new processes, and improvement of current products. In particular, 52.7% of exporting firms have engaged in product improvement activity, in comparison to 29.8% of non-exporting firms.

The associated Chi-square test shows that, with p<0.001, there appears to be a relationship between firm innovation activities (new products, new processes, and new technology) and export participation.

Table 6.7: Frequencies of exporting and non-exporting firms by innovation activity

Export Status	New products				Improvement of products				New process or technology			
	Yes	No	Total	%	Yes	No	Total	%	Yes	No	Total	%
(1)	*(2)*	*(3)*	*(4)*	*(2/4)*	*(6)*	*(7)*	*(8)*	*(6/8)*	*(10)*	*(11)*	*(12)*	*(10/12)*
Exporting	49	336	385	12.7	203	182	385	52.7	102	283	385	26.5
Non-exporting	430	4,976	5,406	8.0	1,611	3,795	5,406	29.8	523	4,883	5,406	9.7
Total	**479**	**5,312**	**5,791**	**8.3**	**1,814**	**3,977**	**5,791**	**31.3**	**625**	**5,166**	**5,791**	**10.8**

Source: Author's calculation from the SME survey data

6.4.2.5 Export and firm's knowledge

The descriptive statistics show that exporting firms are more competent in terms of understanding the related law and regulations. Among exporting firms, 37.7% claimed to have good knowledge of all relevant regulations, compared with only 8.6% of non-exporting firms. More remarkable, only 10.5% of total firms have good knowledge, while 38% of total firms claimed to have no knowledge of law and regulations, the latter containing 98.9% non-exporting firms.

Table 6.8: Frequencies of exporting and non-exporting firms by level of firms' knowledge

Level of knowledge	Exporting		Non-exporting		Total		% of exporting over total firms
	Freq	%	Freq	%	Freq	%	
No knowledge	25	6.5	2,202	40.7	2,227	38.5	1.1
Limited knowledge	67	17.4	1,507	27.9	1,574	27.2	4.3
Average knowledge	148	38.4	1,232	22.8	1,380	23.8	10.7
Good knowledge	145	37.7	465	8.6	610	10.5	23.8
Total	**385**	**100**	**5,406**	**100**	**5,791**	**100**	**6.6**

Source: Author's calculation from the SME survey data

Chi-square result suggests that, with p<0.001, there might exist a relationship between export and intellectual capital or firm knowledge. Pearson chi2(3) = 448.9391 and Pr = 0.000.

6.5 Regression models of export propensity

6.5.1 Variables and Measurement

6.5.1.1 Dependent variable

Export Propensity is a binary variable that indicates whether a part of the SME's sales come from exports. In the present research, the export propensity of SMEs is measured by using the self-reporting question, *"Does your enterprise export (directly or indirectly)?"*, rather than by using the export revenue figure. The reasons for this are: firstly, we want to include firms that exported in the previous financial years rather than only in surveyed periods; and secondly, it allows the inclusion of indirect exporters, who may not record export revenue properly due to their less complex management accounting system (Hall & McPeak 2011).

6.5.1.2 Independent variables

Social capital constructs: According to Saglietto, David and Cézanne (2016), research in the fields of economics and management often focuses on social networks to remove any ambiguity from the definition of social capital. For this, social capital is measured by the size of the personal (or corporation) network, volume of resources contained in this network, and opportunity to access these resources (Saglietto, David & Cézanne 2016). Following that, social capital in the present research is measured by the network size and the actual network support (which contains both the resources and the access to resources). Since the distributions of the social capital variables are not normal, transformation has been made by using the natural logarithm of the respective variables to resolve the normality failure, as suggested by Pallant (2010):

- **Network size** is measured by the total number of contacts of the focal entity. For this research, network size is measured for each firm-year observation. Four types of networks are measured separately: formal business contacts, social network contacts, bank network contacts, and authority network contacts; detailed as follows:
  - ***Formal business contacts*** (or ***business network*** in short) is a continuous variable. It is measured by the logarithm of the total number of contacts being suppliers / customers / creditors / debtors. These include both international and home-based business relationships.

- ***Social network contacts*** (or ***social network***) is a continuous variable. It is measured by the logarithm of the total number of contacts in the same sector and in different sectors, which are not included in the formal business networks of firms.
- ***Bank network contacts*** (or ***bank network***) is measured by the logarithm of the total number of firm's contacts being bank officials.
- ***Authority network contacts*** (or ***authority network***) is measured by the logarithm of the total number of firm's contacts being politicians or civil servants.

- **Network resources**: As network capacity is concerned about not only the total number of social contacts but also how those contacts provide resources for firms (Nahapiet & Ghoshal 1998), a variable called ***'Resources from networks'*** (or ***Network resource***) is included. Network resource is a continuous variable measured by the logarithm of the total assists that a firm received from its network relationships.

Firm's knowledge is measured by the level of firm knowledge on laws and regulations. This is a categorical variable with the following values: (1) no knowledge; (2) limited knowledge; (3) average knowledge; and (4) good knowledge.

Firm's innovation is measure by four constructs as follows:

- ***Product innovation*** (code: **D_newprod**) is a dichotomous variable that takes the value 1 when the firm introduces new products in the survey year; and 0 otherwise.
- ***Product improvement*** (code: **D_improd**) is a dichotomous variable that takes the value 1 if the firm introduces any major improvement of existing products or changed specification in the survey year; and 0 otherwise.
- ***Technology innovation*** (code: **D_tech**) is a dichotomous variable that takes the value 1 if the firm introduces new production processes/new technology; and 0 otherwise.
- ***R&D investment*** (code: **D_RDinvest**) is a dichotomous variable that takes the value 1 if the firm makes investment in research and development; and 0 otherwise.

6.5.1.3 Control variables

Firm size is typically measured by total sales, total assets or total employees (Dhanaraj & Beamish 2003; Kiss, Danis & Cavusgil 2012; Singh 2009). For the present research, we measure firm size by total number of full-time employees based on four categories (Tran, C, Le & Nguyen 2008): (1) less than ten employees; (2) from ten to fifty employees; (3) from fifty to two hundred employees; and (4) from two hundred to three hundred employees.

Location is a dummy variable to show whether a firm is located in an urban area (dummy = 1) or a rural area (dummy =0). Urban areas include the centrally governed cities, Hanoi, Ho Chi Minh City, and Hai Phong, whereas rural areas include the remaining seven provinces (Vu, VH 2014).

Sector: We use the 4-digit Vietnamese sector identification code to combine the surveyed SMEs into five categories: (1) food and food processing; (2) garment, textiles and clothes; (3) wood processing and furniture; (4) rattan and bamboo related; and (5) others. Four dummy variables are created to represent five sectors, as suggested by Hosmer, Lemeshow and Sturdivant (2013).

Ownership is a dummy variable to represent whether a firm is established as private limited liability company (dummy=1) or otherwise (dummy =0).

6.5.2 Summary statistics of variables

The strength of the logistic regression model is that it can handle many different types of independent variable. The independent variables in a logistic regression model can be discrete, nominal scale or continuous variables. As for nominal scale variable where the number is used for merely identifiers rather than having some numeric significance, it is recommended to be transformed to dummy variables (Hosmer, Lemeshow & Sturdivant 2013). For this study, all categorical variables such as Firm size, Sector, Location, Ownership, Knowledge, Innovation have been transformed accordingly to generate dummy variables. Table 6.9 provides a summary of the statistics of all variables in the model. As presented in Table 6.9, only social capital variables are in continuous form. Other categorical variables have been transformed to dummy variables, as suggested by Hosmer, Lemeshow and Sturdivant (2013).

Table 6.9: Summary statistics for all variables in export propensity model

Variable	Obs	Mean	Std. Dev.	Min	Max
Export	5791	0.07	0.25	0	1
Firm_size*					
from 11 to 50 employees	5791	0.20	0.40	0	1
from 51 to 200 employees	5791	0.05	0.22	0	1
from 201 to 300 employees	5791	0.00	0.05	0	1
Location	5791	0.38	0.49	0	1
Ownership	5791	0.16	0.37	0	1
D_sector1	5791	0.28	0.45	0	1
D_sector2	5791	0.07	0.25	0	1
D_sector3	5791	0.13	0.33	0	1
D_sector4	5791	0.08	0.27	0	1
network size - business	5791	3.19	0.78	0	8.52
network size - social	5791	3.03	0.75	0	8.52
network size - banks	5791	0.55	0.63	0	4.62
network size - authorities	5791	0.71	0.66	0	4.80
network supports - all	5791	3.89	1.74	0	9.11
Knowledge**					
Limited Knowledge	5791	0.27	0.44	0	1
Average Knowledge	5791	0.24	0.43	0	1
Good know Knowledge	5791	0.11	0.31	0	1
D_newprod	5791	0.08	0.28	0	1
D_improd	5791	0.31	0.46	0	1
D_tech	5791	0.11	0.31	0	1
D_RDinvest	5791	0.50	0.50	0	1

Note: **The baseline is the group having less than 10 employees*

*** The baseline is the group having no knowledge of laws and regulations*

6.5.3 Diagnostic tests - checking assumptions of the logistic regression

6.5.3.1 Sample size

Logistic regression uses a maximum likelihood to get the estimates of the coefficients, which is believed to be more desirable as the sample size increases. On the contrary, small number of cases relative to the number of predictor variables may create several problems, such as the production of extremely large parameter estimates and standard errors, as well as the problem of overfitting (Tabachnick & Fidell 2013). Therefore, logistic regression typically requires a large sample size. A general guideline is that a logistic regression model needs a minimum of 10 observations with the least frequent outcome for each independent variable. For example, if a model is designed to contain 5

independent variables and the expected probability of the least frequent outcome is 10%, then a minimum sample size would be 500 (equivalent to 10*5 /0.1) (Statistics Solutions 2016).

For this study, with seventeen independent variables and the expected probability of the least frequent outcome (export =1) being approximately 7%, it is expected that the desired sample size would be 1,215 observations (17*5/0.07). The sample size of this study is 5,791 observations, which is more than four times the required size. The large sample satisfies the requirement for the logistic model, and should comfortably accommodate categorical predictors and fix any multicollinearity concern (Institute for Digital Research and Education 2016).

6.5.3.2 Outliers

Outliers are observations with extreme values above or below the majority of other observations, indicating peculiarities in the data (Gujarati 2006; Pallant 2010). Outliers reduce the predictive accuracy and statistical significance of the regression results, and thus a data set should have no outlier. Over-censoring and over-treating of outliers, however, may prevent a logistic regression model from "finding the correct systematic component even asymptotically" (Jennings 1986, p. 988). Similarly, Hair et al. (2010) suggest that outliers should not be dropped unless there is convincing proof indicating that they are unusually different from the rest of the observations and not representing the population.

For the present research, outliers were detected by graphical analysis (box plot). For the most part, outliers were found in the social capital variables such as number of social contacts, business contacts, bank contacts, authority contacts, or the number of assists received from such network contacts. These outliers were omitted if they appeared completely unreasonable in comparison with the rest of the data. Thus, observations of firms having more than 10,000 contacts or receiving 10,000 assists per financial year while having less than ten employees were dropped. This resulted in the removal of 27 observations, which is less than 0.5% of the total sample size.

6.5.3.3 Multicollinearity

Logistic regression requires that there should be little or no multicollinearity among the independent variables. This means that the independent variables should not be too highly

correlated with each other (Cohen, Manion & Morrison 2013; Wooldridge 2010). High correlation between the variables obstructs the measurement of the independent variables' individual effect on the dependent variable's variance.

The assumption of no multicollinearity can be assessed by a correlation matrix among the variables (Hair et al. 2010; Wooldridge 2010). The presence of multicollinearity is indicated by large correlation coefficients between the independent variables. Tabachnick and Fidell (2013) recommend that the assumption of no multicollinearity is met if correlation coefficients among independent variables are less than 0.90.

The correlation matrix presented in Table 6.10 shows that there is no excessive correlation between the independent variables. The highest value of correlation was reported as 0.83 between the variables Network size-business and Network size-social. Furthermore, a larger sample size (in this case 5,791 observations) can also be a remedy for the multicollinearity problem (Institute for Digital Research and Education 2016). Thus, the large sample size and all correlation values were recorded below 0.90, confirming that the model is free from the multicollinearity problem.

Table 6.10: Pairwise correlation matrix of variables in the logistic regression model

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Export	1.00																	
2	Firm_size	0.42	1.00																
3	Location	0.08	0.23	1.00															
4	Ownership	0.29	0.50	0.24	1.00														
5	D_sector1	-0.07	-0.18	-0.15	-0.13	1.00													
6	D_sector2	0.09	0.14	0.06	0.11	-0.17	1.00												
7	D_sector3	-0.02	-0.06	-0.20	-0.07	-0.24	-0.10	1.00											
8	D_sector4	0.11	0.00	-0.15	-0.04	-0.18	-0.08	-0.11	1.00										
9	network size - business	0.04	0.19	0.11	0.19	0.11	-0.05	-0.05	-0.11	1.00									
10	network size - social	0.06	0.18	0.12	0.19	0.09	-0.03	-0.05	-0.08	0.83	1.00								
11	network size - banks	0.16	0.27	-0.06	0.22	-0.07	0.02	0.05	0.01	0.28	0.22	1.00							
12	network size - authorities	0.10	0.20	0.08	0.16	-0.03	0.01	0.00	-0.02	0.29	0.23	0.35	1.00						
13	network supports	0.04	0.04	0.03	0.10	0.08	0.00	-0.04	-0.02	0.29	0.29	0.09	0.10	1.00					
14	Knowledge	0.26	0.46	0.35	0.46	-0.17	0.07	-0.06	-0.03	0.22	0.20	0.19	0.22	0.09	1.00				
15	D_newprod	0.04	0.02	-0.05	0.03	-0.03	-0.01	0.02	-0.01	-0.03	0.00	0.01	0.02	0.01	0.02	1.00			
16	D_improd	0.12	0.21	0.08	0.14	-0.19	0.05	0.09	0.04	0.07	0.06	0.11	0.11	-0.09	0.22	0.01	1.00		
17	D_tech	0.14	0.25	0.08	0.19	0.00	0.00	-0.02	-0.01	0.13	0.11	0.12	0.07	-0.02	0.20	0.06	0.29	1.00	
18	D_RDinvest	-0.10	-0.19	0.13	-0.15	0.07	0.00	-0.09	-0.04	-0.10	-0.06	-0.39	-0.11	-0.10	-0.10	-0.03	-0.15	-0.19	1.00

6.5.4 Model building strategy

This study follows the suggestion of Hosmer, Lemeshow and Sturdivant (2013) for the purposeful selection of covariates for the model. The purposeful selection process begins with a univariate analysis of each independent variable. Any variable having a significant univariate test at some arbitrary level (p-value less than 0.25) is selected as a candidate for the multivariate analysis. The model should also include "all variables of known clinical importance" (Hosmer, Lemeshow & Sturdivant 2013, p. 91), meaning that justification for inclusion of a variable should not only be based on pure univariate analysis but also on review of the literature in the discipline.

T-test and Pr-test are performed for explanatory variables to determine the possible relationship between these variables and export propensity of firm (Hosmer, Lemeshow & Sturdivant 2013). T-test is performed on continuous variables and Pr-test is performed on dummy variables. The T-test and Pr-test basically result in the means of almost all variables included in the models being statistically significant different between exporting and non-exporting firms.

Table 6.11: Variable means comparison – T statistics

Variable	diff.	t statistics
Firm_size	-0.961***	(-35.04)
network size - business	-0.132**	(-3.19)
network size - social	-0.169***	(-4.25)
network size - banks	-0.395***	(-12.08)
network size - authorities	-0.253***	(-7.27)
network supports	-0.298**	(-3.25)
Knowledge	-1.080***	(-20.81)
Location	-0.148***	(-5.62)
Ownership	-0.435***	(-16.96)
D_sector1	0.127***	(6.44)
D_sector2	-0.093***	(-4.93)
D_sector3	0.022	(1.35)
D_sector4	-0.120***	(-5.88)
D_sector5	0.063*	(2.47)
D_newprod	-0.048**	(-2.75)
D_improd	-0.229***	(-8.75)
D_tech	-0.168***	(-7.36)
D_RDinvest	0.202***	(8.21)
N	5791	

*Note: t statistics in parentheses * p<0.05, ** p<0.01, *** p<0.001*

6.6 Empirical results of regression models

Logistic regressions were used to test our hypotheses through four models, as follows:

- ***Model 1*** is the baseline model that includes only controlling variables. The baseline is used as a primary check to see whether the adding of independent variables helps improve or disturbs the baseline model.
- ***Model 2*** adds social capital constructs to the baseline model to test Hypotheses H1a, H1b, H1c and H1d.
- ***Model 3*** adds firms' knowledge variable to Model 2 to test Hypothesis H2.
- ***Model 4*** adds firms' innovation capability construct to Model 3 to test Hypotheses H3.

Results of the pooled logistic regression models and the random effects logistic regression on the panel data are presented in Table 6.12. Model 1 to Model 4 show the results of estimation based on the pooled data. Model 5 to Model 8 show the results of random effects estimations on the panel data. The random effects regression is preferred as it is useful in providing inference for covariates that can change within a cluster, in this case is changes within an entity (Hosmer, Lemeshow & Sturdivant 2013).

As presented in Table 6.12, the results of pooled estimation and random effects estimation are basically consistent on the signs of the coefficients and statistical significance levels. The random effects models, as they account for both the variations between and within an entity, should be considered more desirable. In this case, random effects models resulted to slightly different coefficients between the dependent and independent variables. However, as suggested by Wooldridge (2010), the pooled data estimations can be of similar efficient, especially when transforming coefficients in to the predicted probabilities for interpretation.

Table 6.12: Logit regression results on pooled data and panel data

	Pooled logit				Random effects logit			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
VARIABLES	Coef	Coef	Coef	Coef	Coef	Coef	Coef	Coef
2.Firm_size	2.210***	2.249***	1.954***	1.924***	2.104***	2.206***	2.041***	1.992***
	-0.166	-0.171	-0.173	-0.175	-0.309	-0.312	-0.308	-0.311
3.Firm_size	3.620***	3.582***	3.170***	3.101***	3.887***	3.914***	3.655***	3.528***
	-0.197	-0.206	-0.21	-0.213	-0.45	-0.456	-0.45	-0.456
4.Firm_size	3.622***	3.616***	2.984***	2.793***	4.391***	4.605***	4.139***	3.618***
	-0.605	-0.602	-0.611	-0.611	-1.254	-1.271	-1.259	-1.269
Ownership	0.959***	0.937***	0.689***	0.687***	2.154***	2.109***	1.810***	1.778***
	-0.138	-0.142	-0.143	-0.144	-0.392	-0.394	-0.384	-0.385
Location	0.168	0.261*	0.114	0.129	0.628	0.763*	0.486	0.577
	-0.138	-0.141	-0.142	-0.145	-0.414	-0.417	-0.41	-0.416
D_sector1	0.552***	0.670***	0.734***	0.739***	0.234	0.38	0.489	0.526
	-0.181	-0.185	-0.186	-0.188	-0.485	-0.487	-0.482	-0.488
D_sector2	0.791***	0.767***	0.811***	0.825***	1.639***	1.646***	1.695***	1.804***
	-0.191	-0.195	-0.196	-0.196	-0.575	-0.577	-0.566	-0.572
D_sector3	0.826***	0.833***	0.818***	0.792***	1.969***	2.029***	2.044***	2.036***
	-0.215	-0.217	-0.219	-0.22	-0.517	-0.52	-0.511	-0.512
D_sector4	2.052***	2.040***	2.121***	2.112***	2.344***	2.429***	2.385***	2.421***
	-0.199	-0.202	-0.206	-0.207	-0.508	-0.51	-0.511	-0.514
network size - business		-0.578***	-0.662***	-0.652***		-0.458*	-0.550**	-0.537**
		-0.157	-0.162	-0.164		-0.255	-0.261	-0.263
network size - social		0.196	0.222	0.192		-0.002	0.052	0.027
		-0.156	-0.16	-0.162		-0.248	-0.253	-0.256
network size - banks		0.404***	0.426***	0.420***		0.559***	0.615***	0.568***
		-0.102	-0.104	-0.109		-0.177	-0.179	-0.186
network size - authorities		0.076	0.022	0.01		-0.041	-0.138	-0.141
		-0.096	-0.098	-0.099		-0.157	-0.16	-0.162
network supports		0.080**	0.085**	0.099**		0.174***	0.185***	0.195***
		-0.037	-0.0385	-0.039		-0.057	-0.058	-0.059
2. Knowledge			0.928***	0.907***			0.926**	0.869**
			-0.256	-0.256			-0.36	-0.362
3. Knowledge			1.236***	1.217***			1.208***	1.180***
			-0.251	-0.252			-0.368	-0.37
4. Knowledge			1.828***	1.756***			1.885***	1.798***
			-0.264	-0.266			-0.402	-0.408
D_newprod				0.416**				0.725**
				-0.203				-0.331
D_improd				0.236*				0.239
				-0.136				-0.223
D_tech				0.113				0.181
				-0.165				-0.28
D_RDinvest				-0.002				-0.296
				-0.144				-0.24
Constant	-4.981***	-4.461***	-5.010***	-5.107***	-8.714***	-8.438***	-8.951***	-9.012***
	-0.181	-0.305	-0.348	-0.36	-0.713	-0.823	-0.814	-0.831
Observations	5,791	5,791	5,791	5,791	5,791	5,791	5,791	5,791
Number of firm-clusters					1,166	1,166	1,166	1,166
Log likelihood	-980.57	-962.82	-934.23	-929.74	-725.77	-714	-702.29	-697.88
Chi2	870	905.52	962.69	971.66				
Pseudo R2	0.307	0.32	0.34	0.343				
Wald Chi2					153.97	168.34	188.94	189.05
Chibar 2					509.61	497.62	463.88	463.71

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.*

The panel-level variance component is 'parameterized' as the log of the variance $\ln(\sigma_u^2)$ (labeled **lnsig2u** in the output). The standard deviation σ_u is also included in the output (labeled **sigma_u)** together with ρ (labeled rho), which is the proportion of total variance contributed by the variance component at panel-level (Stata Corporation LLC n.d):

$$\rho = \frac{\sigma_\nu^2}{\sigma_\nu^2 + \sigma_\epsilon^2}$$

When rho is zero, the panel-level variance component is unimportant, and the panel estimator is no different from the pooled estimator. The estimation procedures from Stata software, version 13 include a likelihood-ratio test of the null hypothesis (H_0) for rho equal zero, the result of which is presented at the bottom of the output. This test formally compares the pooled estimator (logit) with the panel estimator (Stata Corporation LLC n.d).

In the present study, results of the random effects regression consistently show that rho is different from zero, confirming that the panel-level variance component is important. The test results show that rho is not equal to zero, and the likelihood-ratio test of the null hypothesis rho equal zero is rejected. Detailed random effects regression results of Model 8 are presented in Table 6.13.

Table 6.13: Random effects logit regression of Model 8 – statistical indicators

Random-effects logistic regression — Number of obs = 5791
Group variable: ma_dn — Number of groups = 1166

Random effects u_i ~ Gaussian — Obs per group: min = 4
avg = 5.0
max = 5

Integration method: mvaghermite — Integration points = 12

Wald chi2(21) = 189.05
Log likelihood = -697.88628 — Prob > chi2 = 0.0000

XK	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Firm_size3a						
from 11 to 50 employees	1.991602	.3106078	6.41	0.000	1.382822	2.600382
from 51 to 200 employees	3.527608	.4564269	7.73	0.000	2.633027	4.422188
from 201 to 300 employees	3.617758	1.268581	2.85	0.004	1.131385	6.104131
Location	.5774303	.4155801	1.39	0.165	-.2370918	1.391952
Ownership	1.777513	.3850017	4.62	0.000	1.022924	2.532103
D_sector1	.5256027	.4878856	1.08	0.281	-.4306354	1.481841
D_sector2	1.803597	.571899	3.15	0.002	.6826955	2.924498
D_sector3	2.035596	.5124136	3.97	0.000	1.031284	3.039908
D_sector4	2.421249	.5138177	4.71	0.000	1.414185	3.428313
ln_business	-.5365833	.2631211	-2.04	0.041	-1.052291	-.0208754
ln_social	.0273612	.2555561	0.11	0.915	-.4735196	.5282421
ln_bank	.5676466	.1862001	3.05	0.002	.2027011	.932592
ln_pol	-.1410363	.1619339	-0.87	0.384	-.4584208	.1763483
ln_res_all	.194981	.0589417	3.31	0.001	.0794574	.3105045
Ex_kngedge3						
Limited knowledge	.8694895	.362425	2.40	0.016	.1591496	1.579829
average knowledge	1.179801	.3700611	3.19	0.001	.4544943	1.905107
Good knowledge	1.797683	.4075035	4.41	0.000	.9989913	2.596375
D_newprod	.7253094	.3313307	2.19	0.029	.0759132	1.374706
D_improd	.2389556	.2225041	1.07	0.283	-.1971444	.6750556
D_tech	.1809839	.2802205	0.65	0.518	-.3682383	.730206
D_RDinvest	-.295526	.2404579	-1.23	0.219	-.7668149	.1757629
_cons	-9.012139	.8307585	-10.85	0.000	-10.6404	-7.383882
/lnsig2u	2.33917	.194882			1.957209	2.721132
sigma_u	3.220656	.313824			2.66074	3.898399
rho	.7592044	.035627			.6827332	.822048

Likelihood-ratio test of rho=0: chibar2(01) = 463.71 Prob >= chibar2 = 0.000

6.6.1 Result analysis

The logit coefficients estimated from the logistic regression models reflect the sign of the relationship between the dependent variable and each of the independent variables. However, these coefficients are in log-odds units and do not represent the marginal effects or the predicted probability (Torres-Reyna 2007a). In order to interpret the results in terms of its marginal effects, the estimated coefficients need to be transformed to odds ratio (e^b rather than b). When transforming the estimated coefficients, the standard errors and confidence intervals are similarly transformed. In other words, the transformation of the

estimated coefficients only affects the display of the results rather than the underlying estimation method. Marginal effects are presented in Table 6.14.

Table 6.14: Logit regression results on pooled data– marginal effects

VARIABLES	(1) Marginal effects	(2) Marginal effects	(3) Marginal effects	(4) Marginal effects
2.Firm_size	0.111***	0.113***	0.089***	0.0875***
	(0.011)	(0.011)	(0.009)	(0.009)
3.Firm_size	0.332***	0.313***	0.238***	0.227***
	(0.030)	(0.030)	(0.026)	(0.026)
4.Firm_size	0.332***	0.320***	0.209**	0.183**
	(0.123)	(0.116)	(0.089)	(0.081)
Ownership	0.045***	0.044***	0.0313***	0.031***
	(0.006)	(0.007)	(0.006)	(0.006)
Location	0.008	0.012*	0.005	0.006
	(0.007)	(0.007)	(0.006)	(0.007)
D_sector1	0.026***	0.031***	0.033***	0.033***
	(0.009)	(0.009)	(0.008)	(0.008)
D_sector2	0.037***	0.036***	0.037***	0.037***
	(0.009)	(0.009)	(0.009)	(0.009)
D_sector3	0.039***	0.039***	0.037***	0.0358***
	(0.010)	(0.010)	(0.010)	(0.010)
D_sector4	0.097***	0.095***	0.096***	0.096***
	(0.009)	(0.009)	(0.009)	(0.009)
network size - business		-0.027***	-0.030***	-0.030***
		(0.007)	(0.007)	(0.007)
network size - social		0.009	0.010	0.009
		(0.007)	(0.007)	(0.007)
network size - banks		0.019***	0.019***	0.019***
		(0.005)	(0.005)	(0.005)
network size - authorities		0.004	0.000	0.000
		(0.004)	(0.004)	(0.004)
network supports		0.004**	0.004**	0.005**
		(0.002)	(0.002)	(0.002)
2. Knowledge			0.0298***	0.029***
			(0.008)	(0.008)
3. Knowledge			0.045***	0.044***
			(0.008)	(0.008)
4. Knowledge			0.081***	0.077***
			(0.0112)	(0.011)
D_newprod				0.0188**
				(0.009)
D_improd				0.0107*
				(0.006)
D_tech				0.005
				(0.007)
D_RDinvest				-0.000
				(0.007)
Observations	5,791	5,791	5,791	5,791

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.*

6.6.1.1 Control variables impacts on export propensity

Firm size: All four models indicate *Firm size* having the strongest and most consistent impact on export propensity of SMEs over the years. For example, in the baseline model, on average the change in export probability increases by more than 10% when firm size moves from Group 1 (less than 10 employees) to Group 2 (of 11-50 employees), and more than 30% when firm size moves from Group 1 (less than 10 employees) to Group 3 (51-200 employees). The consistency in positive coefficients and statistical significance ($p<0.01$) in all four models confirms that firm size is one of the main determinants of export participation by SMEs.

Ownership: the statistically significant and positive coefficient of export propensity to *Ownership* variable indicates that SMEs that are established as private limited companies have higher export probability than do other types of firms. In the baseline model, for example, the change in export probability increases by more than 3% if a firm has its ownership as a liability limited company.

Location: The logistic regression model does not show any significant correlation between a firm's location and its export propensity, indicating that an SME's *Location* in rural or urban area does not significantly affect its likelihood of exporting.

Firm sector: Regarding *Firm sector*, the regression results show positive coefficients, or increase of propensity when SMEs move from 'other sectors' to the four sectors specified in this study. However, these results are statistically significant for only Sector 2 (garment, textiles and clothes) and Sector 4 (rattan- and bamboo-related).

6.6.1.2 Impacts of social capital on export propensity

In ***Model 2***, Hypothesis1 about the impact of social capital on export propensity is tested; which includes five sub-hypotheses about four different constructs of social capital, as mentioned above. Unlike the consistency shown in firm size and ownership variables, regression results in Model 2 generally show that the impacts of all four variables of network size are *neither statistically significant nor consistent in the signs of their coefficients over the five surveys*.

With regard to formal business relationships, regression results show a negative coefficient between export propensity and number of formal business contacts, and this result is statistically significant at the confidence level of 99% (or $p<0.01$). This indicates

that more formal business contacts may not lead to an increase in probability of exporting. Thus, **Hypothesis H1a is rejected**.

Concerning social network relationships, regression results show consistent positive coefficients, indicating that the more social networks SMEs attain, the more likely that firms export. However, these results are not statistically significant at the confidence level of 90% ($p<0.1$), therefore **Hypothesis H1b is not supported**.

With regard to bank networks, we found consistent positive coefficients, indicating that the positive relationship between the bank network capability of SMEs is positively associated with their export propensity. Although the marginal impacts are very minimal (less than 1%), it is statistically significant ($p<0.01$), thus **Hypothesis H1c is supported**.

With regard to network size of public officials or authorities network, regression results are neither consistent on sign of coefficient nor are they statistically significant. Thus, **Hypothesis H1d is not supported**.

With regard to resources from networks, which are measured by the total number of assists/support that firms received from their network contacts in the previous financial year, regression results show consistent positive coefficients, and statistical significance ($p<0.01$), indicating that the increase in support from social networks may increase the export propensity of SMEs. This result suggests that the resource dimensions of social capital may positively impact the internationalization process of SMEs. For this, **Hypothesis H1e is supported.**

In summary, we found mixed results for a relationship between social capital constructs and export propensity of SMEs.

In ***Model 3***, we include the variable representing the firm's knowledge to test Hypothesis 2. We found that a firm's knowledge is generally positively related to the export propensity of SMEs. For example, comparing with firms with no knowledge about laws and regulations, firms that have good knowledge of laws and regulations attain an increased likelihood of exporting in a range of from 3% to 8%. These results are statistically significant at confidence levels of 99% ($p<0.01$). Thus, there is evidence to conclude that knowledge of firms positively impacts firms' export propensity, and **Hypothesis 2 is supported**.

In ***Model 4***, we include '*firm's innovation capability'* variables to test Hypothesis 3. We found mixed results in coefficient signs of all four variables over the five survey datasets. For this, both new product and product improvement capability have significant positive impacts on export propensity of firms. In contrast, regression results show no correlation between export propensity and the dummy variables of new technology and R&D investment. This result indicates that SMEs with innovation capability in introducing new products and improvement of existing products are more likely to export. Thus, **Hypotheses H3a and H3b are supported**. On the other hand, there is not enough evidence to support Hypotheses 3c and 3d, thus **Hypotheses H3c and H3d are rejected**.

In summary, Model 4 is the full model that covers all variables to test the hypotheses on export propensity. In Model 4, we found that the results of the previous three models were not disturbed by adding the '*firm's innovation capability'* variables. For that, the following conclusions are evidenced from the logistic regression results on the panel data:

- Firm size and ownership structure positively impact on export propensity of SMEs.
- Firm location (rural or urban) and the sectors that firm operate in do not necessarily associate with a firm's export propensity.
- The size of network contacts shows a mixed impact on firm's export propensity. Specifically, SMEs with a broader business network are less likely to export, while a broader network with public officials does not influence export propensity of SMEs.
- The resources from network are positively associated with export likelihood.
- Firm knowledge positively relates to its export probability.
- Firms with better capability in introducing new products and improving existing products are more likely to export.

6.6.2 Robustness check

Additional tests were conducted to confirm the models and results above. Akaike's Information Criterion (AIC) and Bayesian Information Criterion (BIC) were used to compare the above four models. According to the calculated AIC and BIC, Model 4 is the best model out of four because it contains all variables of interest and has the lowest AIC and second lowest BIC, only lower than Model 3. The additional Goodness-of-fit

test for all four models was also conducted. As the Pseudo-R2 does not consistently provide the accurate level of fit and needs to be interpreted with caution (Statistic Solution 2016), the Hosmer-Lemeshow test is used to measure goodness of fit of the models, as this is the common test used for the logit model (Institute for Digital Research and Education). It is found that *p* values of Model 1 are very low, while p values for Model 3 are the highest (0.152). While p value of Model 4 is not very high (0.0716), it passes the goodness-of-fit test (Institute for Digital Research and Education). Results of the Hosmer-Lemeshow test are presented in Table 6.15.

Table 6.15: Results of Hosmer-Lemeshow test and comparison of models

	Model 1	Model 2	Model 3	Model 4
Hosmer-Lemeshow chi2	15.070	12.660	11.980	14.410
Prob> chi2	0.035	0.124	0.152	0.072
AIC	1993.417	1807.567	1761.893	1760.406
BIC	2060.113	1906.264	1880.329	1905.162

As a robustness check, the above specifications are re-estimated using different methods as well as using the same method on different formation of data. Firstly, a Probit regression is performed on panel data. Secondly, the Logit regression is performed on separate waves of the panel data. Thirdly, the Logit regression is performed on separate survey data for each year, to increase the number of observations. The full survey data before forming up the panel data include both repeated firms in the panel data and non-repeated firms. Finally, regressions were performed to expand analysis of Model 4 in order to examine each of the Social Capital variables separately.

Essentially, the results of all robust check models are qualitatively similar to the results of the Four Models estimated using panel data discussed above. The similarities are found on the signs of the coefficient and the statistical significance levels, reconfirming the conclusion about the factors' impact on export propensity of SMEs in Vietnam. The results of robustness checks are presented in Appendix 6.

6.7 Regression model of export propensity on a reduced dataset

As discussed in Section 6.4.2.2 on the relationship between firm size and export probability of SMEs in the dataset, a very low percentage of the micro firms export (1.5%), while this type of firm dominates the dataset with approximately 75% of the total firm-year observations. It was decided to construct a reduced dataset that excludes these

micro firms for further investigation. There are two reasons for this further examination. Firstly, this is to avoid the possible 'noise' caused by these dominating micro firms; and secondly, this extends the investigation and analysis of the social capital impact on export propensity of the remaining small- and medium-sized firms.

6.7.1 Data description

The reduced dataset consists of 1,451 firm-year observations, with 441 firms, so the panel is unbalanced. The percentage of exporting observations for the reduced dataset is approximately 22%, a significant increase compared to the 6.65% of the full dataset. Summary statistics of the reduced dataset are presented in Table 6.16.

Table 6.16: Summary statistics of all variables in the reduced dataset

Variables	Obs	Mean	Std. Dev.	Min	Max
Export	1451	0.22	0.41	0	1
Firm_size*					
from 51 to 200 employees	1451	0.20	0.40	0	1
from 201 to 300 employees	1451	0.01	0.09	0	1
Location	1451	0.58	0.49	0	1
Ownership	1451	0.48	0.50	0	1
D_sector1	1451	0.13	0.34	0	1
D_sector2	1451	0.13	0.34	0	1
D_sector3	1451	0.10	0.29	0	1
D_sector4	1451	0.08	0.27	0	1
D_sector5	1451	0.56	0.50	0	1
network size - business	1451	3.45	0.80	1.10	7.61
network size - social	1451	3.27	0.80	0.69	6.92
network size - banks	1451	4.00	1.81	0	8.88
network size - authorities	1451	0.82	0.69	0	3.50
network supports - all	1451	0.93	0.72	0	4.80
Knowledge**					
Limited Knowledge	1451	0.22	0.41	0	1
Average Knowledge	1451	0.41	0.49	0	1
Good know Knowledge	1451	0.27	0.45	0	1
D_newprod	1451	0.08	0.28	0	1
D_improd	1451	0.48	0.50	0	1
D_tech	1451	0.23	0.42	0	1
D_RDinvest	1451	0.34	0.47	0	1

*Notes: *The baseline is the group having from 11-50 employees*

*** The baseline is the group having no knowledge of laws and regulations*

6.7.2 Empirical results and analysis of regression models on reduced dataset

The same rationale used for the logistic regression models is applied to estimate export propensity of the reduced dataset. Following that, the first step is using logistic regression on pooled data; and second is the logistic regression with random effects on the panel data; with the results of each model presented in Table 6.17.

Table 6.17: Pooled logit and Random effects logit models on reduced dataset

	Pooled logit				Random effects logit			
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
VARIABLES	Coef	Coef	Coef	Coef	Coef	Coef	Coef	Coef
3.Firm_size	1.387***	1.318***	1.192***	1.168***	1.507***	1.462***	1.371***	1.318***
	-0.151	-0.154	-0.157	-0.159	-0.379	-0.382	-0.379	-0.389
4.Firm_size	1.484**	1.436**	1.093*	0.988*	2.036*	2.144*	1.97	1.655
	-0.587	-0.584	-0.591	-0.593	-1.224	-1.234	-1.219	-1.257
Location	0.118	0.196	0.107	0.111	0.103	0.223	0.054	0.151
	-0.152	-0.155	-0.157	-0.162	-0.486	-0.489	-0.491	-0.503
Ownership	0.762***	0.762***	0.556***	0.559***	1.529***	1.541***	1.282***	1.303***
	-0.144	-0.148	-0.152	-0.154	-0.391	-0.402	-0.407	-0.413
D_sector1	0.796***	0.913***	0.962***	0.943***	1.120*	1.255**	1.307**	1.309**
	-0.204	-0.208	-0.212	-0.213	-0.607	-0.611	-0.613	-0.623
D_sector2	0.771***	0.751***	0.800***	0.817***	1.624**	1.601**	1.635**	1.727***
	-0.200	-0.205	-0.207	-0.208	-0.64	-0.645	-0.645	-0.654
D_sector3	0.698***	0.704***	0.676***	0.683***	1.792***	1.804***	1.795***	1.905***
	-0.250	-0.253	-0.257	-0.259	-0.653	-0.659	-0.663	-0.676
D_sector4	1.629***	1.643***	1.766***	1.772***	1.925***	2.056***	2.111***	2.155***
	-0.241	-0.245	-0.254	-0.256	-0.664	-0.672	-0.68	-0.697
network size - business		-0.555***	-0.620***	-0.611***		-0.573*	-0.705**	-0.633*
		-0.183	-0.187	-0.189		-0.325	-0.333	-0.336
network size - social		0.184	0.2	0.174		0.096	0.198	0.129
		-0.18	-0.183	-0.185		-0.314	-0.320	-0.324
network size - banks		0.374***	0.396***	0.407***		0.531**	0.597***	0.565***
		-0.113	-0.115	-0.120		-0.208	-0.211	-0.219
:twork size - authorities		0.0911	0.046	0.044		-0.011	-0.096	-0.048
		-0.106	-0.108	-0.109		-0.186	-0.188	-0.191
network supports		0.049	0.056	0.063		0.118*	0.127*	0.111
		-0.042	-0.043	-0.044		-0.068	-0.069	-0.072
2. Knowledge			0.622	0.580			1.014	0.898
			-0.388	-0.388			-0.649	-0.648
3. Knowledge			1.123***	1.078***			1.642***	1.571**
			-0.368	-0.369			-0.631	-0.63
4. Knowledge			1.642***	1.581***			2.109***	2.005***
			-0.376	-0.377			-0.657	-0.659
D_newprod				0.553**				0.964**
				-0.231				-0.409
D_improd				-0.047				-0.279
				-0.154				-0.275
D_tech				0.127				-0.052
				-0.178				-0.316
D_RDinvest				0.11				-0.191
				-0.167				-0.300
Constant	-2.586***	-1.935***	-2.724***	-2.752***	-5.472***	-4.813***	-5.939***	-5.833***
	-0.177	-0.342	-0.459	-0.467	-0.544	-0.768	-0.948	-0.96
Observations	1,451	1,451	1,451	1,451	1,451	1,451	1,451	1,451
Number of firm-clusters					441	441	441	441
Log likelihood	-672.72	-660.3	-641.94	-638.49	-491.128	-484.22	-476.71	-473.08
Chi2	183.09	207.92	244.65	251.55				
Pseudo R2	0.1198	0.136	0.16	0.165				
Wald Chi2					45.78	56.25	66.2	69.95
Chibar2					363.18	352.17	330.47	330.82

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.*

In general, the results of the logistic regression models for the reduced dataset are quite consistent with the regression results on the full dataset about signs of the coefficients. Regarding the variables of main interest – social capital variables – the coefficient signs and significance levels are consistent with the full models on the four network size variables.

Table 6.18. Comparison of random effects logit regression results between full dataset and reduced dataset

	Full dataset			Reduced dataset		
	(6)	(7)	(8)	(14)	(15)	(16)
VARIABLES	Coef	Coef	Coef	Coef	Coef	Coef
network size - business	-0.458*	-0.550**	-0.537**	-0.573*	-0.705**	-0.633*
	(0.255)	(0.261)	(0.263)	(0.325)	(0.333)	(0.336)
network size - social	-0.002	0.052	0.027	0.096	0.198	0.129
	(0.248)	(0.253)	(0.256)	(0.314)	(0.320)	(0.324)
network size - banks	0.559***	0.615***	0.568***	0.531**	0.597***	0.565***
	(0.177)	(0.179)	(0.186)	(0.208)	(0.211)	(0.219)
network size - authorities	-0.041	-0.138	-0.141	-0.011	-0.096	-0.048
	(0.157)	(0.160)	(0.162)	(0.186)	(0.188)	(0.191)
network supports	0.174***	0.185***	0.195***	0.118*	0.127*	0.111
	(0.057)	(0.058)	(0.059)	(0.068)	(0.069)	(0.072)
Observations	5,791			1,451		
Number of firms	1,166			441		

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.*

However, regarding the resources (or support) from networks, the logistic regression on the reduced dataset *does not show statistically significant coefficients, unlike for the full dataset*. Thus, for the reduced dataset, there is an absence of evidence to conclude that support from networks has positive impact on the export propensity of firms. In other words, when excluding micro firms, support from network contacts does not show significant positive impact on export propensity of SMEs.

6.8 Chapter summary

In Chapter 6, the impacts of social capital (in the form of different network ties and network resources) on export probability of Vietnamese SMEs were examined. The results are mixed, and there is evidence that the broadness of network does not always

positively impact on export propensity of SMEs. However, the resources or support that SMEs receive from their network contacts are shown to be consistently positively correlated with export likelihood.

Apart from the positive influence of characteristic variables such as firm size and ownership, empirical results from this chapter, in the meantime, support that knowledge of firms is positively associated with SMEs' export propensity. However, when it comes to innovation capability, not all types of innovation positively correlate with export probability of firms.

CHAPTER 7: IMPACTS OF SOCIAL CAPITAL ON EXPORT PERFORMANCE OF SMES – EMPIRICAL EVIDENCE FROM PANEL DATA ANALYSIS

7.1 Introduction

Following the analysis of factors influencing *export propensity* presented in Chapter 6, this chapter examines the impacts of social capital on *export performance* of Vietnamese SMEs, using the same dataset. The random effects and fixed effects regression models were used to estimate the impacts of various social capital variables on different aspects of export performance: revenue, intensity, and market diversity. Besides the chapter introduction and summary, this chapter includes five sections. The chapter starts with the establishment of a conceptual framework, then presents the development of hypotheses. Next, data descriptions and data screening are detailed. Finally, the model specifications and estimation method, followed by the regression results and analysis, are presented.

7.2 Developing a conceptual framework

Informed by the current state of inconsistency in the literature on export performance, this section aims to develop a contingent conceptual model to examine the impacts of social capital on export performance of SMEs in Vietnam. The development of the conceptual model is based on existing models combined with the contextual results from our qualitative analysis.

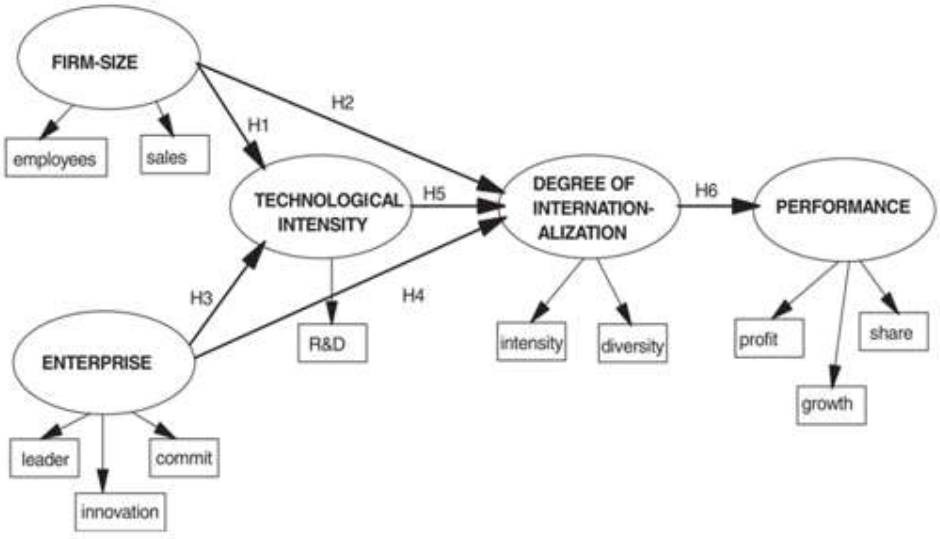
As discussed earlier, in Chapter 1, Section 1.4 on research positioning, the 'late transitional' status of Vietnam serves as an appropriate case for the integration of transaction cost theory and rent theory with resource-based views and the dynamic capabilities perspective, in analysing the impacts of social capital. From the resource-based view, the present research inherits and integrates two theoretical frameworks looking at export performance of small- and medium-sized enterprises. These two models help incorporate well-studied factors (firm size and enterprise characteristics) with an emergent factor (social capital) in analysis of export performance of SMEs.

7.2.1 Existing theoretical models on export performance of SMEs

The first model belongs to Dhanaraj and Beamish (2003), who examine and compare export performance of SMEs in the USA and Canada. Dhanaraj and Beamish (2003) include three latent constructs of firm size, enterprise characteristics, and technological

intensity for their causal analysis of SMEs' export performance, as represented in Figure 7.1.

Figure 7.1: Dhanaraj and Beamish (2003) – theoretical framework



Source: Dhanaraj & Beamish (2003, p. 247)

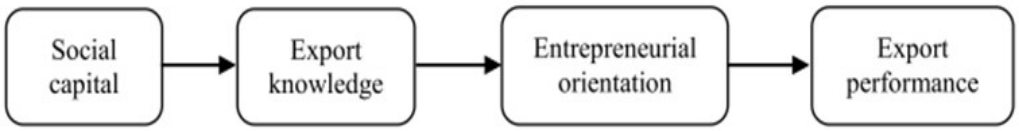
In the model of Dhanaraj and Beamish (2003), export performance (variable name: EXPORT PERFORMANCE) of SMEs is affected by firm size (variable name: FIRMSIZE) and a latent construct named ENTERPRISE. While firm size can be measured by either number of employees or total sales, enterprise characteristics (variable name: ENTERPRISE) is not directly measurable. Enterprise is a latent construct built from three manifest variables, namely, *leader*, *innovation* and *commit*, which represent, respectively, the characteristics of a firm's leaders, the firm's innovation characteristics, and its commitment toward export endeavour.

In the same model, firm size and enterprise characteristics affect the DEGREE OF INTERNATIONALIZATION, both directly and indirectly, via technology intensity (variable name: TECHNOLOGY INTENSITY), which is measured by R&D expenditure. As showed in Figure 7.1, the degree of internationalization (variable name: DEGREE OF INTERNATIONALIZATION) defines export performance of SMEs.

The second research framework this research inherits is that of Roxas and Chadee (2011), who look at social capital from the resource-based view. Roxas and Chadee (2011) analyse the impacts of social capital on export performance of SMEs in the

Philippines through knowledge facilitation. In this model, social capital is measured using two manifest variables: export partner relational capital, and generic export relational capital. Their research framework is presented in Figure 7.2.

Figure 7.2: Research framework for social capital and export performance, by Roxas and Chadee (2011)



Source: Roxas and Chadee (2011, p. 7)

7.2.2 From qualitative findings to conceptual model

7.2.2.1 Rationales for development of the new conceptual frameworks

While the theoretical frameworks proposed by Dhanaraj and Beamish (2003) and Roxas and Chadee (2011) look at various factors affecting export performance of SMEs, it is suggested from the qualitative findings that these factors can be modified and incorporated into one single model. As presented in Chapter 5, and supported by extant literature (e.g. Johanson & Vahlne 1977; Pinho 2011; Roxas and Chadee 2011), social capital contributes positively to export performance of SMEs through various channels, with knowledge facilitation particularly important. Impacts of social capital on export performance of SMEs may differ, depending on firm size, firm sector, and the stage of development. The qualitative results show that stronger impacts of social capital are found in smaller firms, and for firms at the starting phase or operating in restricted sectors. Thus, impacts of social capital on export performance of SMEs may need to be examined in relation to other characteristics of firms such as firm size, sector and age, as well as firms' knowledge and management's view on innovation strategy.

While incorporating the two models mentioned above, the qualitative findings give guidance for adjusting the model in several aspects, including the modification of existing factors and the inclusion of new factors. These adjustments are necessary given the research context and the feasibility of factor measurements.

7.2.2.2 Developing a conceptual framework

Firstly, current literature on export performance confirms the likelihood of a positive relationship between firm size and a firm's export performance (Cavusgil & Nevin 1981; Dhanaraj & Beamish 2003; Sousa, Martínez-López & Coelho 2008). The explanations range from better competitive advantages from economies of scale and scope, to better resources for organization of export activities and to cope with uncertainty in the international market (Loane & Bell 2006; Pham 2008; Presutti, Boari & Fratocchi 2007). Thus, the present research includes firm size in the model and uses it as a control variable. However, while the model of Dhanaraj and Beamish (2003) uses total employees and total sales for the observable construct of firm size, total employees only is looked at here as indicator of firm size. There are three reasons for this decision: firstly, total number of employees is used to define an SME according to Vietnamese law (Decree 56-NDCP, 2009); secondly, total number of employees is used to categorize SMEs into different groups, of micro enterprises, small enterprises, and medium-sized enterprises; and finally, total number of employees has been widely used as a measure of firm size in many studies about performance of SMEs in Vietnam (e.g. Vu, VH 2012, 2014).

Secondly, a firm's innovation is used to represent ENTERPRISE. The measurement of ENTERPRISE in the model of Dhanaraj and Beamish (2003) includes three self-reported indicators about entrepreneur resources: (1) the firm's perception of itself as a technology leader within the industry; (2) the firm's perception of the importance of innovation to its export success; and (3) the firm's emphasis on devoting resources to cutting edge development. Although the use of the above three indicators in the datasets of SMEs in the USA and Canada is plausible, these indicators seem to be irrelevant within the context of SMEs in a developing country such as Vietnam. Resources of SMEs in developing countries are limited (Moini 1997; Roxas & Chadee 2011), and it is difficult and impractical for SMEs to pursue a cutting-edge development strategy (Correa, Dayoub & Francisco 2007); rather, "innovation is mostly exogenous and takes the form of incremental (often imitative) modifications of existing products or processes" (Nassimbeni 2001, p. 248). Moreover, given the flexibility in arranging resources, SMEs' most popular strategy has been realizing and targeting niche markets, rather than being technology leaders in the industry. Therefore, the ENTERPRISE indicator should be modified, contextualized, and possibly retitled. On the other hand, the present study's qualitative findings support the use of firms' innovation capability over

the vague ENTEPRISE, since the qualitative narratives showed that export markets in general are more competitive, requiring both firms and their owners to be more innovative. The present study, therefore, focuses on the firms' innovation capability, and replaces the ENTERPRISE construct in the model Dhanaraj and Beamish (2003) with the INNOVATION construct.

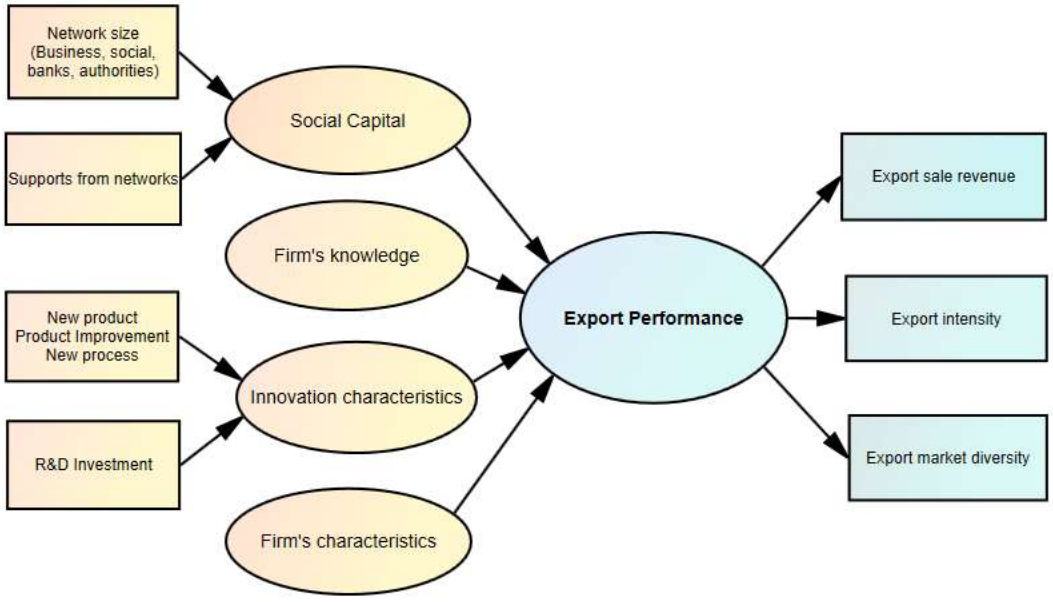
Thirdly, while the Roxas and Chadee (2011) model indicates that export knowledge is a mediator for social capital, many other studies have found direct impacts of knowledge on export performance of SMEs (Aaby & Slater 1989; Fernández-Olmos, Gargallo-Castel & Giner-Bagües 2016; Ganotakis & Love 2012). The qualitative findings also show that export knowledge can affect export performance directly as an independent factor, as well as indirectly as a mediating variable through social capital. Therefore, our model will add firm's knowledge as an independent explanatory factor.

Fourthly, with regard to the factor of main interest - social capital - the study of Roxas and Chadee (2011) examines merely export partner relational capital and generic export relational capital, which only represent part of the relational dimension of the social capital concept. Essentially, previous studies on the relationship between social capital and firm's internationalization and performance have analysed various dimensions of social capital such as the structural, relational and cognitive dimensions (Lindstrand, Melén & Nordman 2011; Yli-Renko, Autio & Tontti 2002). Within the structural dimension, various types of networks (such as formal business networks, social networks, political networks) have been explored (Mesquita & Lazzarini 2008; Xu, Lin & Lin 2008; Zhang, X et al. 2016). Moreover, our qualitative findings show that social capital, in the form of network relationships, contains not only the type of networks (network ties) and the size of those networks (network density) but, more importantly, social capital contains the resources from these networks (Nahapiet & Ghoshal 1998). Therefore, social capital is represented by both network size and network resources of four different ties: business networks, social networks, bank networks, and political networks.

Finally, the proposed model will omit the moderating variable - DEGREE OF INTERNATIONALIZATION. Instead, the DEGREE OF INTERNATIONALIZATION construct will be incorporated as a dimension of the dependant variable of EXPORT PERFORMANCE. This inclusion is relevant because DEGREE OF INTERNATIONALIZATION is constructed by export intensity and diversity, which are arguably indicators of export performance of SMEs (Papadopoulos & Martín Martín

2010). In addition, while the present study keeps export growth as a construct of export performance, the model here omits export market share and export profit from the existing model of Dhanaraj and Beamish (2003). For SMEs, especially SMEs from developing countries, it is impractical and irrelevant to use export market share as an indicator of export performance, because of their small scale (Carneiro, Rocha & Silva 2007; Roxas & Chadee 2011). SMEs in general do not have sufficient resources to pursue long-term market share strategy; rather, they follow short-term objectives. With regard to the export profit indicator, the accounting bookkeeping practice for SMEs often does not clearly distinguish between domestic and export profit. The small scale of businesses causes the separation of overhead costs to be less practical. Therefore, it is argued here that the ability to access different markets, the intensity of exporting, and the actual export sales revenue, are expected to better represent firms' success in international markets (Roxas & Chadee 2011; Shamsuddoha & Ali 2006). The qualitative data in the present study, in the meantime, show that the combination of the above three variables should represent perceived export performance of SMEs in the sample.

Figure 7.3: Proposed research framework



7.3 Hypotheses development

7.3.1 Relationship between social capital and export performance

From the resource-based view, a firm's relationship with its business partners is claimed to be part of the firm's assets (Barney 2001; Roxas & Chadee 2011). The firm's network and relationships are social capital that can be utilized as a firm's resources and capabilities to support its performance. From this perspective, it can be argued that, given other resources and capabilities, firms perform differently according to the differences in the business relationships they hold. In other words, the firm with the higher ability to develop and manage network relationships performs better. This argument holds validity typically for SMEs in developing countries, because one of the major difficulties for SMEs in developing countries is the lack of resources. It is impractical for these firms to gather all necessary resources to enter the export business (Luo 2003; Pinho 2011; Roxas & Chadee 2011). Thus, social capital in the form of external connections can be used to fill the gap. Our qualitative findings also suggest that social capital is typically important in gathering and filtering information for SMEs, especially during the starting period (Chapter 5, Section 5.3.2 and 5.3.4).

From the integration of the resource-based view and the transaction cost perspective, where decisions are based on minimization of transaction costs (Thai & Chong 2011), social capital can be used to minimize transaction costs of a firm and facilitate its performance (Yang, Ho & Chang 2010; Raman et al. 2013). From this integrated perspective, social capital is considered as a unique resource which helps firms outperform through cost-cutting mechanisms.

The traditional resource-based view emphasizes that the possession of strategic resources is critical for shaping, positioning and building a firm's competitive advantage in the marketplace. On the other hand, other work argues that it is the capability of firms in organizing these resources that is more essential for firms' performance (Loane & Bell 2006; Roxas & Chadee 2011). This argument is a significant evolution of the resource-based view and sets the background for the research on dynamic capabilities. Under a dynamic capabilities perspective, a firm's ability to organize, integrate, build and reconfigure internal and external resources to interact and adapt with a changing business environment is critical (Teece, Pisano & Shuen 1997). Through the lens of dynamic capabilities, we argue that social capital is a dynamic capability, in that it helps a firm to

create new resources and capabilities by connecting available resources from internal and external networks to facilitate its business performance. This capability is especially important in export ventures where the perceived level of uncertainty is higher than in the domestic market. Thus, social capital and export performance may have a positive relationship.

By integrating the dynamic capabilities perspective and rent theory, Blyler & Coff (2003) claim that social capital is essential for the acquisition, integration, and diffusion of resources at the core of a dynamic capability. Therefore, social capital may be a key to understanding both rent generation and rent appropriation. While rent is defined as a form of 'excessive income', it can be perceived as positive or negative, depending on how it is realized (Crudeli 2006). Rent generation (or rent creation) is the result of efficient economic activities, or a reward for outperforming enterprises. Rent generation is viewed as a motivation for firm's innovation and dynamics, and therefore, a firm can utilize its social capital for rent creation. In contrast, rent appropriation is the use of non-economic power to capture 'excessive income' on a non-competitive basis (Crudeli 2006). In the context of a transitional developing economy, it is argued that rent is typically directed at the discretion of related government officials (Mbaku 1998). Hence, social capital, typically but not necessarily in the form of informal political connections, may be perceived to be extremely important for the performance of firms.

In short, social capital is considered an emergent factor impacting the performance of firms; and it is argued here that export performance of a firm and its level of social capital may correlate in several ways. That is, variations in the level of social capital leads to variations in the performance of SMEs.

Thus, the following hypothesis is proposed:

H1: Social capital is positively related to export performance of SMEs in Vietnam.

Since social capital is a multidimensional concept, the quantitative study only focuses on the structural and the relational dimensions of social capital. For this, the structural dimension of social capital (or the width of the network) is proxied by four categories of network, being: (1) formal business networks relationships; (2) social networks relationships; (3) bank networks relationships; and (4) political networks relationships. The relational dimension (or the depth of the network) is proxied by the

resources or support provided by the said networks. Hypothesis H1 is thus extended to five hypotheses as follows:

H1a: SMEs with greater number of formal business relationships are more likely to have better export performance.

H1b: SMEs with greater number of social networks relationships are more likely to have better export performance.

H1c: SMEs with greater number of bank networks relationships are more likely to have better export performance.

H1d: SMEs with greater number of public official networks relationships are more likely to have better export performance.

H1e: SMEs that receive more support from their networks are more likely to have better export performance.

7.3.2 Relationship between export knowledge and export performance

There is extant literature on the positive impacts of social capital on the creation of human capital (see, for example, Nahapiet & Ghoshal 1998). With regard to building export knowledge, as discussed previously, social capital helps firms in gathering and filtering export market information more efficiently, hence facilitating the export knowledge of firms. Our qualitative data also indicate that networks can help firms to improve their operational export knowledge. This improvement can be achieved through sharing experience with intra-industry successful firms and the various coaching activities organized by trade associations (Sharma, Sraha & Crick 2018). From the resource-based view, social networks are considered to support export involvement of firms through various knowledge creation mechanisms. Social networks provide experiential knowledge about export markets and for converting implicit into explicit knowledge (Johanson & Vahlne 1977). When knowledge grows out of increasing experience in foreign markets, new capabilities are acquired, and subsequently the degree of market commitment also increases, facilitating more learning and knowledge spillover (Johanson & Vahlne 1977; Pinho 2011).

As exporting firms request various intellectual resources, ranging from international market knowledge, international practice conduct (international commercial

term), and international and national policies and related law and regulations, to supply chain management and financial management requirements for export ventures, exporting is considered a resource-hungry business venture (Roxas & Chadee 2011). Firms that have more export knowledge would be expected to better perform in their export ventures. Thus, the next hypothesis is proposed:

H2: Export knowledge is positively related to export performance of SMEs in Vietnam.

7.3.3 Relationship between innovation and export performance

At the macroeconomic level, evidence has been presented that tends to support the contention that variances in innovation can affect firms' export performance. However, at the microeconomic level, results from empirical studies have been inconsistent (Correa, Dayoub & Francisco 2007). For example, empirical studies conducted by Baum, Schwens and Kabst (2015) have found that innovation has a positive influence on the international performance of SMEs only if associated with prior international experience and a born-global strategy. On the other hand, when measured by indicators such as product innovation and process innovation, Wakelin (1998) found that innovation activities positively affect export intensity. In contrast, Lefebvre, Lefebvre and Bourgault (1998) found that process innovations are more important drivers of export intensity than are product innovations.

The mixed findings regarding innovation in the reviewed literature suggest that results have been strongly influenced by specificities of the analysed contexts (e.g. countries and sectors) and by methodologies in terms of measures and models (Correa, Dayoub & Francisco 2007). For the case of SMEs, the R&D indicator by itself may not be an accurate proxy for innovation (Wakelin 1998), since for SMEs, "innovation is mostly exogenous and takes the form of incremental (often imitative) modifications of existing products or processes" (Nassimbeni 2001, p. 248). In these cases, R&D is only a partial measure of technology, because it does not consider incremental improvements of products and processes observed in small and medium firms that do not have a formal R&D department.

Informed by the mixed results of the current literature, the present research follows the approach of Wakelin (1998) in using the innovation definition of the "Science Policy Research Unit/SPRU" innovation survey, as cited in Correa, Dayoub and Francisco (2007, p. 6), which defines innovation as "the successful commercial

introduction of new or improved products, process or materials in the market". For this, it is proposed here to examine impacts of innovation indicators and R&D processes separately. Therefore, the following hypotheses are proposed:

H3a: Firms' innovation activities are positively related to export performance of SMEs in Vietnam.

H3b: Firms' R&D investment is positively related to export performance of SMEs in Vietnam.

7.3.4 Other predictors of export performance

7.3.4.1 Firm size

Firm size has been widely used as a predictor of export performance (see, for example, Dhanaraj & Beamish 2003; Sousa, Martínez-López & Coelho 2008; Zou & Stan 1998). Larger firms are expected to have higher levels of resources necessary for the successful arrangement of export activities. These resources include finance readiness, market knowledge and information, and human and social capital. Larger firms are also perceived to be in a better position for coping with uncertainty in the international market. On the other hand, following the laws of economy of scale and scope, larger firms are more likely to be involved in export activities to capture higher margins and diversify market risk. As such, these firms are expected to have better export performance, in comparison to smaller firms of similar characteristics. In the present research, therefore, firm size is used as a control variable.

7.3.4.2 Export experience

Similar to firm size, export experience has also been confirmed to have a positive relationship with export performance of a firm (see, for example, Dhanaraj & Beamish 2003; Sousa, Martínez-López & Coelho 2008; Zou & Stan 1998). A considerable number of studies have established the key role played by export experience, which largely affects the capacity to perceive risks and opportunities in foreign marketplaces and to come up with effective solutions (Aaby & Slater 1989; Cavusgil & Nevin 1981; Moini 1997). In the present study, export experience will be used as another control variable.

7.4 Data descriptions and descriptive statistics

7.4.1 Data source

The data used in this chapter are the panel data described in Chapter 4 (Section 4.5.1), which has already been used in Chapter 6. However, this chapter only focuses on examining factors influencing export performance of SMEs, because the inclusion of non-exporting firms (which account for more than 90% of the observations in the panel) may lead to bias in the estimation results. The study, therefore, uses the data screening technique to create a panel data of exporters only.

7.4.2 Data screening

In 385 firm-year observations of self-declared exporters, there are 229 observations having zero percent for export percentage, leaving only 156 observations with positive export sales. In justifying whether these 229 cases are in fact inactive exporters, individual observations are investigated, by following three steps described as follows.

Firstly, the cases with relevant indicators of export performance were browsed, starting with export percentage and export revenue figures, then number of export markets information. It was found that the information related to inactive exporters were systematic. For example, if the export percentage of an individual case is nil, the number of export markets and export revenue for such a case is nil.

Secondly, zero revenue cases were cross-checked with other indicators in the survey data related to export activities of firms, such as the first year of export. It was consistently found that information on export starting year was blank/missing for all the cases with zero percent on export intensity. Finally, we substantiated this with additional information related to export operational procedures, such as *"the average time for customs clearance"* and *"average time of transportation to export market(s)"*; and for those observations with no export revenue, the information was found to be void.

Thus, it is highly possible that the response "YES" to the question, "Does your firm export?", for these firms may indeed refer to either their intentions of exporting or the inclusion of the 'export' function in their registration licenses rather than indicate them being an actual exporter. Since the data justifying the inactive exporting status of these cases are systematic, it was decided to sort out these inactive exporters by dropping observations, to avoid bias in the analysis.

After excluding missing values and outliers and checking the consistency of time-invariant variables among the five survey rounds, this resulted in panel data of 147 observations in 74 groups, or 74 firm identities. Although SMEs in the panel had participated in all the five survey rounds, only observations of the years that export revenue was positive is kept. Therefore, the frequencies of firm identity in this panel range from one to five; resulting in an unbalanced panel.

The dataset contains all interested dependent variables and explanatory variables. This makes possible a test of the influence of social capital on export performance of SMEs.

7.5 Models of export performance of SMEs

7.5.1 Variable description and measurement

7.5.1.1 Dependent variables

At firm level, export performance is generally defined as "the composite outcome of a firm's international sales" (Shoham 1998, p. 61). The 'outcomes' are generally agreed to encompass economic and strategic aspects of performance and should also cover a time horizon sufficient to capture change (Papadopoulos & Martín Martín 2010; Shoham 1998)).

Economic 'outcomes' are the most popular measure of export performance (Carneiro, Rocha & Silva 2007; Papadopoulos & Martín Martín 2010). For example, in a review by Carneiro, Rocha and Silva (2007), economic measures were used by 33 out of 37 studies (89%). Some of most widely used economic indicators include export sales (Sharma, Nguyen & Crick 2018; Sharma, Sraha & Crick 2018; Shoham 1998; Singh 2009; Zou & Stan 1998), export sales growth (Gashi, Hashi & Pugh 2014; Sharma, Nguyen & Crick 2018; Sharma, Sraha & Crick 2018), and export profits (Sharma, Nguyen & Crick 2018; Sharma, Sraha & Crick 2018; Zou & Stan 1998).

Economic 'outcomes' are operationalized differently in different studies (Carneiro, Rocha & Silva 2007). For example, export sales are measured either by the absolute dollar amount of export revenue (Lages, Lages & Lages 2004; Singh 2009; Zou & Stan 1998) or by the export sales intensity, which is the percentage of export over total sales (Katsikeas, Leonidou & Morgan 2000), or both (Shoham 1998).

Besides the issue of inconsistency in operationalization of economic 'outcomes', export performance measurement models appear to be incompatible in terms of the mode of measurement. While it is more plausible to use a combination of objective historical data and subjective evaluation to enable a thorough analysis of firms' export performance, the collection of both objective and subjective data in a single study is in general not easy. Thus, most studies only focus on either objective historical data or on subjective evaluation data.

Export performance in this study is measured using three different variables, namely Export Sales Revenue, Export Intensity, and Export Market Diversity (Papadopoulos & Martín Martín 2010; Singh 2009):

- ***Export Sales Revenue*** is a continuous variable, measured by the logarithm of the Export revenue, which is *Total revenue* multiply by *Export percentage* (percentage of Total revenue derived from export). A potential problem with time variant data is that they are often expressed in current prices of the survey year. Therefore, in the present study the GDP deflators calculated by the World Bank[20] are used to deflate the data of revenue to base year 2010, to avoid bias that might arise due to inflation.
- ***Export Intensity (Export percentage)*** is a continuous variable, measured by the logarithm of the Export percentage.
- ***Export Diversity*** is a continuous variable, measured by the logarithm of the number of export markets.

7.5.1.2 Independent variables

Social capital constructs: Social capital is measured by the network size and the actual network support, as described in Chapter 6, Section 6.5.1.2.

Firm knowledge is measured by the level of firm knowledge of laws and regulations. This is a categorical variable with the following values: (1) no knowledge; (2) limited knowledge; (3) average knowledge; and (4) good knowledge.

Firm innovation: The present research adopts the "Science Policy Research Unit/SPRU" innovation survey, which defines innovation as "the successful commercial introduction of new or improved products, process or materials in the market." (Correa, Dayoub &

[20] http://data.worldbank.org/indicator/NY.GDP.DEFL.ZS?locations=VN&page=5 accessed 2 Feb 2017.

Francisco 2007, p. 6). For this, innovation capability of a firm is measured by three observable indicators: (1) introduction of new product; (2) improvement of existing products; (3) introduction of new processes. Firm innovation (***INNO***) is a dichotomous variable that takes the value 1 when the firm introduces new products, has improvement of existing products, or introduces a new process in the survey year; and 0 otherwise.

In addition to this, the R&D aspect is also included to investigate the impact of R&D on export performance in the context of Vietnam. ***R&D investment*** is a dichotomous variable that takes the value 1 if the firm makes investment in research and development; and 0 otherwise.

7.5.1.3 Control variables

Firm size is normally measured by total assets, total sales, or total employees. For the present research, firm size is measured by total number of full-time employees, based on four categories (Tran, C, Le & Nguyen 2008): (1) less than ten employees; (2) from ten to fifty employees; (3) from fifty to 200 employees; and (4) from 200 to 300 employees.

Export experience is a continuous variable, measured by number of years that firm operates in the export business.

Ownership is a dummy variable to represent whether a firm is established as a private limited liability company (dummy=1) or otherwise (dummy =0).

A summary of all variables in the model, with codes, types and definitions, is presented in Table 7.1.

Table 7.1: Summary of variable codes and definitions

No	Variable code	Type	Definition
	Dependent variables		
1	Export revenue	Continuous	*Export Sales Volume:* logarithm of the Export revenue
2	Export intensity	Continuous	*Export Intensity:* logarithm of the Export percentage
3	Export diversity	Continuous	*Export diversity*: logarithm of the number of export market
	Independent variables		
4	Firm_size	Categorical	*Firm size* categorized by number of total full-time employees in the firm.
5	Export experience	Discrete	Number of year of export experience.
6	Ownership	Dummy	=1 if a firm is established as private liability limited or =0 otherwise.
7	network size - business	Continuous	***Formal business contacts:*** measured by the logarithm of the total number of contacts being suppliers / customers / creditors/ debtors.
8	network size - social	Continuous	***Social network contacts:*** measured by the logarithm of the total number of contacts in the same sector and in different sectors, who are not included in the formal business networks of firms.
9	network size - bank	Continuous	***Bank network contacts:*** measured by the logarithm of the total number of a firm's contacts being bank officials.
10	network size - authorities	Continuous	***Political network contacts:*** measured by the logarithm of the total number of a firm's contacts being government officials or civil servants.
11	network support	Continuous	***Network resource:*** measured by the logarithm of the total assists that a firm received from its network relationships.
12	Knowledge	Categorical	***Firm knowledge:*** measured by the level of firm knowledge of laws and regulations. This is a categorical variable with the following values: (1) no knowledge; (2) limited knowledge; (3) average knowledge; and (4) good knowledge.
13	INNO	Dummy	***Firm innovation*** is a dichotomous variable that takes the value 1 when the firm introduces new products, improves existing products, or introduces a new process, in the survey year; and 0 otherwise.
14	D_RDinvest	Dummy	***R&D investment*** is a dichotomous variable that takes the value 1 if the firm makes investment in research and development; and 0 otherwise.

7.5.2 Descriptive statistics

Table 7.2 presents the summary statistics of all variables in the Export Performance model. There are three dependent variables and three group of independent variables. Group 1 comprises three control variables, presenting firm characteristics: firm size, firm ownership and firm export experience. Group 2 comprises five variables representing social capital level of firms. Group 3 comprises export knowledge, firm innovation, and research and development variables.

Table 7.2: Summary statistics of variables in Export Performance model

Variable	Obs	Mean	Std. Dev.	Min	Max
Export revenue	147	15.164	1.348	11.275	17.190
Export intensity	147	3.558	1.041	0.693	4.605
Export diversity	147	1.122	0.674	0.000	3.367
Firm_size*					
from 11 to 50	147	0.476	0.501	0.000	1.000
from 51 to 200	147	0.408	0.493	0.000	1.000
from 201 to 300	147	0.014	0.116	0.000	1.000
Ownership	147	0.701	0.460	0.000	1.000
Export experience	147	8.646	6.422	0.000	23.000
network size - business	147	3.293	1.000	1.099	7.363
network size - social	147	3.177	0.899	1.099	5.984
network size - banks	147	0.975	0.721	0.000	3.367
network size - authorities	147	1.004	0.750	0.000	2.833
network supports	147	3.814	1.883	0.000	7.723
Knowledge**					
Limited knowledge	147	0.177	0.383	0.000	1.000
Average knowledge	147	0.429	0.497	0.000	1.000
Good knowledge	147	0.361	0.482	0.000	1.000
INNO	147	0.626	0.486	0.000	1.000
D_RDinvest	147	0.388	0.489	0.000	1.000

Note: **The baseline is the group having less than 10 employees*

*** The baseline is the group having no knowledge of laws and regulations*

7.5.3 Diagnostic tests

7.5.3.1 Multicollinearity

Correlation analysis was used to determine the links between export performance-dependent variables and social capital variables. The pairwise correlation matrix presented in Table 7.3 (on the next page) shows the correlation between all variables considered in regression. Overall, most correlation coefficients among variables are quite low. The highest correlation coefficient (0.87) is between business network size and social network size. The second highest coefficient (0.46) represents the relationship between export revenue and firm size. Following the recommendation of Tabachnick and Fidell (2013) that the assumption of no multicollinearity is met if correlation coefficients among independent variables are less than 0.90, it is confirmed that no multicollinearity exists in the panel data.

The correlation matrix demonstrates that not all explanatory variables are significantly correlated with the dependent variables. Firstly, export revenue is positively related to firm size, export experience, export knowledge, and very interestingly, to only one social capital variable, i.e. the size of bank contacts. On the other hand, export intensity is positively related to export experience and R&D investment, but again very interestingly, is negatively correlated with four social capital variables: business networks size, social networks size, bank networks size, and the resources from networks. Finally, export market diversity only shows positive correlation with the size of social networks relationship.

Table 7.3: Pairwise correlation matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Export revenue (1)	1													
Export Intensity (2)	0.501*	1												
	0.000													
Export diversity (3)	0.114	0.156	1											
	0.169	0.059												
Firm_size (4)	0.467*	-0.097	-0.099	1										
	0.000	0.243	0.231											
Ownership (5)	0.221*	-0.150	0.089	0.081	1									
	0.007	0.070	0.286	0.330										
Ex_experience (6)	0.178*	0.176*	-0.158	0.018	0.071	1								
	0.031	0.033	0.056	0.830	0.395									
network size - business (7)	0.044	-0.341*	0.133	0.112	0.177*	-0.138	1							
	0.596	0.000	0.108	0.176	0.032	0.095								
network size - social (8)	0.039	-0.349*	0.194*	0.064	0.304*	-0.131	0.869*	1						
	0.640	0.000	0.018	0.445	0.000	0.114	0.000							
network size - banks (9)	0.181*	-0.244*	-0.028	0.357*	0.197*	-0.082	0.444*	0.399*	1					
	0.029	0.003	0.736	0.000	0.017	0.324	0.000	0.000						
network size - authorities (10)	-0.027	-0.155	0.033	0.185*	0.009	-0.060	0.400*	0.298*	0.269*	1				
	0.747	0.062	0.690	0.025	0.911	0.467	0.000	0.000	0.001					
network supports (11)	0.114	-0.218*	0.008	0.037	0.195*	-0.103	0.346*	0.346*	0.165*	0.179*	1			
	0.168	0.008	0.928	0.657	0.018	0.216	0.000	0.000	0.046	0.030				
Knowledge (12)	0.273*	0.036	-0.121	0.228*	0.148	0.160	0.148	0.067	0.147	0.064	0.032	1		
	0.001	0.663	0.146	0.006	0.074	0.054	0.074	0.422	0.076	0.445	0.702			
INNO (13)	0.028	0.008	0.076	0.070	0.109	0.109	0.004	0.013	0.003	0.079	0.099	0.127	1	
	0.738	0.928	0.362	0.402	0.191	0.190	0.964	0.878	0.972	0.340	0.233	0.124		
D_RDinvest (14)	0.055	0.218*	0.002	-0.145	-0.059	0.044	-0.103	-0.195*	-0.279*	-0.122	-0.168*	0.059	-0.077	1
	0.509	0.008	0.977	0.080	0.477	0.597	0.214	0.018	0.001	0.140	0.042	0.481	0.353	

*Note: * $p < 0.05$.*

7.5.3.2 Homoscedasticity

Homoscedasticity refers to the assumption that dependent variables exhibit equal levels of variance across all values of the independent variables (Statistics Solutions 2013). The violation of homoscedasticity assumption is called heteroscedasticity, referring to the case when the size of the error term differs across values of an independent variable.

When heteroscedasticity presents, the OLS regression will be biased toward cases with the larger variance over other observation. Moreover, heteroscedasticity causes biased in the standard errors, which leads to incorrect conclusions about the significance of the regression coefficients (Statistics Solutions 2013).

For the case of regression using panel data, Torres-Reyna (2007) suggests that the option 'robust' can be added to the regression model to control for heteroscedasticity. Another solution to address the heteroscedasticity issue is to transform the dependent variable using logarithmic transformations, which is considered one of the variance stabilizing transformations (Statistics Solutions 2013). For this study, both robust option to estimate robust standard errors and logarithmic transformations are applied to rectify the heteroscedasticity issues.

7.5.3.3 Cross-sectional dependence / Contemporaneous correlation

In econometric analysis, cross-sectional dependence refers to the situation that observations in the panel data are not spatially independent from each other, and thus can lead to biased statistical inference (Hoechle 2007). If cross-sectional dependence exists, then the model is considered to violate two assumptions: the interdependency between observations, and the homogeneity of distributions (Sarafidis & Wansbeek 2012). However, according to Baltagi (2008), cross-sectional dependence is generally a problem in macro panels with long time series (over 20-30 years). For the panel in the present study, with large number of cases and only five waves of data, it can be considered a micro panel. Thus, cross-sectional dependence is not problematic and can be remedied by using the robust standard errors option provided in the Stata program.

7.5.3.4 Serial correlation

According to Torres-Reyna (2007), serial correlation causes the standard errors of the coefficients to be smaller than they actually are and gives a higher R-squared. However, serial correlation tests apply to macro panels with long time series (over 20-30 years), and

so this is not a problem in micro panels (with very few years). Thus, for the panel data used in this research with only five waves of data over ten years, serial correlation should not cause any bias.

7.6 Empirical results and analysis

7.6.1 Regression model on export revenue

7.6.1.1 Regression model selection

The Hausman specification test was run to choose between a fixed effects model versus a random effects model. The value of the test was positive, and the Prob>chi2 = 0.6289, which is larger than 0.05 (insignificant), indicating that the null hypothesis is rejected and the random effects is the preferred model.

Table 7.4: Hausman test to select between fixed effects and random effects models

	Coefficients			
	(b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
network supports	0.079	0.085	-0.007	0.021
network size - business	-0.235	-0.187	-0.049	0.094
network size - social	0.205	0.139	0.066	0.088
network size - banks	-0.163	-0.043	-0.120	0.099
network size - authorities	-0.228	-0.173	-0.055	0.093
2.Firm_size	2.008	1.564	0.444	0.281
3.Firm_size	2.635	2.396	0.239	0.361
4.Firm_size	2.377	2.287	0.091	0.431
Ownership	1.362	0.470	0.892	0.664
Export_experience	0.010	0.024	-0.013	0.008
2. Knowledge	0.763	0.949	-0.185	0.433
3. Knowledge	0.521	0.909	-0.388	0.397
4. Knowledge	0.685	1.051	-0.366	0.402
INNO	-0.313	-0.194	-0.119	0.104
D_RDinvest	0.475	0.339	0.136	0.118

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg
Test: Ho: difference in coefficients not systematic
chi2(15) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 12.66
Prob>chi2 = 0.629

Next, we performed the Breusch-Pagan Lagrange multiplier (LM) test to choose between a random effects regression and a simple OLS. The null hypothesis in the LM test is that variance across entities is zero, or no significant difference across units (i.e. no

panel effect). The value of the test was positive (chibar2=15.58), and the Prob>chibar2 = 0.000, indicating that the null hypothesis is rejected, and that there is evidence of significant differences across entities. Thus, the random effects model is preferred over the OLS.

Table 7.5: Breusch and Pagan Lagrangian multiplier test to select between random effects and OLS models

Export Revenue [Firm_ID, t] = Xb + u[Firm_ID] + e[Firm_ID,t]

	Var	sd=sqrt(Var)
Export Revenue	1.816	1.348
e	0.478	0.691
u	1.045	1.022

Test: Var(u) = 0
chibar2(01) = 15.58
Prob > chibar2 = 0.000

The random effects regression model is specified as follows:

$$Y_{it} = \alpha + \beta * X_{it} + e_{it} + u_i$$

where:

- α is the intercept
- β is vector of parameters
- *i* is firm and *t* is time
- Y_{it}: the dependent variable of firm *i* in year *t*
- X_{it}: K x 1 vector of explanatory variables
- u_i is the within-entity error
- e_{it} is the between-entity error

7.6.1.2 Results analysis

Table 7.6 shows the results of the random effects regression models. In order to test our Hypotheses H1 (a, b, c, d, e), H2 and H3, four random effects regression models are run with dependent variables of export revenue:

- ***Model 1*** is the baseline model that includes only controlling variables. We use the baseline as a primary check to see whether the adding of independent variables helps to improve, or disturbs, the baseline model.
- ***Model 2*** adds social capital constructs to the baseline model to test Hypotheses H1a, H1b, H1c, H1d and H1e.

- ***Model 3*** adds the firm knowledge variable to Model 2 to test Hypothesis H2.
- ***Model 4*** adds the firm innovation capability construct to Model 3 to test Hypotheses H3a and H3b.

Table 7.6: Random effects regression model

	Dependent Variable: Export revenue			
	(1)	(2)	(3)	(4)
VARIABLES	Coefficients	Coefficients	Coefficients	Coefficients
2.Firm_size	1.272***	1.462***	1.598***	1.564***
	(0.313)	(0.319)	(0.342)	(0.338)
3.Firm_size	2.038***	2.273***	2.359***	2.396***
	(0.335)	(0.350)	(0.365)	(0.361)
4.Firm_size	2.115***	2.276***	2.123***	2.287***
	(0.676)	(0.679)	(0.678)	(0.665)
Ownership	0.537**	0.487*	0.433	0.470
	(0.272)	(0.289)	(0.286)	(0.288)
Export experience	0.030**	0.028**	0.024*	0.024*
	(0.013)	(0.013)	(0.013)	(0.013)
network size - business		-0.037	-0.104	-0.187
		(0.172)	(0.174)	(0.174)
network size - social		0.001	0.045	0.139
		(0.175)	(0.179)	(0.179)
network size - banks		-0.085	-0.058	-0.043
		(0.143)	(0.142)	(0.141)
network size - authorities		-0.206*	-0.181	-0.173
		(0.119)	(0.117)	(0.115)
Network supports		0.066	0.074*	0.085**
		(0.042)	(0.042)	(0.041)
2.Ex_kngedge3			1.202**	0.949*
			(0.487)	(0.494)
3.Ex_kngedge3			1.151**	0.909*
			(0.462)	(0.467)
4.Ex_kngedge3			1.270***	1.051**
			(0.469)	(0.470)
INNO				-0.194
				(0.163)
D_RDinvest				0.339*
				(0.176)
Constant	12.92***	12.94***	11.76***	11.86***
	(0.332)	(0.442)	(0.637)	(0.649)
Observations	147	147	147	147
Number of firms	74	74	74	74
Wald chi2	58.21	65.04	74.48	81.30
Prob > chi2	0.000	0.000	0.000	0.000

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.*

Firstly, the random effects regression results show that both control variables of Firm size and Export experience have consistent positive impacts on export revenue of

SMEs, which is consistent with previous studies on the determinants of firm size in export revenue.

Secondly, while the impact of Ownership on export revenue is positive and significant for Models 1 and 2, these consistent results are not found when adding more explanatory variables of interest.

Thirdly, regarding the main variables of interest, Social capital variables, estimation results show mixed effects on different types of networks. While the sizes of both formal business networks and social networks do not show consistently and statistically significant impacts on export revenue of exporting SMEs, the resources that firms obtain from networks appear to have consistent positive correlation with export revenue. The coefficients are statistically significant at $p<0.1$ in Model 3 and at $p<0.05$ in Model 4, thus supporting Hypothesis 1e. This result is in line with the expectation that the substances or quality of social networks play more important roles in supporting performance of SMEs than the size of such networks does. It, therefore, appears that it is the resources dimension of social capital that can support export performance of SMEs, through enhancing entrepreneurial awareness about foreign market opportunities by providing entrepreneurs with relevant and refined information regarding opportunities that might exist in foreign markets. In the meantime, social network resources may help to mitigate SMEs' perception of risk in international markets.

With regard to the bank network capability and political network capacity, regression results show that the coefficients between the number of contacts, being bank officials and export volume of SMEs in the panel, are not statistically significant, indicating that Hypotheses 1c and 1d are not supported.

Fourthly, with regard to Export knowledge of firms, the regression results show that the coefficients of Export knowledge are consistently positive and statistically significant at the confidence level of 99% ($p<0.001$). The magnitude of the coefficients increases when the level of Export knowledge increases (from 0.96 to 1.13), and when the level of knowledge increases from 'limited knowledge' to 'good knowledge', indicating that the better knowledge firms have, the higher export revenue firms achieve. This result, thus, supports Hypothesis 2 and is in line with expectation.

Finally, there is an absence of statistically significant results for the impact of innovation on export revenue of the sample SMEs. The dummy variable of innovation is

neither positively nor significantly related to export revenue. Thus, Hypothesis H3a is rejected. On the other hand, the regression results show that R&D investment is positively related to export revenue, and the results are statistically significant. Therefore, Hypothesis H3b is supported.

7.6.1.3 Robustness check

In order to control for heteroscedasticity in the random effects model, I replicate the random effects regression model with the robust option, to produce the robust standard errors (Torres-Reyna 2007b). This option has been provided in the Stata program to help rectify certain violations of the underlying model (Hoechle 2007).

The results of the robustness tests conducted, as presented below, are consistent with the main results of the present study. Most of the coefficients are equal to the coefficients obtained from the main regression (see Table 7.7). However, the significance levels are reduced in the robust model. For example, in the main regression model, resources from networks are significant at 95% confidence level; but in the robust model this variable is only significant at 90% confidence level. Similarly, in the main model, variable 'Export Knowledge' is significant (at 95% confidence level) for three categories (limited knowledge, average knowledge, and good knowledge); but in the robust model, only good export knowledge significantly influences (at 90% confidence level) the dependent variable of export revenue.

In summary, although the confidence levels and significant levels are adjusted under the robust model, it in general supports the conclusion that, whilst the resources from social networks are positively related to export revenue of firms, other indicators of network size are not. In addition, the results for export knowledge, innovation and R&D variables are in line with the main model. As such, the impact of good export knowledge and R&D on export revenue of SMEs is statistically significant, while that of general innovation is not.

Table 7.7: Random effects regression model, with robust standard errors

	Dependent Variable: Export revenue			
	(1)	(2)	(3)	(4)
VARIABLES	Coefficients	Coefficients	Coefficients	Coefficients
2.Firm_size	1.272***	1.462***	1.598***	1.564***
	(0.342)	(0.339)	(0.386)	(0.363)
3.Firm_size	2.038***	2.273***	2.359***	2.396***
	(0.346)	(0.355)	(0.394)	(0.382)
4.Firm_size	2.115***	2.276***	2.123***	2.287***
	(0.420)	(0.524)	(0.586)	(0.585)
Ownership	0.537**	0.487*	0.433	0.470*
	(0.253)	(0.279)	(0.269)	(0.281)
Export_experience	0.030**	0.028**	0.024**	0.024*
	(0.013)	(0.013)	(0.012)	(0.012)
network size - business		-0.037	-0.104	-0.187
		(0.183)	(0.203)	(0.199)
network size - social		0.001	0.045	0.139
		(0.173)	(0.179)	(0.171)
network size - banks		-0.085	-0.058	-0.043
		(0.142)	(0.146)	(0.139)
network size - authorities		-0.206	-0.181	-0.173
		(0.147)	(0.137)	(0.131)
network supports		0.066	0.074	0.085*
		(0.053)	(0.051)	(0.049)
2. Knowledge			1.202**	0.949
			(0.559)	(0.612)
3. Knowledge			1.151**	0.909
			(0.545)	(0.596)
4. Knowledge			1.270**	1.051*
			(0.563)	(0.607)
INNO				-0.194
				(0.189)
D_RDinvest				0.339**
				(0.166)
Constant	12.92***	12.94***	11.76***	11.86***
	(0.308)	(0.380)	(0.667)	(0.693)
Observations	147	147	147	147
Number of firms	74	74	74	74

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.*

Additional robustness checks were performed on each variable of social capital separately by controlling for all other variables. Results of the robustness check are consistent with the random effects regression models with regard to sign and statistical significance of variables. Results of the regression on social capital variables are presented in Table 7.8; the full regression results on all variables can be found in Appendix 7.

Table 7.8: Random effects regression model on each SC variables, with robust standard errors

	Dependent variable: export revenue					
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Coef	Coef	Coef	Coef	Coef	Coef
network supports	0.080*	0.071*	0.064	0.078*	0.080*	0.086**
	(0.041)	(0.041)	(0.039)	(0.040)	(0.041)	(0.041)
network size - business	-0.128					-0.076
	(0.091)					(0.099)
network size - social		-0.075			-0.020	
		(0.097)			(0.103)	
network size - banks			-0.121		-0.063	-0.037
			(0.131)		(0.140)	(0.141)
network size - authorities				-0.211*	-0.194*	-0.176
				(0.108)	(0.114)	(0.115)
Constant	11.87***	11.74***	11.67***	11.72***	11.80***	11.90***
	(0.647)	(0.650)	(0.623)	(0.612)	(0.646)	(0.646)
Observations	147	147	147	147	147	147
Number of Firm_ID	74	74	74	74	74	74
R square	0.392	0.374	0.385	0.406	0.413	0.419
Wald chi2	77.66	75.39	75.88	80.54	79.95	80.84
Prob> chi2	0.000	0.000	0.000	0.000	0.000	0.000

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.*

7.6.2 Regression model on export intensity

7.6.2.1 Regression model selection

The Hausman specification test was run to choose between a fixed effects model versus a random effects model. The value of the test was positive, and the Prob>chi2 = 0.689, which is larger than 0.05 (insignificant), indicating that the null hypothesis is rejected and the random effects is the preferred model.

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(14) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 11.87

Prob>chi2 = 0.689

Table 7.9: Hausman test to select between fixed effects and random effects models

	Coefficients			
	(b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
network supports	-0.043	-0.040	-0.003	0.017
network size - business	-0.190	-0.205	0.015	0.079
network size - social	0.187	0.108	0.079	0.074
network size - banks	-0.305	-0.198	-0.107	0.082
network size - authorities	0.002	0.050	-0.048	0.077
2.Firm_size	0.697	0.324	0.373	0.234
3.Firm_size	0.679	0.271	0.408	0.300
4.Firm_size	0.814	0.579	0.235	0.361
Ownership	0.440	-0.120	0.560	0.556
Export_experience	-0.009	0.007	-0.015	0.007
2. Knowledge	0.245	0.238	0.008	0.361
3. Knowledge	0.088	0.161	-0.073	0.331
4. Knowledge	0.299	0.375	-0.076	0.335
INNO	-0.181	-0.043	-0.138	0.087
D_RDinvest	0.289	0.237	0.052	0.098

Next, we performed the Breusch-Pagan Lagrange multiplier (LM) test to choose between a random effects regression and a simple OLS. The null hypothesis in the LM test is that variance across entities is zero, or no significant difference across units (i.e. no panel effect). The value of the test was positive (chibar2=9.01), and the Prob>chibar2 = 0.0013 (which is smaller than the significant level p=0.05), indicating that the null hypothesis is rejected, and that there is evidence of significant differences across entities. Thus, the random effects model is preferred over the OLS:

Export Intensity [Firm_ID, t] = Xb + u[Firm_ID] + e[Firm_ID,t]

	Var	sd=sqrt(Var)
Export Intensity	1.111	1.054
e	0.250	0.500
u	0.793	0.890

Test: Var(u) = 0
chibar2(01) = 9.01
Prob > chibar2 = 0.0013

7.6.2.2 Result analysis

The model on export intensity did not yield either consistent or statistically significant results. As can be seen from the reported R square and Wald chi2 test (Prob>chi2), the

models on export propensity did not explain the export intensity of the sampled SMEs in the panel.

Table 7.10: Random effects regression model on export intensity

	Dependent variable: Export Intensity					
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Coef	Coef	Coef	Coef	Coef	Coef
network supports	-0.034	-0.042	-0.051	-0.053	-0.046	-0.039
	(0.035)	(0.035)	(0.033)	(0.034)	(0.035)	(0.035)
network size - business	-0.157**					-0.119
	(0.077)					(0.084)
network size - social		-0.118			-0.066	
		(0.082)			(0.087)	
network size - banks			-0.244**		-0.219*	-0.193
			(0.109)		(0.119)	(0.119)
network size - authorities				-0.033	0.028	0.048
				(0.094)	(0.097)	(0.097)
2.Firm_size	0.335	0.330	0.362	0.335	0.346	0.336
	(0.282)	(0.285)	(0.279)	(0.291)	(0.287)	(0.285)
3.Firm_size	0.213	0.199	0.329	0.227	0.289	0.271
	(0.296)	(0.299)	(0.298)	(0.309)	(0.307)	(0.306)
4.Firm_size	0.438	0.442	0.684	0.552	0.599	0.549
	(0.554)	(0.563)	(0.545)	(0.563)	(0.563)	(0.557)
Ownership	-0.172	-0.146	-0.093	-0.197	-0.074	-0.089
	(0.236)	(0.239)	(0.242)	(0.241)	(0.245)	(0.243)
Export_experience	0.008	0.009	0.006	0.009	0.007	0.007
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
2. Knowledge	0.283	0.282	0.202	0.235	0.235	0.253
	(0.417)	(0.423)	(0.413)	(0.424)	(0.419)	(0.416)
3. Knowledge	0.198	0.175	0.096	0.117	0.134	0.168
	(0.395)	(0.400)	(0.389)	(0.400)	(0.396)	(0.394)
4. Knowledge	0.390	0.347	0.290	0.316	0.314	0.359
	(0.398)	(0.401)	(0.392)	(0.403)	(0.397)	(0.396)
INNO	-0.016	0.000	-0.035	-0.001	-0.029	-0.037
	(0.138)	(0.140)	(0.136)	(0.140)	(0.138)	(0.137)
D_RDinvest	0.245*	0.223	0.207	0.255*	0.195	0.212
	(0.144)	(0.147)	(0.143)	(0.146)	(0.146)	(0.144)
Constant	3.521***	3.414***	3.331***	3.173***	3.444***	3.541***
	(0.550)	(0.553)	(0.524)	(0.531)	(0.550)	(0.548)
Observations	147	147	147	147	147	147
Number of Firm_ID	74	74	74	74	74	74
R square	0.1381	0.1139	0.1831	0.1141	0.1733	0.184
Wald chi2	18.62	16.19	19.54	14.06	19.74	21.47
Prob> chi2	0.0982	0.1828	0.0763	0.297	0.1386	0.0902

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% level respectively*

7.6.2.3 Robustness check

Homoscedasticity refers to the assumption that dependent variables exhibit equal levels of variance across the range of independent variables (Statistics Solutions 2013). For the case of random effects regression using panel data, Torres-Reyna (2007) suggests that the option 'robust' can be added to the model to control for heteroscedasticity. In this case, the results of the models with robust standard errors show that firm size and R&D investment are positively associated with export intensity of SMEs. It is worth noting that none of the social capital variables show a positive impact on export intensity of firm. In contrast, the level of network supports and the size of bank network actually show *negative* coefficients with export intensity of SMEs.

Table 7.11: Random effects regression model on export intensity – robust standard errors

	Dependent variable: Export Intensity					
	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	Coef	Coef	Coef	Coef	Coef	Coef
network supports	-0.034	-0.042	-0.051*	-0.053*	-0.046	-0.039
	(0.030)	(0.031)	(0.028)	(0.032)	(0.031)	(0.029)
network size - business	-0.157*					-0.119
	(0.094)					(0.090)
network size - social		-0.118			-0.066	
		(0.091)			(0.085)	
network size - banks			-0.244**		-0.219**	-0.193*
			(0.113)		(0.103)	(0.101)
network size - authorities				-0.033	0.028	0.048
				(0.104)	(0.103)	(0.105)
Constant	3.521***	3.414***	3.331***	3.173***	3.444***	3.541***
	(0.685)	(0.693)	(0.646)	(0.627)	(0.691)	(0.683)
Observations	147	147	147	147	147	147
Number of Firm_ID	74	74	74	74	74	74
R square	0.1381	0.1139	0.1831	0.1141	0.1733	0.184
Wald chi2	23.41	20.17	22.8	19.61	21.26	23.93
Prob> chi2	0.0244	0.0639	0.0294	0.0748	0.0951	0.0467

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively*

7.6.3 Regression model on export diversity

7.6.3.1 Regression model selection

The Hausman specification test was run to choose between a fixed effects model versus a random effects model. The value of the test was positive, and the Prob>chi2 = 0.0395,

which is smaller than 0.05 (significant), indicating that we fail to reject the null hypothesis and the fixed effects is the preferred model.

Table 7.12: Hausman test to select between fixed effects and random effects models

	Coefficients			
	(b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
network supports	-0.025	-0.032	0.007	0.019
network size - business	0.008	-0.003	0.011	0.088
network size - social	0.235	0.210	0.025	0.082
network size - banks	-0.296	-0.148	-0.148	0.091
network size - authorities	-0.073	-0.003	-0.070	0.080
2.Firm_size	-0.112	-0.033	-0.079	0.250
3.Firm_size	-0.229	-0.101	-0.127	0.314
4.Firm_size	0.319	0.292	0.027	0.368
Ownership	0.409	0.046	0.363	0.527
Export_experience	-0.031	-0.021	-0.010	0.007
2. Knowledge	0.622	0.400	0.222	0.373
3. Knowledge	0.535	0.266	0.269	0.346
4. Knowledge	0.353	0.156	0.197	0.348
INNO	-0.140	0.083	-0.222	0.093
D_RDinvest	0.184	0.081	0.103	0.107

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg
Test: Ho: difference in coefficients not systematic
chi2(14) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 25.86
Prob>chi2 = 0.0395

The fixed effects regression model is specified as follows:

$$Y_{it} = \alpha_i + \beta_1 * X_{it} + u_{it}$$

where:

- α_i (i=1…n) is the unknown intercept for each entity (n entity-specific intercepts)
- Y_{it}: the dependent variable of firm *i* in year *t*
- X_{it}: K x 1 vector of explanatory variables
- β_1 is the coefficient for that explanatory variable
- *i* is firm and *t* is time
- u_i is the error term

7.6.3.2 Results analysis

Results of the fixed effects regression models on export market diversity are presented in Table 7.13, with focus on social capital's variables.

Table 7.13: Fixed effects regression model on export diversity

	Dependent variable: Export market diversity					
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Coef	Coef	Coef	Coef	Coef	Coef
network supports	-0.022	-0.025	-0.004	-0.001	-0.025	-0.024
	(0.036)	(0.035)	(0.034)	(0.036)	(0.035)	(0.036)
network size - business	0.118					0.198**
	(0.0818)					(0.0876)
network size - social		0.159*			0.241***	
		(0.082)			(0.087)	
network size - banks			-0.194		-0.295**	-0.281**
			(0.125)		(0.129)	(0.132)
network size - authorities				-0.050	-0.072	-0.067
				(0.111)	(0.111)	(0.114)
2. Firm_size	-0.154	-0.179	-0.183	-0.145	-0.115	-0.075
	(0.332)	(0.327)	(0.331)	(0.348)	(0.329)	(0.338)
3. Firm_size	-0.423	-0.423	-0.408	-0.401	-0.231	-0.234
	(0.374)	(0.369)	(0.374)	(0.403)	(0.383)	(0.393)
4. Firm_size	-0.105	-0.034	-0.081	-0.126	0.319	0.211
	(0.593)	(0.589)	(0.593)	(0.617)	(0.598)	(0.606)
Ownership	0.504	0.415	0.497	0.397	0.404	0.550
	(0.551)	(0.543)	(0.549)	(0.569)	(0.539)	(0.549)
Export_experience	-0.025**	-0.026**	-0.027**	-0.026**	-0.031***	-0.030**
	(0.011)	(0.011)	(0.011)	(0.012)	(0.011)	(0.012)
2. Knowledge	0.874*	0.816	0.808	0.807	0.620	0.721
	(0.498)	(0.492)	(0.498)	(0.522)	(0.494)	(0.501)
3. Knowledge	0.761	0.723	0.733	0.740	0.535	0.597
	(0.468)	(0.463)	(0.467)	(0.486)	(0.462)	(0.470)
4. Knowledge	0.541	0.538	0.485	0.495	0.354	0.368
	(0.472)	(0.466)	(0.473)	(0.494)	(0.466)	(0.476)
INNO	-0.071	-0.086	-0.102	-0.093	-0.140	-0.114
	(0.149)	(0.147)	(0.150)	(0.154)	(0.145)	(0.148)
D_RDinvest	0.168	0.210	0.122	0.157	0.186	0.126
	(0.161)	(0.161)	(0.162)	(0.164)	(0.157)	(0.158)
Constant	0.232	0.225	0.854	0.720	0.491	0.412
	(0.809)	(0.780)	(0.772)	(0.799)	(0.767)	(0.796)
Observations	147	147	147	147	147	147
Number of Firm_ID	74	74	74	74	74	74
R-squared	0.252	0.271	0.256	0.229	0.342	0.315
Prob > F	0.087	0.054	0.079	0.146	0.019	0.040

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively*

The regression results indicate that most of the variables in the model do not explain the export diversity of SMEs in the sample. Noticeably, export experience of SMEs does not associate with more export markets, indicating that exporting SMEs might not have focused enough on market diversification.

With regard to social capital variables, only the size of business network and social network of the sampled SMEs are positively associated with their export market diversity. These positive coefficients are statistically significant (at $p<0.05$). This result indicates that the more contacts that SMEs obtain, the wider reach they have with regard to export market. On the other hand, there is no link between political network, resource from network, and export market diversity of SMEs.

7.6.3.3 Robustness check

As recommended by the Stata Corporation LLC (n.d), the robustness check of the fixed effects model can be performed by replicating the model with the option of robust standard errors. This helps to rectify the issue of heteroskedasticity or within-panel serial correlation in the model.

The regression model with robust standard errors are presented in Table 7.14. The results with regard to variables of social capital are consistent with the normal fixed effects model with regard to sign of the coefficients; however, with the robust standard errors, the significance level increases, thus the model confirms that business and social networks size do positively associate with export market diversity of the sampled SMEs. It is noted as well that, with robust standard errors option, knowledge of firms is found to be positively and significantly associated with export market diversity of the sample SMEs.

Table 7.14: Fixed effects regression model on export diversity with robust standard errors

	Dependent variable: export market diversity					
	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	Coef	Coef	Coef	Coef	Coef	Coef
network supports	-0.022	-0.025	-0.004	-0.001	-0.0247	-0.0239
	(0.033)	(0.033)	(0.032)	(0.036)	(0.035)	(0.0349)
network size - business	0.118**					0.198***
	(0.058)					(0.069)
network size - social		0.159**			0.241***	
		(0.066)			(0.067)	
network size - banks			-0.194**		-0.295***	-0.281***
			(0.097)		(0.092)	(0.092)
network size - authorities				-0.050	-0.072	-0.067
				(0.118)	(0.125)	(0.135)
2. Firm_size	-0.154	-0.179	-0.183	-0.145	-0.115	-0.075
	(0.221)	(0.213)	(0.198)	(0.241)	(0.203)	(0.220)
3. Firm_size	-0.423	-0.423	-0.408	-0.401	-0.231	-0.234
	(0.318)	(0.300)	(0.299)	(0.346)	(0.329)	(0.357)
4. Firm_size	-0.105	-0.034	-0.081	-0.126	0.319	0.211
	(0.311)	(0.294)	(0.296)	(0.329)	(0.336)	(0.351)
Ownership	0.504*	0.415	0.497*	0.397	0.404	0.550
	(0.295)	(0.273)	(0.297)	(0.334)	(0.349)	(0.380)
Export_experience	-0.025**	-0.026**	-0.027***	-0.026**	-0.031***	-0.030***
	(0.011)	(0.010)	(0.0102)	(0.010)	(0.010)	(0.010)
2. Knowledge	0.874***	0.816***	0.808***	0.807***	0.620**	0.721***
	(0.225)	(0.250)	(0.200)	(0.231)	(0.271)	(0.241)
3. Knowledge	0.761***	0.723***	0.733***	0.740***	0.535**	0.597***
	(0.199)	(0.230)	(0.192)	(0.200)	(0.257)	(0.223)
4. Knowledge	0.541***	0.538**	0.485***	0.495**	0.354	0.368
	(0.189)	(0.220)	(0.172)	(0.218)	(0.260)	(0.222)
INNO	-0.071	-0.086	-0.102	-0.093	-0.140	-0.114
	(0.154)	(0.157)	(0.148)	(0.160)	(0.145)	(0.142)
D_RDinvest	0.168	0.210	0.122	0.157	0.186	0.126
	(0.173)	(0.180)	(0.173)	(0.174)	(0.168)	(0.167)
Constant	0.232	0.225	0.854**	0.720*	0.491	0.412
	(0.420)	(0.415)	(0.361)	(0.416)	(0.411)	(0.410)
Observations	147	147	147	147	147	147
Number of Firm_ID	74	74	74	74	74	74
R-squared	0.252	0.271	0.256	0.229	0.342	0.315
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively.*

7.7 Chapter summary

In this chapter, export performance variables (export revenue, export intensity and export diversity) are separately estimated by the random effects regression models for panel data. Mixed effects were found for the impacts of social capital on export performance of SMEs in the dataset. In general, there is an absence of evidence to conclude that the broadness

of relationships can support export performance of firms. Specifically, relationships between SMEs and government official and bank official contacts are not significant. However, the support from network of relationships shows positive impact on export revenue of SMEs, which is in line with the literature and expectation.

The summary results of the hypotheses testing are presented below. Results of this chapter will be triangulated with those in Chapter 6 on export propensity, and discussed with the qualitative study results in the next chapter.

Table 7.15: Summary of the regression hypotheses and regression results on export performance

Hypothesis	Export revenue	Export intensity	Export market diversity	Results
H1a: SMEs with more formal business relationships have better export performance	-	-	+*	Partly supported
H1b: SMEs with more social networks relationships have better export performance	+	-	+*	Partly supported
H1c: SMEs with more bank contacts have better export performance	-	-	-*	Not supported
H1d: SMEs with more contacts with authorities have better export performance	-	+	-	Not supported
H1e: SMEs with more resources from networks have better export performance	+*	-	-	Partly supported
H2: SMEs' knowledge is positively associated with SMEs' export performance	+*	+	+*	Supported
H3a: SMEs' innovation capability is positively associated with SMEs' export performance	-	-	-	Not supported
H3b: SMEs' R&D investment is positively associated with SMEs' export performance	+*	+*	+	Supported

CHAPTER 8: DISCUSSION, IMPLICATIONS AND CONCLUSION

8.1 Introduction

The main purpose of this chapter is to discuss the hypotheses testing results presented in Chapters 6 and Chapter 7, and to triangulate these results with the qualitative findings presented in Chapter 5. The discussion is positioned in parallel with relevant literature and the specific research context, to rigorously explain the findings and draw both theoretical and practical implications. A summary table of such results is presented in Appendix 8.

Besides this introduction, the chapter includes five main sections. The chapter begins with discussion of the hypotheses testing results that are supported by qualitative findings, and underscores the changing impacts of social capital on export performance over time. It then follows with a discussion of the results that do not present a perfect match between qualitative narratives and the regression estimations. After a summary of the discussion results and how the present research responded to the research questions, the chapter continues with some theoretical, managerial and policy implications, and highlights its contributions to the current stage of knowledge on the topic. This chapter concludes by recognizing the limitations of the research and offering future research directions.

8.2 Quantitative results support qualitative findings

In Chapter 6 on export propensity and Chapter 7 on export performance of Vietnamese SMEs, regression results showed mixed impacts of different network types on both export propensity and export performance. While the export propensity regression results depict the impacts of social capital on SMEs at the beginning stage of their export venture, the export performance regression results represent the impacts of social capital on continuing exporters.

In triangulating the quantitative regression estimation results with the qualitative findings, consistent answers were found for the research questions, which will be further discussed as follows.

8.2.1 The importance of social capital to export participation

For the mass data in the quantitative analysis, the regression results presented in Chapter 6 robustly show that the support from firms' networks had positively impact on the export propensities of the surveyed SMEs over the period from 2007 until 2015. The support from firms' networks essentially represents the resource dimension of social capital, and could therefore indicate that social capital positively impacts the export propensity of SMEs in Vietnam.

In Vietnam, it is common to have business opportunities through referrals from firms' social networks. For example, the latest SME survey conducted in 2015[21] shows that approximately 77% of the total surveyed firms and 74% for exporting firms responded that they had their first customers introduced by their personal contacts. However, when looking closer at the structure of the referrers, it is noticed that non-exporting firms use closer network ties of family/relatives or friends, while exporting SMEs utilize ties outside of their close network, as shown in Table 8.1.

Table 8.1: Structure of referrers between non-exporting and exporting firms

Type of relationship	Non-exporting firms		Exporting firms	
	Freq.	Percent	Freq.	Percent
Family/ relatives	403	21.26	14	10.45
Friends	630	33.23	41	30.6
Acquaintances	789	41.61	74	55.22
Don't know	74	3.9	5	3.73
Total	**1,896**	**100**	**134**	**100**

Source: Author's calculation based on 2015 SME survey data

The quantitative regression results answer the first research question, *"Does social capital support export propensity of SMEs in Vietnam?"* This result is consistent with the literature on social networks that suggests that social networks help enhance information flow and facilitate the creation of market knowledge, thus increasing the probability of SMEs accessing the international market. Empirical studies have confirmed the importance of social networks for firms' international involvement through enabling

[21] The SME survey 2015 initiated, for the first time, the inclusion of supplementary questionnaires on the importance of networks in acquiring and retaining customers.

the flows of valuable information or knowledge into the firms (Ellis 2000; Ellis & Pecotich 2001; Muzychenko & Liesch 2015).

In supplementing the regression results, the qualitative study found that social capital was important to the export business activities of the participating SMEs, especially at the starting phase of their business. Consistent with extant literature on social capital and internationalization of SMEs, the present research found that social capital increases export opportunities for SMEs. In addition, the roles that social capital plays in supporting the internationalization process of participating SMEs were identified. For this, social capital, in the form of support from network contacts, was seen to be critical for the sampled SMEs in several ways: (i) supporting firms with market information and export knowledge to realize more export opportunities; (ii) reducing search costs in identifying potential customers and suppliers; (iii) accessing necessary finance needed for export business; (iv) lubricating the export transaction procedure; and (v) reducing perceived risk in dealing with international partners.

8.2.2 The mixed impacts of social capital on export performance

While both qualitative and quantitative studies show consistent impacts of social capital on the export propensity of SMEs in Vietnam, the results for impact of social capital on export performance of SMEs are less prominent. In contrast to export propensity, qualitative findings and quantitative regression results jointly showed that social capital has diverse impacts on the various performance dimensions of continuing exporters.

In the quantitative estimations, mixed results were found for each of the proxies of social capital for each dimension of export performance. Firstly, while network supports were found to positively and significantly impact export revenue, the impacts of network supports were not significant on both export intensity and export market diversity. Similarly, the sizes of both business networks and social networks were found to positively affect the market diversity of exporters but were not significant for export revenue and intensity. Finally, the size of network with bank officers and authorities did not have any significant positive impact on all three dimensions of export performance.

With regard to business and social network size, the positive relationships between market diversity and network size have not been specifically reported in the literature previously. Rather, these results appear to align with the broader stream of literature on the benefits of social networks, which suggest that social networks help

enhance information flow and facilitate the creation of market knowledge firms (Ellis 2000; Ellis & Pecotich 2001; Muzychenko & Liesch 2015), thus increasing the likelihood of SMEs accessing the international market. One may argue that the broader the networks that firms have, especially international networks, the more information about international markets that firms can obtain, hence providing more opportunities to diversify their export market. Furthermore, as reported by Agndal, Chetty and Wilson (2008), when SMEs become 'seasoned' in the international market, they create more social relationships and deepen the existing ones, and by that they are known by more potential partners in the field, hence receiving more benefit from the 'serendipity' roles of social capital.

With regard to political networks, the regression results show political network size as having an insignificant relationship with all three dimensions of export performance, on average during the period of the pooled surveys. In this case, it is possible that export restrictions in Vietnam had been, by the survey period, reduced, and hence rents associated with 'export rights' were no longer available to be distributed by government officials. For example, the non-tariff barriers of quantitative restrictions (quota), export sublicenses, and foreign exchange control were reduced gradually when Vietnam entered bilateral and multilateral trade agreements. Specifically, most export quota were eliminated by 2001, and export licenses for most products began to be automatically granted. The removal of export restrictions indicates improvement in the legal and regulatory system, and the emergent of the market-driven environment, which reduces the importance of social networks in providing 'informal governance' as observed by Sheng, Zhou and Li (2011).

Another explanation for the relatively insignificant relationship of political networks and export performance is that, although connections with politicians are important in the domestic market, they are less so when it comes to export markets, in which SMEs must compete on equal footing with international players. On the other hand, it may imply that, for SMEs, most support from authorities and government officials is at the transactional level for daily operations, which in turn can be resolved by other options, including payment of informal fees discussed in several previous studies (De Jong, Tu & van Ees 2012; Nguyen, VT et al. 2016).

These results jointly indicate that a strong relation between social capital and all three aspects of export performance were absent. These results appear to be contrast with

the literature claiming that social capital is positively associated with export performance of SMEs (see, for example, Chadee & Zhang 2000; Ellis & Pecotich 2001; Haahti et al. 2005). Nevertheless, these results are consistent with findings of several empirical studies in a similar research context, such as the case of China. For example, Zhang, X et al. (2016), based on data collected in 2006, found that it was business networks that had mediating effects on the international performance of SMEs in China; whilst Sheng, Zhou and Li (2011) based on data collected in 2008, suggested that business networks have a stronger impact on performance than do political ties.

From the qualitative analysis, it was evident that, although social capital is helpful in acquiring export customers, it is less helpful in retaining them. As such, it is argued here that social capital is critical for starting exporters, but not as important for ensuring successful export performance. Rather, the core of export success is the dynamic capability of firms to arrange and manage necessary resources to gain competitive advantage in the international market, plus firms' credibility and reliability in delivering on their commitments. There are several reasons drawn from the qualitative analysis to explain this phenomenon. Firstly, although social capital can support SMEs with information and knowledge in realizing their export opportunities, and add to the ability of SMEs to arrange necessary resources for the export venture, *success in the export business depends largely on the capability of SMEs to satisfy market demand*. In other words, SMEs can leverage social capital to gather necessary resources for their export business, but in order to succeed, they need to utilize those resources effectively and to develop their own capacity. In this regard, firms need to capitalize on initial support from their social networks to then build their own reputation and credibility, to compete in the international market.

Secondly, the qualitative findings are consistent with the extant literature on the distinct roles of social capital at the beginning and the later stages of SMEs' internationalization. At the early stage, the referrals from social networks can help in reducing the uncertainties of SMEs when entering international markets (Agndal, Chetty & Wilson 2008), and in acting as a bridge between firms and potential export partners (Adler & Kwon 2002) (Ellis & Pecotich 2001). This positive impact is referred to as the efficacy role of social capital (Agndal, Chetty & Wilson 2008). Nevertheless, as reported in the same study by Agndal, Chetty and Wilson (2008), at the later stage of internationalization, it is observed that firms' capability, competitiveness, stability and

credibility in the marketplace passively spread referrals, thus attracting more business opportunities for firms. This passive benefit of social capital is referred to as serendipitous social capital (Agndal, Chetty & Wilson 2008). In other words, a positive impact of social capital in the form of referrals can only remain beneficial to firms if it is accompanied by the core value that firms can deliver, since the role of social capital is dynamic in nature (Agndal, Chetty & Wilson 2008).

Thirdly, unlike other types of capital such as finance or physical capital, social capital is latent (that is, a resource to be mobilised as and when required). Therefore, even if social capital were available for firms in the shape of a resourceful network relationship, this would not automatically create firms' competitive advantage or improve firms' long-term performance in international markets. Rather, benefits from social capital can only be gained from exchanges between a focal firm and its contacts. These exchanges can either be used to build up the focal firm's competitive advantage, or only limit the focal firm to ad hoc transactional benefits. For example, with the same level of information sharing or training and support from a trade association to its members, different SMEs utilize these resources differently. Many SMEs may not have a clear vision and mission for their enterprises, but only take these resources as an opportunity to gain short-term profit. Meanwhile, other firms might utilize these resources to help map out their long-term strategy to gradually gain long-term competitive advantage and outperform in the marketplace. Therefore, possessing a high level of social capital could but does not always correlate with better export performance. As such, social capital could be seen as a necessary but not sufficient condition for export success.

8.2.3 Phase out of the rent-appropriation impact: the relative statistical non-significance of political ties

Networking with authority or politicians is typically described as an important factor in doing business in transitional economies (Sheng, Zhou & Li 2011). For the present study, however, the regression results show no proven link between the size of the authority (or public official) networks and either export propensity or export performance of SMEs. The insignificance in the regression estimations, combines with the qualitative findings on transformation of social capital's impact channel presented in Section 5.3.7, may indicate that: (i) the rent-appropriation opportunities associated with political network relationships have been phased out as the economy has been transforming toward being

market-oriented; and (ii) the size of authority networks is not correlated with the support provided from those networks.

In the first circumstance, networking with authorities and public officials may no longer benefit SMEs in their export ventures. These findings suggest that, at this 'late transitional'[22] stage in Vietnam, authorities and public officials may have lost their once-important influence on export performance of SMEs in most sectors, except for the restricted sectors mentioned earlier in the qualitative analysis. This result is consistent with the findings of Sheng, Zhou and Li (2011), where political ties were found to be having positive impacts for Chinese firms only under certain conditions, such as in the weak government support environment. This result may also be explained by the fact that, as the qualitative findings demonstrate, rent-seeking opportunities have been diminishing with the greater transparency in export procedures. In reality, the majority of export restrictions in Vietnam have been gradually abolished to conform to the commitments of Vietnam in the signed bilateral and multilateral agreements (Vo, TT 2005). The unexpected absence of correlation between the size of political contacts and export performance of SMEs can thus be explained.

In the second circumstance, the number of authority connections might not correlate with the amount of resources or support that firms may receive from these connections. Social networking activities, especially with authorities or politicians, are normally perceived as an investment for firms (Chadee & Zhang 2000). These activities incur costs, and require effort from firms, at least time and attention in them being established and retained. As such, for SMEs with limited resources, investment in both broad and deep authority networks does not appear to be profitable. Rather, SMEs may be more selective in setting up their profound and strategic relationships with the relevant public officials who could provide 'back door' support in the specific and critical aspects of their business, or to gain access to the limited business opportunities in restricted areas. On the other hand, the majority of the broad, 'operational level' political ties are simply 'weak ties', which do not require intense interactions and financial or emotional investment (Yang, Ho & Chang 2010). This 'operational level' of political ties typically can support firms to avoid red tape harassments or to 'boost the process' to get things done quicker.

[22] Refer to Chapter 1, Section 1.1, Footnote 1 for the definition of a 'late transitional' economy.

As observed by Nguyen, VT et al. (2016), firms believe that these 'weak ties' can be established and preserved by the paying of petty bribes, and that these relationships themselves can also be substituted by the payment of informal fees. Furthermore, Nguyen, VT et al. (2016) also report that petty bribery, and hence the relationship with 'operational level' political ties, are not evidently associated with better efficiency or performance of firms. Rather, they are perceived as being a form of conformity to the hidden 'rules of the game'. In short, the majority of 'weak ties' in the broad political networks may not always be associated with the closeness of such networks, and thus with the strategic needs of SMEs. Therefore, the size of the authority networks may carry limited impact on SMEs' performance. This result lines up with the qualitative findings for SMEs in the restricted sectors, in which the relationships between SMEs and authorities are important but need to be close enough to assist SMEs to overcome certain business obstacles.

8.2.4 The importance of knowledge in export activities

It is interesting to note that, in both the qualitative study and the quantitative regression results, knowledge has emerged as the most prominent factor that positively impacts both export propensity and export performance of SMEs. The impacts of export knowledge on export success of SMEs are twofold. Firstly, export knowledge holds a direct and positive impact on export performance of SMEs. Secondly, knowledge also acts as a mediating variable that facilitates the impacts of social capital on export success of SMEs through the creation and facilitation of market information and competencies for SMEs.

With regard to the quantitative study, the hypotheses testing results show that the levels of firm knowledge are positively associated with the likelihood of export and the level of export sales revenue. As the level of knowledge increases, the magnitude of the coefficients, and hence marginal effect, increases for both export propensity and export sales revenue. For example, the marginal effect calculation (Table 6.14) shows that export probability of SMEs increased by 2.9% when SMEs moved from having 'no knowledge' to the 'limited knowledge' category, but the likelihood increased more than double (7.7%) between SMEs having 'no knowledge' and having 'good knowledge'.

The above-mentioned results are consistent and reinforce the qualitative findings, which highlight the importance of knowledge and capacity building in the export business. The present study found that most successful exporters mentioned that social

capital supported their access to foreign markets and long-term performance by improving either generic firm management skills or export knowledge, as well as specific market information and requirements. For that, successful SMEs are those which appreciate the value of knowledge and actively and persistently seek to improve, even though some of them may initially enter the export business by serendipity. Furthermore, these firms share the common characteristic of utilizing social capital for facilitating knowledge creation, rather than for daily operational support. In other words, successful exporting SMEs are exporters that actively draw on social capital for strategic capacity building, or that actively use social capital in transforming external resources into their own knowledge and dynamic capabilities.

These findings are consistent with the positioning of social capital from the resource-based view, where social capital is considered to support exporting firms' performance through various knowledge creation mechanisms. Social capital has emerged as an explanation for the performance of firms because it is a resource that firms can develop and draw on to create competitive advantage (Loane & Bell 2006; Roxas & Chadee 2011). In a globalising economy, it is argued that social capital acts as a dynamic capability, assisting SMEs to create new resources needed to cope with an increasingly competitive international market (Pinho 2011; Roxas & Chadee 2011). Social capital provides experiential knowledge about export markets and converts knowledge from an implicit to an explicit form (Johanson & Vahlne 1977; Pinho 2011). As knowledge grows out of experience in foreign markets, new capabilities are acquired. Subsequently, the degree of market commitment also increases, supporting firms' performance in foreign markets (Johanson & Vahlne 1977; Pinho 2011).

The knowledge that social capital enables may take the form of information and knowhow (Luo 2003; Walter, Auer & Ritter 2006), business opportunities (Peng & Zhou 2005; Walter, Auer & Ritter 2006; Wu & Choi 2004; Yang, Ho & Chang 2010), skills, management capability, and market knowledge (Roxas & Chadee 2011). This knowledge assists firms to overcome the barrier of export knowledge shortage (Loane & Bell 2006; Presutti, Boari & Fratocchi 2007). More importantly, social capital can facilitate more learning and create new knowledge for firms, boosting firms' proactivity and innovativeness (Luo 2003; Walter, Auer & Ritter 2006), thus enhancing performance of firms in the international market (Johanson & Vahlne 1977).

8.2.5 The quality of networks versus the size of networks

From the regression results presented in Chapters 6 and Chapter 7, it is noticeable that the quality of (or the support from) networks has more robust impact on both export propensity and export performance of SMEs in the panel. The logit regression models of export propensity show that only bank network size positively affects export probability of SMEs. On the other hand, the random effects regression models for export performance indicate that business and social network size associate positively with the market diversity of SMEs, but not with the other indicators of export performance, export intensity and market diversity. In contrast, the support from networks appears to attain more robust impact. Firstly, support from networks positively impacts the export propensity of SMEs in the present research. Secondly, support from networks positively associates with export revenue of the surveyed exporters.

As indicated in Section 6.5.1.2 on the measurement of social capital, extant literature (see, for example, Nahapiet & Ghoshal 1998; Saglietto, David & Cézanne 2016) establishes that social capital includes not only network size but also the resources from those networks and the capability to access network resources. For the present research, the number of assists that firms received from networks represents both the network resources and the accessibility to these resources. As such, it represents the quality or the substance of the networks, while network size represents the quantity. While the quantity of the networks could be argued to represent social capital, it is often maintained that social networks be considered 'social capital' when they can provide benefits for firms, and that such 'capital' can be dispensed at firms' discretion (Durlauf & Fafchamps 2004). In the present empirical study, the impacts of network support may have outweighed those of network size.

From the qualitative findings, there is evidence that the appropriate support offered to firms at the right time has been perceived as being highly valuable. Firms with less broad but strong and capable network contacts can be perceived to have a higher level of social capital in comparison to firms with broad but weak networks. Moreover, not all successful exporters can afford a broad social network. Rather, those who are successful exporters demonstrate a consistent appreciation of some of the critical contacts, either being their customers, suppliers, or the authorities. This validates the importance of establishing, maintaining and transforming the normal social networks into the strategic

resources that SMEs can leverage. This is consistent with the theories on strong ties and weak ties discussed in the literature (Yang, Ho & Chang 2010).

Finally, the qualitative study suggests that the self-declared network size should be viewed with caution. For some cases, self-declared network size can be either flattened or exaggerated, depending on the personalities of respondents. There is evidence that firms having strong relationships, especially with politicians or authorities, often hide these relationships, as they can be perceived negatively for the reputation of both. In contrast, firms with weaker relationships can sometime exaggerate these weak ties and use them as a promotional tool to access desirable resources. For this, it is inadequate to use only the network size to represent social capital, and network size variables captured in the quantitative survey may not yield expected regression results.

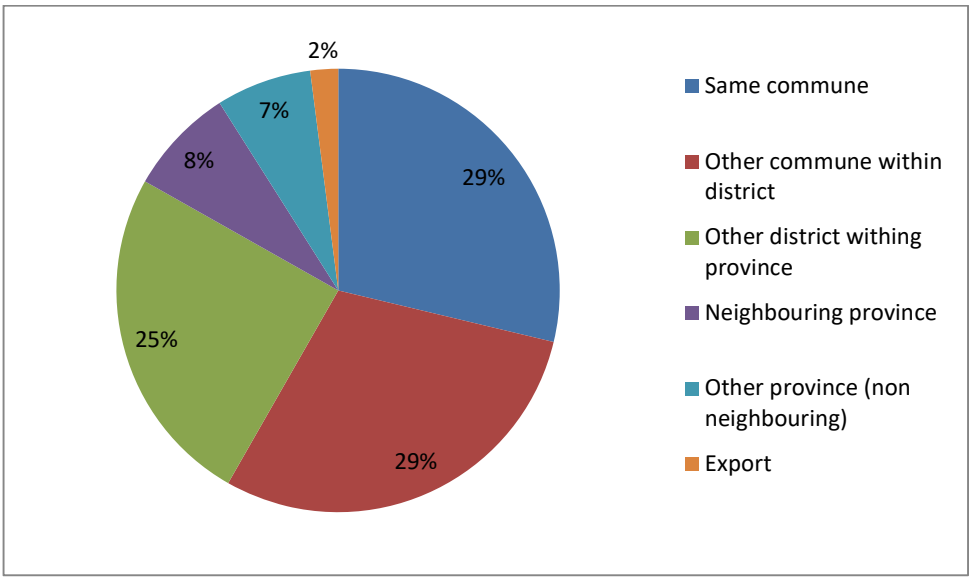
8.3 Quantitative regression results and qualitative findings mismatch

8.3.1 Business networks and SMEs export behaviours

The impact of business relationships on the export propensity of SMEs was found to be negative and statistically significant, which rejects our Hypothesis 1. This result appears to contradict but may in fact be consistent with the literature claiming that business relationships support SMEs in their internationalization process. For this, business networks help SMEs to build relationships of trust with export partners to overcome the smallness liability and better accommodate the demand from international markets, and hence are more likely to be involved in export (Mesquita & Lazzarini 2008; Zhang, X et al. 2016). In the context of Vietnam, this seemingly irrational result could be explained by at least two counter arguments, discussed next.

Firstly, as the business networks variable is measured by the total number of firms' contacts (being customers, suppliers, creditors, debtors), and most customers for these SMEs are from the same commune, district or province (Brandt et al. 2016b), SMEs with extended business networks with domestic players tend to be involved in domestic business rather than export markets. In other words, exporters are often found to be wholesalers and dealing with only limited numbers of importers, rather than with a larger customer base.

Figure 8.1: Location of customers (percentage)



Source: Authors' illustration based on the survey data

Secondly, it is argued here that the size of business networks cannot substitute for the structure or quality of such networks. In this case, SMEs may not be exposed to international markets or gain trust from international partners if their broad business network only includes domestic players. Indeed, according to a recent report by the Vietnam Chamber of Commerce and Industry (VCCI), more than 80% of domestic SMEs aren't aware of the trade agreements that Vietnam has signed, neither have these firms prepared for the impacts of those trade agreements. This figure demonstrates that SMEs in Vietnam tend to have business partners who are other small firms with internal (domestic) growth orientation rather than external (overseas) growth orientation. Therefore, the density and closeness of the home-based business network of SMEs may 'trap' them in the local market, thus preventing SMEs from expanding to the international market (Laursen, Masciarelli & Prencipe 2012).

8.3.2 Bank networks and export behaviours

Regarding the relationship between bank networks and export behaviours of SMEs, the qualitative findings and hypotheses test results for export propensity both found that networking with banks can support the export propensity of SMEs. These findings are consistent with those of Malesky and Taussig (2008), who maintain that networking with banks can facilitate 'connection lending' and thus increase the access to financial

resources. At the initial stage of internationalization, financial stability is critical for SMEs (Carter & Van Auken 2005; Manolova, Manev & Gyoshev 2014). For this, the decision to enter the export market, followed by the associated risk, may well be mitigated with the support from banks with the necessary financial information and possible financial arrangements. These results are consistent with those of Manolova, Manev and Gyoshev (2014), who found that the financial network diversity in the home country positively impacts the internationalization process of SMEs in transitional economies.

On the contrary, with regard to export performance, the present study did not find a significant correlation between the size of bank networks and the export performance of SMEs. This indicates that the broad relationship with bank officials may not automatically support SMEs in their export performance. Although this result has not previously been described specifically in the literature and might need further elaboration, it does indicate that the success of SMEs in an overseas market possibly relies more on other determinants such as the export market strategic orientation, rather than on operational decisions such as the effects of social capital on the availability of finance.

Another possible reason that export performance does not depend on bank network capacity is because Vietnamese SMEs do not heavily rely on external formal financing for their operations, including exporting activities. The survey revealed that only one quarter of the firms applied for formal loans, with the most common reason cited by SMEs for not applying for formal loans being that they did not need it (Brandt et al. 2016a). As reported, Vietnamese enterprises generally have very low debt-to-asset ratios (CIEM, DoE & ILSSA 2010, 2012, 2014; Rand et al. 2008). Retained earnings are observed to be the main source of investment for SMEs (Brandt et al. 2016a). In addition, if there is a need to get external financing, SMEs in general tend to access informal lending from their social ties (such as family members, relatives and friends), which are perceived to be more accessible and less expensive than formal loans from commercial banks (Carter & Van Auken 2005; Ebben & Johnson 2006). Therefore, the importance of formal bank loans appears to have been overestimated for Vietnamese SMEs, including for exporters.

Lastly, for ongoing exporting SMEs, the size of their financial networks may not be associated with export performance indicators, but rather the quality of financial networks is perceived to be more significant. One possible reason for this could be that the ongoing exporters possess a certain level of experience and have a significant

transaction history with fewer financial institutions, in comparison to the broad contacts at the beginning stage. With their refined bank network, SMEs develop trust-based relationships to facilitate their operational objectives, or to establish the 'relationship lending' protocol, as mentioned by Malesky and Taussig (2008).

8.4 Summary answers to the research questions

This chapter discussed the mixed results between the qualitative findings and the quantitative hypotheses test results, for both export participation and export performance of the sampled SMEs. It shows that social capital can support the initial market entry of SMEs. However, in order to be successful in the international market, social capital needs to be treated as a dynamic resource, which can help leverage external resources for firms and facilitate knowledge creation needed for improving export performance.

This discussion chapter, combined with the three results chapters - i.e. the qualitative findings and analysis presented in Chapter 5; the hypotheses test results of impacts of social capital on export propensity presented in Chapter 6; and the hypotheses test results on impacts of social capital on export performance presented in Chapter 7 - have offered answers to the research questions presented in Chapter 1, which can be summarized as follows:

1. *Research question 1: Does social capital positively impact the export success of SMEs in Vietnam?*

   Social capital positively impacts export success at the beginning phase, and improves the export propensity of Vietnamese SMEs. In other words, social capital can support Vietnamese SMEs in obtaining access to more export opportunities.

   However, when it comes to export performance, the results are quite complicated. The evidence that social capital directly improves export performance of SMEs is not robust. Rather, the qualitative study provides evidence that social capital positively impacts export performance of SMEs through the facilitation of export knowledge. In addition, there are distinct impacts of each dimension of social capital on each of the export performance criteria.

2. *Research question 2: By what channels does social capital impact on export success of SMEs in Vietnam?*

The present research found out that the roles of social capital in export success of SMEs in different phases of export business are distinct. For the first phase, of getting access to export opportunities, social capital mainly supports SMEs in: (i) gaining access to knowledge and information (regarding export markets, potential customers and market requirements); (ii) improving perceived credibility of SMEs to their potential export partners; (iii) accessing necessary finance needed for the export business; (iv) lubricating the export transaction procedure; and (v) reducing the perceived risks associated with the complicated export business.

For the continuing exporters, social capital offers possible support to leverage external resources and maximize these resources for export performance of the focal firms. This support includes: (i) the reduction of transaction costs through the establishment of beneficial relationships with related parties involved in the business, such as local suppliers, international customers, and financial providers, as well as public service providers; (ii) access to restricted export business opportunities which are impossible otherwise; and (iii) opportunities to improve knowledge and create effective channels for information in-flows to enhance better export performance.

3. *Research question 3: Have the impact mechanisms of social capital in export performance of Vietnamese SMEs changed during the economic transition process?*

   The present research provides evidence that, during the economic transition process, impact mechanisms of social capital have shifted from the rent-seeking dominance to the transaction cost reduction spectrum; for which, the institutional development and emergence of entrepreneurship have transformed the impact of social capital from being the apparatus for favourable treatment toward being a foundation of the credibility and capacity building spectrum.

Based on the discussion on the changing impacts of social capital, from rent-seeking mechanism more to the transaction costs reduction domain, this chapter now draws some theoretical implications and provides recommendations for both SME managers and policy makers.

8.5 Implications and recommendations

8.5.1 Theoretical implications

The results of this research, that social capital positively increases export propensity of SMEs and has positive impacts on SMEs' performance at the starting phase of their export ventures, supports the view that social capital plays a critical role in the internationalization process of SMEs in developing countries. These findings provide additional empirical evidence to support the current literature on the dynamics of social capital in supporting the foreign market entry of SMEs (see Agndal, Chetty & Wilson 2008; Ellis 2000; Ellis & Pecotich 2001; Prashantham & Dhanaraj 2010; Yli-Renko, Autio & Tontti 2002).

However, the mixed results of the present research on the impacts of different network ties on export performance of Vietnamese SMEs challenge the rent-seeking perspective on social capital, which generally positions social capital as positively supporting firms' performance by offering rent-seeking and rent-appropriation opportunities, especially in transitional economies where the institutional development is underway (Crudeli 2006). The findings in the present study on the relative insignificance of political ties implies that the rent-theory is less relevant in explaining the impact mechanism of social capital. In contrast, the profound significance of knowledge and dynamic capability of SMEs further explains the argument of the resource-based view, in which social capital is perceived as being a dynamic resource that can add value to SMEs if being utilized efficiently.

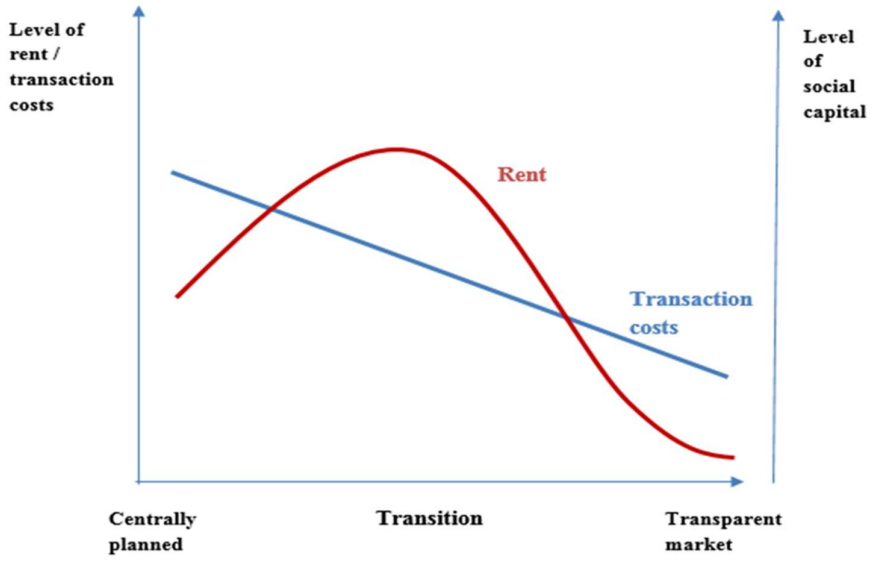
This finding has important implications for developing a conceptual framework for the relative importance of social capital's impacts on export performance of SMEs in transitional economies. As such, during the process of transition, a simple conceptualization of the relation between social capital and transaction costs and rent can be presented as in Figure 8.2. In this figure, the level of rent and transaction cost, as well as the level of firm's social capital, are presented on the vertical axis, whilst the development of market structure over time is presented on the horizontal axis. The relationships between social capital, transaction costs and rents over the transitional process are detailed as follows:

- Under the centrally planned economic system, it is expected that a firm with high endowment of social capital was associated with a higher level of rent-seeking

opportunities compared to those of lower endowment of social capital. However, the transaction costs were high for both firms.

- During the transitional process, the network relationships enabled firms to have more access to favourable information as well as more opportunities to seek for rent, which were in abundance in the process of asset appropriation or asset transfer. Therefore, it is expected that a firm with high level of social capital would benefit the most during the process. On the other hand, as the initial market competition was taking place and helping to reduce transaction costs, hence transaction costs were falling during this process.
- At the other end of the market structure, where a transparent market is dominant, it is expected that, even though a firm had a high level of social capital, opportunities to rent-seek would be minimal. Nevertheless, such a firm would benefit from transaction cost reduction due to cooperation and generalized trust resulting from its high level of social capital in an effective competitive market.

Figure 8.2: Transaction costs and rent over transitional process



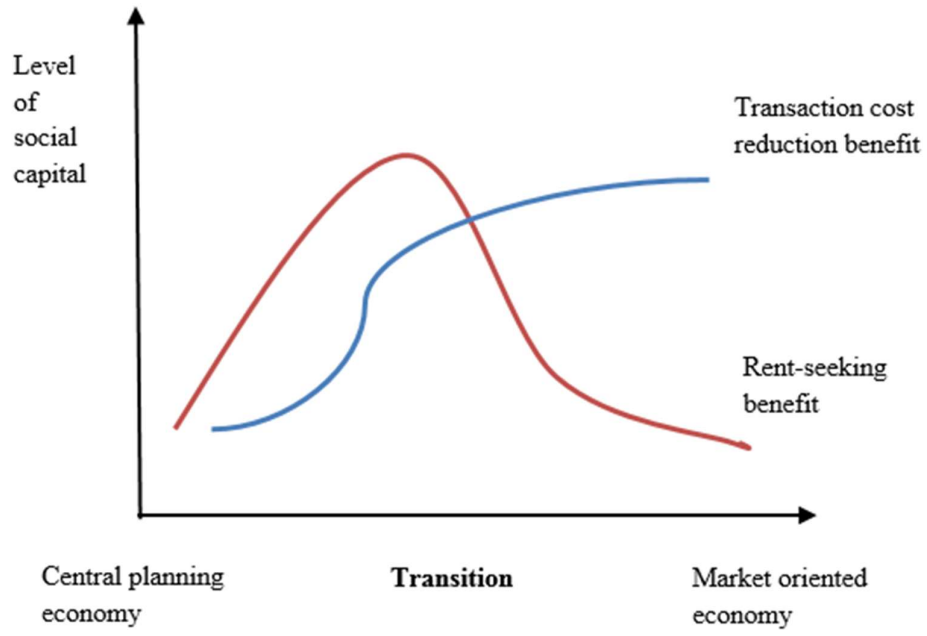
Source: Illustration by author

In the graph in Figure 8.2, the current stage of the Vietnamese economy is predicted to be at the right intersection of transaction costs and rent curve. At this point,

the rent seeking opportunities do exist but are becoming less significant, since the market is becoming more transparent. On the other hand, transaction costs are reducing by the competition mechanism. As such, social capital should be relevant for explaining the better performance of firms, not only by presenting firms with opportunities for rent seeking but, more importantly, by helping to reduce transaction costs (lower cost for seeking and monitoring partners and related activities).

The present study, thus, proposes a theoretical framework for the dynamic impacts of social capital. The theoretical framework shows the interactions between the two main impact mechanisms of social capital on export performance of firms, being (1) benefits from rent seeking opportunities and (2) transaction cost reductions. During the transitional process, social capital's benefit from rent-seeking takes an inverted U-shape curve, whilst social capital's benefit from transaction cost reduction takes an S-shape curve. Social capital consistently helps firms to reduce transaction costs, even in the post-transitional period, as depicted in Figure 8.3 below.

Figure 8.3: Impacts of social capital over transitional process



Source: Illustration by author

8.5.2 Managerial implications

The findings from the present research suggest that SMEs should be more active in leveraging the resources from their social networks to develop their own competitive advantage, if they want to succeed in the international market. This is because social capital does not automatically boost the export success of firms. Rather, social capital is dynamic and latent in nature, and is only supportive for SMEs' export success if being utilized proactively. SMEs should diversify their networks to include more international relationships to gain more information and knowledge about the overseas market demands, competition, and specific requirements. Essentially, SMEs should focus on using the broadness of their social networks at the beginning stage. However, once gaining access to the foreign market, they need to focus on their customers' retention strategy, using relationship building with international partners. This relationship building can be done only by the credibility and capability of SMEs to deliver on their commitments with foreign partners. As such, once trust-based relationships have been formed, and the reputation of firms has been established, transaction cost reductions can result in better performance for both exporters and importers.

The findings from the present research also imply that the rent-seeking opportunities have been swept away gradually in the export business in Vietnam. Therefore, SMEs should not rely extensively on ad-hoc rent-seeking opportunities or piggyback support given by certain relationships, especially political ones. Although such opportunistic support can offer short-term profit, it can derail the proactivity of firms, and weaken the ability of those firms in the longer term because the business environment for export business is becoming increasingly transparent. Rather, the resources needed to sustain such opportunistic favourable relationships with public authority officials should better be invested in capacity building, in the form of both human capital improvement and innovation initiation and implementation.

8.5.3 Policy implications

This research demonstrates the changing impacts of social capital on the export performance of SMEs in Vietnam during the transitional process, in that relationships with authorities and public service officers have been comparatively reduced in their impacts, whereas trust-based relationships have been evidencing their positive impacts for the longer term. This changing mechanism has happened because of the emergence

of the private sector and the removal of various export restrictions for further integration into the global market.

The present research also found that opportunistic behaviour and bribery arise where there exist unclear administrative controls instead of transparent economic measures in regulating the export business. Therefore, to ensure a fair competitive market environment between the private and the state-owned sectors, as well as between large private firms and SMEs, the continuous development of the institutional framework is necessary. Equally important is the development and implementation of a transparent and effective monitoring system, in which all actors/stakeholders can provide and publish their feedback on the public services that they have experienced. Finally, it is necessary to effectively implement a credit rating system, where information on credibility of all local firms can easily be traced, and which can possibly be used to support the export marketing strategies of firms, especially SMEs.

To promote the export participation and support export success of Vietnamese SMEs, there are various measures that the Government can implement to support SMEs, as follows:

(1) ***Promote the role of industry and trade associations:*** While the most critical elements of SMEs are to improve their core values and product capacity, it is suggested that the role of industry and trade associations in linking exporters with their prospective markets should be strengthened. As the broadening of network contacts to include international players is important, it is recommended to encourage both the domestic SMEs and the FDI enterprises to participate in the industry and trade associations. As such, the domestic enterprises shall have better opportunities to establish international networks and to exchange with FDI enterprises, and to join the supply chain of the FDI enterprises, as well as improve export capability and opportunities. Furthermore, the industry and trade association also can support SMEs to:

a. *Enhance their accessibility to information-serving export activities,* especially to accurate and timely forecasts and market orientation; organize training programs to improve SMEs' skills of analysing and using market forecasts, for higher activeness in their business and production.

b. *Diversify their export markets and enhance trade promotion* via market research to identify potential exporting markets in the future and speed up trade promotion activities in existing consuming markets and potential markets in future, with fairs, exhibitions and conferences.

c. *Promote the branding for Vietnam's export products and strengthen the enterprises' capacity for negotiation and contracting.* The trade associations should develop the overall branding strategies and encourage member enterprises to develop brands for their products. At the same time, they should coordinate with localities to organize training programs to enhance the capacity for negotiating, contracting and participating in international transactions, to gradually reduce the exports of raw materials and unknown brands.

(2) ***Encourage SME's involvement in economic integration:*** The implementation of various multilateral and bilateral trade agreements requires all existing and potential exporters to continuously update their knowledge about the opportunities and threats given by these free trade agreements, as well as new policies and legal requirements, in order to succeed. In addition to the publication and analysis of the signed FTAs and the supporting measures in parallel with implementation, it is recommended that the trade negotiation agencies should organize regular policy dialogues to form responsible and effective contributions from SMEs (as well as responsible and effective listening) regarding issues in the policies and business environment related to the signing and implementation of FTAs.

(3) ***Establish industrial clusters*** for mutual support in production, encouraging innovation and creativity and promoting social capital development. The industrial clusters will play important roles in regional socio-economic development, create jobs, and control the risks such as environmental pollution and related social issues.

8.6 Research limitations and further research suggestions

The objective of this study was to examine the value of social capital for export behaviours of SMEs in Vietnam during the transitional process. To achieve the research

objective, the dissertation integrates various literature streams in accessing the value of social capital, including the transaction cost theory, rent-seeking theory, resource-based theory, and the dynamic capability perspective. Although trying to identify the overlaps as well as the gaps across these literature streams, the research may not have synthesized all the relevant assumptions and insights provided by the literature. Future research may consider covering and synthesizing some more relevant literature streams, including institutional literature (e.g. Coase 1984; Sheng, Zhou and Li 2011; North, Douglas C 1992) and the social networks approach (e.g. Carrington, Scott and Wasserman 2005). To overcome the divergence in these different literature streams, a more rigorous conceptual framework might be needed.

Another limitation of this study relates to the data availability and data collection. Although efforts were dedicated to capturing the changing impacts of social capital, over the transitional process of Vietnamese economy, by including both qualitative analysis and longitudinal regression analysis, it was challenging to precisely collect data for the past. For that, the qualitative findings on the changing impacts of social capital in the research were drawn from the memory of the research participants, and in triangulation with archival data and literature. It is noted that, whilst the primary qualitative data consist of both manufacturing and trading SMEs, the secondary quantitative data include only manufacturing SMEs. Moreover, since the quantitative data are only practically available since 2007, the regression models have demonstrated only the impacts for the last ten years and may have missed capturing dynamic change impacts of social capital over the long transitional process. Further research is suggested to use both archival research methodology in combination with qualitative method, for which qualitative data would be collected in a larger sample size, and from different stakeholders involved in the export activities of SMEs, such as policy makers, financial institutions, and export partners of participating SMEs. Alternatively, future research on dynamics of social capital during the 'late transitional' process may adopt a longitudinal approach more rigorously to collect both qualitative and quantitative data in real time over a longer period, to obtain more complete and specific data, which would better serve understanding of the dynamics of social capital in the late transitional context.

The research would have benefitted from a more thorough measurement for export performance being developed and consistently applied in both the qualitative and quantitative studies. For this research, the qualitative study followed the current practice

in the field of export performance literature, which adopts a composite construct in assessing export performance, combining economic performance indicators with managerial perceptions. Although extant literature calls for the measurement of performance from the perspectives of top management as they reflect the goals and ambitions of individual firms, it is arguable that an indicator for managerial perception of performance is not strong enough to measure and specially to compare outcomes of different firms. Thus, the comparative analysis between firms is less comprehensive because each manager could perceive performance differently. To address this possible flaw in measurement of export performance, in the quantitative study more economic indicators of export performance were used, such as export revenue, export intensity, and market diversity. However, as constrained by the availability of the secondary data, it was not possible to examine the profitability aspect of export performance, such as export profit, export profit growth, or export profit per capital. Therefore, one promising direction for future research might be to include both subjective views (managerial perceptions) and objective views (economic and financial indicators) in measuring export performance.

Moreover, given the current stage of disagreement in measurement of social capital at corporate level, and the dependence on availability of secondary data, the present research has attempted to use the most persuasive proxies available in the dataset to measure various aspects of social capital. As such, the dissertation contains an empirical model using five distinct proxies of social capital, including four network sizes and one network support representation. Nevertheless, the research would be more rigorous if the secondary data enabled the study to distinguish between the international networks and the domestic networks. Hence, the interpretation of results may need to be cautious of possible bias, typically arising from the measurement of social capital in the survey. For example, the social capital dimensions were measured by the self-reported number of contacts or support to firms in a certain period. However, the vague interpretations and the wide spectrum of substances of some words used in the questionnaires, such as ‘support’, ‘assistance’, and ‘important’, may have led to imprecision in quantifying social capital.

During the research process, some context-specific issues may have led to possible bias in the results, especially for the perception and the measurement of social capital. In Vietnam, it is widely perceived that networking with politicians, authorities

and government officials may carry direct or potential benefits for firms. These benefits are often said to derive from rent-appropriation from information asymmetry, rather than from rent-creation and fair market competition. Hence, the relationships with authorities are generally perceived as being a secret honour to have, so firms are in the position of wishing to keep these relationships undercover to continue receiving their benefits or favourable treatment. For this, it is usually difficult to collect information about these sensitive relationships by self-reporting survey. Similarly, collecting and quantifying information on social capital is challenging because of its ambiguous nature. People may be reluctant to provide the perceived 'sensitive' information, such as how many times have they received support from their networks, or how many politicians or bank officials are in their network of contacts. Therefore, it is suggested that the generalization of our findings to other contexts may need to be reinforced by supplementary contextualization work before interpreting. Alternatively, the generalizability of the present study may be strengthened by replicating the research on other transitional economies.

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APPENDICES

Appendix 1: Definitions of social capital compiled by Adler and Kwon (2002)

TABLE 2
Definitions of Social Capital

External versus Internal	Authors	Definitions of Social Capital
External	Baker	"a resource that actors derive from specific social structures and then use to pursue their interests; it is created by changes in the relationship among actors" (1990: 619).
	Belliveau, O'Reilly, & Wade	"an individual's personal network and elite institutional affiliations" (1996: 1572).
	Bourdieu	"the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (1985: 248).
		"made up of social obligations ('connections'), which is convertible, in certain conditions, into economic capital and may be institutionalized in the form of a title of nobility" (1985: 243).
	Bourdieu & Wacquant	"the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (1992: 119).
	Boxman, De Graaf, & Flap	"the number of people who can be expected to provide support and the resources those people have at their disposal" (1991: 52).
	Burt	"friends, colleagues, and more general contacts through whom you receive opportunities to use your financial and human capital" (1992: 9).
		"the brokerage opportunities in a network" (1997b: 355).
	Knoke	"the process by which social actors create and mobilize their network connections within and between organizations to gain access to other social actors' resources" (1999: 18).
	Portes	"the ability of actors to secure benefits by virtue of membership in social networks or other social structures" (1998: 6).
Internal	Brehm & Rahn	"the web of cooperative relationships between citizens that facilitate resolution of collective action problems" (1997: 999).
	Coleman	"Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of social structure, and they facilitate certain actions of individuals who are within the structure" (1990: 302).
	Fukuyama	"the ability of people to work together for common purposes in groups and organizations" (1995: 10).
		"Social capital can be defined simply as the existence of a certain set of informal values or norms shared among members of a group that permit cooperation among them" (1997).
	Inglehart	"a culture of trust and tolerance, in which extensive networks of voluntary associations emerge" (1997: 188).
	Portes & Sensenbrenner	"those expectations for action within a collectivity that affect the economic goals and goal-seeking behavior of its members, even if these expectations are not oriented toward the economic sphere" (1993: 1323).
	Putnam	"features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit" (1995: 67).
	Thomas	"those voluntary means and processes developed within civil society which promote development for the collective whole" (1996: 11).
Both	Loury	"naturally occurring social relationships among persons which promote or assist the acquisition of skills and traits valued in the marketplace . . . an asset which may be as significant as financial bequests in accounting for the maintenance of inequality in our society" (1992: 100).
	Nahapiet & Ghoshal	"the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilized through that network" (1998: 243).
	Pennar	"the web of social relationships that influences individual behavior and thereby affects economic growth" (1997: 154).
	Schiff	"the set of elements of the social structure that affects relations among people and are inputs or arguments of the production and/or utility function" (1992: 160).
	Woolcock	"the information, trust, and norms of reciprocity inhering in one's social networks" (1998: 153).

Source: Adler and Kwon (2002, p. 20)

Appendix 2: Information to participants involved in research

VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

INFORMATION TO PARTICIPANTS INVOLVED IN RESEARCH

You are invited to participate

You are invited to participate in a research project entitled: ***Valuing social capital: shifting strategies for export success in Vietnamese Small and Medium Sized enterprises.***

This project is being conducted by a student researcher [Nguyen Thi Xuan Huong] as part of a PhD study at Victoria University under the supervision of Prof. Adam Fforde from Victoria Institute of Strategic Economic Studies, College of Business, Victoria University.

Project explanation

The project seeks to measure the value of social capital and its linkage with export performance of Small and Medium sized enterprises (SMEs) in Vietnam. Social capital concept will be conceptualized in Vietnamese context and then exploring whether it is significant to export success of SMEs in Vietnam. This research also aims to explain the changing roles of social capital to export performance during the transitional process of Vietnamese economy.

What will I be asked to do?

The participant will be asked to participate in an open-ended interview or complete a survey form about the topic of social capital and export performance of participant's enterprise. It is expected that the participants will provide researcher with data and information about participants firm's export activities in the overall business performance. The interview will last approximately 1 hour and will be recorded. The survey form will take maximum 45 minutes to complete. Both interview and survey from will be conducted in Vietnamese.

What will I gain from participating?

In participating in this project, informants are contributing to the generation of new knowledge about how social capital affects export performance of SMEs in Vietnam. The result of research will be disseminated by PhD thesis and journal articles publications. It is expected that the understanding about social capital determinant to export performance of firms will help SMEs to adjust their strategies accordingly for business success in the global competition context.

How will the information I give be used?

The information will be analysed and synthesized to explore the answer to the central research question. It is expected that the data will be processed as follows:

- Interviews will be transcribed and translated in to English

- Completed survey will be categorized and translated into English
- Categorized and translated survey forms and transcribed interviews will be entered into relevant soft-wares for analysis
- Other data (operational reports, financial data…) will be kept secured separately for additional analysis.
- All information provided by participants will be handled in accordance with the Regulations of Victoria University and Australia Government's National Statement on ethical conduct in human research.

What are the potential risks of participating in this project?

The participation in this project may be exposed to minimum level of risk. Participants might feel unsecured about sharing information to researcher as they are uncertain about the possibility of leaking private and confidential information during the data collection, analysis generalization and possibly dissemination of research results where participants might be identified. However, for this research, all information will be encoding so that participants can't be identifiable; all the data will be generalized before published.

How will this project be conducted?

In order to answer the central research question, a mix of both qualitative and quantitative methods will be used. At the 1st stage, in-depth interview method will be used to understand the perception of SMEs in Vietnam about social capital since the term "social capital" is largely debatable amongst scholars and it is believed that the term is "context based". Once understandings of concept have been contextualized and verified, it will be used to develop a detail questionnaire in order to collect necessary data from approximately 250 SMEs for statistical regression

Who is conducting the study?

Victoria University

Prof. Adam Fforde
Victoria Institute of Strategic Economic Studies
Tel: 61 3 9919 1340
Email: adam.fforde@vu.edu.au

Prof. Peter Sheehan
Victoria Institute of Strategic Economic Studies
Tel: 61 3 9919 1341
Email: peter.sheehan@vu.edu.au

Nguyen Thi Xuan Huong (PhD candidate)
Victoria Institute of Strategic Economic Studies
Tel: 61 3 9919 1340 / 61 3 9919 1328
Email: thi.nguyen547@live.vu.edu.au / Huong.Nguyen@vu.edu.au

Any queries about your participation in this project may be directed to the Chief Investigator listed above.

If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email researchethics@vu.edu.au or phone (03) 9919 4781 or 4461.

Appendix 3: Consent form for participants involved in research

CONSENT FORM FOR PARTICIPANTS INVOLVED IN RESEARCH

INFORMATION TO PARTICIPANTS:

We would like to invite you to be a part of a study into the impact of social capital to export performance of small and medium sized enterprises in Vietnam titled **"Valuing Social Capital: Shifting Strategies for Export Success in Vietnamese Small and Medium Sized Enterprises"** which seeks to help finding a mechanism for SMEs in Vietnam to improve its export performance.

The research team will conduct case study research at selected exporting SMEs and collect qualitative and quantitative data. The research team will interview owners / managers of selected SMEs on the topic of social capital and collect data on export performance of firms in order to understand the term "social capital" and its aspects, as well as to explore linkage between social capital and export performance of such typical firms. After that, the research team will conduct survey with larger sample size (250 firms) in order to generalize results obtained from case study stage.

CERTIFICATION BY SUBJECT

I, _____

of _____

certify that I am at least 18 years old and that I am voluntarily giving my consent to participate in the study:

"Valuing Social Capital: Shifting Strategies for Export Success in Vietnamese Small and Medium Sized Enterprises" being conducted at Victoria University by: Prof. Adam Fforde

I certify that the objectives of the study, together with any risks and safeguards associated with the procedures listed hereunder to be carried out in the research, have been fully explained to me by: **Nguyen Thi Xuan Huong** and that I freely consent to participation involving the below mentioned procedures:

- Participating in interview (interview can be audio recorded) ☐
- Reviewing interview documents to confirm the content ☐
- Completing survey questionnaires ☐

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this study at any time and that this withdrawal will not jeopardise me in any way.

I have been informed that the information I provide will be kept confidential.

Signed: _____

Date: _____

Any queries about your participation in this project may be directed to the researcher

Prof. Adam Fforde

Victoria University

Phone: +61 3 9919 1340

If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email Researchethics@vu.edu.au or phone (03) 9919 4781 or 4461.

[*please note: Where the participant/s are aged under 18, separate parental consent is required; where the participant/s are unable to answer for themselves due to mental illness or disability, parental or guardian consent may be required.]

Appendix 4: Interview protocols

VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

Qualitative Interview questions

Interviewer: Nguyen Thi Xuan Huong (PhD candidate)

Supervisor: Prof. Adam Fforde

Prof. Peter Sheehan

Topic: VALUING SOCIAL CAPITAL: SHIFTING STRATEGIES FOR EXPORT SUCCESS IN VIETNAMESE SMALL AND MEDIUM SIZED ENTERPRISES

Research has shown that apart from traditional manufacturing resources such as capital, technology, human resources, there exists "other factors" that affecting performance of firms. That "other factors" from different economies and different cultures are not the same. From the view point of firms, each owner and/ or manager possesses his own set of relationships or resources that can affect the performance of firms. This research focuses on evaluating the impact of that factor to export success of Vietnamese small and medium sized enterprises.

Part A - Terminology and concept

1. How do you call the term that describe "*the sum of the actual and potential resources embedded within, available through and derived from the network of relationship possessed by an individual or social unit"?*
2. How do you think if we call the term defined above (Q1) as "social capital"?
   (If agree then we use the term "social capital" for the rest of the interview, if not we will use the term that the interviewee suggests in Q1 to continue). As such, the term "social capital" will be used with flexibility according to the flow of the interview
3. In your view, what are sources of "social capital"?
4. In your view, what are the roles of "social capital" in doing business in Vietnam?
   a. How has the role of social capital change over years if any? (before 1990 / before 2007/ now)
   b. What aspect of "social capital" is typical in Vietnamese business environment?
   c. What aspect of "social capital" is typical in export business?

Additional questions:

i. In general, how do these terms be understood? To what level, by which group of people? Is there any difference between the understandings by different groups? Is there any trend in time? Is there any trend in location?

ii. If you agree that "social capital" plays an important role in business then what are the possible impact of the "lack of understandings" about "social capital"? for example about the loan approval process of the bank? Or appraisal on the credibility of a firm?

Part B – About your situation:

5. How do you normally establish/ maintain network of business relationships with your customers/ suppliers/ partners (banks or creditors / shareholders)?
6. How do you justify if a business partner is valuable?
   a. A local supplier or sub-contractor?
   b. A broker?
   c. A local buyer?
   d. An over sea buyer?
   e. Any other?

Additional questions:

i. The method you use to justify trustworthy mentioned in Q6 is popular or it is of your own method?
ii. If possible, how do you think we can standardize the method to measure "social capital"? (this research aims to quantify the social capital factor)
iii. Could you please provide some example of how you measure the trustworthiness mentioned in Q6 (scale: high, medium, low? Or difference scale)
iv. Do you have any recommendation on this?

Part C - Business Environment and your business

7. Please give us some descriptions of your business environment? How do you compare your business environment with other provinces? Other industries? Any changes over time?
8. How do you think you should work with your relevant authorities?
   a. Do you need to ask for reference/ introduction when you need to work with authorities? Why?
   b. Suppose your company having difficulty at the port trying to clear custom, how do you deal with this situation?
   c. How would you deal with disagreement to the decision of the authorities? Why?
9. What do you think about the roles of trade association?

Additional questions:

i. How do you think about quantifying the roles of social capital to firm via its relationships with authorities?
ii. If possible, could you please provide some examples or suggestions?

Part D – Success measurement

10. How do you define business success? export success? What is the possible relationship between social capital and export performance?

Additional questions:

i. Why do you participate in this current business? Current export venture?
ii. How is your business in the past 5 years?
iii. What is your business plan in the next 3 years?

Appendix 5: Ethics Approval

Type	Human Ethics
Application ID	HRE15-153
Application Title	Valuing Social Capital: Shifting Strategies for Export Success in Vietnamese Small and Medium Sized Enterprises
Status	Finalised - Approved
Primary Investigator	Prof. Adam Fforde
Other Investigators	Ms. Thi Xuan Huong Nguyen Prof. Peter Sheehan
Process Stage	Review complete: Application approved
Template Name	v.13-07 Human Research Ethics Application
Date Created	23/02/2015
Date Approved	22/07/2015
Approved by	Victoria University Human Research Ethics Committee (VUHREC)

Appendix 6: Robustness check for export propensity models

Appendix 6.1: Regression results of Probit model

VARIABLES	(1) Coefficients	(2) Coefficients	(3) Coefficients	(4) Coefficients
2.Firm_size3a	1.042***	1.063***	0.937***	0.924***
	(0.0775)	(0.0806)	(0.0827)	(0.0837)
3.Firm_size3a	1.860***	1.839***	1.661***	1.621***
	(0.102)	(0.106)	(0.109)	(0.111)
4.Firm_size3a	1.896***	1.889***	1.595***	1.489***
	(0.367)	(0.364)	(0.367)	(0.369)
Location	0.0968	0.154**	0.0765	0.0863
	(0.0722)	(0.0742)	(0.0756)	(0.0772)
Ownership	0.527***	0.520***	0.390***	0.390***
	(0.0728)	(0.0747)	(0.0768)	(0.0772)
D_sector1	0.271***	0.331***	0.368***	0.380***
	(0.0922)	(0.0946)	(0.0961)	(0.0969)
D_sector2	0.442***	0.427***	0.452***	0.459***
	(0.102)	(0.104)	(0.105)	(0.105)
D_sector3	0.441***	0.456***	0.459***	0.441***
	(0.109)	(0.110)	(0.112)	(0.113)
D_sector4	1.075***	1.064***	1.099***	1.098***
	(0.104)	(0.105)	(0.108)	(0.108)
ln_business		-0.285***	-0.330***	-0.332***
		(0.0789)	(0.0819)	(0.0829)
ln_social		0.0865	0.0999	0.0873
		(0.0786)	(0.0810)	(0.0819)
ln_bank		0.207***	0.219***	0.218***
		(0.0540)	(0.0550)	(0.0581)
ln_pol		0.0369	0.00318	-0.00429
		(0.0496)	(0.0510)	(0.0515)
ln_res_all		0.0403**	0.0436**	0.0533***
		(0.0190)	(0.0195)	(0.0200)
2.Ex_kngedge3			0.417***	0.401***
			(0.113)	(0.114)
3.Ex_kngedge3			0.544***	0.530***
			(0.114)	(0.115)
4.Ex_kngedge3			0.874***	0.827***
			(0.124)	(0.125)
D_newprod				0.228**
				(0.107)
D_improd				0.150**
				(0.0709)
D_tech				0.0852
				(0.0886)
D_RDinvest				-0.00632
				(0.0746)
Constant	-2.617***	-2.343***	-2.569***	-2.630***
	(0.0854)	(0.154)	(0.170)	(0.178)
Observations	5,791	5,791	5,791	5,791

*Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1*

Appendix 6.2: Logit regression models on panel data

	Dependent variable: Export propensity							
VARIABLES	(1) Coefficients	(2) Coefficients	(3) Coefficients	(4) Coefficients	-5 Coefficients	(6) Coefficients	(7) Coefficients	(8) Coefficients
network size - business	-0.294**					-0.421***		-0.514***
	(0.140)					(0.146)		(0.158)
network size - social		-0.216					-0.338**	
		(0.138)					(0.144)	
network size - banks			0.385**					0.567***
			(0.169)					(0.186)
network size - authorities				-0.0891				-0.141
				(0.147)				(0.162)
network supports					0.152***	0.194***	0.187***	0.195***
					(0.0562)	(0.0584)	(0.0585)	(0.0587)
2.Firm_size	1.919***	1.905***	1.843***	1.880***	1.925***	2.005***	1.985***	1.992***
	(0.309)	(0.309)	(0.307)	(0.308)	(0.310)	(0.312)	(0.312)	(0.311)
3.Firm_size	3.536***	3.513***	3.389***	3.498***	3.498***	3.590***	3.559***	3.527***
	(0.451)	(0.452)	(0.449)	(0.453)	(0.455)	(0.457)	(0.457)	(0.456)
4.Firm_size	3.448***	3.367***	3.431***	3.456***	3.432***	3.482***	3.359***	3.608***
	(1.242)	(1.252)	(1.269)	(1.253)	(1.263)	(1.252)	(1.266)	(1.267)
Ownership	0.523	0.524	0.541	0.512	0.511	0.525	0.529	0.578
	(0.411)	(0.413)	(0.414)	(0.413)	(0.417)	(0.415)	(0.417)	(0.416)
Location	1.884***	1.880***	1.744***	1.799***	1.717***	1.824***	1.830***	1.781***
	(0.381)	(0.384)	(0.377)	(0.378)	(0.382)	(0.385)	(0.388)	(0.383)
D_sector1	0.458	0.423	0.372	0.370	0.334	0.466	0.425	0.526
	(0.483)	(0.484)	(0.484)	(0.483)	(0.488)	(0.488)	(0.490)	(0.488)
D_sector2	1.782***	1.794***	1.790***	1.794***	1.835***	1.822***	1.838***	1.804***

	Dependent variable: Export propensity							
VARIABLES	(1) Coefficients	(2) Coefficients	(3) Coefficients	(4) Coefficients	-5 Coefficients	(6) Coefficients	(7) Coefficients	(8) Coefficients
	(0.565)	(0.567)	(0.567)	(0.567)	(0.574)	(0.573)	(0.575)	(0.572)
D_sector3	1.960***	1.979***	1.988***	1.974***	2.004***	2.002***	2.025***	2.037***
	(0.505)	(0.507)	(0.509)	(0.508)	(0.514)	(0.512)	(0.514)	(0.512)
D_sector4	2.308***	2.327***	2.375***	2.332***	2.380***	2.360***	2.386***	2.423***
	(0.510)	(0.511)	(0.510)	(0.510)	(0.514)	(0.514)	(0.514)	(0.514)
2. Knowledge	0.799**	0.780**	0.799**	0.792**	0.762**	0.793**	0.771**	0.868**
	(0.355)	(0.355)	(0.357)	(0.356)	(0.358)	(0.359)	(0.359)	(0.362)
3. Knowledge	1.117***	1.091***	1.074***	1.107***	1.071***	1.127***	1.094***	1.178***
	(0.362)	(0.362)	(0.363)	(0.365)	(0.365)	(0.365)	(0.365)	(0.370)
4. Knowledge	1.702***	1.668***	1.658***	1.679***	1.641***	1.720***	1.675***	1.796***
	(0.398)	(0.398)	(0.399)	(0.401)	(0.400)	(0.402)	(0.401)	(0.407)
D_newprod	0.714**	0.731**	0.721**	0.715**	0.734**	0.728**	0.758**	0.727**
	(0.327)	(0.327)	(0.328)	(0.328)	(0.329)	(0.329)	(0.328)	(0.331)
D_improd	0.109	0.111	0.119	0.112	0.178	0.204	0.203	0.239
	(0.217)	(0.217)	(0.217)	(0.217)	(0.220)	(0.221)	(0.221)	(0.222)
D_tech	0.131	0.111	0.103	0.104	0.135	0.184	0.155	0.180
	(0.275)	(0.275)	(0.274)	(0.274)	(0.277)	(0.279)	(0.279)	(0.280)
D_RDinvest	-0.554**	-0.543**	-0.391*	-0.540**	-0.465**	-0.479**	-0.466**	-0.295
	(0.230)	(0.230)	(0.236)	(0.230)	(0.232)	(0.233)	(0.233)	(0.240)
Constant	-8.314***	-8.590***	-9.516***	-9.147***	-9.915***	-8.863***	-9.138***	-9.003***
	(0.783)	(0.774)	(0.714)	(0.693)	(0.782)	(0.826)	(0.824)	(0.830)
Observations	5,791	5,791	5,791	5,791	5,791	5,791	5,791	5,791
Number of Firm_ID	1,166	1,166	1,166	1,166	1,166	1,166	1,166	1,166

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% level respectively*

Appendix 6.3: Logit regression results year on year of the panel data

BASELINE – MODEL 1					
VARIABLES	(2007) Marginal effects	(2009) Marginal effects	(2011) Marginal effects	(2013) Marginal effects	(2015) Marginal effects
Firm_size (2)	0.0856***	0.102***	0.126***	0.123***	0.153***
	(0.0182)	(0.0227)	(0.0263)	(0.0272)	(0.0287)
Firm_size (3)	0.286***	0.310***	0.371***	0.333***	0.473***
	(0.0583)	(0.0644)	(0.0696)	(0.0705)	(0.0825)
Firm_size (4)	0.135		0.155		0.645**
	(0.140)		(0.170)		(0.254)
Location	0.0300**	-0.00259	0.00623	0.00281	0.00237
	(0.0135)	(0.0142)	(0.0146)	(0.0160)	(0.0136)
Ownership	0.0402***	0.0305**	0.0385**	0.0425**	0.0551***
	(0.0116)	(0.0143)	(0.0151)	(0.0165)	(0.0135)
Sector (1)	0.0319**	0.0179	0.0408**	0.0176	0.0213
	(0.0162)	(0.0186)	(0.0187)	(0.0209)	(0.0195)
Sector (2)	0.00855	0.00904	0.0398*	0.0610***	0.0608***
	(0.0191)	(0.0206)	(0.0207)	(0.0214)	(0.0183)
Sector (3)	0.0719***	0.0123	0.0398*	0.0331	0.0411*
	(0.0197)	(0.0221)	(0.0216)	(0.0263)	(0.0225)
Sector (4)	0.0743***	0.0969***	0.122***	0.119***	0.0831***
	(0.0177)	(0.0196)	(0.0224)	(0.0219)	(0.0205)
Observations	1,166	1,164	1,162	1,165	1,163
Log likelihood	-143.34	-187.21	-202.71	-238.78	-179.84
LR chi2	180.36	154.85	171.85	156.21	273.78
Prob> chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.3862	0.2926	0.2977	0.2465	0.4322

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively*

MODEL 2					
VARIABLES	(2007) Marginal effects	(2009) Marginal effects	(2011) Marginal effects	(2013) Marginal effects	(2015) Marginal effects
Firm_size (2)	0.0835***	0.107***	0.133***	0.144***	0.162***
	(0.0181)	(0.0250)	(0.0297)	(0.0298)	(0.0337)
Firm_size (3)	0.254***	0.334***	0.397***	0.373***	0.472***
	(0.0579)	(0.0698)	(0.0700)	(0.0764)	(0.0939)
Firm_size (4)	0.160		0.171		0.693***
	(0.175)		(0.179)		(0.245)
Location	0.0361***	9.13e-05	-0.00167	0.00258	0.00895
	(0.0140)	(0.0157)	(0.0157)	(0.0173)	(0.0155)
Ownership	0.0384***	0.0334**	0.0426***	0.0353**	0.0423***
	(0.0120)	(0.0157)	(0.0155)	(0.0173)	(0.0147)
Sector (1)	0.0323**	0.0322	0.0500***	0.0396*	0.00522
	(0.0162)	(0.0201)	(0.0194)	(0.0218)	(0.0213)
Sector (2)	0.00713	0.0185	0.0325	0.0797***	0.0548***
	(0.0196)	(0.0224)	(0.0222)	(0.0222)	(0.0211)
Sector (3)	0.0725***	0.0233	0.0415*	0.0456*	0.0323
	(0.0203)	(0.0234)	(0.0218)	(0.0271)	(0.0237)
Sector (4)	0.0806***	0.0986***	0.105***	0.127***	0.0721***
	(0.0181)	(0.0222)	(0.0238)	(0.0227)	(0.0221)
Business networks	0.00699	-0.0242	-0.0547***	-0.0613***	-0.0171
	(0.0117)	(0.0160)	(0.0191)	(0.0200)	(0.0175)
Social networks	-0.00845	0.000798	0.0165	0.0430**	0.0228
	(0.0117)	(0.0171)	(0.0199)	(0.0218)	(0.0181)
Res-social networks	-0.00899**	-0.000763	0.0140***	-0.00546	-0.00878
	(0.00433)	(0.00540)	(0.00491)	(0.00692)	(0.00561)
Bank networks	0.00261	0.00650*	0.00300*	0.00349	0.00154
	(0.00247)	(0.00342)	(0.00171)	(0.00301)	(0.00315)
Public officials network	0.00182	0.000279	0.00384*	-0.000633	-0.000851
	(0.00119)	(0.000876)	(0.00213)	(0.00334)	(0.00284)
Observations	1,166	1,020	1,085	1,062	987
Log likelihood	-139.174	-165.647	-185.417	-206.490	-146.096
LR chi2	188.70	152.38	184.98	159.58	228.48
Prob> chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.4040	0.3151	0.3328	0.2787	0.4388

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively*

MODEL 3					
VARIABLES	(2007) Marginal effects	(2009) Marginal effects	(2011) Marginal effects	(2013) Marginal effects	(2015) Marginal effects
Firm_size (2)	0.0672***	0.0743***	0.121***	0.105***	0.135***
	(0.0169)	(0.0172)	(0.0267)	(0.0239)	(0.0285)
Firm_size (3)	0.183***	0.192***	0.336***	0.228***	0.410***
	(0.0535)	(0.0424)	(0.0666)	(0.0580)	(0.0897)
Firm_size (4)	0.0575		0.0922		0.564**
	(0.0728)		(0.122)		(0.263)
Ownership	0.0348***	0.0189	0.0264*	0.0271*	0.0442***
	(0.0122)	(0.0140)	(0.0151)	(0.0158)	(0.0142)
Sector (1)	0.0225	0.0311*	0.0451**	0.0324	0.0272
	(0.0162)	(0.0179)	(0.0181)	(0.0204)	(0.0191)
Sector (2)	0.0171	0.0104	0.0355*	0.0480**	0.0666***
	(0.0190)	(0.0199)	(0.0212)	(0.0208)	(0.0187)
Sector (3)	0.0550***	0.0232	0.0374*	0.0213	0.0424*
	(0.0187)	(0.0205)	(0.0201)	(0.0256)	(0.0217)
Sector (4)	0.0645***	0.105***	0.125***	0.110***	0.0788***
	(0.0161)	(0.0191)	(0.0219)	(0.0202)	(0.0208)
Business networks	0.00712	-0.0274*	-0.0573***	-0.0542***	-0.0141
	(0.0120)	(0.0161)	(0.0174)	(0.0201)	(0.0162)
Social networks	-0.0127	0.00619	0.0298*	0.0252	0.00780
	(0.0121)	(0.0165)	(0.0177)	(0.0197)	(0.0152)
Bank networks	0.00151	0.00280*	0.00273	0.00532*	0.00141
	(0.00244)	(0.00149)	(0.00171)	(0.00284)	(0.00314)
Political networks	0.000671	0.000155	0.00312*	-0.00240	0.000411
	(0.00120)	(0.000983)	(0.00188)	(0.00325)	(0.00265)
Firm knowledge (2)	-0.00638	0.0648***	0.0293	0.0230	0.0349
	(0.0162)	(0.0157)	(0.0181)	(0.0164)	(0.0212)
Firm knowledge (3)	0.0266	0.0566***	0.0404**	0.0604***	0.0332
	(0.0178)	(0.0122)	(0.0185)	(0.0188)	(0.0212)
Firm knowledge (4)	0.0529**	0.113***	0.0667***	0.128***	0.0530*
	(0.0222)	(0.0226)	(0.0253)	(0.0287)	(0.0271)
Observations	1,166	1,164	1,162	1,165	1,131
Log likelihood	-138.416	-168.789	-191.281	-222.083	-172.033
LR chi2	190.22	191.68	194.72	189.62	259.38
Prob> chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.4073	0.3622	0.3373	0.2992	0.4298

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively*

MODEL 4					
VARIABLES	(2007) Marginal effects	(2009) Marginal effects	(2011) Marginal effects	(2013) Marginal effects	(2015) Marginal effects
Firm_size (2)	0.0676***	0.0674***	0.109***	0.0967***	0.135***
	(0.0161)	(0.0165)	(0.0252)	(0.0232)	(0.0293)
Firm_size (3)	0.169***	0.171***	0.299***	0.201***	0.394***
	(0.0489)	(0.0403)	(0.0637)	(0.0554)	(0.0926)
Firm_size (4)	0.0533		0.0882		0.538*
	(0.0651)		(0.121)		(0.275)
Ownership	0.0368***	0.0158	0.0224	0.0294*	0.0425***
	(0.0124)	(0.0139)	(0.0151)	(0.0158)	(0.0142)
Sector (1)	0.0270	0.0315*	0.0417**	0.0398*	0.0214
	(0.0166)	(0.0179)	(0.0181)	(0.0205)	(0.0190)
Sector (2)	0.0204	0.0118	0.0364*	0.0462**	0.0669***
	(0.0186)	(0.0195)	(0.0211)	(0.0207)	(0.0185)
Sector (3)	0.0559***	0.0184	0.0377*	0.0188	0.0421*
	(0.0190)	(0.0201)	(0.0197)	(0.0254)	(0.0215)
Sector (4)	0.0639***	0.0989***	0.123***	0.104***	0.0753***
	(0.0161)	(0.0193)	(0.0217)	(0.0203)	(0.0211)
Business networks	0.00521	-0.0220	-0.0632***	-0.0517**	-0.0151
	(0.0124)	(0.0163)	(0.0175)	(0.0201)	(0.0161)
Social networks	-0.00953	-0.000990	0.0324*	0.0205	0.00997
	(0.0126)	(0.0165)	(0.0175)	(0.0196)	(0.0152)
Bank networks	0.00317	0.00263*	0.00261	0.00493*	0.000999
	(0.00251)	(0.00156)	(0.00176)	(0.00298)	(0.00320)
Public officials network	0.000170	0.000233	0.00310*	-0.00216	-0.000305
	(0.00137)	(0.00105)	(0.00185)	(0.00331)	(0.00269)
Firm knowledge (2)	-0.00626	0.0601***	0.0267	0.0182	0.0369*
	(0.0155)	(0.0151)	(0.0178)	(0.0169)	(0.0210)
Firm knowledge (3)	0.0304*	0.0574***	0.0417**	0.0567***	0.0309
	(0.0174)	(0.0124)	(0.0186)	(0.0192)	(0.0208)
Firm knowledge (4)	0.0501**	0.106***	0.0640**	0.118***	0.0481*
	(0.0214)	(0.0220)	(0.0252)	(0.0296)	(0.0264)
Newproduct	0.0168	0.0342	-0.0522	0.0857	0.0164
	(0.0183)	(0.0273)	(0.0369)	(0.0593)	(0.0137)
Product improvement	0.0288**	0.0286**	0.0154	0.0241	-0.0151
	(0.0139)	(0.0133)	(0.0137)	(0.0158)	(0.0184)
New technology	-0.0132	0.00691	0.0331**	-0.00633	0.0523**
	(0.0130)	(0.0140)	(0.0162)	(0.0241)	(0.0205)
R&Dinvestment	0.0224*	-0.00890	-0.0121	-0.0238	0.00339
	(0.0119)	(0.0132)	(0.0149)	(0.0150)	(0.0145)
Observations	1,166	1,164	1,162	1,165	1,131
Log likelihood	-133.983	-164.369	-186.563	-218.004	-167.978
LR chi2	199.08	200.52	204.15	197.77	267.48
Prob> chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.4263	0.3789	0.3536	0.3121	0.4433

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively*

Appendix 6.4: Models specification

Model 1

	2007	2009	2011	2013	2015	Avg
Hosmer-Lemeshow chi2	5.57	5.22	3.47	3.41	5.13	4.56
Prob> chi2	0.5912	0.6337	0.9012	0.8447	0.6440	0.72296
AIC	306.6873	392.4153	425.4236	495.5681	379.6751	399.95388
BIC	357.3007	437.9518	476.0025	541.1124	430.2627	448.52602

Model 2

	2007	2009	2011	2013	2015	Avg
Hosmer-Lemeshow chi2	5.06	7.42	9.93	4.93	4.89	6.446
Prob> chi2	0.7507	0.4925	0.2700	0.7645	0.7690	0.60934
AIC	308.3481	359.2946	400.8347	440.9811	322.1936	366.33042
BIC	384.2682	428.2804	475.6747	510.5318	395.6137	438.87376

Model 3

	2007	2009	2011	2013	2015	Avg
Hosmer-Lemeshow chi2	12.36	4.45	4.90	8.26	8.38	7.67
Prob> chi2	0.1358	0.8147	0.7680	0.4089	0.3968	0.50484
AIC	308.8318	367.5772	414.5625	474.1656	376.0651	388.24044
BIC	389.8132	443.4715	495.4889	550.0728	456.5588	467.08104

Model 4

	2007	2009	2011	2013	2015	Avg
Hosmer-Lemeshow chi2	10.09	3.38	5.93	8.33	5.38	6.622
Prob> chi2	0.2587	0.9086	0.6546	0.4017	0.7167	0.58806
AIC	309.4945	365.1978	411.795	474.5572	374.0108	387.01106
BIC	405.6599	456.2709	507.8951	565.6458	469.5971	481.01376

Appendix 6.5: Estimation results of logit model on individual datasets

BASELINE MODEL					
VARIABLES	(2007) Marginal effects	(2009 Marginal effects	(2011) Marginal effects	(2013) Marginal effects	(2015) Marginal effects
2.Firm_size3a	0.0690***	0.0862***	0.0830***	0.0983***	0.123***
	(0.0108)	(0.0125)	(0.0132)	(0.0151)	(0.0169)
3.Firm_size3a	0.251***	0.254***	0.281***	0.251***	0.371***
	(0.0362)	(0.0364)	(0.0398)	(0.0393)	(0.0461)
4.Firm_size3a	0.286**	0.290**	0.338**	0.154	0.311**
	(0.130)	(0.145)	(0.137)	(0.127)	(0.121)
Location	0.0257***	0.0154*	0.0187**	0.00878	0.00382
	(0.00897)	(0.00904)	(0.00940)	(0.00961)	(0.00924)
Ownership	0.0409***	0.0422***	0.0459***	0.0394***	0.0383***
	(0.00842)	(0.00886)	(0.00937)	(0.00990)	(0.00953)
D_sector1	0.0335***	0.0294**	0.0413***	0.0135	0.0196
	(0.0112)	(0.0121)	(0.0117)	(0.0128)	(0.0125)
D_sector2	0.0485***	0.0460***	0.0528***	0.0527***	0.0642***
	(0.0104)	(0.0109)	(0.0115)	(0.0121)	(0.0112)
D_sector3	0.0320**	0.0291*	0.0412***	0.0190	0.0205
	(0.0146)	(0.0155)	(0.0149)	(0.0166)	(0.0170)
D_sector4	0.0781***	0.102***	0.110***	0.107***	0.0818***
	(0.0135)	(0.0137)	(0.0159)	(0.0146)	(0.0146)
Observations	2,622	2,657	2,550	2,573	2,643

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively*

MODEL 2

VARIABLES	(2007) Marginal effects	(2009) Marginal effects	(2011) Marginal effects	(2013) Marginal effects	(2015) Marginal effects
2.Firm_size3a	0.0706***	0.0936***	0.0852***	0.118***	0.135***
	(0.0111)	(0.0143)	(0.0147)	(0.0175)	(0.0195)
3.Firm_size3a	0.266***	0.283***	0.301***	0.306***	0.407***
	(0.0388)	(0.0411)	(0.0430)	(0.0457)	(0.0507)
4.Firm_size3a	0.327**	0.296*	0.365**	0.229	0.316**
	(0.137)	(0.154)	(0.144)	(0.162)	(0.130)
Location	0.0258***	0.00753	0.0167*	0.00895	0.0104
	(0.00909)	(0.00965)	(0.00996)	(0.0102)	(0.0103)
Ownership	0.0416***	0.0427***	0.0472***	0.0339***	0.0287***
	(0.00836)	(0.00950)	(0.00985)	(0.0103)	(0.0100)
D_sector1	0.0345***	0.0412***	0.0474***	0.0267**	0.0124
	(0.0112)	(0.0126)	(0.0124)	(0.0136)	(0.0138)
D_sector2	0.0461***	0.0438***	0.0542***	0.0597***	0.0523***
	(0.0106)	(0.0119)	(0.0122)	(0.0127)	(0.0122)
D_sector3	0.0342**	0.0208	0.0436***	0.0266	0.0180
	(0.0147)	(0.0173)	(0.0155)	(0.0170)	(0.0174)
D_sector4	0.0808***	0.0940***	0.104***	0.114***	0.0801***
	(0.0137)	(0.0145)	(0.0170)	(0.0151)	(0.0150)
ln_business	0.000272	-0.0274***	-0.0214*	-0.0256**	-0.0264**
	(0.00837)	(0.00964)	(0.0116)	(0.0130)	(0.0116)
ln_social	-0.00235	0.0131	0.00551	0.0108	0.0272**
	(0.00859)	(0.0101)	(0.0120)	(0.0134)	(0.0117)
ln_res_social	-0.00764**	-0.00678**	0.00791**	-0.00343	-0.00719*
	(0.00297)	(0.00340)	(0.00317)	(0.00409)	(0.00378)
Observations	2,622	2,320	2,361	2,329	2,305

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively*

MODEL 3

VARIABLES	(2007) Marginal effects	(2009) Marginal effects	(2011) Marginal effects	(2013) Marginal effects	(2015) Marginal effects
2.Firm_size3a	0.0684***	0.0906***	0.0807***	0.117***	0.136***
	(0.0108)	(0.0140)	(0.0144)	(0.0175)	(0.0200)
3.Firm_size3a	0.246***	0.264***	0.297***	0.297***	0.396***
	(0.0376)	(0.0400)	(0.0422)	(0.0454)	(0.0516)
4.Firm_size3a	0.316**	0.260*	0.346**	0.232	0.310**
	(0.135)	(0.140)	(0.136)	(0.164)	(0.130)
Location	0.0292***	0.0109	0.0144	0.00822	0.0113
	(0.00918)	(0.00978)	(0.00992)	(0.0102)	(0.0105)
Ownership	0.0404***	0.0422***	0.0472***	0.0334***	0.0233**
	(0.00836)	(0.00948)	(0.00976)	(0.0103)	(0.0103)
D_sector1	0.0354***	0.0428***	0.0504***	0.0255*	0.0121
	(0.0112)	(0.0126)	(0.0124)	(0.0136)	(0.0138)
D_sector2	0.0474***	0.0440***	0.0538***	0.0582***	0.0564***
	(0.0106)	(0.0118)	(0.0122)	(0.0126)	(0.0126)
D_sector3	0.0318**	0.0228	0.0448***	0.0258	0.0204
	(0.0147)	(0.0172)	(0.0154)	(0.0168)	(0.0173)
D_sector4	0.0825***	0.0946***	0.104***	0.110***	0.0796***
	(0.0137)	(0.0145)	(0.0169)	(0.0153)	(0.0157)
ln_business	-0.00371	-0.0304***	-0.0232**	-0.0272**	-0.0253**
	(0.00843)	(0.00955)	(0.0116)	(0.0129)	(0.0118)
ln_social	-0.00146	0.0121	0.00132	0.00632	0.0280**
	(0.00848)	(0.00978)	(0.0121)	(0.0136)	(0.0118)
ln_res_social	-0.00848***	-0.00744**	0.00872***	-0.00299	-0.00619
	(0.00299)	(0.00343)	(0.00315)	(0.00410)	(0.00385)
netw_bank	0.00183	0.00432**	0.000127	0.00109	-0.000578
	(0.00177)	(0.00213)	(0.00130)	(0.000922)	(0.000859)
netw_politician	0.00237**	0.000643	0.00482***	0.00103	0.00124
	(0.000923)	(0.000709)	(0.00152)	(0.00101)	(0.00198)
Observations	2,622	2,320	2,361	2,329	2,224

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively*

MODEL 4

VARIABLES	(2007) Marginal effects	(2009) Marginal effects	(2011) Marginal effects	(2013) Marginal effects	(2015) Marginal effects
2.Firm_size3a	0.0575***	0.0680***	0.0751***	0.0769***	0.113***
	(0.0107)	(0.0108)	(0.0136)	(0.0136)	(0.0176)
3.Firm_size3a	0.184***	0.177***	0.249***	0.186***	0.316***
	(0.0343)	(0.0285)	(0.0400)	(0.0341)	(0.0476)
4.Firm_size3a	0.188*	0.144	0.283**	0.131	0.245**
	(0.101)	(0.0892)	(0.125)	(0.111)	(0.106)
Ownership	0.0370***	0.0301***	0.0410***	0.0307***	0.0314***
	(0.00856)	(0.00859)	(0.00966)	(0.00966)	(0.00976)
D_sector1	0.0307***	0.0381***	0.0427***	0.0210*	0.0213*
	(0.0112)	(0.0118)	(0.0116)	(0.0128)	(0.0124)
D_sector2	0.0489***	0.0397***	0.0525***	0.0429***	0.0701***
	(0.0106)	(0.0107)	(0.0115)	(0.0120)	(0.0117)
D_sector3	0.0220	0.0255*	0.0354**	0.0116	0.0234
	(0.0143)	(0.0147)	(0.0144)	(0.0160)	(0.0165)
D_sector4	0.0681***	0.0920***	0.106***	0.0994***	0.0816***
	(0.0128)	(0.0134)	(0.0156)	(0.0141)	(0.0150)
ln_business	-0.00313	-0.0308***	-0.0291***	-0.0191	-0.0143
	(0.00840)	(0.00983)	(0.0106)	(0.0119)	(0.0108)
ln_social	-0.00712	0.00330	0.0112	-0.00234	0.00820
	(0.00846)	(0.00986)	(0.0107)	(0.0117)	(0.0101)
netw_bank	0.00122	0.00249**	0.000239	0.00118	-0.00112
	(0.00173)	(0.00118)	(0.00128)	(0.000900)	(0.000982)
netw_politician	0.00157*	0.000328	0.00409***	0.000606	0.00273
	(0.000950)	(0.000885)	(0.00140)	(0.000912)	(0.00179)
2.Ex_kngedge3	0.00138	0.0388***	0.0218	0.00714	0.0289**
	(0.0119)	(0.0108)	(0.0133)	(0.0114)	(0.0145)
3.Ex_kngedge3	0.0168	0.0468***	0.0219*	0.0424***	0.0235
	(0.0121)	(0.00969)	(0.0128)	(0.0127)	(0.0144)
4.Ex_kngedge3	0.0542***	0.0727***	0.0335**	0.0715***	0.0346**
	(0.0157)	(0.0125)	(0.0148)	(0.0169)	(0.0170)
D_newprod	0.00916	0.0154	0.00267	0.00349	0.0202**
	(0.0126)	(0.0171)	(0.0179)	(0.0385)	(0.00942)
D_improd	0.0134	0.0193**	0.0123	0.0214**	-0.00710
	(0.00873)	(0.00866)	(0.00898)	(0.0100)	(0.0109)
D_tech	-0.0124	0.0171*	0.0192*	-0.000514	0.0418***
	(0.00923)	(0.00907)	(0.0101)	(0.0151)	(0.0136)
Observations	2,622	2,655	2,550	2,573	2,558

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively*

Appendix 7: Robustness check for export performance models

Appendix 7.1: Random effects regression model on each SC variables, with robust standard errors

	Dependent variable: export revenue					
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Coef	Coef	Coef	Coef	Coef	Coef
network supports	0.080*	0.071*	0.064	0.078*	0.080*	0.086**
	(0.041)	(0.041)	(0.039)	(0.040)	(0.041)	(0.041)
network size - business	-0.128					-0.076
	(0.091)					(0.099)
network size - social		-0.075			-0.020	
		(0.097)			(0.103)	
network size - banks			-0.121		-0.063	-0.037
			(0.131)		(0.140)	(0.141)
network size - authorities				-0.211*	-0.194*	-0.176
				(0.108)	(0.114)	(0.115)
2. Firm_size	1.463***	1.455***	1.461***	1.576***	1.582***	1.575***
	(0.333)	(0.336)	(0.335)	(0.336)	(0.338)	(0.337)
3. Firm_size	2.245***	2.236***	2.289***	2.395***	2.414***	2.393***
	(0.349)	(0.351)	(0.355)	(0.356)	(0.361)	(0.361)
4. Firm_size	2.086***	2.106***	2.234***	2.291***	2.305***	2.248***
	(0.658)	(0.666)	(0.663)	(0.652)	(0.667)	(0.664)
Ownership	0.539**	0.551**	0.569**	0.475*	0.512*	0.507*
	(0.275)	(0.278)	(0.280)	(0.276)	(0.285)	(0.283)
Export_experience	0.0270**	0.028**	0.0266**	0.024**	0.024*	0.024*
	(0.013)	(0.013)	(0.013)	(0.012)	(0.013)	(0.013)
2. Knowledge	1.038**	1.031**	0.983**	0.950*	0.947*	0.969**
	(0.494)	(0.498)	(0.496)	(0.489)	(0.494)	(0.493)
3. Knowledge	0.992**	0.968**	0.917**	0.886*	0.888*	0.921**
	(0.467)	(0.470)	(0.467)	(0.461)	(0.467)	(0.466)
4. Knowledge	1.109**	1.072**	1.038**	1.002**	0.998**	1.034**
	(0.470)	(0.472)	(0.471)	(0.465)	(0.468)	(0.470)
INNO	-0.182	-0.171	-0.183	-0.174	-0.182	-0.186
	(0.164)	(0.165)	(0.165)	(0.162)	(0.163)	(0.163)
D_RDinvest	0.322*	0.310*	0.308*	0.317*	0.300*	0.307*
	(0.170)	(0.174)	(0.173)	(0.168)	(0.172)	(0.171)
Constant	11.87***	11.74***	11.67***	11.72***	11.80***	11.90***
	(0.647)	(0.650)	(0.623)	(0.612)	(0.646)	(0.646)
Observations	147	147	147	147	147	147
Number of Firm_ID	74	74	74	74	74	74
R square	0.392	0.374	0.385	0.406	0.413	0.419
Wald chi2	77.66	75.39	75.88	80.54	79.95	80.84
Prob> chi2	0.000	0.000	0.000	0.000	0.000	0.000

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively*

Appendix 7.2: Random effects regression model on export intensity – robust standard errors

	Dependent variable: Export Intensity					
	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	Coef	Coef	Coef	Coef	Coef	Coef
network supports	-0.034	-0.042	-0.051*	-0.053*	-0.046	-0.039
	(0.030)	(0.031)	(0.028)	(0.032)	(0.031)	(0.029)
network size - business	-0.157*					-0.119
	(0.094)					(0.090)
network size - social		-0.118			-0.066	
		(0.091)			(0.085)	
network size - banks			-0.244**		-0.219**	-0.193*
			(0.113)		(0.103)	(0.101)
network size - authorities				-0.033	0.028	0.048
				(0.104)	(0.103)	(0.105)
2.Firm_size	0.335	0.330	0.362	0.335	0.346	0.336
	(0.423)	(0.429)	(0.429)	(0.421)	(0.414)	(0.408)
3.Firm_size	0.213	0.199	0.329	0.227	0.289	0.271
	(0.402)	(0.408)	(0.409)	(0.401)	(0.398)	(0.391)
4.Firm_size	0.438	0.442	0.684**	0.552*	0.599*	0.549
	(0.348)	(0.361)	(0.337)	(0.332)	(0.346)	(0.341)
Ownership	-0.172	-0.146	-0.093	-0.197	-0.074	-0.089
	(0.225)	(0.234)	(0.235)	(0.229)	(0.241)	(0.232)
Export_experience	0.008	0.009	0.006	0.009	0.007	0.007
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
2. Knowledge	0.283	0.282	0.202	0.235	0.235	0.253
	(0.519)	(0.522)	(0.503)	(0.492)	(0.519)	(0.525)
3. Knowledge	0.198	0.175	0.096	0.117	0.134	0.168
	(0.501)	(0.506)	(0.480)	(0.473)	(0.495)	(0.500)
4. Knowledge	0.390	0.347	0.290	0.316	0.314	0.359
	(0.519)	(0.527)	(0.491)	(0.486)	(0.512)	(0.517)
INNO	-0.016	0.000	-0.035	-0.001	-0.029	-0.037
	(0.130)	(0.131)	(0.128)	(0.134)	(0.128)	(0.127)
D_RDinvest	0.245*	0.223*	0.207*	0.255**	0.195*	0.212*
	(0.127)	(0.127)	(0.114)	(0.119)	(0.118)	(0.119)
Constant	3.521***	3.414***	3.331***	3.173***	3.444***	3.541***
	(0.685)	(0.693)	(0.646)	(0.627)	(0.691)	(0.683)
Observations	147.000	147.000	147.000	147.000	147.000	147.000
Number of Firm_ID	74.000	74.000	74.000	74.000	74.000	74.000
R square	0.1381	0.1139	0.1831	0.1141	0.1733	0.184
Wald chi2	23.41	20.17	22.8	19.61	21.26	23.93
Prob> chi2	0.0244	0.0639	0.0294	0.0748	0.0951	0.0467

*Note: Standard errors in parentheses; *, ** and *** denotes significance at 10%, 5% and 1% levels, respectively*

Appendix 8: Summary of results on qualitative and quantitative studies

Criteria	Qualitative (Chap 5)	Export Propensity (Chap 6)	Export performance (Chap 7)			
			Overall	**Revenue**	**Intensity**	**Diversity**
Network size						
Business network size	Positive for starting phase and more for domestic rather than export business	Negative	Partly supported	Negative Insignificant	Negative Insignificant	Positive Significant
Social network size	Positive	Not significant	Partly supported	Positive Insignificant	Negative Insignificant	Positive Significant
Bank network size	Positive, but phasing out with the growth of firm	Positive	Not supported	Negative Insignificant	Negative Insignificant	Negative Significant
Political network size	Used to be significant, but not now	Not significant	Not supported	Negative Insignificant	Positive Insignificant	Negative Insignificant
Network assist / support	Positive for starting phase rather than later	Positive	Partly supported	Positive Significant	Negative Insignificant	Negative Insignificant
Knowledge	SC create Knowledge. Knowledge is important	Positive	Supported	Positive Significant	Positive Insignificant	Positive Significant
Innovation		Positive	Not supported	Negative Insignificant	Negative Insignificant	Negative Insignificant
R&D		Ambiguous	Supported	Positive Significant	Positive Significant	Positive Insignificant