

Networking in Weak Institutions: When Is It Good for Small Business Investment?

The Case of Vietnam

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Abstract: This study investigates the influence of business-specific, bank-specific, and political-specific networks on small firm investments in Vietnam. Also, we aim to explain how these social networks substitute the weaknesses of local institutions. Examining a set of more than 9,800 firm-year observations of small businesses in Vietnam from 2005-2015, we find that social ties with bank officials can boost firm investments; social ties with government officials can help firms overcome institutional voids; whereas social ties with businesspeople appear trivial to investment decisions. More importantly, we propose that networking, especially networks built upon connections with government officials can substitute local institutions by addressing the weaknesses in (1) inefficient legal enforcement, (2) corruption, (3) bureaucratic compliance, and (4) non-transparent governance system.

Keywords: Small business; Investment; Social capital; Informal institutions; Vietnam

1. Introduction

Investment is an essential entrepreneurial activity for small businesses (Zhou, 2013). After the initial investment (venture creation), deciding to make post-establishment investments appears to be critical for entrepreneurs. In this study, investment is measured as the additional financial capital

invested in a venture, whether that be in the form of fixed assets or working capital. Firms that make investments may or may not grow, but firms that do not invest certainly cannot sustain their competitive advantages and market share, leading to declined growth rates or the threat of collapse (Nguyen, 2019).

Investment is made based on exploiting business opportunities, i.e., gaps in the market. Identifying these is highly dependent on the information that entrepreneurs obtain from their surrounding events and environments (Baron & Ensley, 2006). For this reason, entrepreneurs are inclined to strategically build their social networks to expand their pool of information, and also to obtain productive resources and favours from the relationships embedded in their networks (Du et al., 2015; Putnam, 1993). Social capital, despite having been frequently linked to firm performance in previous studies (Santarelli & Tran, 2013), is rarely scrutinised in relation to small business investments, which are of course crucial for economic performance and sustainable growth.

As such, the first research question in this study is that what types of social networks are more important to firm investment decisions? To answer this question, we examine three types of networks, namely business-specific, bank-specific, and political-specific. In each type of network, we measure the number of active contacts linked with entrepreneurs. Given that the context of analysis is Vietnam, which is a developing country with a transition economy associated with immature financial systems and incomplete institutional settings, the analysis of networking ties with “resource keepers”, i.e., bank and government officials is particularly interesting (O'Toole et al., 2016).

More importantly, we also strive to understand the underlying relations between these social networks and local institutional settings, which are represented in this study by the governance quality of local governments.

Governance quality is related to the process whereby local officials deliver public services, and has much to do with their attitude, behaviour, service quality, and reliability (Nguyen et al., 2018). There has been a long-held assumption, either implicitly or explicitly, that in less developed institutional environments (e.g., the developing countries), networking is more important to doing business than it is in the developed countries (Du et al., 2015; Nolan, 2011; Santarelli & Tran, 2013). However, the mechanisms through which networking might moderate the weaknesses of local institutions remain largely unexplored. As such, the second research question in this study is that how do social networks facilitate small business investments in the context of low-quality local governance environments?

Examining a panel dataset of more than 9,800 firm-year observations of small businesses (mostly household ventures) in Vietnam over the 2005-2015 period, we show that only bank-specific networks directly influence investment decisions, political-specific networks help firms overcome institutional voids, whereas business-specific networks, interestingly, appear to be redundant. Social ties with bank officials are key to the finalisation of business opportunities, where entrepreneurs seek funding from external financiers (banks) (Nguyen et al., 2006). As such, we suggest that it may not be that entrepreneurs in Vietnam lack business opportunities, but rather that their key obstacles are the deficiency of capital (financing constraints) and support from local authorities.

Also, this study demonstrates that social networks can substitute a set of formal forces of local governance. Specifically, the mechanisms through which social capital substitutes institutions could be through addressing the weaknesses in local (1) inefficient legal enforcement, (2) corruption, (3) bureaucratic compliance, and (4) non-transparent governance system. We therefore propose that social capital functions as a smaller and rougher version of institutions in domains where the “rules of the game” are deficient.

This study is well integrated with the literature that examines social capital in the context of entrepreneurship in Vietnam. Social capital in general and its special Chinese form – Guanxi – have been widely investigated in the context of China, and recently linked to the economic decisions and organisational performance of Chinese firms, see for example [Bian \(2018\)](#). However, very little has been done concerning Vietnamese Quanhe (Vietnam’s version of Guanxi). By extending the discussion of social capital/Guanxi to Vietnam – a context characterised by weak and incomplete institutions – this study highlights the importance of social networks, especially the ties associated with bank officials and government officials, to doing businesses.

2. Literature

2.1. Social capital

Social capital has become an increasingly popular research topic in organizational management studies. The development of this concept has largely been attributed to sociologists; namely, Coleman in education ([Coleman, 1988](#)), Putnam in political science ([Putnam, 1993](#)), and Granovetter and Burt in social networks ([Granovetter, 1973, 1985, 2005](#)); ([Burt, 2003, 2007](#)). Only recently, has social capital caught the attention of economists seeking to incorporate non-economic factors into conventional economic theories ([Dasgupta & Serageldin, 2000](#)).

While sociologists map social structures to seek out the meaning of social capital, economists are more inclined to approach social capital from the “capital” perspective. [Stiglitz \(1999\)](#) defines social capital as tacit knowledge, a collection of networks, an aggregation of reputations, and views organizational capital as a social means of coping with moral hazard and incentive problems. It is obvious that this definition of social capital is broader and appears to be more rationale-driven than its equivalence in sociological literature. Interestingly, some economists even dispute the use of the term capital in the name. [Solow \(1999\)](#) suggests using the term “behaviour patterns” to describe “things as trust, the willingness and capacity to cooperate and coordinate” instead of social capital. Meanwhile, [Arrow \(1999\)](#) advocates for abandonment not only of the metaphor of capital but also of the term social capital as a whole.

Given that social capital is a difficult and complicated concept ([Solow, 1999](#)), we have adopted for this study the bricolage (i.e., pragmatism) method of Claude Levi-Strauss’s, in which both the sociological and economic viewpoints are sensibly adopted to address the effects of social networks on firm investment.

2.2. Guanxi in Vietnam

Guanxi does not have a precise definition in the literature ([Luo et al., 2012](#)). However, studies seem to agree that Guanxi is a form of social capital that is specific to China ([Bian, 2017](#)) and other countries in the Southeast Asian region ([Cotterell, 2014](#)). Scholars working intensively with this concept, such as Bian, Luo and their colleagues, note that Guanxi has a complex set of cultural meanings and behavioural implications.¹

[Burt and Burzynska \(2017\)](#), in an effort to synthesise the Guanxi literature, defines Guanxi as a tie in which relative trust is high and is not dependent on third parties. This type of social tie is naturally embedded in family relationships. As such, Guanxi serves as a mechanism by which *quasi-familial* relations can be created to cultivate trust among non-kin ([Guo & Miller, 2010](#)).

Guanxi as a business practice is essential in Vietnam. Guanxi’s equivalent terminology in Vietnamese is *Quanhe*, which has more or less the same meaning. The influence of *Quanhe* on Vietnamese organizational behaviour and economic outcomes receives little research interest compared to its Chinese counterpart. Even though there is, as yet, no systematic analysis of *Quanhe*, we seek some initial understanding through previous studies in the relevant fields. Specifically, [Dalton et al. \(2002\)](#) find that family in Vietnam continues to be the central focal point of social life. Compared with China,

¹ See, for example [Bian \(2017\)](#), [Bian \(2018\)](#), [Bian and Ang \(1997\)](#); also [Luo et al. \(2012\)](#), and [Luo \(2007\)](#).

the Philippines and Japan, the gap between family networks and other networks is greater in Vietnam. This finding implies that quasi-familial relations, or more specifically, “familising” non-kin relationships would be important to building trust among individuals (Turner & Nguyen, 2005).

Given that Quanhe is important in the context of Vietnam, entrepreneurs need to carefully map their networks so as to successfully extract social capital from their social ties. The first and most important ties for entrepreneurs, obviously, are business ties. Having a strong and durable Quanhe with businesspeople may help entrepreneurs running small businesses gain access to otherwise unreachable resources. Sorenson (2017) asserts that social capital, in the form of business ties, appears to be far more valuable to entrepreneurs in the East compared to the West, the reason being that businesspeople in the East are keen to build almost clique-like connections (Burt & Burzynska, 2017). To be filtered into these small groups of closely connected businesspeople (and hence to enjoy the concomitant social capital), each entrepreneur must be active in bonding (strengthening) their business networks and linking (creating) connections with key persons in their local markets. A person who belongs to no business group, who has no group identity, is a person without business.

Besides business ties, social ties built through fostering relationships with bank officials and government officials are particularly essential to entrepreneurs in Vietnam. While evidence on Vietnam is scarce, scholars have demonstrated that establishing Guanxi with bank and government officials is important to small businesses in China. For example, regularly entertaining and giving gifts to bank officials helps firms obtain more bank loans (Du et al., 2015); meanwhile, political affiliation helps firms secure “fair treatment” from local governments and provides them with informational advantages (Zhou, 2013). In the context of Vietnam, some studies initially suggest that firms that have a closer relationship with government officials can get loans of longer duration (Dinh et al., 2012; Pham & Talavera, 2018).

It is noteworthy that Vietnam’s economic system (i.e., socialist-oriented market economy) share many similarities with the Chinese system (Nguyen et al., 2011).² One prominent common feature is the monopoly of state-owned financial institutions in the economy. The system is intrinsically biased against the private sector, which leaves entrepreneurs running small firms in inferior positions when gaining access to financial capital (Nguyen et al., 2006). Another notorious shared feature is the level of bureaucracy associated with the governance system (Nguyen et al., 2018). In underdeveloped and

² Socialist-oriented market economy is the official title given to the current economic system in the Socialist Republic of Vietnam. It is described as a multi-sectoral market economy, where the state sector plays the decisive role in directing economic development, with the eventual long-term goal of developing socialism.

incomplete institutional settings, local authorities have substantial room to “play the game” off-road, i.e., to deviate from the rules. This mismatch between the rules and play of the institutional game inevitably motivates entrepreneurs to build quasi-familial relations with officials, who have the power to make arbitrary decisions on the allocation of resources.

In short, previous studies show that *Quanhe* is a legitimated practice in doing business in Vietnam. Also, given the historical and contemporary social and political conditions, Vietnam might be a context in which the social capital derived from business-specific networks, bank-specific networks and political-specific networks plays an essential role in determining small business behaviour, including investment strategy.

3. Networks and firm investment

3.1. Networks with businesspeople

A broader set of social networks with businesspeople in the same sector is beneficial to firm investments. We subscribe to [Le Van et al. \(2018\)](#) and propose that business ties accelerate a firm’s access to resources that are not under its control/ownership by providing it with more information, increasing its visibility in the local markets thus reducing asymmetric information and improving its trustworthiness in its embedded networks.

First, having wider networks with others in the same industry will help entrepreneurs stay up to date with the newest trends in their markets, whether these be material markets or product markets ([Sorenson, 2017](#)). By exchanging information with more businesspeople, entrepreneurs are able to build up a broader and more complete picture of the opportunities (e.g., new technology) and threats (e.g., new entrants) in their business environments, enabling them to pursue a more informed and timely investment strategy.

Second, a broader network reduces asymmetric information and helps establish calculative trust among its members. Therefore, an entrepreneur who can successfully signal competence to a larger number of social ties in the network may obtain corresponding favours (e.g., a better trade credit scheme), which may then be used to finance/support new investment projects ([Du et al., 2015](#)). Trade credit and reciprocal financial support from local business communities are important to the investments of small businesses, especially in developing countries with underdeveloped financial institutions ([Cull et al., 2009](#)). Without such a system of networking and mutual trust, the flow of finance among small businesses cannot be successfully activated.

Third, networking with more people in the same tribe (in this case: industry sector) could drive variation out of group behaviour and reinforce the status quo ([Burt, 2007](#)). This may reduce opportunistic incentives in transactions (e.g., hold-ups) by increasing the opportunity costs of risk to reputation. Embeddedness could therefore be a reliable signal of trustworthiness ([Granovetter, 2005](#)). As such, it could be expected that the wider the connection a firm has in its local sector (in terms of the number of business ties), the more social capital (leading to other forms of capital) the firm will generate to support its investment projects.

3.2. Networks with bank officials

Besides business-ties, networks built upon relationships with bank officials may generate substantial social capital for private firms. In the context of Vietnam, networking with bank officials has many features of *Quanhe* ([Meyer & Nguyen, 2005](#)). This type of network requires entrepreneurs to build quasi-familial relations with bank officials, which not only promote trust and sentiment in the relationship but also facilitate resource exchanges.

Building a broader set of *Quanhe* ties with bank officials is particularly important for two reasons. First, bank loans are the major external finance source for SMEs, but access to bank loans is limited ([Carreira & Silva, 2010](#)). The extant literature has recognised that small businesses are typically financially constrained because of their age and size liabilities. Due to informational asymmetries (e.g., insufficiently long and trackable performance records), banks usually regard lending to SMEs as riskier than lending to well-established firms, leading to an element of credit rationing ([Fraser et al., 2015](#)). Given that access to finance is crucial but limited, maintaining strong ties with many bank officials appears to be a prudent networking strategy.

Second, the banking systems in developing countries are largely controlled by the state, which favours relationship-based rather than arms-length transactions. [Nguyen et al. \(2006\)](#) suggest that, in the absence of effective market institutions and business data, banks in Vietnam face considerable uncertainty when lending to small businesses. Consequently, banks rely on trust when lending to their private business clients. Given that lending decisions are made arbitrarily and are contingent on the level of trust, it is beneficial for small firms to strengthen and widen their interactions with bank officials. Networking serves as a mechanism of “information transfer”, in which firms can convey information about their reliability and creditworthiness to potential lenders ([Zhan, 2012](#)). This should enable lenders to build up a better picture of the financial and operating situations of the firms, leading to a reduction in informational asymmetries and a greater willingness to forward credit.

In general, Quanhe embedded in bank-specific social networks helps firms to reduce informational asymmetries and establishes intimacy, which may lead to better treatment overall when applying for bank loans.

3.3. Networks with politicians

Quanhe ties to government provide gains in information, influence, or solidarity. These gains may open access to key resources, including information of strategic policies, preferential treatment, or similar benefits ([Arnoldi & Villadsen, 2015](#)). In particular, [Ahlstrom and Bruton \(2006\)](#) document that relationships associated with government officials and politicians are positively related to firm performance and growth in East-Asian transition countries. This could be explained by the considerable power and influence exerted by government officials who approve projects and allocate resources ([Pham & Talavera, 2018](#)). In the context of Vietnam, the power of local authorities may be even more substantial due to the mismatch between the “rules of the game” (the central laws and regulation systems) and the “play of the game” (the application of laws and regulations at local level).

Political-specific networks are important because of the resource and protection effects they offers. The resource effect includes the informational advantage (opportunities) that may help “insider” businesses make the first move and gain competitive advantages in the market ([Zhou, 2013](#)). Also, in developing countries, governments often play a significant role in allocating productive resources (e.g., capital, labour, energy) ([Su & Bui, 2017](#)). Thus, those entrepreneurs that have broader connections with the government enjoy advantages in gaining access to such resources (e.g., financial subsidies). These non-transparent communications and biased resource allocations stem from culture-specific “group identification”, which emphasises a strong sense of family-like social exchanges and hinges heavily on the interpersonal connections seen in restrictive political networks ([Chen et al., 2013](#); [Zhan, 2012](#)).

Meanwhile, the protection effect indicates protection for property rights in the absence of effective legal systems. Entrepreneurs may find that in weak institutional settings, exploiting political connections may be a particularly effective mechanism for protecting property rights because of the coercive power exercised by government officials. Government officials, for their part, have incentives to protect the property rights of economic actors with whom they have political connections because they (or the members of their families) will extract at least some of the rents generated by these connections ([Zhou, 2013](#)).

In the light of this, it is clear that the confidence boost that entrepreneurs receive from being able to build upon the competitive advantages extracted from their political-specific networks (e.g., private information) may prompt a higher rate of investments. Nguyen (2019) finds, in the context of Vietnam, that entrepreneurs in regions with a higher level of governance quality are more likely to increase the reinvestment rates of their ventures. This could result from the effects of increased institutional trust (trust in government) on entrepreneurs' confidence, which subsequently boosts investment incentives.

Given the discussion on the importance of business-specific networks, bank-specific networks, and political specific-networks, we propose the following hypothesis:

Hypothesis H1: In Vietnam, network ties with (a) businesspeople; (b) bank officials; (c) politicians and civil servants are positively associated with firm investments.

4. Local governance and firm investment

Local governance, in this study, is defined as the governance quality of local governments (Nguyen et al., 2018). It indicates the execution and implementation of national laws at the local level – or the “play of the game” in the terminology of Williamson (2000). A set of well-designed general institutional configurations needs not being effective in practice without being executed by a set of well-structured governance forces.

Local governance is now well-known to be an essential determinant of entrepreneurial investment, especially in developing countries (Nguyen et al., 2018). The reason is that small businesses, due to their age and size liabilities, are typically bounded in their local markets, which are strongly shaped by the governance quality of local governments rather than by broader general constitutional configurations (Nguyen et al., 2018). Meanwhile, within a weak national institutional environment (i.e., developing countries), there is significant variation in governance quality across regions (Du & Mickiewicz, 2016). This sub-national institutional heterogeneity is created by the incompleteness of the underdeveloped institutional settings, which enable central laws to be haphazardly implemented at the local levels.

Improvements in local governance quality are expected to be associated with firm investment, for the following reasons. The first is the effect of a reduction in local transaction costs. Entrepreneurs may find that the creativity and cleverness of local authorities in implementing central policy and in designing their own initiatives for the development of their local private sector are important for improving institutional environments and subsequently reducing transaction costs (Malesky et al.,

2015). This reduction in transaction costs may then lead to higher investment incentives. The second effect results from an improvement in institutional trust (trust in governments) (Efendic et al., 2015). In weak institutional settings, entrepreneurs may find that an improvement in governance quality reduces the burden of local negative norms (e.g., corruption) (Holmberg et al., 2009). Therefore, they are more inclined to increase their trust in local governments (Efendic et al., 2015). This positive perception may boost their inclination to make investments.

Since the effects of local governance on firm investment and performance are widely confirmed in the context of Vietnam (Malesky et al., 2015; Nguyen & Canh, 2020; Nguyen & van Dijk, 2012), in this study, we focus on exploring the role of social networks in the presence of weak governance quality. We shall argue that network ties provide similar benefits to local governance (i.e., reduced transaction costs and improved trusts); as such, can substitute local governance in boosting firm investments where governance quality is weak and incomplete.

5. Networks and local governance

Social networks function much like formal institutions, albeit on a smaller scale. One of the key common functions of both social networks (informal institutions) and formal institutions is that they exert some type of expectation on the agents embedded in them, whether these be individuals or organisations. So, why are people inclined to create social networks or *Quanhe* (*Guanxi*) even though a set of institutions and legislation already exist? Helmke and Levitsky (2004) suggest that the key motivational reason lies in the inefficiency, fragmentation, and unreliability of the set of formal institutions in effect, which lead people to coalesce into groups with their own specific “rules of the game” that then become local networks.

In this saying, networking appears to become more important when the formal institutional settings are weak or incomplete. Specifically, we suggest that the effects of social networks on firm investment are stronger in regions having weaker local governance settings. The general mechanism is that social capital may substitute institutions by reducing transaction costs (uncertainties) and facilitating collaboration (trust) (Gedajlovic et al., 2013). Therefore, in regions endowed with weak local governance, entrepreneurs may seek business opportunities and external support for their investment projects by actively expanding their social networks. This mechanism is indeed in line with a large body of literature on the substitution between formal and informal institutions (Holmes Jr et al., 2013; Stiglitz, 1999; Williams & Vorley, 2015).

Meanwhile, local governance, in the context of Vietnam, is of five dimensions: legal institutions, corruption, market-access regulations, business environment, and institutional openness (PCI Report, 2019). Also, Nguyen (2019) shows that these governance forces impose dissimilar effects on local entrepreneurial activities. As such, in the following sections, we shall explore the potential benefits of social networks on firm investments when these governance forces are weak and incomplete.

5.1. Legal institutions

Legal institutions, in this study, indicate the private sector's confidence in provincial legal institutions; whether firms regard provincial legal institutions as an effective vehicle for contracting dispute resolution, or as an avenue for lodging appeals against property-rights violation (PCI Report, 2019). Acemoglu and Johnson (2005) analyse a sample of European colonial countries and confirm the importance of property-rights institutions and contracting institutions in facilitating productive economic activities (such as entrepreneurial investments).

In the case that legal institutions are weak, entrepreneurs may need to rely on their social networks to secure investment projects. Specifically, having broader network ties with businesspeople increase firms' visibility in local markets and thus reduce informational asymmetries (Li et al., 2015). This positive effects of networking allow firms to make effective informal arrangements with their investment stakeholders *ex-ante*, without a need to rely on legal institutions, which are ineffective, to resolve potential disputes. As such, it is expected that the effect of networking with businesspeople and legal institutions on firm investments are substitutive.

Meanwhile, having a set of wider networks with bank officials enables small businesses to reduce asymmetric information with potential financiers (Du et al., 2015). The "connected" status provides a signal to banks that firms are trustable and trackable. This serves to improve the confidence of financiers to forward credit to such firms even *without* a set of efficient legal institutions. The reason is that firms holding close relationships with many banks are perceived to be trustworthy and less risky (Malesky & Taussig, 2009). When banks estimate potential disputes and holdups to reduce significantly, they may be eager to fund "connected" firms' investments. As such, it is expected that the effect of networking with bank officials and legal institutions on firm investments are substitutive.

Also, having a set of wider network ties with politicians and civil servants help firms obtain confidence in the protection toward their private properties. Dixit (2004) argues that when a government cannot provide adequate formal protection for property rights, economic actors will

attempt to seek informal protection by establishing *Quanhe* (*Guanxi*) with politicians. Therefore, it is expected that in weak legal institutions environment, relationships with politicians and civil servants help secure firm investment.

Empirically, in the context of China, [Zhou \(2013\)](#) evidently demonstrates that political connections substitute for, rather than complement, formal market and legal institutions in facilitating entrepreneurial reinvestment. Also, in Vietnam, [Malesky and Taussig \(2009\)](#) observe that although Vietnam's banking sector is in a transition toward a healthier system, it still allocates a disproportionate share of credit to "connected" enterprises. Analysing 6,400 private firms in Vietnam, they show that relationship-based lending has served as an effective substitute for legal institutions. Therefore, we propose:

Hypothesis H2a: In Vietnam, the effects of social networks on firm investment are stronger in regions with lower quality of legal institutions.

5.2. Corruption

Corruption in this study is a measure of how much firms pay in informal charges, how much of an obstacle those extra fees pose for their business operations, whether payment of those extra fees results in expected results or "services," and whether provincial officials use compliance with local regulations to extract rents ([PCI Report, 2019](#)). Corruption exerts adverse effects on entrepreneurial investments because it increases transaction costs in doing businesses ([Tonoyan et al., 2010](#)). Also, corruption impairs levels of trust in the ability of the state and market institutions to reliably and impartially enforce law and the rules of trade ([Anokhin & Schulze, 2009](#)).

In a corruption environment, expanding network ties with businesspeople may help firms avoid getting involved in bribery transactions, which may dampen their incentives for investments. The reason is that firms may share resources (e.g., information) with their partners in the networks without a need to contact corrupt politicians and government officials ([Zhan, 2012](#)). Moreover, thanks to the signalling effect, a firm could send a positive message to corrupt officials about its *Quanhe* (*Guanxi*) relationships with businesspeople in the networks, who have stronger connections with the government ([Zhou, 2013](#)). Utilising this shielding effect, firms may avoid being harassed by corrupt officials. These positive effects associated with networking with businesspeople may encourage firms to invest in a corrupt environment.

Meanwhile, having a set of more extensive networks with bank officials in a banking system largely controlled by the state help firms establish a legitimate identity, i.e., being treated as a member of the

institutionalised financing networks ([Nguyen et al., 2006](#)). This legitimacy helps firms avoid bureaucratic harassments, such as corruption in the process of loans application; thereby securing their investment incentives.

Also, in this line of argument, having a set of wider network ties with politicians and civil servants allows firms to utilise the Quanhe (Guanxi) networks to legitimise their identity ([Rand & Tarp, 2012](#)). This positive effect of network ties with the government, in a weak institutional environment, help firms not only avoid corruption harassments but also obtain protection and enjoy special treatments from local authorities ([Zhou, 2014](#)). Empirically, in the contexts of China and Vietnam, it is well documented that firms with stronger political affiliations are exempted from the screening radar of corrupt officials ([Du & Mickiewicz, 2016](#); [Rand & Tarp, 2012](#)). Therefore, we propose that:

Hypothesis H2b: In Vietnam, the effects of social networks on firm investment are stronger in regions with a higher level of corruption.

5.3. Market-access regulations

Market-access regulations, in this study, indicate the procedures that entrepreneurs must go through to gain access to (1) land and land use rights and (2) business licenses and other production permits ([PCI Report, 2019](#)). Without obtaining operation permits and land use rights, firms are unable to enter the local markets. [Efobi et al. \(2019\)](#), in a sample of four African countries (Ethiopia, Nigeria, Tanzania and Malawi) evidently show that entrepreneurs' access to land and rights to such land significantly explain their likelihood to engage in non-farm enterprises.

When market-access regulations are weak, it is difficult and costly for new firms to enter the local markets as well as for existing firms to expand their operations. In this circumstance, network ties become a valuable source of social capital that help firms obtain land/land use rights and business licenses/production permits. Specifically, a broader set of connections with businesspeople increases the likelihood that entrepreneurs can utilise the established Quanhe (Guanxi) relationships with the government of one of the members in their networks to obtain access rights to the markets.

Meanwhile, having a wider set of connections with bank officials increases the likelihood that firms obtain external funding ([Du et al., 2015](#)), which may help with the costly procedures in gaining licenses and permits. In another perspective, connections with bank officials in a state-owned banking system also has a signalling effect, in which government officials offer "connected" firms a set of favourable treatments ([Arnoldi & Villadsen, 2015](#)). Empirically, [Pham and Talavera \(2018\)](#), in the context of Vietnam, evidently show that firms that have closer relationships with bank officials

and businesspeople enjoy several privileges, including first access to new markets. Since the direct ties are typically stronger than the indirect ties ([Burt, 2007](#)), it is naturally expected that a wider set of direct network ties with local authorities and government officials help firms overcome the weaknesses of the local market-access regulations, thereby securing their investments. In sum, we propose that:

Hypothesis H2c: In Vietnam, the effects of social networks on firm investment are stronger in regions with weaker market-access regulations.

5.4. Business environment

Business environment, in this study, indicates local governance settings on (1) human resource regulations, (2) business support activities, and (3) bureaucratic compliance ([PCI Report, 2019](#)). Human resource is an essential factor of production, which is highly dependent on local governance. Past research suggests that regulations that increase the quantity of labour (e.g., migration laws) and the quality of human resource (e.g., the availability of educational or skill training centres) often give rise to new venture establishments ([Makino & Tsang, 2011](#)). Similarly, local governance concerning business support activities reduces transaction costs by promoting agglomeration establishments (e.g., industrial zones), local trade fairs, and other types of business subsidies ([Miika Kreivi Lingyun Wang Matti Muhos Pekka, 2012](#)). Also, bureaucratic compliance relates directly to how costly it is to go through government inspections. [Du and Mickiewicz \(2016\)](#) show that bureaucratic harassments significantly reduce entrepreneurial performance. The reason is that entrepreneurs need to allocate their resources to avoid being unproductively intervened by government officials.

In a weak business environment, regulations supporting the development of local human resources and business activities are insufficient while unproductive interventions from the government are high. In such an environment, networks built upon businesspeople may help firms obtain resources and support. Specifically, members of a business network may exchange information and provide trade credits to each other. These outcomes of networking activities, to some extent, can substitute government organised trade fairs and subsidies. [Le and Nguyen \(2009\)](#), in the context of Vietnam, evidently show that networking with suppliers reduces the need for bank loans.

While the network ties associated with bank officials are not directly relevant to these institutional forces, entrepreneurs might still utilise the signalling effects, in which they could send a positive message to government officials about their relationships with officials of state-owned banks. This

strategy may help firms avoid some of the bureaucratic harassments, thereby boosting their investment incentives.

Meanwhile, a set of direct networks with local authorities and government officials help firms avoid bureaucratic interventions ([Luo & Junkunc, 2008](#)), obtain subsidies ([Du & Mickiewicz, 2016](#)), and may induce politicians to modify policies toward local workforce (e.g., open training centres for some specific skills and industries) that allow them to reap the benefits. These advantages thus allow "connected" firms to make investments despite the weaknesses in the local business environment. As such, we propose that:

Hypothesis H2d: The effects of social networks on firm investment are stronger in regions with weaker business environment.

5.5. Institutional openness

Institutional openness, in this study, indicates the levels of transparency in local governance system and the proactiveness of local leadership ([PCI Report, 2019](#)). Transparency denotes the degree to which firms have access to proper planning and legal documents necessary to run their businesses, and whether new policies and laws are communicated to firms and predictably implemented ([Malesky et al., 2015](#)). Meanwhile, leadership proactivity refers to the creativity and cleverness of local authorities in designing and implementing policy providing initiatives for local small business sector development, how is authorities' reaction to the lack of clarity in central policies/documents and are they proactive and innovative in solving new problems ([Nguyen et al., 2018](#)).

When institutional openness is weak, it is difficult for firms to obtain relevant information important to investment decisions. Moreover, it is risky to run new projects if local authorities do not show support to innovations and proactiveness. In this situation, networks built upon businesspeople may help. Specifically, in broader business networks, firms are more likely to obtain information needed for their strategic decisions, including information relating to planning and legal documents of local governments, from a member in their embedded networks, who has more substantial connections with the government.

While the network ties associated with bank officials are not directly relevant to institutional openness, the ties associated with local authorities are. Specifically, political-specific networks allow firms to access to information that is unpublished ([Du et al., 2015](#)). Moreover, having *Quanhe* (*Guanxi*) with government officials increase the chance that firms will enjoy favouritism when running investment projects that are not clearly regulated by the existing regulations. Empirically, [Nguyen](#)

(2018), in the context of Vietnam, find that entrepreneurs having close connections with the government are able to identify more business opportunities despite the stagnancy of local authorities. Therefore, we suggest that:

Hypothesis H2e: The effects of social networks on firm investment are stronger in regions with lower level of institutional openness.

6. Data and methodology

6.1. Data

To test the proposed hypotheses, this study employs the Small and Medium Enterprise (SME) dataset published by the Central Institute for Economic Management (CIEM) of Vietnam. This dataset is a collaboration of CIEM with two other institutions, namely the Institute of Labour Science and Affairs of Vietnam (ILSAA), and the Development Economics Research Group (DERG) of Copenhagen University.

The SME survey covers information on several operational aspects of small ventures in Vietnam, including their production, sales structure, investment, and employment. In addition to formally registered enterprises, the survey also samples a substantial number of household businesses to gain a comprehensive understanding of firm dynamics in Vietnam, where the informal sector is particularly relevant (Carbonara et al., 2020). Besides venture information, household characteristics of the owner-managers and their social network information are also extensively surveyed. The first full investigation was conducted in 2005 and has been carried out every two years thereafter. Approximately 2,800 small businesses in 10 provinces across Vietnam are randomly selected to participate in each survey. In this study, we employ the dataset over an 11-year period, from 2005 to 2015 (6 surveys in total).

It is noteworthy that this is an unbalanced panel as some firms may exit and other new firms may join into the surveys. The survey sample was drawn randomly using the stratified sampling technique to ensure that an adequate number of businesses with different ownership structures was included for each province. We thus have households (the majority), private firms, partnerships, cooperatives, limited liability companies, and joint stock companies. For a comprehensive understanding of the survey, see Rand and Tarp (2007).

This SME dataset is then matched with the second dataset: Provincial Competitiveness Index (PCI). This is a joint product of the Vietnam Chamber of Commerce (VCCI) and the US Agency for International Development (USAID). This dataset is a panel of provincial governance quality. The

quality is scored from 0 to 100, the higher the score, the better the governance quality. The PCI index is calculated based on a survey of more than 17,000 domestic firms and 1,700 foreign firms across provinces in Vietnam. The pilot study was conducted in 2005 on one-third of the total provinces of Vietnam (63 provinces in total). From 2006, the PCI index became available for all provinces and is updated annually.

We combine the firm-level SME dataset with the provincial level PCI dataset to create a multi-level panel of 11 years from 2005 to 2015. While the PCI panel is strongly balanced, the SME dataset is unbalanced and requires cleaning before using. Specifically, firms with no identification code and non-meaningful accounting information were dropped. Moreover, the outliers are controlled for by censoring the top and bottom 1% of observations in each variable, leaving a final sample of 9,898 firm-year observations.

6.2. Variables and summary statistics

6.2.1. Dependent variable

The primary dependent variable in this study is firm investment decision measured by investment rate. Specifically, *Investment* is the ratio of a firm's investment value over its total capital in a period of two years. This investment variable is, due to the nature of the survey, slightly different from the conventional measures employed in previous corporate finance studies.

First, unlike studies that assign firm investment as the difference between the fixed asset values across two consecutive periods, the SME survey directly asks entrepreneurs to report the values of investment that they made in their businesses.

Second, the investment variable in this study captures not only fixed asset investment but also investment in research and development, human capital upgrading (training), patents, and additional working capital. It is arguable that an investment decision, whether related to fixed or intangible assets, is a result of the process of deliberately identifying, evaluating, and finalising business opportunities ([Ding et al., 2013](#)). Therefore, the investment variable constructed in this study is expected to thoroughly reflect the investment decisions of entrepreneurs.

6.2.2. Independent variable

6.2.2.1. Social Networks

There are three social networks of interest, namely business-specific networks, bank-specific networks, and political-specific networks. We measure the level of effectiveness of these networks

using the number of network ties that an entrepreneur efficiently maintains within the respective categories. Specifically, we make use of the following item in the questionnaire: “Approximately, with how many people do you currently have regular contact (contact at least once every 3 months), which you find useful for your business operations in each of the following categories: (1) Businesspeople in the same sector (same product as the reported industry codes); (2) Bank officials; (3) Politicians and civil servants”.

In particular, the three variables: *Business-specific networks*, *Bank-specific networks*, and *Political-specific networks* are the numbers of active contacts with whom an entrepreneur regularly has contact, corresponding to the questions.

Table 1 presents the definition and summary statistics of the variables in use. The average number of effective relationships in business-specific networks is much higher than the average number of effective relationships in the bank-specific and political-specific networks. This may represent the fact that small businesses are relatively weak at building social capital with local authorities and bank officials (Du & Mickiewicz, 2016).

<Table 1>

6.2.2.2. Local governance

To measure the governance quality of local governments, we use the PCI index. The PCI score ranges from 0 to 100, the higher the score, the better the quality of government. PCI index is constituted from other nine sub-indices³, including:

Legal institutions, a measure of the private sector's confidence in provincial legal institutions; whether firms regard provincial legal institutions as an effective vehicle for contracting dispute resolution, or if they constitute a viable avenue for appealing against corrupt official behaviour.

Corruption, a measure of how much firms pay in informal charges, how much of an obstacle those extra fees pose for their business operations, and whether payment of those extra fees garners the expected results or “services”.

Entry costs, a measure of the length of business registration in days, the number of licenses and permits necessary to start operations, and the percentage of firms that need additional licenses/permits. *Land access*, which is a measure combining two dimensions of the land problems

³ Summary statistics of the nine sub-indices are reported in Appendix A.

confronting entrepreneurs: how easy it is to access land and the security of tenure once land is acquired. These two indices represent market-access regulations.

Business support, a measure of provincial regulations and services for private sector trade promotion, provision of regulatory information to firms, business partner matchmaking, provision of industrial zones or industrial clusters, and technological services for firms; and *Labour and training*, which is a measure of the regulations promulgated by provincial authorities to promote vocational training and skills development for local industries and to assist in the placement of local labour. *Time costs*, which is a measure of how much time firms waste on bureaucratic compliance, as well as how often and for how long firms must shut down their operations for inspections by local regulatory agencies. These three indices represent local business environment regulations.

Transparency, which is a measure of whether firms have access to the proper planning and legal documents necessary to run their businesses, whether those documents are equitably available, whether new policies and laws are communicated to firms and predictably implemented. *Leadership proactivity*, a measure of the creativity and cleverness of provinces in implementing central policy, designing their own initiatives for private sector development, and working within sometimes unclear national regulatory frameworks to assist and interpret them in favour of local private firms. These two indices represent the openness of local governance.

We have tried combining nine PCI sub-indices into these five dimensions of local governance. However, the values of Cronbach Alpha are lower than 0.7 – the conventional acceptance level of interitem correlations. This may be due to the fact that there is substantial heterogeneity among the indices classified in one governance dimension. As such, in the empirical tests, we treat each PCI sub-index as an independent variable grouped in a theoretical framework of five governance dimensions.

6.2.3. Control variables

The model also controls for covariates that may influence investment decisions. At the venture level it includes conventional variables such as firm age and firm size. These variables represent the firm-specific characteristics that significantly determine the rate, value, and frequency of investment (Valliere & Peterson, 2009; Zhou, 2017). In addition, external finance is also an important determinant of investment decisions. As such, we use two variables to address this issue: *Liability*, which is the ratio of a firm's total liability over its total capital; and *Bank loans*, a dummy variable that takes value 0 if a firm did not take out bank loans in the previous period, and value 1 if a firm has

borrowed from a bank in the previous period. The use of these two variables could also isolate the non-networking-related financing factors that drive investment decision.

At the individual level, the study account for owner age. This variable may influence investment decisions because it indicates the experience of entrepreneurs, which have a marked influence on their propensity to recognise and evaluate business opportunities (Nguyen, 2018).

To control for regional time-invariant factors that may influence local firm investment, a set of 10 province dummies are included in the model. Finally, the authors note that some entrepreneurs may make investments because of the available industry-specific and business-cycle-specific opportunities. As such, following Ding et al. (2013) and Guariglia et al. (2011), the model includes a set of the interaction terms between industry dummies and year dummies, on top of their individual dummies. This method could control for industry-level time-variant fluctuations over a year, this being a good proxy for business opportunities.⁴ The pairwise correlation matrix of variables is presented in Appendix B.

It is noteworthy that all other effects such as industry sectors, types of ownership, and owner-manager backgrounds and management characteristics are absorbed by the fixed-effects estimation method introduced subsequently.

6.3. Empirical specification and estimation

We propose the following reduced-form investment equation:

$$\begin{aligned}
 Investment_{igt} = & \beta_0 + \beta_1(Firm\ controls_{igt}) + \beta_2(Owner\ controls_{igt}) + \beta_3(Social\ networks_{igt}) \\
 & + \beta_4(Local\ governance_{gt}) \\
 & + v_i + v_t + v_{jt} + v_g + \mu_{it}
 \end{aligned}$$

where i denotes an individual venture, g is the province, and t a year. As such, $Investment_{igt}$ is the investment rate of firm i in province g in year t . The term $Firm\ controls_{igt}$ is a vector of firm age, labour size, liability ratio, and bank loans. $Owner\ control_{igt}$ includes owner age. The terms $Social\ networks_{igt}$ includes three types of networks: business-specific, bank-specific, and political-specific. Finally, $Local\ governance_{gt}$ indicates the PCI index and the nine sub-indices, respectively.

⁴ Regression results with conventional industry and year dummies (without their interaction terms) remain robust.

The investment function also has a time-specific component v_t , and an industry-specific time-specific component v_{jt} . These effects are controlled by the corresponding dummy variables. Firm-specific time-invariant characteristics are captured in v_i , and region-specific time-invariant characteristics are captured in v_g . This study controls for these components by estimating the equation using a fixed-effects technique that accounts for the multi-level clustered structure of the observations.⁵ The fixed-effects estimator could deal, to some extent, with unobservable heterogeneity and the potential endogeneity of missing (time-invariant) variables in the model. To reduce endogeneity concerns, all variables that may suffer from reverse effects are lagged one year. These variables are firm size, liability, and bank loans. Finally, μ_{it} is the idiosyncratic component of the error.

We also test multicollinearity among the regressors using a variance inflation factor (VIF) test and find no evidence of its presence. However, using the Cumby–Huizinga test for autocorrelation of the current error term with the error terms up to five lags, we find that autocorrelation is significant. Following that, we estimate the equations with heteroskedasticity and autocorrelation (HAC) robust standard errors, choosing a bandwidth of five (the highest possible, considering the time length of the data used). The use of bandwidth, combined with robust HAC standard errors, produces estimates that are robust to both arbitrary heteroskedasticity and arbitrary autocorrelation.

7. Results

The regression results are presented in Table 2 to Table 6. Specifically, Table 2 shows the baseline regressions of the three types of networks. Table 3 shows the interaction effects between the three types of networks and local governance. Table 4-6 presents the interaction effects between each type of networks and the nine governance forces. To facilitate the interpretation and simplify the format of the tables, the dependent variable, which is the ratio of investment over total capital, is multiplied by 100.

<Table 2>

The coefficients associated with local governance quality (PCI index) are positive and statistically significant in most specifications, indicating that improved governance quality will boost local small businesses' investment incentives. In Table 2 for example, on average, the coefficients associated with local governance quality is approximately 0.2, indicating that when the local PCI index improves by one point, local firms will increase their investments by 0.2% of total capital, holding all else

⁵ The *reghdfe* program in Stata, which sets to absorb both firm ID cluster and province ID cluster.

constant. Even though we did not explicitly hypothesise the influence of local governance on firm investment, this result is consistent with the institutional theory and sets a solid foundation for the analysis of the interaction effects.

In terms of networking effects, as being shown in Table 2, the coefficient associated with total networks in column 1 is positive and significant, showing that social capital plays an essential role in boosting firm investments. Having a look at the types of networks, it is found that bank-specific (column 3) and political-specific networks (column 4) are crucial for firm investments. Business-specific networks, interestingly, do not exert significant impacts on investment decisions. It is noteworthy that, in the lump-sum specification (column 5), political-specific networks lose their statistical meaning, leaving bank-specific networks as the only statistically significant variable among the three. This finding implies that financial capital is the most important determinant of firm investment decisions in Vietnam. Therefore, hypothesis H1a is not supported, H1b is fully supported, and H1c is supported to some extent.

The general results are, however, explainable. In a transition economy with a burgeoning middle-class fuelling increased market diversity and a demand for high-quality goods and services, entrepreneurs are unlikely to lack business opportunities. Nonetheless, the extant economic and institutional renovation struggles to keep pace with the growth of the market-oriented private sector, leading to a situation in which the entrepreneurs who first gain access to finance can leverage their position to extract the available opportunities.

<Table 3>

Table 3 investigates the moderating effect of social networks on the relationship between local governance and firm investments. In column 1, the coefficient associated with the interaction term is negative and statistically significant. This finding implies that networking in general is more important in regions that have weaker institutions (in this case, local governance quality). This initial result sets the groundwork to examine in detail the moderating effects the three specific types of networks.

Among the three types of networks, only political-specific networks can substitute the weaknesses of local governance. This finding remains robust either in a separate specification (column 4) or in a lump-sum specification (column 5). It is noteworthy that the impact of bank-specific networks remain statistically significant but it has no moderating effect. Meanwhile, similar to the results found in Table 2, business-specific networks appear non-significant to firm investments.

The results obtained from Table 1 and Table 2 point to a general picture of the importance of different types of social networks in Vietnam: bank-specific networks are essential to boost firm investment (also the strongest networks in terms of economic effects) but fail to help firms overcome institutional voids; political-specific networks even though do not directly influence firm investments, can help them cope with the weaknesses of the local institutional environments; meanwhile, business-specific networks seem to be trivial in the investment decisions.

Next, we examine the interaction terms between each type of networks and the nine local governance forces. Also, from the results obtained in Table 3, we know that political-specific networks exert a moderating effect while business-specific and bank-specific networks do not. As such, we expect that there are more significant interaction terms between political-specific networks and the nine PCI sub-indices than those of business-specific and bank-specific networks.

<Table 4, Table 5, and Table 6>

The results obtained from these Tables indicate that networking cannot substitute all weaknesses of local governance. Specifically, in Table 4, only the coefficient associated with the interaction term between business-specific networks and time cost is significant. Meanwhile, in Table 5, only the coefficient associated with the interaction term between bank-specific networks and business support is significant. These findings are consistent with the results obtained from Table 3, in which the interaction terms between these two types of networks with the PCI index are insignificant. However, Table 6 shows that political-specific networks are able to moderate the weaknesses of 5 out of 9 governance forces. Table 7 summarises these findings in association with hypotheses H2a to H2e.

<Table 7>

Regarding the control variables, firm size is insignificant in most specifications, indicating that there may be no difference in investment decisions between smaller and larger firms. This finding could be explained by the fact that the sample in our analysis is a set of evenly small-sized businesses. The coefficients associated with financial liability are negative, indicating that the more debts firms have, the fewer investments they make, probably because of financial distress. Meanwhile, the coefficients associated with bank loans are positive, showing that the more bank loans firms obtain, the more investments they make. In terms of the individual variable – owner age appears to have a statistically insignificantly negative effect on investments.

8. Discussion

This study investigates the influence of social networks and local governance on the investment decisions of small businesses. The context of analysis is Vietnam, a developing country with a transition economy. The key research objectives are to understand whether social networks could substitute for the weaknesses of local governance settings; and if they do, what types of network are more important.

To address these research aims, social networks are examined from three perspectives: business-specific ties; bank-specific ties; and political-specific ties. Meanwhile, local governance is employed as a proxy for institutional quality. Our model enables cross-level interaction between firm-level social networks and regional-level governance quality.

This study makes a set of contributions to the literature that investigates the investment decisions made by small businesses.

First, this study evidently shows that social capital derived from different types of networks may induce significantly different impacts on firm investments. Previous studies, whether focusing on an examination of the structure of networks (i.e., the number and the intensity of general social contacts), or analysing the relational aspects of networks (i.e., investigating whom one is connected with), are unable to draw a complete picture of the effects of social capital on entrepreneurship ([Alexy et al., 2012](#); [Chun & Miller, 2010](#)). This study stands in sharp distinction to the extant literature by analysing in detail different aspects of social networks. Specifically, we distinguish between business-specific networks, bank-specific networks, and political-specific networks.

Second, this study highlights the relevance of local institutions, specifically the governance quality of local government, in facilitating entrepreneurial activities. Our findings show that local institutional settings have significant influence on the entrepreneurial investments. A set of well-organised local governance arrangements provides entrepreneurs with productive resources such as land, labour, and public administrative support, while reducing bureaucratic harassments from local public servants and protecting entrepreneurs from potential appropriation. As such, this study serves as an echo of recent publications ([Du & Mickiewicz, 2016](#); [Nguyen et al., 2013](#)) that call for more research into the influence of local institutions on local entrepreneurship and small businesses.

Third, this study shows the substitution between social networks and institutions. Social networks may be seen as an initial form of small-scale institutions, in which members operate under the umbrella of a set of social network settings that are regulated by the group and which incentivise group members to maintain their membership status by following the pre-set reciprocal group

expectations. This study subscribes to the view of [Hayami \(2009\)](#) in which the concept of social capital should be linked to the concept of institutions in order to understand how social behaviour evolves. The particular coherence between social capital and institutions implies that in situations where the institutions are not sufficiently strong, entrepreneurs will rely on social networks to facilitate transactions and obtain/share resources ([Ko & Liu, 2017](#)).

Also, the empirical findings in this study extend our understanding of the nature of social networks and their influence on the investment decisions of small businesses in developing countries. We show that business-specific networks do not help entrepreneurs to realise investment opportunities, but that bank-specific networks do. The latter is less related to opportunity formation and evaluation, but are concerned rather with the finalisation of opportunities, in which entrepreneurs try to seek funding from external financiers (banks). This finding implies that the key obstacles for entrepreneurs in developing countries are not so much the lack of business opportunities, but rather a deficiency of capital (financing constraints), and support from local authorities.

More importantly, we suggest some potential mechanisms through which networking may help address the weaknesses of local governance quality. Specifically, we find that social capital appears more important in regions that have problems with their legal enforcement, transparency, corruption, and bureaucracy. Entrepreneurs, by utilising their networks, especially networks built upon connections with local government officials may overcome institutional voids stemmed from the weaknesses of these governance forces and make more investments subsequently.

This study provides a set of implications for policymakers who strive to boost entrepreneurial activities in developing countries. First, networking is important to entrepreneurial investments, but from the aggregated viewpoint, may not be beneficial to the economic performance of the society as a whole. [Du and Mickiewicz \(2016\)](#) show that political affiliation is associated with the misallocation of resources and economic opportunities, which are given to favoured entrepreneurs who would not otherwise have been selected by market mechanisms. It is also noteworthy that the relationships built with bank officials and local authorities need frequent reinforcement (e.g., gift-giving and entertaining officials); from the entrepreneurs' perspective, these are unproductive activities. Therefore, local authorities should aim to build and maintain a set of efficient governance systems that can generate trust in the local entrepreneur communities without requiring unproductive investments in building social networks.

For entrepreneurs in weak institutional environments, building social networks is an efficient strategy to acquire the business opportunities and resources required for investments. However,

they should pay attention to the benefits associated with each type of network as some networks are more efficient than the others.

This study is not without limitations that should be acknowledged, but they also provide potential avenues for future research. First, this study only analyses the impacts of social capital on the final stage of investment, i.e., investment realisation. Due to the limitation of the dataset, we are not able to observe the processes whereby entrepreneurs identify and evaluate opportunities. As such, we have not yet been able to analyse the effects of social networks on the earlier stage of investment decisions. Future studies may design questionnaires that capture the entire process of the investment decision and investigate the influence of social capital on each stage of the process. Also, the generalisability of this study may be limited because the sample was restricted to Vietnamese firms. Future studies therefore should extend the proposed framework and re-test it in other contexts. Further, the dataset employed in this study is quite small in a short period of time. Future research should re-test the validity of our findings using a larger dataset with longer survey periods. Finally, due to the limited information available in the SME survey, we are mostly restricted to the use of variables that capture only the relational aspect of social capital. Future study may design questionnaires that capture both the relational and structural aspects of social networks, which would allow for a deeper understanding of the impact of social capital on firm investments.

9. Conclusion

This study investigates the importance of a set of social networks, specifically business-specific ties, bank-specific ties, and political-specific ties, on small business investments in Vietnam. The results show that bank-specific networks can boost firm investments, whereas business-specific networks appear trivial to firm investments. Also, we suggest that entrepreneurs can utilise their social networks, especially political-specific networks to overcome institutional voids stemmed from the lower quality of local legal institutions, higher levels of corruption, higher demands for bureaucratic compliance, and non-transparent governance systems.

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Tables and Figures:

Table 1: Variable Definition and Summary Statistics

Variable	Definition	Mean	SD	Min	Max
Investment	Firm investment as a ratio of total capital in a survey period (two years)	10.019	20.491	0	130.790
Local governance quality	The PCI index, ranging from 0 to 100. The higher the value, the better the quality of governance	57.883	4.176	49.757	67.12
Firm age	Firm age since establishment	18.265	12.531	3	62
Firm size	Natural log of the number of employees (report here the number of employees)	14.989	28.723	1	199
Liability	The ratio of firm liability over total capital	0.092	0.185	0	1.078
Bank loans	Takes value 1 if a firm takes out bank loans in the previous period (the last 2 years), 0 otherwise	0.562	0.496	0	1
Owner age	Age of the owner of the small businesses	46.035	10.564	17	94
Business-specific networks	The number of effective contacts with businesspeople (see table note for the definition of effectiveness)	25.179	23.122	0	195
Bank-specific networks	The number of effective contacts with bank officials	1.022	1.606	0	10
Politician-specific networks	The number of effective contacts with government officials	1.402	1.937	0	10

Note: Effective contacts are the contacts that entrepreneurs get in touch with at least once every 3 months and who are useful for their business operations. The statistics are provided for 9,898 firm-year observations from 2005 to 2015. The data source is the SME dataset published by the Central Institute for Economic Management (CIEM) of Vietnam.

Table 2: Baseline Model Results

	(1)	(2)	(3)	(4)	(5)
Local governance	0.197*	0.206**	0.187*	0.208**	0.193*
	(0.103)	(0.100)	(0.101)	(0.101)	(0.102)
Total networks	0.021***				
	(0.008)				
Business-specific networks		0.015			-0.006
		(0.010)			(0.010)
Bank-specific networks			1.358***		1.379***
			(0.150)		(0.160)
Political-specific networks				0.345***	-0.014
				(0.117)	(0.124)
Firm age	0.254***	0.230***	0.242***	0.238***	0.247***
	(0.087)	(0.085)	(0.086)	(0.086)	(0.086)
Firm size	-0.157	-0.161	-0.228	-0.198	-0.273
	(0.509)	(0.500)	(0.504)	(0.504)	(0.506)
Liability	-5.322**	-5.482**	-5.567**	-5.563**	-5.433**
	(2.289)	(2.262)	(2.247)	(2.281)	(2.262)
Bank loans	2.120***	2.131***	1.973***	2.062***	1.931***
	(0.644)	(0.638)	(0.634)	(0.639)	(0.636)
Owner age	-0.041	-0.035	-0.037	-0.036	-0.039
	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)
VIF	4.864	4.652	4.688	4.624	6.841
Observations	9,898	9,898	9,898	9,898	9,898
R-squared	0.408	0.407	0.416	0.408	0.415

Note: The dependent variable is firm investments as a ratio of total capital times 100. The estimator is fixed-effects (*reghdfe* in Stata), clustering both firm ID and province ID. A set of 6-year dummies, and the interaction terms between year dummies and industry dummies are included. Standard errors and test statistics are asymptotically robust to heteroskedasticity and autocorrelation. The variables: firm size, bank loans, and liability are lagged one period. * indicates 10% significant level; ** indicates 5% significant level; *** indicates 1% significant level.

Table 3: Three Types of Networks and Local Governance

	(1)	(2)	(3)	(4)	(5)
Local governance	0.310*** (0.109)	0.191* (0.115)	0.036 (0.209)	0.148 (0.185)	0.027 (0.164)
Total networks	0.157* (0.090)				
Total networks × Local governance	-0.006*** (0.002)				
Business-specific networks		-0.028 (0.178)			0.111 (0.208)
Business-specific networks × Local governance		0.001 (0.003)			-0.002 (0.004)
Bank-specific networks			7.820* (4.120)		5.978* (3.059)
Bank-specific networks × Local governance			-0.105 (0.069)		-0.074 (0.052)
Political-specific networks				5.941** (2.582)	5.016** (2.481)
Political-specific networks × Local governance				-0.100** (0.043)	-0.084** (0.042)
Firm age	0.260*** (0.095)	0.230*** (0.086)	-1.035*** (0.180)	-0.252** (0.126)	-0.149 (0.131)
Firm size	-0.200 (0.504)	-0.162 (0.500)	-1.244 (0.815)	-0.913 (0.607)	-1.096* (0.613)
Liability	-6.290*** (2.281)	-5.486** (2.262)	-7.667** (3.193)	-4.548 (2.824)	-4.259 (2.801)
Bank loans	2.153*** (0.642)	2.134*** (0.638)	0.318 (0.936)	1.290 (0.796)	1.285 (0.797)
Owner age	-0.026 (0.039)	-0.035 (0.039)	0.073 (0.062)	-0.009 (0.048)	-0.009 (0.049)
VIF	5.421	5.628	5.998	4.257	8.241
Observations	9,898	9,898	9,898	9,898	9,898
R-squared	0.407	0.407	0.518	0.459	0.473

Note: The dependent variable is firm investments as a ratio of total capital times 100. The estimator is fixed-effects (*reghdfe* in Stata), clustering both firm ID and province ID. A set of 6-year dummies, and the interaction terms between year dummies and industry dummies are included. Standard errors and test statistics are asymptotically robust to heteroskedasticity and autocorrelation. The variables: firm size, bank loans, and liability are lagged one period. * indicates 10% significant level; ** indicates 5% significant level; *** indicates 1% significant level.

Table 4: Business-specific Networks and Nine Forces of Local Governance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Business-specific network	0.115 (0.098)	0.096 (0.130)	0.151 (0.117)	-0.088 (0.070)	0.232** (0.117)	0.039 (0.131)	0.070 (0.110)	0.011 (0.157)	0.075 (0.054)
Legal institutions	2.100*** (0.701)								
Bus. network × Legal institutions	-0.020 (0.018)								
Corruption		1.624** (0.793)							
Bus. network × Corruption		-0.016 (0.023)							
Entry costs			1.623*** (0.571)						
Bus. network × Entry costs			-0.020 (0.014)						
Land access				0.949 (0.603)					
Bus. network × Land access				0.015 (0.013)					
Time costs					2.525*** (0.786)				
Bus. network × Time costs					-0.040** (0.019)				
Business support						0.141 (0.697)			
Bus. network × Business support						-0.006 (0.022)			
Labour training							2.589*** (0.769)		
Bus. network × Labour training							-0.014 (0.020)		
Transparency								-0.478 (0.723)	
Bus. network × Transparency								0.002 (0.025)	

Leadership proactivity									1.866***
									(0.479)
Bus. network × Leadership proactivity									-0.018
									(0.011)
Firm age	-0.834***	-0.882***	0.266**	0.080	-0.187	-1.000***	-0.258**	0.558***	0.001
	(0.185)	(0.178)	(0.117)	(0.116)	(0.127)	(0.183)	(0.125)	(0.196)	(0.145)
Firm size	-0.968	-1.013	-0.561	-0.585	-0.912	-0.953	-0.771	-0.496	-0.871
	(0.799)	(0.799)	(0.627)	(0.627)	(0.606)	(0.797)	(0.607)	(0.747)	(0.605)
Liability	-8.195**	-7.959**	-8.407***	-8.257***	-4.476	-8.084**	-4.662*	-3.008	-4.820*
	(3.268)	(3.247)	(2.642)	(2.634)	(2.782)	(3.250)	(2.779)	(3.476)	(2.790)
Bank loans	0.098	0.105	2.244***	2.251***	1.366*	0.105	1.262	0.706	1.350*
	(0.916)	(0.921)	(0.722)	(0.718)	(0.785)	(0.920)	(0.786)	(1.074)	(0.782)
Owner age	0.067	0.067	-0.028	-0.030	-0.018	0.069	-0.014	0.031	-0.013
	(0.059)	(0.059)	(0.042)	(0.042)	(0.048)	(0.059)	(0.048)	(0.059)	(0.048)
VIF	5.410	5.232	5.681	5.268	5.654	5.521	5.231	5.336	7.652
Observations	9,898	9,898	9,898	9,898	9,898	9,898	9,898	9,898	9,898
R-squared	0.505	0.504	0.429	0.430	0.461	0.503	0.462	0.522	0.462

Note: The dependent variable is firm investments as a ratio of total capital times 100. The estimator is fixed-effects (*reghdfe* in Stata), clustering both firm ID and province ID. A set of 6-year dummies, and the interaction terms between year dummies and industry dummies are included. Standard errors and test statistics are asymptotically robust to heteroskedasticity and autocorrelation. The variables: firm size, bank loans, and liability are lagged one period. * indicates 10% significant level; ** indicates 5% significant level; *** indicates 1% significant level.

Table 5: Bank-specific Networks and Nine Forces of Local Governance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Bank-specific network	-0.826 (1.598)	-0.105 (1.223)	1.618 (1.755)	-0.744 (1.002)	0.921 (1.563)	2.192 (1.535)	-2.188 (1.670)	0.350 (1.383)	-0.628 (0.836)
Legal institutions	1.424** (0.610)								
Bank. network × Legal institutions	0.065 (0.305)								
Corruption		0.263 (0.447)							
Bank. network × Corruption		-0.052 (0.204)							
Entry costs			1.378*** (0.470)						
Bank. network × Entry costs			-0.279 (0.221)						
Land access				1.241** (0.544)					
Bank. network × Land access				0.025 (0.188)					
Time costs					1.768*** (0.656)				
Bank. network × Time costs					-0.223 (0.262)				
Business support						0.314 (0.550)			
Bank. network × Business support						-0.475* (0.258)			
Labour training							1.811*** (0.679)		
Bank. network × Labour training							0.318 (0.301)		
Transparency								-0.517 (0.515)	
Bank. network × Transparency								-0.130 (0.234)	

	Leadership proactivity								1.371***
									(0.415)
Bank. network × Leadership proactivity									0.048
									(0.190)
Firm age	-0.824***	-0.226*	0.243**	0.063	-0.197	-0.887***	-0.287**	-0.205	-0.010
	(0.187)	(0.129)	(0.118)	(0.117)	(0.130)	(0.189)	(0.129)	(0.131)	(0.148)
Firm size	-0.958	-0.905	-0.499	-0.536	-0.919	-0.905	-0.819	-0.878	-0.867
	(0.809)	(0.612)	(0.637)	(0.639)	(0.611)	(0.792)	(0.613)	(0.614)	(0.609)
Liability	-8.096**	-4.707*	-8.147***	-8.018***	-4.606	-7.542**	-4.765*	-4.629	-4.971*
	(3.343)	(2.823)	(2.667)	(2.665)	(2.827)	(3.259)	(2.810)	(2.828)	(2.824)
Bank loans	0.436	1.455*	2.148***	2.112***	1.471*	-0.317	1.403*	1.418*	1.489*
	(0.925)	(0.798)	(0.729)	(0.728)	(0.798)	(0.951)	(0.799)	(0.798)	(0.794)
Owner age	0.067	-0.012	-0.028	-0.031	-0.014	0.069	-0.010	-0.011	-0.011
	(0.061)	(0.049)	(0.043)	(0.043)	(0.049)	(0.059)	(0.049)	(0.049)	(0.049)
VIF	5.012	5.325	5.007	5.632	5.951	5.014	5.335	5.287	7.665
Observations	9,898	9,898	9,898	9,898	9,898	9,898	9,898	9,898	9,898
R-squared	0.508	0.462	0.431	0.431	0.463	0.506	0.464	0.462	0.464

Note: The dependent variable is firm investments as a ratio of total capital times 100. The estimator is fixed-effects (*reghdfe* in Stata), clustering both firm ID and province ID. A set of 6-year dummies, and the interaction terms between year dummies and industry dummies are included. Standard errors and test statistics are asymptotically robust to heteroskedasticity and autocorrelation. The variables: firm size, bank loans, and liability are lagged one period. * indicates 10% significant level; ** indicates 5% significant level; *** indicates 1% significant level.

Table 6: Political-specific Networks and Nine Forces of Local Governance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Political-specific network	3.968*** (1.233)	7.040** (3.077)	1.020 (1.816)	1.871** (0.819)	2.685 (1.833)	-0.076 (0.692)	1.619 (1.125)	4.128** (1.938)	1.127* (0.672)
Legal institutions	2.174*** (0.549)								
Pol. network × Legal institutions	-0.659*** (0.228)								
Corruption		1.292 (1.446)							
Pol. network × Corruption		-1.251** (0.531)							
Entry costs			1.017* (0.559)						
Pol. network × Entry costs			-0.079 (0.226)						
Land access				1.647*** (0.519)					
Pol. network × Land access				-0.261* (0.144)					
Time costs					0.192 (0.837)				
Pol. network × Time costs					-0.492 (0.307)				
Business support						1.530*** (0.421)			
Pol. network × Business support						-0.000 (0.110)			
Labour training							2.658*** (0.676)		
Pol. network × Labour training							-0.328 (0.206)		
Transparency								1.632* (0.958)	
Pol. network × Transparency								-0.688** (0.320)	

	Leadership proactivity								1.739***
									(0.409)
Pol. network × Leadership proactivity									-0.251*
									(0.147)
Firm age	-0.931***	-0.225	-0.114	-0.330**	-1.052***	-0.150	-0.255**	-0.177	-0.053
	(0.194)	(0.344)	(0.141)	(0.138)	(0.200)	(0.128)	(0.125)	(0.153)	(0.148)
Firm size	-0.899	-0.299	-0.813	-0.751	-0.956	-0.756	-0.758	-0.903	-0.893
	(0.803)	(0.953)	(0.613)	(0.610)	(0.803)	(0.606)	(0.607)	(0.609)	(0.607)
Liability	-7.785**	-3.701	-4.375	-4.255	-8.085**	-4.846*	-4.616*	-4.747*	-4.762*
	(3.250)	(4.738)	(2.781)	(2.772)	(3.333)	(2.789)	(2.778)	(2.816)	(2.823)
Bank loans	0.289	-2.363	1.385*	1.430*	0.342	1.321*	1.247	1.242	1.300
	(0.937)	(1.500)	(0.800)	(0.798)	(0.916)	(0.784)	(0.786)	(0.795)	(0.793)
Owner age	0.062	0.115	-0.015	-0.016	0.069	-0.015	-0.013	-0.007	-0.005
	(0.060)	(0.086)	(0.049)	(0.049)	(0.060)	(0.048)	(0.048)	(0.048)	(0.048)
VIF	5.664	5.632	5.421	5.976	5.368	5.221	5.871	5.367	7.225
Observations	9,898	9,898	9,898	9,898	9,898	9,898	9,898	9,898	9,898
R-squared	0.459	0.459	0.459	0.506	0.612	0.461	0.462	0.462	0.512

Note: The dependent variable is firm investments as a ratio of total capital times 100. The estimator is fixed-effects (*reghdfe* in Stata), clustering both firm ID and province ID. A set of 6-year dummies, and the interaction terms between year dummies and industry dummies are included. Standard errors and test statistics are asymptotically robust to heteroskedasticity and autocorrelation. The variables: firm size, bank loans, and liability are lagged one period. * indicates 10% significant level; ** indicates 5% significant level; *** indicates 1% significant level.

Table 7: Summary of Findings on Hypotheses H2a-H2e

Governance dimension	PCI indices	Business-specific network	Bank-specific network	Political-specific network
Legal institutions	Legal institutions	Non-supported	Non-supported	Supported
Corruption	Corruption	Non-supported	Non-supported	Supported
Market-access regulations	Land access	Non-supported	Non-supported	Supported
	Entry costs	Non-supported	Non-supported	Non-supported
Business environment	Labour training	Non-supported	Non-supported	Non-supported
	Business support	Non-supported	Supported	Non-supported
	Bureaucracy compliance	Supported	Non-supported	Non-supported
Institutional openness	Transparency	Non-supported	Non-supported	Supported
	Leadership proactivity	Non-supported	Non-supported	Supported

Appendix A: Definition and Summary Statistics of PCI Sub-indices

Variable	Definition	Mean	S.D.	Min.	Max.
Legal institutions	Measures the confidence in provincial legal institutions; whether firms regard provincial legal institutions as an effective vehicle for dispute resolution, or as an avenue for lodging appeals against corrupt official behaviour. The indicator ranges from 1 to 10; the higher the score, the better the institutions.	4.86	0.96	2.98	6.80
Entry costs	Measures the differences in entry costs for new firms across provinces (for example, length of business registration in days, etc.). The indicator ranges from 1 to 10; the higher the score, the lower the entry costs.	7.77	0.81	5.73	9.13
Land access	Combines two dimensions of the land problems confronting entrepreneurs: how easy it is to access land and the security of tenure once land is acquired. The variable ranges from 1 to 10; the higher the score, the better the access.	5.07	1.42	2.06	8.37
Time costs	Measures how much time firms waste on bureaucratic compliance, as well as how often and for how long firms must shut down their operations for inspections by local regulatory agencies. The indicator ranges from 1 to 10; the higher the score, the lower the time waste.	5.86	0.74	3.88	7.89
Business supports	Measures provincial services for trade promotion, provision of regulatory information to firms, business partner matchmaking, provision of industrial zones or industrial clusters, and technological services for firms. The indicator ranges from 1 to 10; the higher the score, the better the support.	6.23	1.29	3.05	8.73
Labour training	Measures the efforts by provincial authorities to promote vocational training and skills development for local industries and to assist in the placement of local labour. The indicator ranges from 1 to 10; the higher the score, the better the training.	5.77	0.86	3.85	7.36
Corruption	Measures how much firms pay in bribes, how much of an obstacle those extra fees pose for their business operations, whether payment of those extra fees results in expected results or "services," and whether provincial officials use compliance with local regulations to extract rents. The indicator ranges from 1 to 10; the higher the score, the better the corruption controls.	5.63	0.85	4.26	7.90
Transparency	Measures whether firms have access to the proper planning and legal documents necessary to run their businesses, whether those documents are equitably available, and whether new policies and laws are communicated to firms and predictably implemented. The indicator ranges from 1 to 10; the higher the score, the more transparent.	5.35	1.46	2.26	7.15
Leadership proactivity	Measures the creativity and cleverness of provinces in implementing central policy, designing their own initiatives for private sector development, and working within sometimes unclear national regulatory frameworks to assist and interpret them in favour of local private firms. The indicator ranges from 1 to 10; the higher the score, the more proactive.	4.56	1.03	1.39	6.89

Note: The panel encompasses 10 provinces and municipal cities in Vietnam that has conducted the SME surveys in the period 2005-2015, obtained from the Provincial Competitiveness Index (PCI) dataset.

Appendix B: Pairwise Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Investment (1)										
Business-specific networks (2)	0.041									
Bank-specific networks (3)	0.188	0.235								
Political-specific networks (4)	0.048	0.230	0.371							
Local governance (5)	-0.046	-0.009	-0.017 [^]	0.037						
Owner age (6)	-0.100	-0.020	-0.005	0.025 [^]	-0.040					
Firm age (7)	-0.141	-0.029	-0.033	0.001 [^]	-0.054	0.358				
Firm size (8)	0.126	0.149	0.252	0.160	0.051	-0.043	-0.108			
Liability (9)	0.467	0.058	0.268	0.047	-0.012 [^]	-0.065	-0.134	0.206		
Bank loans (10)	-0.247	-0.065	-0.305	-0.092	-0.051	0.025 [^]	0.047	-0.171	-0.313	

Note: All correlation coefficients are significant at 1% except for coefficients with [^] are significant at 5%.