# NETWORK AND FIRM PERFORMANCE UNDER BALANCED SCORECARD APPROACH

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### **Abstract:**

Network and firm performance is an interesting topic, attracting many scholars. There is a sizable body of research on the field. However, this paper is unique since (1) we approach firm performance under balanced scorecard framework, and (2) this is the first paper conducted in a developing context of Vietnam. Utilizing survey data from 158 firms operating in Vietnam, we found that network impacts positively on firm performance. The more network a firm has, the better financial performance, the more customer satisfies, and the more learning and growth of employees. The managerial implication is that firms should invest in building network with others at both individual level and organizational level.

**Keywords:** *network, firm performance, learning and growth, financial perspective, customer perspective* 

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### 1. Introduction

The capability to network is one of the most significant skills any firm, business or entrepreneur should possess as this is a relatively easiest way to grow business through getting to know customers and competitors as well as the industry as a whole. Networking plays an important role in business, particularly in emerging markets where the level of environmental uncertainties is relatively high (Luo, 2003). While there are many factors that can influence the success of a venture, only recently have researchers begun to highlight the potential significance of networking involvement. It is widely acknowledged that relationships are the social capitals for success, therefore, one of the best ways for enterprises to reach for opportunities and develop strategy is through networking.

Recent developments in the field of network research have made inter-organisational relationships attractive to social science scholars. One of the most important research areas is the link between relationship networks and firm performance. Indeed, there has been opposing arguments relating to whether building up a network effectively will contribute to success of business. Many scholars suggest that making use of networks can stimulate firms' performance while others argue there has been little evidence to support for this point. However, the existing literature focuses mostly on qualitative research. In addition, firm performance is mostly

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analyzed under a single financial or marketbased indicator, such as profit or market share. Moreover, majority of the literature has been focused on developed contexts with advanced market structures. This paper is to tackle these mentioned drawbacks of literature by deploying balanced scorecard approach in measuring firm performance, and subjective data is collected via survey from 158 firms in Vietnam. The paper is to offer a better understanding of the role of network in firm performance with hope to shed more light to this interesting issue. It is hoped that the findings presented and discussed in this paper will help build a better theory of firm performance as well as inform owners, advisors, and policy makers.

### 2. Theoretical framework

# 2.1. Concept of network

Networking, while holding various definitions in the past, has recently taken its concept more closely towards business field. Ivan Misner, founder and chief visionary officer of BNI, has concluded that networking is "The process of developing and activating relationship to increase your business, enhance your knowledge, expand your sphere of influence or serve your community." (Misner, 2012). Surely, networking is not simply just meeting and talking to people to build relationship. Instead, it is rather a structured plan for one firm to get to know people or other firms that would like to do business and cooperate with or at least are able to introduce those who would. It is necessary to make a plan and commit to it. Any firms that do networking or networker should be devoted to their plans and particular actions. Half of the success of networking is contributed by the devotion of networkers as by how much they spend their time and effort being out there in the game. Another half is constituted by the efficiency of networking. The term is always easier said than done. Being proactive is mainly the key point to networking. One cannot network successfully without taking control of the situation instead of just reacting to it. Networking requires getting out of the comfort zone and being challenged. Networking holds various benefits for a firm that would develop its performance pretty effectively. Firm performance is a term that is usually mistaken with organizational effectiveness. However, business performance, or firm performance is only a subset of organizational effectiveness. It refers to the degree to which the financial and operational outcome of a company reach expectation or set goals.

Networking is the activity of building relationships and connections from one to other, which help benefit its owner in various ways, especially for business purpose. Networking occurs between different parties, who can be persons, groups, and collectives of organizations. Networks and network relationships provide channels for information that is required for successful business operations. Some people do not take networking seriously as they assume that networking is just about going out and meeting people. In the context of business, networking is a structured plan of controlling all the external sources of knowledge in order to serve the firm's benefits. The structure of network linkages provides both opportunities and constraints on the actions of participants. It is critical that all information gained from networking being used efficiently so as to make right decisions for the firm while the

networks are maintained and expanded.

Networking refers to making connections and building enduring, mutually beneficial relationships. As far as business organizations are concerned, networking theory indicates that the ability of owners to gain access to resources not under their control in a cost effective way through networking can influence the success of business ventures (Zhao and Aram, 1995). While there are many factors involved in the success of business enterprises, only recently that have researchers started to investigate the importance of an owner - manager's networking involvement (Cromie and Birley 1992). Coleman suggested that by networking, information can be reached in a cost effective way to contribute to decision making process. Otherwise, Granovetter (1983) argued that individuals whose networks include primarily family and friends are likely to have access to less information than those with many acquaintances. Florin et al. (2003) suggested that networking can gain benefits for members by giving them access to the social resources included in a network. That is to say, networking can give a chance for small and medium enterprise (SME) owners can tap needed resources that are "external" to the firm (Jarillo 1989). Julien (1993) indicated that this form of cooperation can stimulate the economies of scale, avoiding diseconomies caused by large size.

The notion that firms corporate with competitors to improve business performance was considered to be contradicted to conventional wisdom (Rowley et al., 2000). However, with the increasing complexity of business environment where intersectoral nature of knowledge increase rapidly, there is a need to go beyond traditional boundaries of

firms to seek for knowledge from others. It is becoming more and more challenging for firms to capitalize all available knowledge (George et al., 2001). In other words, focusing entirely on firm's internal resource and capabilities is no longer offering competitive advantage. Rather, the nexus of relationships with other parties contribute to the production function (Schilling & Steensma, 2001). Networking with other firms would help firms to improve its knowledge reservoir, catching up with cutting edge technology, a critical aspect to the innovative performance of firms (Cohen and Levinthal, 1990; Rosenkopf & Nerkar, 2001).

Matusik (2000) argues that the ability of firm to recognize and exploit external knowledge plays a critical role in improving competitiveness. Internalizing external knowledge can be achieved via observing and identifying best practices from others, or via collaborating with different firms in the same or other industries (e.g., Inkpen, 1998; Lubatkin et al., 2001). Networking facilitates learning ability of firms and improve innovation outputs, which is empirically proved by Darr et al., 1995; Shan et al., 1994). Networking could offer the best for firms: gaining knowledge from partners without paying for accumulating experience (Ingram, 2002).

Literature on learning and innovation (e.g., Anand & Khanna, 2000; Child, 2001; Kale, Dyer, & Singh, 2002) show that networking can be able to facilitate creating new knowledge, which is not possessed by parties before. The entirely new knowledge is developed via the activities of sharing, transferring existing knowledge that combining with existing knowledge from partner to make something

totally new. Via networking, firms can acquire knowledge and skills that cannot be able to, or hardly, develop internally. This might include the direct transfer of assets, the sharing of key equipment, intellectual property, or personnel, and the transfer of organizational knowledge (Dyer & Singh, 1998; Hamel & Prahalad, 1989).

How much knowledge firms acquire via networking activities depends on its absorptive capacity (Cohen & Levinthal, 1990). Absorptive capacity would be built and developed via R&D activities of firms, which facilitate the ability to recognize and value external knowledge. Over time, the firm improve its ability in assimilating and sharing external knowledge internally via the development of appropriate processes, policies, and procedures. The firm is more skillful in using the combination of internal external knowledge to recognize and technological trends, create products and markets, and maneuver strategically.

Social network theory suggests that a firm's behaviors are significantly influenced by inter-and intra-firm relationships which are embedded in the social context of environment (Galaskiewicz & Zaheer, 1999; Gulati, 1999). The interaction with other players in the social network help improve firm's ability in creating value, expanding the boundaries of firms (Dyer & Singh, 1998; Gulati, 1999). In a social network, a firm can enter into social networking activities, such as strategic alliance, to access to knowledge, technology, and other resources.

# 2.2. Firm performance under balanced scorecard perspective

Firm performance refers to the process

of analyzing the action's efficiency and effectiveness as compared to goals and objectives (Neely, Gregory & Platts, 1995). Each firm has their own suitable methods of measuring its performance. For instance, firm performance can be measure by the market share and or by growth rate, ROI, profit margin, etc. Firm performance does not only demonstrate how well the firm is doing but also offers significant important information in managing firm activities and determining follow-up solutions.

An assessment of the measurement of performance within the field of business and management, traditionally, show that scholars normally use financial indicators to indicate how good or bad a firm performs in a certain period of time. Research shows that commonly used measures of financial performance consist of sales-based indicators, return on assets, return on investment and profitability. However, measuring performance using the accounting profit rate is unstable, as the profit rate may vary in different industries significantly over the business cycle (Globerman, 1979). Using financial measures may fail adequately to reflect the extent to which a firm achieves its short-term and long-term objectives (Geringer & Hebert, 1991). A firm may have a variety of objectives, ranging from profitability, market share and technology transfer to material assets. Traditional accounting measures thus are unable statistically to detect the excellence of the firm (Chakravarthy, 1986). Hax & Majluf (1984) argue that accounting-based measures are less reliable and that 'market' or 'valuebased' measurements are more appropriate in reflecting business performance.

To tackle the abovementioned weakness, in this study, we employ a more advanced

way to measure firm performance, by using balanced scorecard (BSC) approach. The BSC system not only incorporates financial and non-financial measures but also translates a company's mission and strategy into tangible objectives and measurements. It is considered a "balanced" framework because it incorporates results from previous efforts with measures that drive future performance, grouping them according to four different perspectives: financial, customer, internal business processes, and learning and growth (Arroyo, 2010). This is a holistic approach, being able to evaluate firms from various angles. Banker et al. (1996) revealed that nonfinancial measures of customer satisfaction were significantly associated with future financial performance and contained additional information not reflected historical financial measures

The Financial Perspective: The financial perspective retains the short-term approach of measuring profitability, sales growth or generation of cash flow, mainly because these measurements indicate the company's financial success from a shareholder's point of view. The financial perspective is to evaluate whether the company's strategies are translating into bottom-line improvements of the company. Financial measures tend to be historical, and do not reveal the present situation of the business environment and the prospects of the future performance. However, financial measures are still important because there is no guarantee that improved operating performance will indeed lead to financial success (Kaplan & Norton, 1992). The financial performance such as profitability of an organization is significant to its success, therefore cannot be dismissed. According to Kaplan & Norton (1992), operational improvements that do not lead to financial success indicate that the implementation of the strategy of an organization needs to be revisited. However, trying to capture the success strategy using the traditional financial indicators requires the selection of financial measures that will most effective suited by the product life cycle stage. There are three possible stages described by Kaplan and Norton (1996), that is rapid growth, sustain, and harvest. For the growth stage, companies will probably use measures such as increased sales volumes, acquisition of new customers, and growth in revenues that can evaluate the growth and development of the company. In the sustain stage financial measures will be return on investment (ROI) and the return on capital employed, measures on this stage are purposely directed to evaluate the effectiveness of the organization. Finally, the harvest stage, measures are payback periods and revenue volume aimed to reap the rewards of the strategy that will potentially be based on different cash flow analysis that attempt to evaluate the company's success in harvesting profits from maturing products or services.

The customer perspective: The customer perspective includes not only market share and new customer acquisition but also measures related to the value propositions that the company will deliver to its customers, such as customer intimacy, operational excellence or product leadership (Arroyo, 2010). The aim of the customer perspective is to ascertain the needs of the customers, and then devise appropriate the value the company wants to apply to the end-user that will potentially satisfy their needs taking into account the measure of quality and perceived

value of the products or services that are supplied to the customer. According to Kaplan and Norton (1992), customers are primarily concerned with time, quality, performance and service, and costs. For a company to attain its customer satisfaction and retention ought to deliver on time, offer innovative products/ services and technological excellence that will render the company's offering at a satisfactory cost, because if customers are not satisfied, they will seek products and services elsewhere. Customer measures are considered leading indicators of future performance.

The internal business perspective: The internal business processes perspective identifies critical internal processes in which the company must excel in order to deliver the value propositions that will attract and retain customers (Arroyo, 2010). The purpose of the internal business perspective is to determine the key business processes that create and deliver the goods and services of the company to the customers whilst develop measures to ensure that these processes are working well. By focusing on the activities and key processes required, it enhances the company's efforts to excel at providing the value expected by the customers, hence that the measures in the customer perspective will be supported. The processes in the in the internal business perspective have impact on the financial perspectives, whereas well implemented measures that attain smaller lead-times or better quality may result in greater profit margins. Contrary, poor performance in critical business processes can lead to a decline in customer satisfaction and ultimately in profit margins. These measures serve as focal guidelines for managers to focus on the important internal operations that will aid them meet customers' expectations. According to Kaplan & Norton

(1992), companies should focus on business processes that have the most significant impact on customer satisfaction and are required to excel and compete in their industry. Measures in the internal business perspective could be innovation rates, service measures, lead-time, quality measures, efficiency measures, costs reductions

The innovation and learning perspective: The learning and growth perspective identifies the capabilities required to deal with the competitive environment so as to create longterm growth and continuous improvement (Arroyo, 2010). The purpose of the innovation and learning perspective is to determine the ability of the company to continually improve and innovate. This is the foundation of any strategy and centers on the human and intangible assets of the company. As discussed earlier, intangible assets are increasingly important in today's globalized economy as business success lies on it. Thus, the focus is mainly on the internal skills and capabilities that are required to support the value creation, which includes the areas of individual and corporate self improvement and technological support and tools. This perspective tries to define the human and developmental requirements of the company that will enable ambitious objectives in the other three perspectives to be achieved. To increase shareholder value a firm must constantly able to innovate, learn and improve which will result in firm growth. Theoretically, through increased improvement, businesses are able to improve their internal processes, leading to greater customer satisfaction, corporate growth, and increased profits (Scott et al. 2012). The possible measures in this perspective are illness rates, employee turnover and education and development.

# 2.3. The link between networking and firm performance

While there are many factors that can contribute to the performance of a venture, only recently have researchers begun to emphasize the potential significance of networking (Cromie and Birley 1992). According to Coleman (1988), networking can provide access to information, a costly yet inevitable factor in the decision making process, in a more cost effective manner. Therefore, the use of network can lower a firm's risk of 'failure' and increase its chances of 'success'. Even though not strongly demonstrated, there have been a limited number of empirical studies that have documented a positive association between networking and firm performance. Throughout history, there were prime findings of the association between networking and performance. For example, Potts (1977) noted that successful companies relied more heavily on accountants' information and advice than did unsuccessful companies. Duchesneau and Gartner (1990) found that successful firms were more likely to have used professional advice. Donckels and Lambrecht (1995) found that network development, particularly at the national and international level, was positively associated with firm growth. Kent (1994) stated that the financial performance of a group of small pharmacy businesses was positively related to using external management advisory services, which was backed up by Lerner, Brush and Hisrich's statement (1997) that there was a significant link between network affiliation and profitability, and that the use of outside advisors was related to revenue. Hustedde and Pulver (1992) found that entrepreneurs who failed to seek assistance were less successful in acquiring equity

capital. Similarly, Larsson et al. (2003) found that a lack of contacts with outside expert advisors was an obstacle to the expansion of small businesses. Although the positive impacts of networking are acknowledged, one major shortcoming of prior studies refers to evaluating the effects of specific network configurations on performance. According to Hoang and Antoncic (2003), network configuration can be defined as the pattern of relationships involving direct and indirect ties with different external actors. Moreover, there is considerable ambiguity and debate within the literature regarding appropriate network configuration for competitiveness (Pittaway et al., 2004). As prior studies also hold diverse views on how to capture a network configuration, this research gap can be further expanded. For example formal vs. informal configurations, strong vs. weak ties (Granovetter, 1973), customer-oriented (Jacob, 2006) vs. supplier-oriented (Arend, 2006) configurations. To solve this problem, the study of Baum et al. (2000) can give a general view on network configurations, distinguishing networks with upstream partners (e.g. suppliers), downstream partners (e.g. customers), and horizontal partners (e.g. competitors). Networking with upstream partners deals with direct suppliers, which can be important for new ventures and small firms as their involvement can lead to development of more efficient processes (Bradley, Meyer, & Gao, 2006). In his study Arend (2006) found that upstream configuration has a positive effect on performance. According to Ragatz, Handfield, & Scannell, (1997), networking with upstream partners is also believed to positively affect speed, responsiveness, cost, quality and technology of a firm's production.

Lee et al. (2001) stated that networking with established suppliers would increase the credibility of firms among third parties, such as customers and other interested parties. Thus, networking certainly accelerate firm's development in a rather fast manner.

Since firm performance has four perspectives under BSC approach, the paper is going to test the following hypotheses:

H1: Network positively associates with financial performance of firm

H2: Network positively associates with customer performance of firm

H3: Network positively associates with internal business processes of firm

H4: Network positively associates with learning and growth of firm

## 3. Research methodology

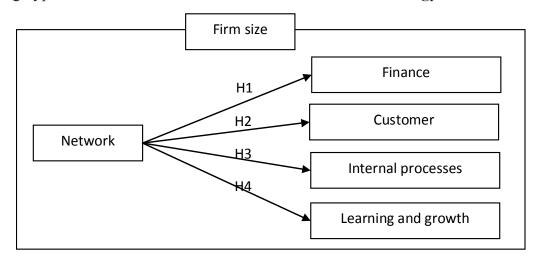


Figure 1: Research framework

Research model is:

Finance  $= \alpha + \beta 1 * network + \beta 2 * firm size + \epsilon$ Customer  $= \alpha + \beta 1 * network + \beta 2 * firm size + \epsilon$ Internal process  $= \alpha + \beta 1 * network + \beta 2 * firm size + \epsilon$ Learning and growth  $= \alpha + \beta 1 * network + \beta 2 * firm size + \epsilon$ 

Due to the nature of five variables (finance, customer, internal process, learning and growth, and network), we decided to use subjective data via survey technique. Questionnaire is developed with 21 items (5-point Likert scale) (see Appendix). Data are coded and use SPSS package to analyze, as following: network has 3 items: Q12.1-Q12.3; finance has 4 items Q16.1-Q16.4, customer as 5 items: Q17.1-Q17.5, internal process

has 2 items: Q18.1-Q18.2, and learning and growth has 6 items: Q19.1-Q19.6. Number of employee (under Logarithmic form) is used as a control variable to capture firm size, which can affect the ability of firm to network. The questionnaire was sent to 200 firms operating in various industries, in various geographical areas in Vietnam. 158 usable responses are used in this study.

## 4. Research findings and discussion

# 4.1. Descriptive statistics

Among 158 firms, 92 firms are in service sector (banking, finance, consulting, trading, insurance, exporting...), and the remaining 66 firms are in manufacturing sector (mechanical engineering, auto-spare part,...). 81 firms from the North, 32 firms from the Centre, and 45 firms from the South.

Three items of network ability of firms have a mean range from 3.44 to 3.73; and 17 items of firm performance. Cronbach Alphas of both network and firm performance are above 0.7, showing the reliability of the questionnaire. This table also presents the adequateness of factor analysis, with KMO of both network and firm performance are above 0.6 and Barlett's tests are significant at 1 percent level (Table 1).

Table 2 shows that 3 factors have Eigenvalues larger than a conventional threshold of 1, suggesting that 3 factors are remained for further analysis.

Table 1: Cronbach Alpha and factor analysis of network and firm performance

	Reliability test		Factor analysis		
	Cronbach Alpha N		KMO	Barlett's test sig	
Network	0.868	3	0.716	0.000	
Firm performance	0.920	17	0.864	0.000	

Table 2: Total variance explained

	]	Initial Eigenv	ralues	Extraction Sums of Squared Loadings			
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	5.604	43.107	43.107	5.604	43.107	43.1	
2	2.273	17.487	60.594	2.273	17.487	60.	
3	1.126	8.665	69.258	1.126	8.665	69.258	
4	.763	5.869	7				

Table 3 indicates that Q17.1, Q17.2, Q18.1, and Q18.2 are loaded at two factors. We decided to discard these four variables and rerun factor analysis. Table 4 suggests that only three factors are remained: factor 1 includes Q19.1-Q19.6 (*learning and growth* aspect), factor 2 includes Q16.1-Q16.4 (*finance* aspect), and factor 3 includes Q17.3-Q17.5 (*customer* aspect). These 3 factors can explain

69.26% the variance of performance. Means of 3 factors are used as three dependent variables for regression.

For the case of networking, factor analysis shows that only 1 factor is remained, and this factor can explain 79.18% variance. Mean of there three variable is used as independent variable. Descriptive statistics of four variables are described in Table 5.

Table 3: Rotated Component Matrix<sup>a</sup>

Component       1     2     3       Q16.1     .792       Q16.2     .829       Q16.3     .802       Q16.4     .691       Q17.1     .659     .520       Q17.2     .749     .377       Q17.3     .708     .708       Q17.4     .828     .822       Q18.1     .381     .500     .464       Q18.2     .439     .438     .433       Q19.1     .710     .710     .717       Q19.3     .717     .717     .719       Q19.4     .840     .840       Q19.5     .793     .709	Table 5: Rotated Component Matrix					
Q16.1   .792     Q16.2   .829     Q16.3   .802     Q16.4   .691     Q17.1   .659   .520     Q17.2   .749   .377     Q17.3   .708     Q17.4   .828     Q17.5   .822     Q18.1   .381   .500   .464     Q18.2   .439   .438   .433     Q19.1   .710   .710     Q19.2   .821   .821     Q19.4   .840   .793		Component				
Q16.2   .829     Q16.3   .802     Q16.4   .691     Q17.1   .659   .520     Q17.2   .749   .377     Q17.3   .708     Q17.4   .828     Q17.5   .822     Q18.1   .381   .500   .464     Q18.2   .439   .438   .433     Q19.1   .710   .710     Q19.2   .821   .821     Q19.3   .717   .717     Q19.4   .840   .793		1	2	3		
Q16.3   .802     Q16.4   .691     Q17.1   .659   .520     Q17.2   .749   .377     Q17.3   .708     Q17.4   .828     Q17.5   .822     Q18.1   .381   .500   .464     Q18.2   .439   .438   .433     Q19.1   .710   .710     Q19.2   .821   .821     Q19.3   .717   .717     Q19.4   .840   .793	Q16.1			.792		
Q16.4   .691     Q17.1   .659   .520     Q17.2   .749   .377     Q17.3   .708     Q17.4   .828     Q17.5   .822     Q18.1   .381   .500   .464     Q18.2   .439   .438   .433     Q19.1   .710   .710   .710     Q19.2   .821   .821   .717     Q19.4   .840   .840     Q19.5   .793   .793	Q16.2			.829		
Q17.1   .659   .520     Q17.2   .749   .377     Q17.3   .708     Q17.4   .828     Q17.5   .822     Q18.1   .381   .500   .464     Q18.2   .439   .438   .433     Q19.1   .710   .710   .710     Q19.2   .821   .821   .717     Q19.4   .840   .840     Q19.5   .793   .793	Q16.3			.802		
Q17.2   .749   .377     Q17.3   .708     Q17.4   .828     Q17.5   .822     Q18.1   .381   .500   .464     Q18.2   .439   .438   .433     Q19.1   .710   .710   .710     Q19.2   .821   .821   .717     Q19.4   .840   .793     Q19.5   .793   .793	Q16.4			.691		
Q17.3   .708     Q17.4   .828     Q17.5   .822     Q18.1   .381   .500   .464     Q18.2   .439   .438   .433     Q19.1   .710     Q19.2   .821     Q19.3   .717     Q19.4   .840     Q19.5   .793	Q17.1		.659	.520		
Q17.4 .828   Q17.5 .822   Q18.1 .381 .500 .464   Q18.2 .439 .438 .433   Q19.1 .710   Q19.2 .821   Q19.3 .717   Q19.4 .840   Q19.5 .793	Q17.2		.749	.377		
Q17.5 .822   Q18.1 .381 .500 .464   Q18.2 .439 .438 .433   Q19.1 .710   Q19.2 .821   Q19.3 .717   Q19.4 .840   Q19.5 .793	Q17.3		.708			
Q18.1   .381   .500   .464     Q18.2   .439   .438   .433     Q19.1   .710   .710   .710     Q19.2   .821   .821   .717     Q19.3   .717   .793   .793	Q17.4		.828			
Q18.2   .439   .438   .433     Q19.1   .710   .710     Q19.2   .821   .821     Q19.3   .717   .717     Q19.4   .840   .840     Q19.5   .793	Q17.5		.822			
Q19.1 .710 Q19.2 .821 Q19.3 .717 Q19.4 .840 Q19.5 .793	Q18.1	.381	.500	.464		
Q19.2 .821 Q19.3 .717 Q19.4 .840 Q19.5 .793	Q18.2	.439	.438	.433		
Q19.3 .717 Q19.4 .840 Q19.5 .793	Q19.1	.710				
Q19.4 .840 Q19.5 .793	Q19.2	.821				
Q19.5 .793	Q19.3	.717				
	Q19.4	.840				
Q19.6 .709	Q19.5	.793				
	Q19.6	.709				

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

**Table 4: Rotated Component Matrix**<sup>a</sup>

	Component				
	1	2	3		
Q16.1		.837			
Q16.2		.859			
Q16.3		.802			
Q16.4		.686			
Q17.3			.675		
Q17.4			.894		
Q17.5			.812		
Q19.1	.721				
Q19.2	.819				
Q19.3	.722				
Q19.4	.842				
Q19.5	.805				
Q19.6	.711				

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

**Table 5: Correlations matrix** 

		N	Mean	Std. Dev.	(1)	(2)	(3)	(4)
(1)	learninggrowth	158	3.83	.730				
(2)	finance	158	3.48	.697	.373**	1		
(3)	customer	158	3.64	.777	.391**	.563**	1	
(4) networking 158 3.57 .800 .333** .564** .518** 1								
**. Co	**. Correlation is significant at the 0.01 level (2-tailed).							

**Table 6: Regression results** 

	Model 1	Model 2	Model 3
natuvarkina	0.244***	0.495***	0.463***
networking	(2.85)	(7.62)	(5.90)
Lamplayaa	0.048	0.081**	-0.033
Lemployee	(0.95)	(2.11)	(-0.72)
R	0.071	0.349	24.2
F	4.34**	30.29***	18.08***

Note: \*\*, \*\*\*: significant level at 5% and 1%

Model 1: dependent variable: learning and growth

Model 2: dependent variable: finance Model 3: dependent variable: customer

Source: SPSS results

Table 6 are the results of regression. Model 1, Model 2, and Model 3 test the impacts of network on learning and growth, financial performance, and customer, respectively. Employee (under logarithmic form) is a controlled variable in all three models. As can be seen, network variables are statistically significant at 1 per cent level in all models. For Model 1, when firm improves network 1 point, learning and growth performance increases 0.244 point. For Model 2, when network

a. Rotation converged in 5 iterations.

a. Rotation converged in 4 iterations.

improves 1 point, financial performance of firm improves 0.495 point. And, for Model 3, when network improves 1 point, customer perspective improves 0.463 point. All three hypotheses are strongly supported.

There is a positive relationship between network and firm performance. When network increases 1 point, firm performance increases 0.468 point, approving the hypothesis set forth. The results of this paper can be summarized in Table 7.

**Table 7: Hypothesis testing results** 

	Hypotheses	Supported
		or not
H1	Network positively associates	Supported
	with financial performance of firm	
Н2	Network positively associates	Supported
	with customer performance of firm	
Н3	Network positively associates	Not tested
	with internal business processes of firm	
H4	Network positively associates	Supported
	with learning and growth of	
	firm	

#### 5 Conclusions

The ability to identify key factors associated with the performance of firms has been of significant interest to entrepreneurs. Although many studies have investigated the factors of success in many countries, accurate models for predicting venture performance are not widely available (Lussier and Pfeifer 2001). The study, therefore, aims to examine (and model) the potential impact of networking on firm performance.

Utilizing survey data from 158 firms operating in Vietnam, we found that network impacts positively on firm performance. The more network a firm has, the better financial performance, the more customer satisfies, and the more learning and growth of employees. The managerial implication is that firms should invest in building network with others at both individual level and organizational level.

To be concluded, as the industry is becoming more and more competing through development, business enterprises should invest in their networks, both formal and informal, for either expected or unexpected benefits. In business, the executives with broad and deep networks, together with excellent networking skill are likely to become the game changer, the key to success of a firm. Therefore, encouraging networking might well be highly beneficial if the objective is to maximize business survival and growth.

Networking has become more popular in the large scale such as business or industry ones since it has such a significantly positive impact on the overall firms performance. Networking could increase a company's position on the market and also its profitability. Secondly, it cannot be denied that networking helps a firm mainly in getting to know competitors and other cooperative agents. And finally, since networking is not only done by companies but also by individuals and employees, it helps a firm improve its human resource and intellectual resource by recruiting talents. With its many benefits that eventually lead a betteroff firm performance, networking should be more invested in and taken more seriously.

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