



The Factors Influence to Competitive Performance of Small Firms Using the Internet in Northeastern Thailand

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ABSTRACT

This article is quantitative research which aims to explore the factors influencing competitive performance of small firms using the Internet in Northeastern Thailand. The interview was conducted with 285 small firms that use the Internet. They were selected by stratified random sampling, which have fewer than 10 employees and have run the business for more than 1 year. Descriptive statistics are employed for data analysis in order to explain the characteristics of the sample group by frequency, percentage, average, standard deviation, and maximum and minimum values. Besides, interpretation of competitive performance of small firms is done with the 5-level criteria, from the least to the most. Also, inferential statistics are used to test the hypothesis about the factors affecting competitive performance of small firms with the Internet according to the study. Standardized coefficient of regression: β is used with the level of significance at 0.05 and R-square value from regression line in order to tell about variation of competitive performance of small firms with the Internet (dependent variable) influenced by independent variables, including (1) structure of small firms, (2) use of the Internet, and (3) external surroundings of small firms.

Keywords: Small Firms, Competitive Performance, Using the Internet, Northeastern Thailand

JEL Classification: L25

1. INTRODUCTION

Small firms play an important role in economic and social development of the Country. This significantly results in economic growth from the local level to the global level (Shideler and Badasyan, 2012; Banks, 2013). Most small firms have fewer than 10 employees (Schaper, 2006; Jones and Rowley, 2009; Rigg and Promphakping, 2014). In developed countries, there are more than 90% of small firms (Schaper and Volery, 2007), whereas there are more than 95% of small firms in developing countries. These are substantially important in innovation and economic growth. In both Thailand and the United States, they are similarly outstanding (Paulson, 2004), for example, OECD (2008) data provide that small firms have 60-70% employment or 55% of GDP. In the United States, there is 50% employment or 38% of GDP, while Thailand has 60% employment or 50% of GDP (Rochaa, 2012). The data indicate that small firms are the small unit which plays a significant role in almost all countries' development.

From the literature review, it shows the conditions related to competitive performance of other kinds of businesses, especially the use of information and communication technology of most firms, the Internet (Simpson and Paula, 1997; Berisha, 2009). This enables small firms to run their new businesses and services; they access new markets and make more value added for customers. Also, customers gain profits from the service which provides low cost in trade and easy deal in social network (Srinuan, 2013). Moreover, sufficient evidence proves that the Internet has an influence on competitive performance of firms. For instance, the study in the United States indicates that it affects an increase of labor productivity for 5% (Atrostic et al., 2004); in Finland, the product growth changes between 8 and 18% (Maliranta and Nurmi, 2004); in Canada there is an increase of product and market share (Baldwin and Wulong, 2004); in England, there is positive importance with labor and factors of production (Clayton et al., 2004). For Thailand, in 2016 the use of the internet for making income is 35.27% average; the northeast has the most of 41.27%, and when small firms use the Internet up

to 80.54%, it results in more different uses and finally sustainably competitive performance (Zheng et al., 2006; Ashurst et al., 2012). The relation of the internet use and competitive performance depends on resource-based view (RBV) (Barney, 2001; Tarafdar and Gordon, 2007) which is valuable and inimitable (Hitt et al., 2011; Wowak et al., 2013), able to be used in complex situations to respond to quicker services (Bitner et al., 2000; Rust and Miu, 2006). The result shows that basic resource condition, such as the Internet use by small firms, enhances competitive performance and leads to success of business. Thus, small firms that use the Internet are an interesting target, in accordance with the rocketing statistics of small firms using the Internet in running their businesses, both in central and regional sectors.

From the phenomenon and concepts mentioned earlier, the researcher believes that small firms that use the Internet in Thailand are likely to have different levels of competitive performance because of different factor influences, internal structures, the Internet uses, and external surroundings in business. These help the researcher develop approaches or methods of enhancing competitive performance of small firms, mostly in the northeast of Thailand (NSO, 2012), to suit the real situations more.

2. CONCEPTUAL FRAMEWORK

Conceptual framework of quantitative research is synthesized from related theories and studies as well as qualitative research. The details are as follows:

2.1. Independent Variables

1. Independent variable of small firm structure gains the concept from the theory of the firm by Grant (1996) who gave the importance to ownership of the firm and literature review with 3 factors, including (1) the owner factor with 5 variables: Ownership, gender of the owner, age, education, and

experience, (2) characteristic of the owner with 3 variables: Types of business, length of business, and employees, and (3) ability to run the business with 2 variables: Supplementary business and capital (Table 1).

2. Use of the Internet is developed from awareness of business resource use and ability considered important to competitive performance (Barney, 1991; Amit and Schoemaker, 1993). RBV theory of business has the hypothesis stating that resources of factor stock have the owner or are occupied by entrepreneur (Amit and Schoemaker, 1993), including 4 factors: Valuable, rare, inimitable and non-substitutable (Newbert, 2008). However, there is the study showing that small firms can use the resources and ability by using 2 factors; valuable and rare, and succeed in competitiveness, leading to an increase of short-term competitive performance (Barney, 1991). Most firms use the Internet as the information and communication technology (Simpson and Paula, 1997; Berisha, 2009); therefore, the Internet is valuable to business running, and it shows the synthesis of the Internet use factors with 3 variables (Table 1).
3. External surrounding is gained from literature review and related studies. There are 2 external factors, including (1) access to the Internet (provider) and (2) effects to business running with 3 variables: Support from the Government, business competitors, and customers and business network (Table 1).

2.2. Dependent Variables

Dependent variables are competitive performance which means the result of management of resource happening or existing in the particular period of time to run the business well according to the satisfying criteria. These variables are gained from literature review, the concept of competitive performance APP (Ambastha and Momaya, 2004), and the concept of economies of scale (Besanko et al., 2010) with 3 competitive performances of small firms, including resource, ability to operate, and achievement (Figure 1).

Table 1: Independent variables in quantitative research

Factors	Independent variables		
	Literature review	Qualitative results	Application in quantitative
Structure of small firms	Ownership	Ownership	Ownership
	Type of business	Gender	Gender
	Length of business operation	Age	Age
	Employees	Education	Education
	Income	Experience	Experience
	Capital	Type of business	Type of business
		Length of business operation	Length of business operation
Use of the Internet	Physical resource of IT system	Employees	Employees
	Human resource such as skills and knowledge about how to use IT	Supplementary business	Supplementary business
	Enterprise resource such as plan of use, control system, follow-up the use of IT	Capital source	Capital source
	Support from the Government	Use of the Internet resource	Use of the Internet resource
		Skills to use the Internet	Skills to use the Internet
External surrounding	Competitors	Internet use management	Internet use management
	Customers	Internet provider	Internet provider
	Entrepreneur society	Support from the Government	Support from the Government
		Competitors	Competitors
		Customers and business network	Customers and business network

3. METHODS

3.1. Unit of Analysis

The unit of analysis used in quantitative research is organizations, small firms founded legally as both cooperation and partnership which is and is not legal person. The firms have fewer than 10 employees each, operate the business for more than 1 year, have installed the Broadband Internet used for more than 1 year, and have been located in the Northeast. The owner, a business partner, a manager, a managing director, or a manager who is in charge of administration in the organization is the informant.

3.2. Sample Group

Sample size in the research in social science and business administration can be calculated from the rules of multivariate analysis. The least number of sample sizes is 10 for 1 independent variable (Hair et al., 2010). In this research, the total number of variables is 17; thus, the researcher decided to use the criteria to estimate the sample group appropriately. In other words, the ratio of sample group is 17 small firms to 1 independent variable. Therefore, the size of the sample group in this quantitative research is approximately 285 small firms.

Sampling design in order to make the sample group the best representative is done by multi-stage sampling. The Northeastern provinces are divided into the upper and the lower provinces before randomizing each group for 1 province per group to be the representatives. Then, the representatives are used to randomize for small firms in the percentage of the number of small firms using the Internet in the provinces. The result is that the upper province at random is Khonkaen and the lower province is Ubon Ratchathani. According to the data gained from Office of Small and Medium Enterprise Promotion (OSMEP), OSMEP (2013), the number of small firms in Khonkaen province and in Ubon Ratchathani were 79, 144 51, 486 firms, respectively. Thus, the data collection in Khonkaen is 62% of all chosen small firms while in Ubon Ratchathani is 38% of all selected small firms.

3.3. Data Analysis

Descriptive statistics and inferential statistics are employed to analyze the data with the Statistical Package for the Social Sciences. The details are as follows:

3.3.1. Descriptive statistics

The primary data from the interview are brought to be analyzed and explained the characteristics of the sample group with the statistics, including frequency, percentage, average, standard division, maximum and minimum values, and interpretation of performance level of firms. The criteria are as follows:

The criteria for interpreting the performance of firms include 5 levels.

Fewer than 1.49 scores	Means	The fewest
1.50-2.49 scores	Means	Few
2.50-3.49 scores	Means	Medium
3.50-4.49 scores	Means	Many
4.50 and over	Means	The most

3.3.2. Inferential statistics

Multiple Regression Analysis is used to test the hypothesis of factors influencing competitive performance of small firms using the Internet according the conceptual framework. The researcher employs the Unstandardized Coefficient of Regression: b and Standardized Coefficient of Regression: β with the significant level at 0.05 and R-square value gained from regression equation to judge variation of variables of competitive performance of small firms using the Internet (dependent variable) which is influenced by 3 independent variables: Structure of small firms, use of the Internet, and external surroundings of small firms.

4. RESULTS

The Structure of firm, use of the Internet by small firms, and external surroundings factors probably influence competitive performance of small firms. The result of hypothesis test is:

- 1) There are 6 factors influencing competitive performance of small firms statistically significantly at 0.05. 1 factor comes from the structure of firm which is the number of employees, 2 factors come from use of the Internet of firm which are the Internet use resource and the Internet use management, and 3 factors come from external surroundings including the Internet provider, enhancement and support from the Government, and support from customers and networks (Table 2).
- 2) There are 12 factors not influencing competitive performance of small firms statistically significantly at 0.05. 10 factors come from the structure of firm, including (1) ownership, (2) female gender, (3) age of owner, (4) education level, (5) experience of owner, (6) store business, (7) service business, (8) supplementary business, (9) length of business operation, and (10) the number of fund sources. 1 factor comes from use of the Internet which is ability to use the Internet, and 1 factor comes from external surroundings: Business competitors (Table 2).

It is also found that all factors in the model of research hypothesis can explain the variation of competitive performance of small firms at 53.4% (R^2 adjust = 0.534) and have standard error measurement in estimating the model at 17.43 (SEE = 17.43) (Table 2).

The overall picture and each aspect of factors influencing competitive performance of small firms gained from testing the 3 groups of factors, including the structure of firm, use of the Internet, and external surroundings show that:

- 1) The factors that influence competitive performance of small firms in overall picture include the number of employees, the internet use resource, use of the Internet, the internet provider, enhancement and support from the Government, and support from customers and networks (Table 3).
- 2) The factors that influence competitive performance of small firms in the resource aspect include the number of employees, the Internet use resource, the Internet use management, enhancement and support from the Government, customers, and business networks (Table 3).
- 3) The factors that influence competitive performance of small firms in the ability to operate business include the number

Table 2: Factors influencing competitive performance of small firms

Independent variables	b	β	t	Significant
Owner	2.171	0.039	0.787	0.432
Female	3.781	0.076	1.728	0.085
Age	0.045	0.020	0.327	0.744
Bachelor_above	1.140	0.023	0.504	0.615
Experince	0.198	0.065	0.802	0.423
Shop	-2.656	-0.050	-0.805	0.421
Service	-4.086	-0.083	-1.341	0.181
Minor_business	3.203	0.043	0.969	0.334
Number_staff	1.873	0.146	2.695	0.007
Firm_time	-0.352	-0.143	-1.971	0.050
Budget_source	-2.889	-0.054	-1.132	0.259
It_resource_sum	2.054	0.345	4.657	0.000
It_skill_sum	0.171	0.059	0.686	0.493
It_manage_sum	0.431	0.163	2.067	0.040
Ext_isp_sum	0.982	0.173	2.911	0.004
Ext_govsup_sum	-1.546	-0.176	-3.773	0.000
Ext_compet_sum	0.160	0.031	0.638	0.524
Ext_netwk_sum	0.854	0.138	2.751	0.006

R=0.731, R²=0.534, R² adjust=0.502, SEE=17.43

Table 3: The overall picture and each aspect of factors influencing competitive performance of small firms

Independent variables	Y_total	Y_res	Y_mam	Y_out
x1_position	0.039	0.031	0.002	0.069
x2_gender	0.076	0.111*	0.057	0.048
x3_age	0.020	0.004	0.035	0.012
x4_education	0.023	0.067	-0.026	0.029
x5_experience	0.065	0.046	0.091	0.037
x6_1_shop	-0.050	-0.041	-0.033	-0.060
x6_2_service	-0.083	-0.063	-0.063	-0.093
x7_minor_business	0.043	-0.006	-0.014	0.119*
x8_number_staff	0.146**	0.143*	0.129*	0.126
x9_firm_time	-0.143	-0.188*	-0.141	-0.075
x10_budget_source	-0.054	-0.025	-0.083	-0.034
x11_it_resource	0.345**	0.327**	0.305**	0.304**
x12_it_skill	0.059	-0.047	0.000	0.175
x13_it_manage	0.163*	0.053	0.355**	0.022
x14_ext_isp_sum	0.173**	0.295**	0.067	0.138*
x15_ext_govsup_sum	-0.176**	-0.153**	-0.145**	-0.176**
x16_ext_compet_sum	0.031	0.101	0.007	-0.007
x17_ext_netwk_sum	0.138**	0.095	0.106*	0.163**

*Significant <0.05, **Significant <0.01, Y_total means competitive performance of small firm in the overall picture, Y_res means competitive performance in the resource aspect, Y_man means competitive performance in the ability to operate business, Y_out means competitive performance in the achievement of business operation

of employees, the Internet use resource, the Internet use management, enhancement and support from the Government, customers, and business networks (Table 3).

- The factors that influence competitive performance of small firms in the achievement of business operation include supplementary business, the number of employees, the Internet use resource, the Internet provider, enhancement and support from the Government, customers, and business networks (Table 3).

The factors influencing competitive performance of small firms in the overall picture are from testing the 3 groups of factors separately: Components of the structure of firm, components of

the Internet use, and components of external surroundings. It is found that:

- The components of the structure of firm that influence competitive performance of small firms in the overall picture include service business, the number of employee, the length of business operation (Table 4).
- The components of the Internet use that affect competitive performance of small firms in the overall picture include the Internet use resource and the ability to use the Internet (Table 4).
- The components of the external surroundings influencing competitive performance of small firms in the overall picture include the Internet provider, enhancement and support from the Government, customers, and business networks (Table 4).

5. CONCLUSION

The conclusion of the factors influencing competitive performance of small firms using the Internet in the northeast of Thailand can be divided into 3 groups: Positive effect, negative effect, and no effect as shown the following details.

There are 9 factors affecting competitive performance positively, including (1) the female owner, (2) business type, (3) supplementary business, (4) the number of employees, (5) the Internet use resource, (6) ability to use the Internet, (7) the Internet use management, (8) the Internet provider, and (9) customers and business networks. The components of the factors that provide positive effects can be concluded as follows:

- The female owner positively affects competitive performance in resource, including capital, employees, materials, and the firm's location. 57.2% of the female owners pay attention to details in both quantity and quality of the firms' resources; it is confirmed by the qualitative study that females can tell the details of products and services as well as the background of the firms more thoroughly. This characteristic of the owner will lead to strength and safety of property or resource in the business.
- The business type, the service business which accounts for 44.9%, gives positive effects to competitive performance in the ability to operate the business, including the ability to manage, to build good relation with related persons, to pay attention to keeping the good service, to follow up and solve the problems of after-sales service.
- 12.3% of supplementary business provides positive impacts to competitive performance in the achievement of business operation, including products and services, profits, customers, employees and employment, and additional income. While 87.7% of small firms have potential to compete with others, they tend to have supplementary businesses in order to reduce a financial risk of the firm; having several businesses at the same time can divide risks, according to a qualitative study.
- Small firms with only 1-2 employees account for 50%, resulting in positive effect to competitive performance. It can be concluded that the more employees the firms have, the stronger aspects the firms gain.
- The Internet use resource gives positive impact to competitive performance. Using the Internet for business requires

Figure 1: Conceptual framework

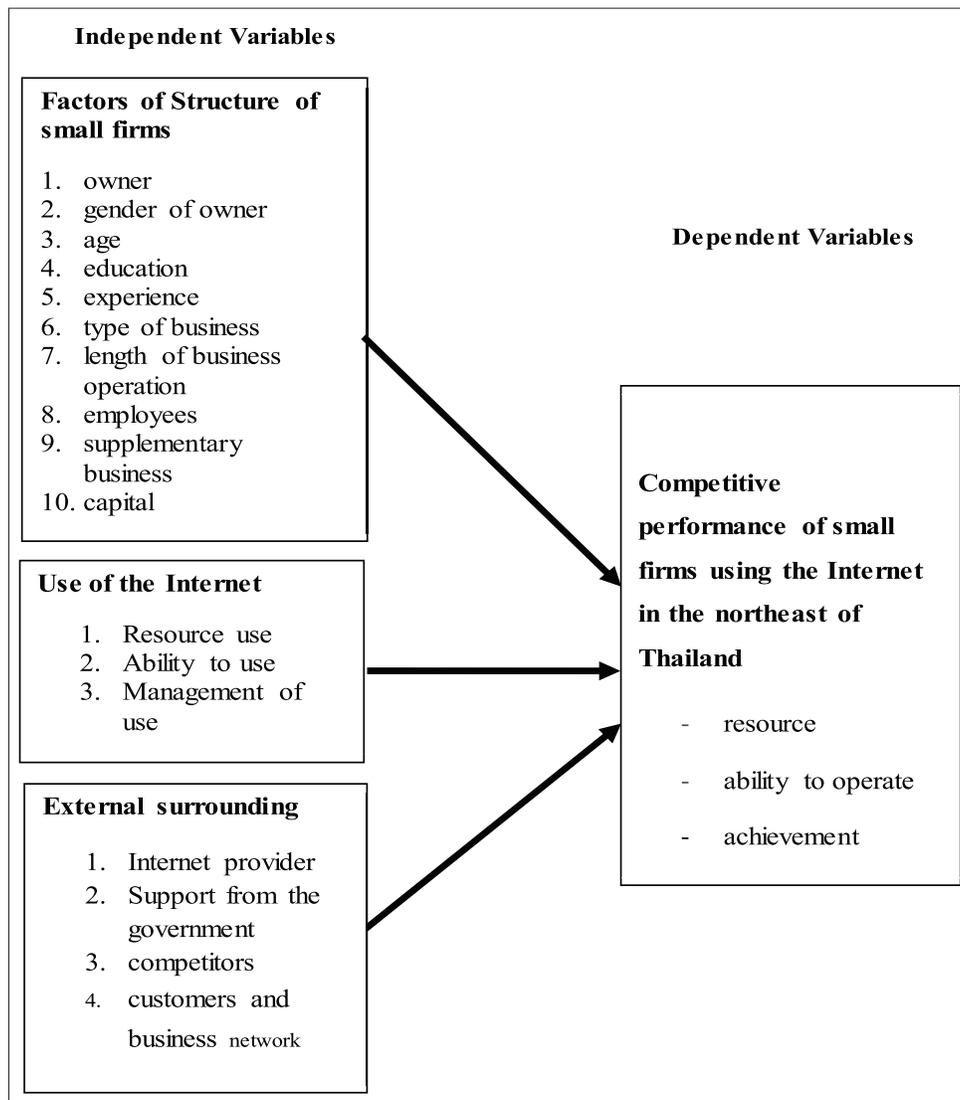


Table 4: Factors in each group influencing competitive performance of small firms in the overall picture

Independent variables	Y _{total}	Y _{total}	Y _{total}	Y _{total}
x1_position	0.039	-0.030		
x2_gender	0.076	0.043		
x3_age	0.020	-0.073		
x4_education	0.023	0.011		
x5_experience	0.065	0.074		
x6_1 shop	-0.050	0.003		
x6_2 service	-0.083	0.157*		
x7_minor_business	0.043	-0.029		
x8_number_staff	0.146**	0.368**		
x9_firm_time	-0.143	-0.193*		
x10_budget_source	-0.054	-0.028		
x11_it_resource	0.345**		0.419**	
x12_it_skill	0.059		0.175**	
x13_it_manage	0.163*		0.120	
x14_ext_isp_sum	0.173**			0.466**
x15_ext_govsup_sum	-0.176**			-0.132**
x16_ext_compet_sum	0.031			-0.058
x17_ext_netwk_sum	0.138**			0.258**

*Significant <0.05, **Significant <0.01

connecting materials and the Internet network to be the important parts. The more intelligent it is, the stronger the firms become.

- 6) The ability to use the Internet positively affects competitive performance, specifically in case of paying attention to the Internet use only. In other words, skills and knowledge to use the Internet are not barriers to use the Internet, making small firms able to run their businesses by using the Internet as a tool.
- 7) The internet use management provides positive impact to competitive performance. It can be seen that when the Internet is applied to activities in business operation, small firms become stronger in every aspect.
- 8) The Internet provider positively influences competitive performance. When the level of support or help from the internet service provider () for the Internet use by small firms increases, it reduces cost and length of time, making it possible for small firms to operate their business more rapidly and strongly in every aspect.
- 9) Customers and business networks positively affects competitive performance. The level of support or help by

customers and business networks which is complex will enhance with more effective administration (Ritter, 2004), leading small firms to have more strength in every aspect.

There are 2 groups influencing competitive performance negatively. First, length of business operation, and second, enhancement and support from the Government. It can be summarized as follows:

- 1) The length of business operation negatively affects competitive performance in resources, in case of testing the structure of firm and competitive performance in resource only. It is found that when the time is longer while the structure of firm has the same number of resources, it feels that the value of resources decreases, leading to a decline of competitive performance. The solution when testing more length of business operation with an increase of competitive performance in every aspect, or even management and result of operation, it reflects the fact that the length of business operation does not have statistical significance. Therefore, more using the existing resources to achieve the most benefit is an approach to enhance competitive performance in the resource aspect.
- 2) Enhancement and support from the Government negatively affect almost all tests of competitive performance, reflecting the fact that the Government is not the significant mechanism in helping and supporting, instead it is the inspector who controls business operation of small firms. According to the qualitative research, small firms divide the Government officers into 2 groups: (1) Those who enhance and support them – the officers who give them a permit to operate the business, who give them knowledge about their business types, and (2) those who control and inspect them such as tax controllers, the officers who collect fees, regulators, and inspectors. Therefore, it can be concluded that the Government officers in Group 2 play a significantly important role while Group 1 does not have a clear role. A solution to this is that there should be recommendation for the Government to pay attention to small firms, making it do their duty efficiently. Meanwhile, Group 2 should work properly according to the law amended. These will be the means to increase competitive performance of small firms by aid and support from the Government, changing from the decreasing trend to the increasing trend.

There are 7 factors which do not impact competitive performance, including (1) ownership, (2) age of the owner, (3) the owner's education level, (4) the owner's experience, (5) selling (business type), (6) fund sources, and (7) business competitors. From the literature review and qualitative research, these factors are likely to affect competitive performance; however, when studied with this quantitative research, making it generalized to be confirmed by small firms, it is found that there is no generalization. Thus, these factors probably influence specific small firms in qualitative research and study on other contexts.

REFERENCES

- Atrostic, B.K., Peter, B.N., Kazuyuki, M., Sang, N. (2004), IT, Productivity and Growth in Enterprises: Evidence from New International Micro Data Authors. Paris: OECD Workshop on ICT and Business Performance OECD.
- Ambastha, A., Momaya, K. (2004), Competitiveness of firms: Review of theory, frameworks, and models. *Singapore Management Review*, 26, 45-61.
- Amit, R., Schoemaker, P.J.H. (1993), Strategic assets and organizational rent. *Strategic Management Journal*, 14(1), 33-46.
- Ashurst, C., Freer, A., Ekdahl, J., Gibbons, C. (2012), Exploring IT-enabled innovation: A new paradigm. *The International Journal of Information Management*, 32(4), 326-336.
- Berisha, N.M. (2009), The Role of Information Technology in Small and Medium Sized Enterprises in Kosova. Pristina, Kosova: Faculty of Economics, University of Pristina, St. Agim Ramadani.
- Besanko, D., Doraszelski, U., Kryukov, Y., Satterthwaite, M. (2010), Learning-by-doing, organizational forgetting, and industry dynamics. *View Issue TOC*, 78(2), 453-508.
- Baldwin, J.R., Wulong, G. (2004), Trade liberalization: Export-market participation, productivity growth, and innovation. *Oxford Review of Economic Policy*, 20(3), 372-392.
- Banks, G.P. (2013), Exploring Small-Business Change and Strategic Adaptation in an Evolving Economic Paradigm. *College of Management and Technology*.
- Barney, J.B. (1991), Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
- Barney, J.B. (2001), Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of Management*, 27(6), 643-650.
- Bitner, M.J., Brown, S., Meuter, M. (2000), Technology infusion in service encounters. *Journal of the Academy of Marketing Science*, 28(1), 138-149.
- Clayton, A.J., Danson, S., Jolly, S., Ryder, W.D.J., Burt, P.A., Stewart, A.L., Wilkinson, P.M., Welch, R.S., Magee, B., Wilson, G., Howell, A., Wardley, A.M. (2004), Incidence of cerebral metastases in patients treated with trastuzumab for metastatic breast cancer. *British Journal of Cancer*, 91, 639-643.
- Grant, R.M. (1996), Toward a knowledge-base theory of the firm. *Strategic Management Journal*, 17, 109-122.
- Hitt, M.A., Ireland, R.D., Sirmon, D.G., Trahms, C.A. (2011), Strategic entrepreneurship: Creating value for individuals, organizations, and society. *Acad Manage Perspect*, 25(2), 57-75.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. (2010), *Multivariate Data Analysis a Global Perspective*. New Jersey: Pearson Prentice Hall.
- Jones, R., Rowley, J. (2009), Marketing activities of companies in the educational software sector. *Qualitative Market Research*, 12, 337-354.
- Maliranta, M., Nurmi, S. (2004), Analyzing Entrepreneurship with the Finnish Linked Employer-Employee Data (FLEED): Matching and Qualitative Properties of the Data ETLA Discussion Papers, The Research Institute of the Finnish Economy (ETLA), No. 920.
- National Statistics Office (NSO). (2012), *Explore the use of Information and Communications Technology in the Business*.
- Newbert, S.L. (2008), Value, rareness, competitive advantage, and performance: A conceptual-level empirical investigation of the resource-based view of the firm. Pennsylvania, U.S.A: Villanova School of Business, Villanova University, Villanova.
- OECD. (2008), *Measuring Entrepreneurship: A Digest of Indicators*. Paris: OECD Statistics Directorate.
- OSMEP. (2013), Office of Small and Medium Enterprise Promotion (OSMEP), Report on SMEs 2013. Available from: <http://www.sme.go.th/th/index.php/data-alert/alert/report-smes-year/report-year/report-year-2559>. [Last retrieved on 2016 Oct 01].
- Paulson, A.L. (2004), *Entrepreneurship and Financial Constraints in*

- Thailand. Chicago, USA: University of Chicago.
- Ritter, T. (2004), Managing in complex business networks. *Industrial Marketing Management*, 33(3), 175-183.
- Rochaa, E.A.G. (2012), The Impact of the Business Environment on the Size of the Micro, Small and Medium Enterprise Sector; Preliminary Findings from a Cross-Country Comparison. Japan: Kobe University, 2-1 Rokkodai-Cho, Nada-Ku, Kobe.
- Rigg, J., Promphakping, B. (2014), Personalizing the middle-income trap: An inter-generational migrant view from rural Thailand. *World Development*, 59, 184-198.
- Rust, R.T., Miu, C. (2006), What academic research tells us about service. *Communications of the ACM*, 49(7), 49-54.
- Shideler, D., Badasyan, N. (2012), Are SMEs Falling Behind the Digital Marketing Development, Jyväskylä University, School of Business and Economics, October, 12-13.
- Srinuan, C. (2013), Analysis of fixed broadband access and use in Thailand: Drivers and barriers. *Telecommunications Policy*, 37(8), 615-625.
- Schaper, M., Volery, T. (2007), *Entrepreneurship and Small Business*. 2nd Pacific Rim Edition. Brisbane: John Wiley & Sons.
- Schaper, M. (2006), Distribution patterns of small firms in developed economies: Is there an emergent global pattern? *International Journal of Entrepreneurship and Small Business*, 3(2), 183-189.
- Simpson, P., Paula, M.C.S. (1997), Small business use of the internet: Findings from Australian case studies. *International Marketing Review*, 14(5), 385-402.
- Tarafdar, M., Gordon, S.R. (2007), Understanding the influence of information systems competencies on process innovation: A resource-based view. *Journal of Strategic Information Systems*, 16(4), 353-392.
- Wowak, K.D., Christopher, W.C., David, J.K.Jr. (2013), Supply chain knowledge and performance: A meta-analysis. *View Issue TOC*, 44(5), 843-875.
- Zheng, J., Bakker, E., Knight, L., Gilhespy, H. (2006), A strategic case for e-adoption in healthcare supply chains. *International Journal of Information Management*, 26(4), 290-301.