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Antecedents of PLS path model for competitive advantage and financial performance of SMEs in Thailand

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This research study focused on the antecedents of path model for competitive advantage and financial performance of SME's with the key objective to view the level of effect of antecedents together with the mediation role of logistics, operation and marketing performances as the connected link of the entrepreneurship and leadership toward the competitive advantage and financial performance. The study was also extended to include the comparison of competitive advantage and financial performance of various types of organization profile. The analysis was based on 450 responded questionnaires from random sampling of SMEs' general managers at the northern region of Thailand by applying the SEM and comparing the competitive advantage and financial performance through MANOVA technique. The study revealed that the performance of logistics, operation and marketing had direct effect on the competitive advantage and financial performance of SMEs, while leadership and entrepreneurship had indirect effect through these 3 mediators. In addition, the difference among most organization profiles had no effect on the competitive advantage and financial performance with the exception of the employee numbers and the source of funds.

Key words: Entrepreneurship, competitive advantage, financial performance, SMEs.

INTRODUCTION

Both small and medium enterprises were established with the similar key objectives of achieving the highest profits for the business survival which had to rely on the sale of products or services. It is inevitable that many enterprises produced similar products or services and they had to seek for directions and utilize appropriate strategies to generate higher sales or market shares. Hence, for the enterprises to be able to compete with other enterprises, they would be required to build the competitive advantage (Porter, 1980) which consisted of 3 main strategies: (1) cost leadership strategy, (2) differentiation strategy and (3) focus strategy. Each enterprise selected the appropriate strategy to suit their business context and environment (Wingwon, 2007b: 58).

Nevertheless, the advantage or strength is the element that each enterprise attempt to generate, but it is not easy for them to construct one. The most important key factor is the core competency of the organization which

must strive to generate one by the means of share learning and the development of learning organization. The management must then pool all the knowledge and know-how which were gathered throughout the years by each individual to create innovation for the organization. Therefore, the competitive advantage is the important element and must be valued by the management under fierce competition together with the uncontrollable external factors, for example, the 'free trade agreement', the interest rate, the rising trend of energy cost and the flood of overseas products. The management must have capable strategies to compete within the country and with overseas countries.

The basic factor in building the competitive advantage is the knowledge of continuing and creating learning which led to the innovation of the organization. The key important strategies were: (1) Good research and development, (2) Potential of new product development, (3) Advanced production process, (4) Joint experience and knowledge transfer and (5) Good management. Therefore, the management must have suitable strategies which will lead to the competitive advantage and in addition, it would

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enhance the country's competitiveness against other rival countries (Wingwon and Piriyakul, 2010; Asasongtham, 2005). The business competency could be developed from the combination of asset, workforces and process or the capability to utilize the available resources in generating an outcome which could be measured on effectiveness, efficiency, response speed and the quality of the organization (Barringer and Iveland, 2008). Therefore, the basic capability of the organization is the strength of the organization which led to competitive advantage.

However, the changing environment had forced the entrepreneur to be faced with the issues and constraints in operating the business which Sakulsurarat (2007: 68) and Bosma et al. (2000) summarized as follows:
(1) Marketing and, in particular, the more fierce competition in the internal market with declining purchasing power is followed by the competition with the new overseas arrival.
(2) Finance issue which is mainly on the main flow of cash from commercial bank loans is followed by the business revenue and the retaining earning of the business, private fund, private loan and loan from governmental finance institutions which arose from the inability of commercial banks to give loan due to lack of collateral and followed by the complication in dealing with the financial institution amid non standard accounting system.
(3) Government policy and regulations which entrepreneurs viewed as the corporate tax system of the large, medium and small enterprises is not fair, as the competitive competency of small and medium enterprises was at a lower level than the large enterprise and also with weaker finance stability (Nguyen et al., 2008). So, there should be certain lower exemption on the revenue taxes than the large enterprises. The important government policy issue has too many bureaus without integration among them.
(4) Human resource and labor issues were the higher level of labor movement and the lack of skill workers.
(5) The administrative management issue is the non standard family business management. Therefore, the increase of competition would deteriorate the customer response of which would, in turn, lead the business to be faced with the long term competition. As such, these described circumstances have a direct implication on the objectives of this research.

THEORETICAL FOUNDATION

In order to investigate the model causality that originated from entrepreneurship, there must be at least two theories realized, that is, 'entrepreneur theory' and 'resource based view' of the firm (RBV). For the 'entrepreneur theory', the entrepreneurs were the risk takers, arbitrators, innovators, managers, capitalists and also the leaders (Bosma et al., 2000). With this profile of profit, employment generation and survival are the organizational environments which must be emphasized

in order to achieve better performance of both personal and social success. For the RBV (Barney, 1991), the organization had to utilize the rare, valuable, inimitable and un-substitutable resources, that is, asset, finance, know-how, entrepreneurship, leadership, employee competency and capabilities to achieve the well recognized organization financial performance and sustainable competitive advantage. As such, these resources were the internal part of SWOT (Porter, 1980).

Therefore, researchers could summarize these mentioned concepts on the following model. The framework split the consequence of 3 mediators into 2 separated outcomes, that is, competitive advantage and financial performance, which were in line with the intention of the research. Theoretically, this was from RBV (Barney, 1991) and the comparative advantage theory of competition (Hunt and Morgan, 1995). It was known that the competitive advantage caused a change in financial performance. This study was not intended to trace back what had been accepted in general, but was intended to study if these 3 different non-financial performances could function separately as mediators which transferred the influences of antecedents, that is, entrepreneurship and leadership of the business. This was the logic why the path from the competitive advantage and financial performance was not connected.

Depicted from the research model (Figure 1), non-financial performance of SME's, logistics, operation and marketing, were mediators that convey significant attributes of the ownership, entrepreneurship and leadership toward the competitive advantage in one model and to financial performance in another model.

Research objectives

1) To study the levels and roles of logistics performance, operation performance and marketing performance as the mediator in linking entrepreneurship and leadership toward the competitive advantage and financial performance of small and medium enterprises.
2) To compare the competitive advantage and financial performance of small and medium enterprises in accordance with business profiles.

Research scope

The research was carried out in a quantitative format with 4 research scopes.

Subject matters

To focus on logistics, operation and marketing performances as the mediator that separately links
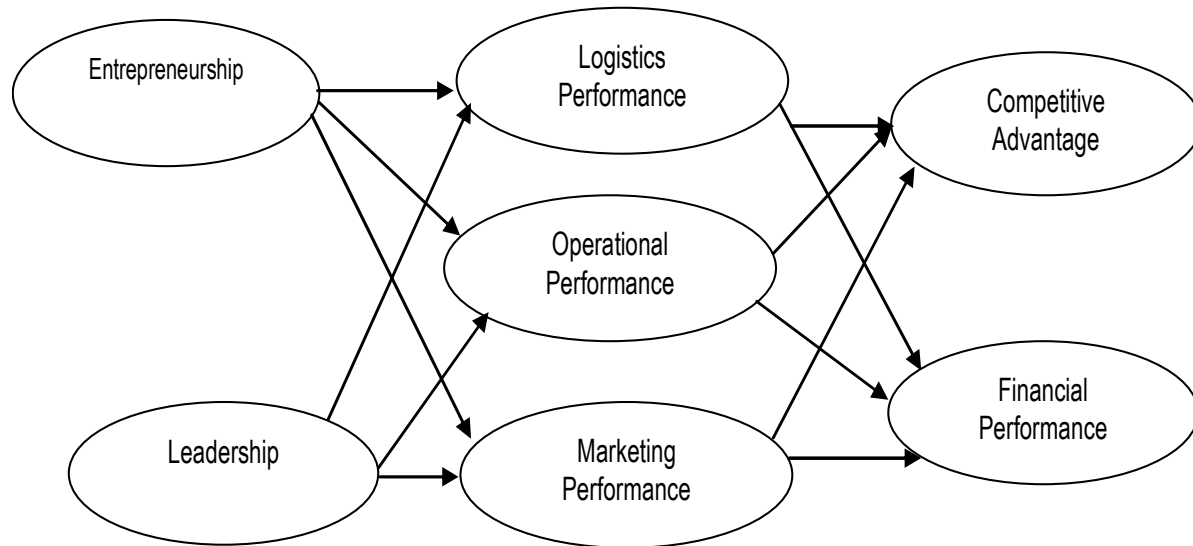
Figure 1 Research framework.

entrepreneurship and leadership to the competitive advantage and financial performance like two models with the same antecedents which are combined for simultaneous analysis.

Duration

The research was carried out for a period of 6 months (November 2009 to April 2010).

Population

SME's general managers in the northern region.

Area

The research was carried out in four provinces in northern Thailand: Chiangrai, Chiangmai, Lamphun and Lampang.

LITERATURE REVIEW

Entrepreneurship

The entrepreneur is the risk taking person who activates innovation application and as such, the focus is on the proactive management which would result in generating new products and services. The new process would lead to the development and sustainability of the business to which the outcome could be financial benefits or otherwise, for example, social aspect, cooperation environment and structure adjustment (Hough and Scheepers, 2008). Furthermore, the entrepreneur also discovers the differences in aspiration, motivation and life objectives (Wingwon and Piriyakul, 2010) with an adoption of innovation in driving the business, the job and profession generator for the worthiness and wealth of the economy including risks management and the opportunity used to generate profits (Bosma et al., 2000). Also, the entrepreneur discovers social acceptance from the relevant parties and the application of the individual talent and commitment to include creative thinking and challenge in achieving the main objectives of business growth (Zimmerer and Scarborough, 2002: 4). The entrepreneurship has effect on both organization and financial performance (Micheels and Gow, 2008) and is extended to cover the competitive advantage as the leadership within the entrepreneur is the linking factor (Nguyen et al., 2008). In addition, the entrepreneur must have the leadership skill (Hough and Scheepers, 2008), for example, vision, aspiration, determination and the capability to motivate others to follow and achieve the targeted objectives within the logical self expectation (Moorman and Holloran, 2006: 5) to drive business to sustainability.

Leadership

Leadership is a status which an individual anticipates by envision, flexibility, resilience, strategic thinking and an ability to work jointly with others in the organization to progress to success and the organization's destination. As a result, the management or entrepreneur can effectively manage resources and create the competitive advantage. Therefore, leadership is the factor that affects entrepreneurship and is one of the key characters of entrepreneur as well (Hough and Scheepers, 2008). Both leadership and entrepreneurship affected operation performance of the business in managerial and financial

performance (Nguyen et al., 2008) and affected the competitive advantage at the end (Hsu et al., 2009).

Logistic performance

The logistics performance generally means how to reach better level of storage and delivery of products or services. Currently, logistics performance extended its scope to cover coopera-tion at an industrial level and as a part of the business supply chain (Wingwon and Piriyakul, 2010) in order to generate mutual benefits and strengthen their business alliance by jointly focusing on the demand of raw materials and products, the production distribution plan, the data base linkage between business and the sharing of information among members in the supply chain (Tracey, 1998: 65-81), to include the flow chart of logistic activities and supply chain so that it can review, improve and redesign for the better business process and improve the accuracy and punctuality of the data store (Kim, 2006). The supply chain management is one of the elements for business to link with their vision, mission, strategies and assessment than keeping the business existence and sustainability (Hsiao and Melody, 2007). It is also discovered that those businesses that adopted supply chain concept had a shorter production time and lower stock inventory than their competitors by 50% and with time product to market faster than their competitors by 17% (Joseph and Chan, 2005). Nevertheless, the logistic operation must rely on the management capability to manage business, human resources, cost structure, financial stability, production schedule and data base by focusing jointly on administration for the profits / benefits and the ratio of investment on the resources, the physical environment and human resources, including the IT application as a tool in their operations (Bowersox and Daugherty, 1995) to generate differences and a competitive advantage (Barringer and Iveland, 2008) amid the constant changing in business environment of either the expanding or shrinking economic status (Wallenburg and Weber, 2005). It revealed that logistics performance with logistics cost and logistics service, in particular, had affected the financial performance. The study of Salam (2005) also revealed that the logistics and supply chain management had affected the competitive advantage as well.

Operation performance

Operation performance generally concerns production activities like production cost, product quality, research and development for new products or services and raw materials manipulation. The current business operation valued the importance of business growth and focused on the most effective resource utilization (Raymond and Josée, 2005) with the logic of having a standard operation that is timely

and cost effective (Post and Griffin, 1997). In general, the entrepreneur valued the importance of result outcomes by focusing on the business objectives and strategies as the base for full participation from both internal and external business. The outcome of business operation is also involved with the resource management and the distribution of products and services to ultimate customers. The outcomes were the confirmation of whether or not the operations were in line with the defined mission, plan and strategies (Wingwon, 2007a). As such, the productivities/operations were the results of the process used to illustrate the effectiveness of the current production process of business and were also the operational issues that benefited problems solving and efficiency development planning for future operation (Demirbag et al., 2006).

Nevertheless, the success of the operation must rely on the joint efforts of both internal and external resources and must value the importance of staff capability development, by integrating all objectives toward the same direction to achieve the demands of business stakeholders (Lin and Kuo, 2007). This is done by focusing on the performance at operation level, and on the affected teamwork and joint learning of all stake-holders (Fazzari and Mosca, 2009). Fawcett et al. (2008) revealed that the operation performance had an effect on the high side toward the cooperation intention with the individual, working unit and the organization in the supply chain. Also, it revealed that it had an effect on the competitive advantage (Nguyen et al., 2008) and the operation performance involved with the general management of investment profit and productivities. As such, the operation performance could be measured by profits, sales volume, gross margin, market share, new product to the market, relative price, customer complaint, customer satisfaction and the distribution channel (Amber et al., 2004), of which if perceived from the comparison of the competitors, would be a competitive advantage (Jaakkola, 2006; Green et al., 2006). This showed that marketing performance had an effect on the financial performance (Jaakkola, 2006; Hooper, 2006) and revealed that the focus on marketing had an effect on the competitive advantage as well (Hsu et al., 2007).

Marketing performance

The marketing performance is an indicator of a sustainable stand in business operation, which is mostly shown by market share, sales' volume, retention of existing customers and discovery of new customers. It plays an important role in business which is responsible for the distribution of product and services to the customers starting from the demand analysis planning and the forecast of future demands (Knight, 2000: 12-32), including sales promotion to expedite the products to customers. The marketing decision involved the marketing

mixed strategies of 4 elements, that is, product, price, place and promotion or which is called 4P's (Kotler, 2008). The marketer must analyze the customer demand, plan, check and control it, to ensure that the marketing plan is in line with customer desires. The processes are (Zeng et al., 2010): (1) operations is the data used to exhibit the sales' volume of marketing operations by focus on effectiveness (2) marketing research is the marketing data analysis that focuses on the behavior and relationship of consumers toward the products and services of the business (Ambler et al., 1999). The marketing research would assist the management in marketing planning and decision making, analyzing competitors, adopting marketing strategies as a tool to formulate the operation direction of the business and as the base to formulate the external operation factors, for example, the change in economy, politics, social and technology (Wingwon and Piriyakjul, 2010) which had an effect on the business opportunities and threats. Consequently, consumers' demand towards the products or services either expands or shrinks (Kotler and Keller, 2009), thereby covering the creating of new competitors or the changing of the business process or format.

Competitive advantage

The competitive advantage is the business advantage status in a competitive context. The increase of the competitive advantage of a business consists of (1) the low unit cost, (2) the product differentiation and the better service over their competitors and (3) the speed of response time (Porter, 1980). The successful industry must consist of the organization structure and the positioning of their industry at a suitable location, in which the analysis model of the structure and business competition were presented under 'the five force model' (Porter, 1980). As such, they consist of the following key factors: (1) Threat from new competitors in the industry, (2) Threats from the substitute products or services, (3) Bargaining power of raw materials suppliers, (4) Bargaining power of buyers and (5) The competitive environment within the industry. These 5 factors were the key industrial indicators utilized in developing their business strategy for their long term successful industry.

In order to remain at a competitive advantage, the business must have their products and service differentiated from their competitors and with higher perceived value by the customers, that is, money worth, high sentimental benefits which could not be provided by other products or brand. Therefore, in addition to the product value, the products must be differential from that of their competitors which could not be replaced or if it could be replaced, should be done with high switching cost. The key factor is that the product must not be replaceable (Barney, 1991). With this logic, customers must be faced with switching cost, that is, once the customers got use to a

product or service and have to switch to another, it would have affected their emotion, installation fee, location adjusting cost and increase maintenance fee as the new suppliers would charge extra. Furthermore, it could also generate the financial and social risks as well.

Financial performance

The financial performance is an indicator of business success or failures which can be seen from ROI, ROE, cash flow liquidity and others. It is the important end result of the organization performance as it exhibited the sustainability of the business (Green et al., 2008; Wallenburg and Weber, 2009). The financial performance is related with every performance of the organization and is being affected by performances of marketing, investment and logistics (Green et al., 2008; Wallenburg and Weber, 2009), including the information technology's effect and the internal and external organization's cooperation (Chen and Hsiao, 2008). As such, It has the ability to measure the financial performance from various indicators, for example, profitability, market shares, return on sales (Agus and Hassan, 2005), return on investment, average profit and the increase of profit (Chien and Shih, 2007), increase on sales (Chen and Hsiao, 2008), increase on return of investment and increase on net profits (Gao et al., 2007).

Research hypothesis

H_1: Entrepreneurship effect on logistics performance.
H_2: Entrepreneurship effect on operation performance.
H_3: Entrepreneurship effect on marketing performance.
H_4: Leadership effect on logistics performance.
H_5: Leadership effect on operation performance.
H_6: Leadership effect on marketing performance.
H_7: Logistics performance effect on competitive advantage
H_8: Logistics performance effect on financial performance
H_9: Operation performance effect on competitive advantage
H_{10}: Operation performance effect on financial performance
H_{11}: Marketing performance effect on competitive advantage
H_{12}: Marketing performance effect on financial performance

RESEARCH METHODOLOGY

The research was conducted with a survey method. The samples of 450 SMEs were drawn randomly from a target population of 1,850 enterprises in Chiangrai, Chiagmai, Lamphun and Lampang provinces in northern Thailand. The research assistants were assigned to gather the company's data from general managers or authorized delegates either by interviews or by self-administered questionnaires. These 2

methods of data gathering could be used interchangeably depending on the respondents' availability. The questionnaire consisted of 7 categories. Measurements of logistics, operation and marketing performances were adapted from Green et al. (2008), while competitive advantage and financial performance were gotten from Fawcett et al. (2008). Measurements of entrepreneurship and leadership were adapted from management literatures.

Data were coded, keyed-in, verified and imputed for missing values if it existed in the nearest neighborhood method prior to analysis phase. Missing data imputation was critically needed because SEM was really sensitive to missing values. Structural equation modeling (SEM) and multivariate analysis of variance (MANOVA) were used to explain model causality and means comparison, respectively. For SEM, we could have utilized different available software like LISREL, AMOS, PLS and some others, but we decided to use PLS-Graph (Chin, 2001). Unlike LISREL or AMOS, PLS-Graph did not presuppose the normal assumption, in that it needed less samples and must be convergent always (Piriyakul, 2010). For means comparison, MANOVA was used because it could capture the difference of both competitive advantage and financial performance between 6 different enterprise profiles in a simultaneous fashion.

'PLS path model' was the path model that was analyzed through PLS-Graph software or any PLS software, for example, Smart PLS or Visual PLS. Path model is a conceptual model that links LV into a network of successive uni-dimension impact until it reaches the outcome construct(s). Results from the analysis would provide both theoretical and practical consequences for the real world phenomena. Thus, PLS is briefly discussed as follows:

'PLS-path model' consists of:

1. Inner mode: $\xi_j = \beta_{oj} + \Sigma\beta_{ji}\xi_i + \zeta_j$ at E $(\zeta_j) = 0$ and $E(\xi_j|\zeta_j) = \beta_{oj} + \Sigma\beta_{ji}\xi_i$ when β_{ji} is the coefficient of route $\xi_I \rightarrow \xi_j$

2. The outer model splits into 3 types as per context and job suitability

(a) Reflective way is the case where the latent variable (LV) reflects the abstract onto the indicator as it naturally appears, for example, love, intelligent, habit, behavior and the characters of LV: The measurement model in block j is $X_{ji} = \lambda_{jo} + \lambda_{ji}\xi_{ji} + \varepsilon_{ji}$; i = 1,2,3,…, k or $E(X_{ji}|\xi_j) = \lambda_{jo} + \lambda_{ji}X_{ji}$

(b) Formative way is the case where LV is constructed or formulated from indicators, that is, LV is the theoretical or practical built object, for example, brand loyalty and customer citizenship. Constructed object means the object that is made from or composed of appropriated indicators. The measurement model in block j is $\xi_j = \pi_{jo} + \Sigma\pi_{jl}X_{jl} + \delta_{ji}$

(c) MIMIC way (Multiple effect indicators for multiple causes) is the case where LV contains both reflective and formative indicators. The measurement model in block j is $X_{ji} = \lambda_{jo} + \lambda_{ji}\xi_j + \varepsilon_j$; i = 1,2,3,…, k and $\xi_j = \pi_{jo} + \Sigma\pi_{jl}X_{jl} + \delta_{ji}$

Algorithm for the approximation value is defined as follows:

(i) External approximation: To approximate the value of ξ_j with the weight aggregate of x_{ji}, that is, $Y_j \propto \Sigma_i\ w_{ji}x_{ji}$ for the block at j value of Y_j is used as a proxy of ξ_j with symbol ∞ which meant that Y_j is the standardized value of $\Sigma_i\ w_{ji}x_{ji}$ value with weight w_{ji} assigned as appropriate.

(ii) Internal approximation: To approximate the value of LV with $Z = \Sigma_i\ e_{ji}Y_i$ in path within the conceptual framework by the value of weight e assigned from 1) Corr (Y_i,Y_j) in the case of exogenous variable or 2) Applying the coefficient of the linear regression of route.

(iii) Update the outer weight in step 1 as seen hereunder:
1) In case of reflective, use $w_{ji} = Corr(x_{ji},Z_j)$

2) In case of formative, use $w_{ji} = (X_j^tX_j)^{-1}X_j^tZ_j$ where X_j consists of the manifest variable (MV) column in j block
3) In case of MIMIC, apply simple regression $x_{ji} = b_{ji}Z_j$, and if reflective, apply multiple regression $Z_j = \Sigma b_{ji}x_{ji}$.
4) Repeat step 1 to 3 recursively, until they are convergent.

RESEARCH RESULTS

1. Results from Figure 2, Table 1 and Table 2 revealed that factors which had direct effect on the competitive advantage and financial performance were 3 mediators, logistics performance, operation performance and marketing performance. Entrepreneurship and leadership which are exogenous variables had an indirect effect from these 3 mediators to competitive advantage and financial performance with the exception that marketing performance could not be concluded to know whether it had an effect on the competitive advantage or not (Table 1).

2. Competitive advantage had a direct effect on both logistics and operation performances, where operation performance had higher effect than logistics performance by 3.3 folds. It meant that despite the efficiency of products delivery, that is, on time and flexible to meet the customers requirement, it is still not as important as the operation performance, for example, the building of customer satisfaction, the improvement of stock inventory control of both raw materials and work-in-process at an appropriate level in order to control costs and decrease wastage and as such, it extends to cover the quality control and production improvement for reliable products with high quality at low costs.

3. Financial performance meant the benefits, profit yields, business liquidity and efficiency of the past money management. Findings revealed that financial performance is directly affected by the mediators, logistics performance, operation performance and marketing performance of the firm. Logistics and marketing performances left equally high effects and are higher than the operation performance by approximately 1.2 to 1.3 times. In addition, the competitive advantage is affected by these same 3 mediators, but the operational performance had much higher effect than the logistics and marketing factors. It meant that, for good financial performance, firms must be market oriented, that is, pay attention to the customer, response on the purchase of taking orders, the product delivery on time and the efficiency of flexibility to meet customers' expectation, preventive control of sales, market share drop and focus on the customer base expansion. For the operation performance (maintaining the level of customer satisfaction, the quality and quantity control of raw materials, the work-in-process of both the production process and inventory warehouse, and the improved productivity through production innovation of both the existing production line and the new product development to include the expansion of the new market
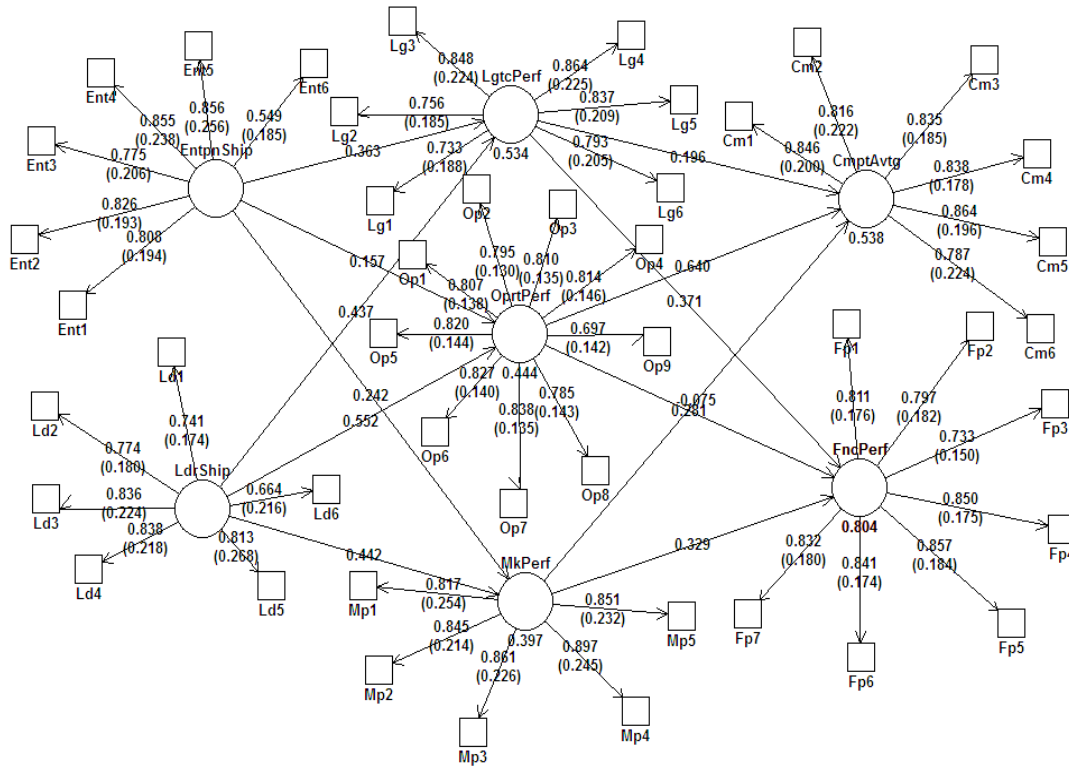
Figure 2. PLS path model.

Table 1. Results of the hypothesis test.

Path	Path coef.	t-statistics	Result
Entrepreneurship→logistics performance	0.363	9.741[**]	Supported
Entrepreneurship →operation performance	0.157	3.029[**]	Supported
Entrepreneurship →marketing performance	0.242	4.172[**]	Supported
Leadership→logistics performance	0.437	11.187[**]	Supported
Leadership→ operation performance	0.552	11.056[**]	Supported
Leadership→marketing performance	0.442	7.963[**]	Supported
Logistics performance→financial performance	0.371	11.590[**]	Supported
Logistics performance→competitive performance	0.196	3.825[**]	Supported
Operation performance →financial performance	0.281	5.542[**]	Supported
Operation performance → competitive performance	0.640	12.205[**]	Supported
Marketing performance→financial performance	0.329	7.874[**]	Supported
Marketing performance→ competitive performance	-0.075	1.078	Not supported

[**] $p \leq 0.01$.

base), even if it had less effect than the logistics and marketing performances, it still has significant and positive effects on the financial performance of the organization.

4.   Entrepreneurship and leadership were exogenous variables which had direct effects on logistics, operation and marketing performances in different level of effects and were statistically significant at every route. The entrepreneurship meant that the capability to set a direction for the organization should be suitable with the opportunity and level of risks to include the work expertise and confidence of achieving success, whereas leadership meant the capability to manage and make decision to include the building of a good relationship with human resources within the organization and with external sources. In any case, both entrepreneurship and leadership had effect on logistics and marketing performances with a value of 0.397 to 0.534 (Table 2).

Table 2. Effects of antecedents on dependent variables.

Dependent variable	R^2	Effect	Antecedents				
			Logistics performance	Operation performance	Marketing performance	Entrepreneurship	Leadership
Competitive advantage	0.538	DE	0.196	0.604	0.000	0.000	0.000
		IE	0.000	0.000	0.000	0.172	0.260
Financial performance	0.804	DE	0.371	0.281	0.329	0.000	0.000
		IE	0.000	0.000	0.000	0.439	0.460
Logistics performance	0.534	DE	N/A	N/A	N/A	0.363	0.440
		IE	N/A	N/A	N/A	0.000	0.000
Operation performance	0.444	DE	N/A	N/A	N/A	0.157	0.550
		IE	N/A	N/A	N/A	0.000	0.000
Marketing performance	0.397	DE	N/A	N/A	N/A	0.157	0.550
		IE	N/A	N/A	N/A	0.000	0.000

DE = direct effect; IE = indirect effect.

Table 3. Multivariate tests.

Effect	Test	Value	F	Hypothesis df	Error df	p-value
Intercept	Roy's largest root	36.132	7858.629	2	435	0.000
Business type	Roy's largest root	0.003	0.719	2	436	0.488
Experience in market	Roy's largest root	0.003	0.647	2	436	0.524
Employee number	Roy's largest root	0.022	3.214	3	436	0.023
Business condition	Roy's largest root	0.010	2.200	2	436	0.112
Budget source	Roy's largest root	0.025	5.476	2	436	0.004
Growth rate	Roy's largest root	0.007	1.510	2	436	0.222

In addition to entrepreneurship and leadership which had direct effects on logistics, operation and marketing performances, they also had indirect effects on the competitive advantage and financial performance. It revealed that leadership had an indirect effect on the competitive advantage and financial performance at a rather high level. As such, its effect on financial performance is higher than that on competitive advantage at about 2 folds and its leadership effect on both competitive advantage and financial performance is higher than that on entrepreneurship. It shows that leadership is very important to the sustainability and growth of the organization either from the competitive advantage or financial performance angle, while the entrepreneurship is a less important factor.

5. The mean difference of the competitive advantage and financial performance was compared simultaneously (Tables 3 and 4) between 3 business types, 3 levels of experience in business, 4 categories of employee number, 3 types of business condition, 3 sources of budget and 3 intervals of growth rate. However, Roy's largest root indicated, in an overall fashion, that both constructs were generally different according to the number of employees and sources of investment, but with the in-depth study on specific attributes, the tests of between-subjects effects revealed that only financial performance was different according to the number of employees and sources of investment, while competitive advantage was not different on both elements (Tables 3 and 4).

Factorial validity

Quality of structural model

Table 5 revealed that the construct had a composite reliability value (CR) equal to 0.903 to 0.931 which was higher than the threshold of 0.60. It indicated that the items of each latent or construct could be used to measure the value with high reliability. Each constructs showed AVE value equal to 0.608-0.730 which was higher than the

Table 4. Tests of between-subjects effects.

Source	Dependent variable	Type III sum of squares	df	MS	F	Sig.
Corrected model	Competitive advantage	0.761	13	0.059	0.511	0.918
	Financial performance	2.077	13	0.160	1.701	0.058
Intercept	Competitive advantage	854.597	1	854.597	7460.982	0.000
	Financial performance	861.249	1	861.249	9172.029	0.000
Business type	Competitive advantage	0.054	2	0.027	0.238	0.789
	Financial performance	0.114	2	0.057	0.609	0.544
Experience in market	Competitive advantage	0.062	2	0.031	0.271	0.763
	Financial performance	0.077	2	0.039	0.412	0.662
Employee number	Competitive advantage	0.298	3	0.099	0.867	0.458
	Financial performance	0.695	3	0.232	2.467	0.062
Business condition	Competitive advantage	0.168	2	0.084	0.735	0.480
	Financial performance	0.322	2	0.161	1.714	0.181
Budget source	Competitive advantage	0.018	2	0.009	0.077	0.926
	Financial performance	1.027	2	0.513	5.466	0.005
Growth rate	Competitive advantage	0.216	2	0.108	0.944	0.390
	Financial performance	0.136	2	0.068	0.724	0.485
Error	Competitive advantage	49.940	436	0.115		
	Financial performance	40.940	436	0.094		
Total	Competitive advantage	6588.028	450			
	Financial performance	6601.959	450			
Corrected total	Competitive advantage	50.702	449			
	Financial performance	43.017	449			

a: R^2 = 0.015 (Adjusted R squared = -0.014), b: R^2 = 0.048 (Adjusted R squared = 0.020).

threshold of 0.50. As such, it indicated that the constructs are abstract in nature, but could reflect their influence and role to indicators at a satisfactory level. From Table 6, the path model has R^2 value equal to 0.397 to 0.805 which indicated that all constructs in each model had a rather high effect toward their destination construct. The average redundancies at the level of 0.280 to 0.539 indicated that the constructs in each path of the structural model successfully reflected their role toward the end indicators at an acceptable level. The model which had 'goodness of fit' value (GoF) equal to 0.598 (comes from the square root of the product between average R^2 and average communality) indicated that the structural model could, very well, help predict the performance of indicators.

Table 5. Mean, loading, composite reliability and average variance extracted.

	Mean	loading	t-stat	CR	AVE
Ent1:Confident that operation performance can be able to achieve the business objectives	3.83	0.808	38.445	0.905	0.617
Ent2:Initiate operation as responsibility of the organization	3.85	0.826	43.747		
Ent3:Having the new product introduction and faster services	3.87	0.775	29.228		
Ent4:Having strong policy to support the high risk projects	3.87	0.855	64.804		
Ent5:Operate on the most skilled activities and capable of identifying opportunity	3.90	0.856	61.064		
Ent6:Having the risk management of the business	3.87	0.549	10.084		
Entrepreneurship	3.87				
Ld1:Creativity	3.83	0.742	20.125	0.903	0.608
Ld2:Negotiation ability	3.84	0.774	26.166		
Ld3:Business managerial skill	3.92	0.836	44.440		
Ld4:Persistence that evolve attractive circumstances	3.79	0.838	44.949		
Ld5:Decision making skill	3.83	0.813	51.809		
Ld6:Team and stakeholders relationship building skill	3.95	0.664	15.569		
Leadership	3.86				
Lg1:Products delivery of the business	3.82	0.734	28.361	0.918	0.651
Lg2:Delivery confirmation for the business	3.82	0.757	32.408		
Lg3:Speed of customers response	3.97	0.848	56.467		
Lg4:Flexibility of products delivery	3.84	0.864	67.065		
Lg5:Capability to meet the purchase order	3.77	0.837	54.752		
Lg6:Transportation cost of the business	3.82	0.793	43.959		
Logistics performance	3.84				
Op1:Overall customers satisfaction	3.85	0.807	43.506	0.941	0.640
Op2:Procurement of raw materials and products costs	3.84	0.795	34.279		
Op3:Inventory maintenance costs	3.74	0.810	42.475		
Op4:Overall production costs	3.82	0.814	51.785		
Op5:Productivity of the business	3.87	0.820	55.442		
Op6: Overall product quality	3.82	0.827	49.571		
Op7:Competition of local and overseas markets	3.79	0.838	49.704		
Op8:Delay in product innovation and development	3.82	0.785	35.930		
Op9:Product development cost	3.76	0.697	22.137		
Operation performance	3.81				
Mp1:Increase the average market share in the past 3 years	3.78	0.817	42.650	0.931	0.730
Mp2:Increase the average sales volume in the past 3 years	3.85	0.845	57.823		
Mp3:Increase in average sales value in the past 3 years	3.72	0.861	64.300		
Mp4:Maintain customers base	3.80	0.897	69.464		
Mp5:Current customers recommend new customers to the business	3.83	0.851	58.531		
Marketing performance	3.80				
Fp1:Average return on investment for the past 3 years	3.70	0.811	46.398	0.934	0.669
Fp2:Average profitability for the past 3 years	3.91	0.797	42.076		
Fp3:Increase of profitability for the past 3 years	3.83	0.733	22.993		
Fp4:Return on sales for the past 3 years	3.87	0.850	52.007		

Table 5 Cont.

Fp5: Efficiency of cash flow of the business	3.83	0.857	68.971		
Fp6: Liquidity of the business	3.74	0.841	46.855		
Fp7: Capability to utilize investment and machinery / tools	3.85	0.832	46.849		
Financial performance	3.82				
Cm1: Business with liquidity	3.82	0.846	39.192	0.931	0.691
Cm2: Increase in capital assets for the past 3 years	3.92	0.816	42.173		
Cm3: Capability to compete in general	3.79	0.835	43.303		
Cm4: Business with differentiation from competitors	3.76	0.838	42.146		
Cm5: Business with low cost when compared with competitors	3.80	0.864	61.348		
Cm6: Business with product uniqueness	3.78	0.787	38.642		
Competitive advantage	3.81				

Table 6. Cross construct correlation and global prediction indices.

	1	2	3	4	5	6	7	R^2	AvCommun	AvRedund
1.Entrepreneurship	0.785							0.000	0.617	0.000
2.Leadership	0.666	0.780						0.000	0.608	0.000
3.Logistics performance	0.654	0.679	0.807					0.535	0.651	0.348
4.Operation performance	0.525	0.656	0.729	0.800				0.444	0.640	0.284
5.Marketing performance	0.537	0.604	0.725	0.810	0.854			0.397	0.730	0.290
5.Financial performance	0.533	0.669	0.815	0.819	0.826	0.818		0.805	0.670	0.539
7.Competitive advantage	0.449	0.762	0.609	0.723	0.586	0.683	0.831	0.539	0.691	0.372
Average								0.544	0.658	0.367
Goodness of fit (GoF)									0.598	

Table 5 also illustrated that the respondents expressed their views on entrepreneurship, leadership, business performance and competitive advantage of the organizations, in general, at a favorably high level. This interpretation is based on the mean of indicators, that is, if the means went through 3.5 to 4.5, the level of preference is high if the highest is more than 4.5. (Table 5) (Best, 1986).

Convergent validity

In Table 5, all indicators which were highly statistical and significant and which respectively left their loadings higher than the threshold of 0.707 (except Ent6 and Ld6 that were slightly smaller; however, they were still statistically significant) revealed a high convergent validity. Convergent validity is the measurement method used to reveal whether different test papers, in this case were items in each block, could be used to measure the same construct interchangeably (Table 6).

Discriminant validity

Table 6 revealed that each column (labels 1 to 7) which was the cross correlation between column construct and other constructs had a value lower than the $\sqrt{AV]}$ of the column/row (in italic font). This shows that indicators of each column construct are able to measure their own content better than the content of other constructs.

DISCUSSION AND IMPLICATION

The study revealed that the competitive advantage and financial performance factors were controlled by logistics,

operation and marketing performances which were the direct effects, while the highest effect was seen on the competitive advantage and financial performance with their value equal to 0.538 and 0.804, respectively. This meant that the organization with competitive advantage has high market share, high value of investment assets, high capacity to reduce cost and create differentiation over competitors, together with high financial performance, that is, sound return, high profitability, capability to use the source of fund and with high business liquidity. As such, this is important for the business of logistics, marketing and operation performance factors.

Furthermore, it also revealed that the entrepreneurship and leadership of organization had an indirect effect on competitive advantage and financial performance, as a result of the leadership having a higher effect over entrepreneurship. It indicated that entrepreneurs must undergo training to have leadership inside of them without relying solely on self charismatic leadership, as each entrepreneur had to drill and train himself on managerial skill, negotiation skill, decision making and the ability to pull employees together. As a result, the leader with vision would affect the organization more or less from all performance factors to the competitive advantage and financial performance as the goal of every business. In addition, the difference between most organization profiles had no effect on competitive advantage and financial performance, except on employee numbers and source of funds.

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