

แนวทางการเรียนรู้และการพัฒนาของบริษัทโลจิสติกส์ในประเทศไทย
เพื่อการได้เปรียบในการแข่งขัน
GUIDELINES FOR LEARNING AND DEVELOPMENT OF LOGISTICS
COMPANIES IN THAILAND FOR COMPETITIVE ADVANTAGES

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บทคัดย่อ

การวิจัยนี้มีคำถามหลักคือ อะไรเป็นแนวทางการเรียนรู้และการพัฒนาของบริษัทโลจิสติกส์ในประเทศไทย เพื่อให้ได้เปรียบในการแข่งขัน ส่วนวัตถุประสงค์ของงานวิจัยคือ 1) เพื่อให้ได้ทราบถึงแนวทางการเรียนรู้และพัฒนา เพื่อให้ได้มาซึ่งความเปรียบในการแข่งขันเชิงกลยุทธ์ของบริษัทที่ดำเนินกิจการทางโลจิสติกส์ในประเทศไทย และ 2) เพื่อเสนอแนะแนวทางการเรียนรู้และการพัฒนาของบริษัทโลจิสติกส์ในประเทศไทย เพื่อให้ได้เปรียบในการแข่งขัน โดยทำการเก็บข้อมูลโดยการส่งแบบสอบถามไปทางไปรษณีย์เพื่อสำรวจความคิดเห็นจากกรรมการผู้จัดการ หรือผู้จัดการของบริษัทโลจิสติกส์ในประเทศไทยที่ลงทะเบียนไว้กับสมาคมผู้รับจัดการขนส่งสินค้าระหว่างประเทศทั้งหมด โดยมีจำนวนตอบกลับ 84 คนเพื่อนำมาใช้ในการวิเคราะห์ข้อมูลทางสถิติด้วยวิธีการวิเคราะห์สหสัมพันธ์พหุคูณ และการวิเคราะห์การถดถอย ผลการวิจัยพบว่า แนวทางในการเรียนรู้และพัฒนาของบริษัทโลจิสติกส์ในประเทศไทย ได้ให้ความสำคัญไปในการพัฒนาเทคโนโลยีและระบบต่างๆ ที่เกี่ยวข้องกับการประยุกต์ใช้งานของระบบเทคโนโลยีใหม่ๆ เพื่อให้บริษัท โลจิสติกส์ในประเทศไทยได้เปรียบทางการแข่งขัน ทั้งนี้ผลการวิจัยได้เสนอแนะแนวทางเพื่อสร้างความได้เปรียบในการแข่งขันของบริษัทโลจิสติกส์ในประเทศไทยควรมุ่งเน้นไปที่การนำเอาระบบเทคโนโลยีต่าง ๆ เข้ามาใช้และมีการพัฒนากลยุทธ์ของบริษัทให้เกิดความเชื่อมั่นของลูกค้าเพิ่มขึ้นโดยการนำระบบเทคโนโลยีเข้ามาช่วยด้วย นอกจากนี้ระบบเทคโนโลยีต่าง ๆ ยังสนับสนุนให้บริษัทโลจิสติกส์ในประเทศไทยสามารถบรรลุเป้าหมายและรักษาความได้เปรียบในการแข่งขันของบริษัทได้อย่างยั่งยืนและมีประสิทธิภาพ ในสภาพแวดล้อมทางธุรกิจที่มีการแข่งขันรุนแรงอีกด้วย โดยบริษัท โลจิสติกส์ในประเทศไทยที่มีการปรับปรุงระบบเทคโนโลยีให้ทันสมัยร่วมกับการใช้แอปพลิเคชันต่างๆ เข้ามาจะทำให้บริษัทเหล่านั้นได้เปรียบในการแข่งขัน

คำสำคัญ : ข้อได้เปรียบเชิงกลยุทธ์ในการแข่งขัน, การวัดผลองค์กรแบบสมดุล, บริษัทโลจิสติกส์ในประเทศไทย

ABSTRACT

This research's main key question is what are the guidelines for learning and development of logistics companies in Thailand for competitive advantages? The purposes of this research are (1) to examine the guidelines for learning and development of logistics companies in Thailand for competitive advantages and (2) to suggest the guidelines for the logistics companies in Thailand for competitive advantages. There are two theoretical contributions, which are 1) strategic competitive advantages and 2) balanced scorecard. This research used the questionnaire mailing, the surveys completed and returned of 84 respondents. The key informants were the managing directors or managers of logistics companies in Thailand which registered as members of the Thai International Freight Forwarders Association (TIFFA). The statistical technique used in this research were multiple correlation analysis and regression analysis. The results found that the guideline of learning and development of the logistics companies has focused on the technological application and new technological systems to approach the competitive advantages. The research also suggests that the technological application factors can be used and developed the company's strategies to increase the confidence of customers. In addition, logistics companies with using technological application are required to achieve their goals and maintain the competitive advantages in a turbulent business condition.

Keywords : Strategic competitive advantages, Balanced scorecard, Logistics companies in Thailand

INTRODUCTION

Thailand's logistics sector has tried very hard to reduce the fixed costs, operational costs and time to both manufacturing and service sectors. Thailand is ongoing to improve the multimodal transport networks and associated infrastructure around the country to be steadily decreasing over time and costs. The total value of logistics costs of Thailand for 2016 was 2,020.6 billion Baht which accounted for 13.9% of the Gross Domestic Product (GDP) and decreased from 14.0% of the GDP in 2015. The logistics costs are composed of inventory holding cost (decreased from 5.3% of GDP in 2015 to 5.1% of GDP in 2016) and transportation cost (increased from 7.4% of GDP in 2015 to 7.5% of GDP in 2016), however the administration cost was in steady state in 2016 (NESDB, 2018, p. 4).

Thailand tries to develop logistics system and infrastructure networks in line with the broader Association of Southeast Asia Nation (ASEAN) framework agreement on transport facilitation. One of the agreement in the ASEAN frameworks is to complete the action plan for the region's physical, organizational, and people to people connection, was agreed by ASEAN Member States in October 2010. One of the master plan's main endeavors is transport facilitation, which entails the simplification and harmonization of international transport procedures and documentation in order to help reduce logistics time and costs for cargo

movement within the region (BOI, 2016, p. 22). In addition to Thailand's effort in shifting to multimodal transport network, Thailand Board of Investment (BOI) is enthusiastically promoting logistics systems to develop the country. BOI is expected to enhance trade, investment and tourism, while also reducing transport costs, and facilitating mobility in the region and country. The Thai government's policy aims to develop border areas and improve Thailand's connectivity with its neighboring countries such as Myanmar, Laos, Cambodia, and Malaysia. Therefore, the logistics infrastructure development also contributes to an increasingly combined sub-region, in terms of commercial networking, supply chain and material associations, and greater access to domestic consumer markets, following the foundation of the ASEAN Economic Community (AEC).

Thailand's strategic location in the heart of Southeast Asia plays a significant role in the government's development plan to connect Myanmar, Laos and Vietnam together, namely East-West Economic Corridor. Also another route is called North-South Economic Corridor covering Thailand, China, Myanmar and Laos. Once completed, these transport links will connect the regional centers of economic activities, providing better connection to remote and landlocked locations in the Greater Mekong Sub-region (GMS). In order to strengthen Thailand's position as a leading logistics strategic country. Thailand can take the strategic advantages by a combination of coordinated development efforts is being promoted, involving the improvement of infrastructure, laws and regulations, customs systems, and domestic and international transport networks. This will increase Thailand's competitiveness, massively attractive Thailand's investment landscape.

Thus, the Thai government focuses and attempts to develop the country's competitiveness as well as facilitating and enhancing trade and investment. Both domestic and international investors should feel confident that are being put in place providing an ideal opportunity to take advantage of future growth of Thailand (BOI, 2016, p. 23). In examining the guidelines for learning and development of logistics companies in Thailand for competitive advantages, the main research question is raised on which this research needs to find the answers. This question is of which guidelines for learning and development perspective can lead the logistics companies in Thailand catching competitive advantages.

RESEARCH OBJECTIVES

The objectives of this research are :

1. To examine the guidelines for learning and development of logistics companies in Thailand for competitive advantages.
2. To suggest the guidelines for the logistics companies in Thailand for competitive advantages.

RESEARCH BENEFITS

The research results would contribute as follows:

1. There will be benefits for managers of the logistics companies to focus on the management philosophy to learn and develop instrumental factors to beat the competitors.
2. The arrangement of the strategic competitive advantages and balanced scorecard theories could examine the learning and development factors of any type of businesses in any other countries.

Theoretical and Literature review

The concept of strategic competitive advantages theory is an important role in enabling companies to generate new knowledge and improve capabilities and skills that can lead to accomplishment. The balanced scorecard (BSC) concept is used to complement the company's goals. Each of applied theories is detailed as follows.

Strategic Competitive Advantages Theory

The strategic competitive advantages theory is the concept that allows a company to overcome its competitors. Porter stated that this theory included an access to company's resources such as unique raw material, highly skilled labor, geographic location, high entry barriers, and ultimate new technology. The company joined a business network for sharing in-depth information and other complementary resources to throw away the obstacles in order to enhance company's capabilities. Information sharing has three elements which are 1) sharing information with its business partners to improve company's ability, 2) sharing information with procurers and suppliers to fulfill company's requirements, and 3) sharing information with community to increase potential opportunities of doing business. Information sharing can lead company to work better with its' partners. Business and social network can encourage information sharing which leads to improve in company competitiveness. (Porter, 1985, p. 33).

As understand the target customers and to gain an advantage over the competition, it is important to fulfill the needs of the target customers to a greater requisitions than the competitor offers. When choosing a strategic competitiveness advantage factors for the company needs to take into account competitors' strategies and target the needs of customers, therefore, it is important to analyze the competitor situation.

The strategic competitiveness advantages factors are adapted from Porter (1985, p. 45) and Ciburiene (2009, p. 725) as the following:

1. Innovation Drives (ID) is ability of the administrators to determine principles for supporting work processes to accomplish innovativeness, this is including government policy makers, managers, and employees to improve their tasks (Elkins & Keller, 2003, p. 591). Innovation can drive positive change and endless improvement in innovation growth and

success to achieve of company's goals. Thus, the purpose of innovation drives is to maintain a smooth flow of information and outputs to achieve higher rates of efficiency and effectiveness of the companies (Zawislak et al., 2013, p. 336).

2. Knowledge Creation (KC) is the company's focus on the creations, collections, exchanges, and application of information in the systematic ways to effective information management in order to increase companies' level of innovation higher than competitors (Becerra-Fernandez, Gonzalez, & Sabherwal, 2004, p. 94). Consequently, knowledge management can create and generate process of strategic competitive advantages to develop companies' capabilities (Psomas & Java, 2016, p. 385; Ciburiene, 2009, p. 726). Therefore, the strategic competitive advantages firms will involve the integration of knowledge and develop strategic competitive advantages of the companies (Yu et al., 2013, p. 212; Du Plessis, 2007, p. 23).

3. Innovation and Entrepreneurship (IE) is defined as the capabilities to combine creativity and executive to overcome managerial obstacles and challenge the course of developing processes, procedures, products and services (Mbizi et al., 2013, p. 376). The innovation and entrepreneurship is an executive's willingness to seek out opportunities for company's resources that have both a chance of failure and success (Wang et al., 2015, p. 73). The innovation and entrepreneurship can drive the strategic competitive advantages since logistics companies tend to start innovation procedures to meet the customers or markets' needs.

4. Technological Application (TA) is an ability of company to create effective uses of technological knowledge (Westphal et al., 1985, p. 281) and a capability to accomplish technical changes (Bell & Pravitt, 1995, p. 15). The technology oriented strategy is an essential for company's strategic competitive advantages development then the technological application is necessary to build effective uses of the technology and the technological capability used to generate technological change for strategic purposes (Tutar et al., 2015, p. 712; Rush et al., 2007, p. 225). The technological application impacts on company's learning, and contributes to the development of company's performance. Hence, the technological application has a potential to positively affect company's performance especially the company's learning and development.

Balanced scorecard (BSC)

The BSC is a dependent variable in this research, it is a strategic planning and management (Kaplan & Norton, 1992, p. 72). The balanced scorecard (BSC) concept is used to encourage employees to complement the company's goals. The BSC transform company's strategic plans to actions. The BSC elements (financial prospective, customer prospective, internal business processes, and learning and development) are chosen to explain the company performance. The managers use the BSC to enhance their companies' strategic goals. The BSC can create the company's strategic management, link strategy and processes in a new management system, create intrinsic motivation, and support all business units to corporate strategy (Kaplan, 2010, p. 3). The BSC has four perspectives proposed by Kaplan and Norton (1992, p. 73) as follows:

1. Customer/Stakeholder perspective: this is to evaluate the company's performance from the customers' and major stakeholders' opinions to design the better products, services, and processes.
2. Internal business processes: this is to evaluate the company's performance from the quality and efficiency related to company's products or services or any main business processes.
3. Financial perspective: this is to evaluate the company's performance from the identification of a relevant high-level financial measure and the use of financial resources.
4. Learning and development perspective: this is to evaluate the company's performance through human capital, infrastructure, technology, culture and other company's capacities. This perspective may be known as 'Organizational Capacity'.

The BSC provides managers as a tool to achieve the future competitive success. Therefore, the BSC measures firm performance across four perspectives: customers/stakeholders, internal business processes, financial, and learning and development as above. In conclusion, the BSC concept has been applied to evaluate of company's performance and developed objectives, strategies, and processes relative to each point of perspectives. The BSC also can inform the story of past through present to guide the journey of companies to create future value through investment in customers, suppliers, employees, stakeholders, processes, technological applications, and innovation. A key benefit of using BSC is that it leads companies to a sustainable success by accomplishing the missions, visions and strategies.

Many researchers have taken four perspectives of the BSC in expanding the ideas of company's performance. However, this research has the prospective idea that the learning and development perspective has been brought to improve the company's value. It is to overcome the competitors in the long-term. That is only learning and development perspective to get into the model.

As discussed above, many researches support the strategic competitive advantages as it offers better response to lead new knowledge and establish the positive impact on company's performance. For the constructs of strategic competitive advantages, four factors are posited that consist of 1) Innovation Drives, 2) Knowledge Creation, 3) Innovation and Entrepreneurship, and 4) Technological Application, all of which are combined in the following framework (Figure 1).

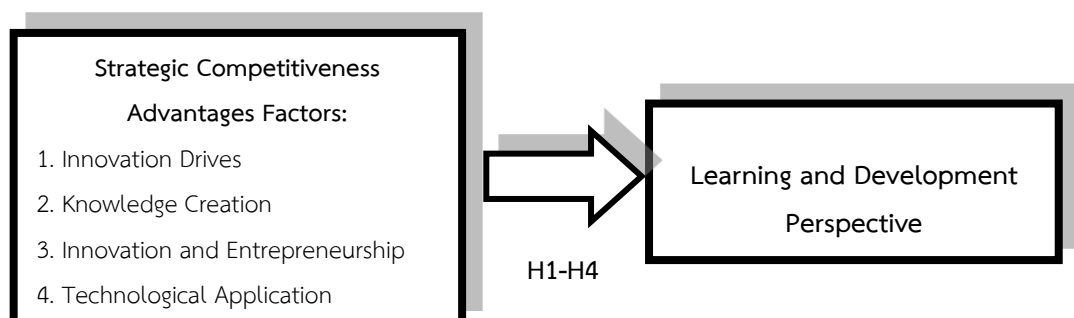


Figure 1 Research Framework

Therefore, the hypotheses are provided as follows:

H₁ : Innovation drives positively affect company's learning and development perspective.

H₂ : Knowledge creation positively affects company's learning and development perspective.

H₃ : Innovation and entrepreneurship positively affect company's learning and development perspective.

H₄ : Technological application positively affects company's learning and development perspective.

RESEARCH METHODOLOGY

1. Model Development

The factor loadings was tested the construct validity of the data in the questionnaire. This research analysed from thirty companies in each sample. The pretest reveal that each item of all variables are greater than the 0.40 cut-off and are statistically significant that suggested by Hair et al. (2010, p. 52). The results found that each item of all variables is loaded on a single factor and the range of factor loadings is between 0.42 and 0.72. This is to indicate acceptable construct validity. Furthermore, the construct validity illustrated by convergent validity. The convergent validity proves that every item indicate of a specific construct converge or share a high proportion of variance in common (Neuman, 2005, p. 213). The Cronbach's alpha (greater than 0.70) is utilized to check the reliability of the instruments used for each of the constructs measured (Nunnally, 1994, p. 350). As a result, there is the construct validity. The Cronbach's alpha coefficients for all variables in this research expressed between 0.86-0.88.

The evaluation of the variable and interaction effects will be undermined due to problems of multicollinearity. This research uses a variance inflation factor (VIF) as indicators to indicate a high degree of multicollinearity among the independent variables as suggested by Hair et al. (2010, p. 157). A rule of thumb is that when the VIF is equal or greater than 10, problems with multicollinearity are serious (Burns & Burns, 2008, p. 421; Hair et al., 2010, p. 161), that is multicollinearity greatly poses a problem for multiple regression such as limit the size of correlation, and increases variances of the regression coefficients. In this research, an analysis of collinearity statistics indicates that the range of VIF values are 1.266-1.717, which indicate that there is no multicollinearity problem (see Table 1).

The Ordinary Least Squares (OLS) regression analysis is used to test four hypotheses following the research framework. The regression equation generated is a linear combination of the strategic competitive advantages factors and learning and development perspective. Then, the OLS is appropriated to test four hypotheses (Gujarati, 2006, p. 418). Therefore, all hypotheses in this research are transformed to equation for testing as follows:

$$\text{LDF} = \alpha + \beta_1\text{CID} + \beta_2\text{CKC} + \beta_3\text{CIE} + \beta_4\text{CTA} + \varepsilon$$

Where,

LDF = The logistics company's performance in learning and development

CID = Innovation Drives

CKC = Knowledge Creation

CIE = Innovation and Entrepreneurship

CTA = Technological Application

α = Constant

β = Coefficient

ε = Error

2. Model Validation

In this research, the questionnaire consists of three parts. A choice of questionnaire uses closed-ended questions because it is easier and quicker for respondents to answer and easier to code and statistically analyze (Neuman, 2005, p. 215). Part one asks for key informants' information such as gender, age, education level, work experience, and present position. Part two asks for general firm information (i.e., number of employees, total company's assets excluding land, company age, state of major shareholder, and joint venture experience).

Parts three is related to evaluating each of constructs in the conceptual model which measuring items are anchored by five-point Likert scale from 1 = strongly disagree to 5 = strongly agree for all variables.

Test of Non-Response Bias

In this research, all 84 received questionnaires of logistics companies are divided into two equal groups to test the non-response bias (Armstrong & Overton, 1977, p. 398). The early respondents are the first group and the latter are the second group. Then, 42 responses from the first group are used to compare with 42 responses received from the second group in terms of their demographic information such as number of employees, total company's assets excluding land and vessels, company age, state of major shareholder, and join venture experience. Number of employees ($t=0.13$, $p>0.05$), total company's assets excluding land and vessels ($t=-0.50$, $p>0.05$), company age ($t=-0.66$, $p>0.05$), state of major shareholder ($t=-0.45$, $p>0.05$), and join venture experience ($t=-0.24$, $p>0.05$). The results show that no statistically significant difference between the first and second groups of these two samples indicating non-response bias between respondents and non-respondents in terms of demographics. In conclusion, a non-response bias is not a key problem in this research.

3. Data Collection

Data were collected from 89 logistics companies in Thailand who registered as the member of the Thai International Freight Forwarders Association (TIFFA, 2017, p. 1). This dataset is a good source to provide all completed addresses because the TIFFA is responsible for the Thailand's import and export sectors. The population data is derived from the TIFFA that can confirm and affirm a certain firm is still in business. The logistics companies in Thailand have six main points to choose as it is the main country economic development, low entry and turnover rate, policy makers' attention, larger share of investment and working capital, foster Thailand economic growth with higher productivity, and higher rate of return on investment (ROI) to develop their new products/services. The logistics companies organize very well training program for employees to better performance improvement. Moreover, the logistics firms are always update technology all the time, they work with automatic equipment, and high flexible to solve any problems immediately. Thus the logistics companies may create innovation quickly with no policy, procedure and discipline in their companies (Israr & Gangele, 2014, p. 108). Finally, Pinget, Bocquet, and Mothe (2015, p. 143) state that the logistics companies introduce more on strategic competitive advantage than trading, manufacturing or agricultural companies. Therefore, the logistics companies in Thailand have the potential to examine the impact of strategic competitive advantages on companies' performance in learning and development perspective.

The key informants were the managing director or managers of logistics companies in Thailand. The questionnaire mail survey was used to collect data in this research. This is appropriate because it is a widely-used method for large-scale data collection in a geographical area where mailing questionnaires is effective (Neuman, 2005, p. 263). The questionnaires were directly distributed to each logistics company in Thailand by mail during September-October, 2017. There were 57 returned questionnaires then three assistant researchers made appointments to meet the managers for 32 logistics firms (of which has no return questionnaires) in November, 2017. With regard to the questionnaire mailing, the valid mailing was 89 surveys, from which 57 responses were received in October, 2017. Of the 32 walk-in surveys completed and returned, 84 were usable. There were 5 denied questionnaires from companies. The effective response rate was 94.38%. According to Aaker, Kumar, and Day (2001, p. 244), 20% response rate for a mail survey, without an appropriate follow-up procedure, is considered sufficient. Therefore, 94.38% response rate of a survey questionnaire was suitable and reliable to analyse in this research.

RESEARCH RESULTS

The demographic characteristics of the 84 respondents. About 64.30% of the respondents are male, 36-40 years old (35.70%), higher than the bachelor degree of education level (41.70%), 11-15 years working experience (29.80%), and department manager position (46.40%). The majority of the firms have more than 200 employees (36.90%), 1,000,000-5,000,000 baht total company's assets excluding land and vessels (25.00%), more than 20 years of operation (41.70%), Asia as major number of shareholders (22.60%), and more than 20 years of joint venture companies (36.90%).

The results of the correlation analysis of all variables (a two-tailed test of statistical significance at two levels as $p < 0.01$) are shown in Table 1. The correlation of four factors of strategic competitive advantages have significant positive relationships with company's learning and development perspective ($r = 0.29-0.46$, $p < 0.01$). In addition to the relationships among variables, the correlations among all variables in the framework are in the range of 0.29 to 0.54 with $p < 0.01$, which is lower than 0.70 (Hair et al., 2010, p. 161). Thus, the results indicate no multicollinearity problem in this research. The mean and standard deviation (S.D.) of the company's learning and development perspective (LDF), independent variables (CID, CKC, CIE, and CTA), and correlation variables among the independent variables are presented in Table 1. The results find that technological application (CTA) is rated as the most agreement factors on average with the mean score of 3.86. Following the innovation and entrepreneurship (CIE), knowledge creation (CKC), and innovation drives (CID) have average the mean scores of the agreement level at 3.85, 3.72, and 3.48, respectively.

Table 1 Descriptive Details and Correlations Matrix

Variables	Mean	S.D.	LDF	CID	CKC	CIE	CTA	VIF
LDF	4.05	0.75	1					
CID	3.48	1.23	0.29**	1				1.26
CKC	3.72	0.78	0.30**	0.44**	1			1.71
CIE	3.85	0.86	0.30**	0.54**	0.39**	1		1.53
CTA	3.86	0.62	0.46**	0.43**	0.37**	0.37**	1	1.32

** Correlation is significant at the 0.01 level (2-tailed)

The results are presented in Table 2 according to research objective 1 that is to examine the guidelines for learning and development of logistics companies in Thailand for competitive advantages. The research framework and hypotheses are also tested by using multiple regression models for analysis. The Durbin-Watson found that 1.80 confirms the values

of all variables are in an acceptable range from 1.50 to 2.50 (Gujarati, 2006, p. 477). The F-statistic is significant with adjusted $R^2 = 19.50\%$ which the inclusion of performance improves the model's fit. There is one variable which is CTA positive and significant at the 1% level of significance. This suggests that the strategic competitive advantages factors and company's learning and development of the logistics companies in Thailand is significant and positively affected by technological application factor. These results supports hypothesis 4 at the statistical significance of 1% level of significance. The hypotheses 1, 2, and 3 are not supported at the 1% and 5% levels of significance.

The results of the regression analysis indicate a positive relationship between strategic competitive advantages and company's learning and development perspective of the logistics companies in Thailand. The technological application factor illustrated that significantly and positively affects to the company's learning and development perspective ($\beta=0.51, p<0.01$). Therefore, H_4 is supported. The technological application factor has a positive relationship with companies' learning and development perspective and relevant to logistics companies in Thailand.

Table 2 Determinants of the Strategic Competitive Advantages and company's learning and development perspective of the Logistics Companies in Thailand

Independent Variables	Coefficients
Constant	1.74 ^{***} (0.50)
CID	0.00 (0.06)
CKC	0.16 (0.12)
CIE	-0.07 (0.10)
CTA	0.51 ^{***} (0.13)
No. of respondents	84
R^2	0.23
R^2 Adjusted	0.19
F-Statistic	6.03
Durbin-Watson	1.80

*** represents statistical significance at 1% level

Beta coefficients with standard errors in parentheses

However, the innovation drives, knowledge creation, and innovation and entrepreneurship factors are not supported H₁, H₂, and H₃, respectively, at the 1% and 5% levels of significance. These results confirm that innovation drives, knowledge creation, and innovation and entrepreneurship factors do not have a relationship with companies' learning and development perspective. These factors have no relevant to logistics companies in Thailand.

Due to research objective 2 that is to suggest the guidelines for the logistics companies in Thailand for competitive advantages. The results support only technological application factors relate to the companies' learning and development perspective. The results are consistent with previous researches in the overall model indicating that sophisticated company with high technology improvement will satisfy the competitive advantages and stay over the competitors. The companies with using technological application are required to enhance and sustain the competitive advantages for a long time.

CONCLUSION

As the research results, this is about high-tech services, high technology distribute, market share of new-to-market products/services/processes, market share of new-to-company products/service/processes, and employment in medium-high/high-technology companies. This is related to the company's learning and development perspective of the logistics firms in Thailand. The results imply that logistics companies need to highlight on technology through operational processes. Certainly, high-technology performance is much of the development nowadays not only what it can be traditionally thought of as "high tech" but also a broader realm of industries extending from trading, manufacturing, servicing to business networks. The future of logistics companies and their capacities to meet major economic, social, and environmental challenges rests largely on how they adapt to and take advantage of changes in technology (Aulet & Murray, 2013, p. 17). Recent years, many companies have moved their strategies for business growth and are now working on the assumption that innovation and technology development drive growth and competitiveness in the 21st-century global economy. Technology application is distinguished from entrepreneurship types (such as social entrepreneurship, small business management, and self-employment) by collaborative experimentation and production of new products, assets, and their attributes, which can be intricately related to advances in scientific and technological knowledge and the company's assets ownership rights (Aulet & Murray, 2013, p. 18). The technology-intensive companies are viewed for their potentials and impacted on competitiveness, future economic growth, and prosperity. Furthermore, this is consistent with Rush et al. (2007, p. 230) and Park, Change, and Park (2015, p. 16) who state that technology can create new methods, processes and techniques to offer new product development and thus resulting in the enhancement of companies'

performance excellence. Yu et al. (2013, p. 214) and Omerzel (2015, p. 755) also agree that technological application impacts on companies' learning, and contributes to the development of companies' innovativeness. The technological application is a significant key factor for the company's strategic competitive advantages factor. Hence, the technological application has a potential to positively affect strategic competitive advantages for logistics companies in Thailand.

SUGGESTIONS

Managerial Suggestions

Managers should focus on the management philosophy that promotes new ideas and proactive working climate with technology. The technological applications and instruments can support working proficiency for employees. The technological applications such as nanotechnology are the various ways a technology can be used in commercially useful products or services. Concentrating on strategic competitive advantages factors (especially, technological application) can result in companies' success. Advances in technology can help to revolutionize operational processes and practices, enhance the efficiency of operations, build and capture the opportunities in the market and offer new values to customers and stakeholders.

Future Research Suggestions

Other business types such as service, financial, agricultural and etc. can be conducted into the comparative research. The economic and financial factors such as sources of funds, interest rate, sales, costs, and loan variables can possibly be considered as factors affecting companies' performances. The qualitative of in-depth interviews may help to explore the up-to-date and point of views of reality from executives. This qualitative methodology stimulates the whole picture and the comprehensive understanding of strategic competitive advantages of the companies. Moreover, other statistical techniques like the Structural Equation Modeling (SEM) may test the hypothesis and examine the relationships among all constructs within the research framework. This would be fruitful to the literature to expand this research in future research.

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