The Golden Teak : Humanity and Social Science Journal (GTHJ.)
Vol.25 No.3 July - September 2019 ISSN 2408-0845 (Print) ISSN 2651-1487 (Online)

ปัจจัยที่ส่งผลต่อศักยภาพการบัญชีต้นทุนห่วงโซ่คุณค่า งานวิจัยเชิงประจักษ์ธุรกิจผลิตอุปกรณ์อิเลคทรอนิกส์และเครื่องใช้ไฟฟ้าในประเทศไทย

Affecting Factors on Value Chain Costing Capability: An Empirical Evidence of Electronic and Electrical Appliance Businesses in Thailand

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Received : March 19, 2018
Revised : June 11, 2018
Accepted : August 7, 2018

บทคัดย่อ

ศักยภาพทางการบัญชีต้นทุนห่วงโซ่คุณค่ามีบทบาทสำคัญต่อการพัฒนาความสามารถทางการแข่งขัน ด้านต้นทุนและผลการดำเนินงานของกิจการ อย่างไรก็ตามการเปลี่ยนแปลงสภาพแวดล้อมทั้งภายในและภายนอกเป็นปัจจัยสำคัญในการกำหนดศักยภาพทางการบัญชีต้นทุนห่วงโซ่คุณค่า งานวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาความสัมพันธ์ระหว่างปัจจัยภายในและปัจจัยภายนอกที่มีต่อศักยภาพทางการบัญชีต้นทุนห่วงโซ่คุณค่า โดยรวบรวมข้อมูลจากธุรกิจผลิตอุปกรณ์อิเลคทรอนิกส์และเครื่องใช้ไฟฟ้าในประเทศไทยจำนวน 152 ราย โดยการใช้แบบสอบถามเป็นเครื่องมือ สถิติที่ใช้การวิเคราะห์ถดถอยเชิงเส้น (OLS regression) ผลการวิจัยพบว่า วัฒนธรรมการเรียนรู้ขององค์กร, ความรู้ในการบริหารต้นทุน, ระบบสารสนเทศเพื่อการบริหารสมัยใหม่, และ แรงกดดันทางการแข่งขันที่เปลี่ยนแปลงอย่างรวดเร็ว มีอิทธิพลเชิงบวกต่อศักยภาพทางการบัญชีต้นทุนห่วงโซ่คุณค่า

คำสำคัญ : ศักยภาพทางการบัญชีต้นทุนห่วงโซ่คุณค่า / ธุรกิจผลิตอุปกรณ์อิเลคทรอนิกส์และเครื่องใช้ไฟฟ้า

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ปีที่ 25 ฉบับที่ 3 กรกฎาคม - กันยายน 2562 ISSN 2408-0845 (Print) ISSN 2651-1487 (Online)

ABSRACT

Value chain costing capability has an important role to develop cost competitiveness and firm performance. Nevertheless, both internal and external environmental changes are also a key factor in value chain costing capability. The purpose of this research is to investigate the relationship between internal factors and external factors which had effects on value chain costing capability. The data were collected from 152 electronic and electrical appliance businesses in Thailand by using a questionnaire mail survey. The ordinary least square (OLS) regression statistical analysis was used to test all of hypothesis. The results revealed that organizational learning culture, cost management knowledge, modern management information system, and volatile competitive pressure had significant positive influence on value chain costing capability. This research supported the new model, and accounting executives are suggested to enhance four key factors in their businesses.

Keywords : Value Chain Costing Capability / Electronic and Electrical Appliance Businesses

Introduction

Business environment changes rapidly so firms have to be ready to cope with changing situations. Industry manufacturing business also has to adapt itself according to situations and environment (Noordin, et al., 2015). Therefore, manufacturing business needs effective production strategies and advanced technology should be employed to create competitive advantages (Janin, 2015). In addition, value chain for production is valued by most industrial manufactures in order to reduce costs as well as operational activities to gain competitive advantages (Grigore, 2013). The concept of value chain is applied to analyze competitive capability to identify activities which can add more value and firm performance (Porter, 1985). The analysis of value chain costing capability (VCCC) can be used to explain the internal and external environments of an organization by connecting all dimensions of business operation in order to obtain more insights on firm performance (Cadez & Guilding, 2008; Walas-Trebache, 2015). The organization with VCCC demonstrates the ability to record, collect and analyze information used for production operation and competitive production cost (Mu & Cui, 2012). As a result, information presented accurately and timely as well as can add more value for customers, resulting in obtaining competitive advantages and better firm performance (Aksoylu & Aykan, 2013; Cinquini & Tenucci, 2010; Kirli & Gumus, 2011; Usshawanitchakit, 2017).

The effectiveness of VCCC depends on internal and external factors which can be applied suitably in business situations and contexts. Moreover, contingency theory is used to explain internal and external business environment which affects VCCC. Therefore, one important key to achieve VCCC is “survival vision” which is the internal factor in term of

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management's perception to develop good management system – the system for the organization survival (Komala, 2012; Posavac, Kardes, & Brakus, 2010). Another key is "organization learning culture" which is the internal factor occurring from the association of knowledge management in the organization to present new operation patterns to contribute to all sides of the organization management (Moradi et al., 2013; Saadat & Saadat, 2016). "Cost management knowledge" is also important as it is the internal factor to facilitate the production operation with reduction of non-profit cost and add more value to the production process effectively (Aksoylu & Aykan, 2013; Walas-Trebacz, 2015). "Modern management information system" is the internal factor to utilize technology to support the business operation and various types of decision-making (Angonese & Lavarda, 2014). And "volatile competitive pressure" is an external factor to perceive the uncertainty of current environment, affecting on firm performance (Gogus & Ozer, 2014). All of these keys are the important factors to optimize the effectiveness of VCCC.

The present research was conducted with Thai electronic and electrical appliance industry because this manufacturing industry type likely faces with competitive challenges and rapid change (World Economic Forum, 2017). To increase the firms' growth, approaches for development are needed for the manufacturing firms in Thailand not only to keep up with high quality standards, but also to shift the quality level of the product higher than the standard of customer expectation, leading to a competitive advantage in quality. In addition, the electronic and electrical manufacturing appliance businesses have to respond to change rapidly and VCCC function is a helpful tool for them (Noordin et al., 2015). In order to increase firm value and good performance, the electronic and electrical appliance industry should be aware of reducing costs in all production activities and increasing the ability to create the efficiency of managerial accounting information (Phornlaphatrachakorn, 2017). Hence, electronic and electrical manufacturing businesses are considered as an appropriate sample for this research by basing on literature review from previous studies concerning value chain. However, the studies on internal and external factors for creating VCCC are rarely found. As a result, the present research is aimed at bridging this gap to investigate on this area with the research question i.e. "How internal and external factors affect on value chain costing capability?"

Objectives

The main objective of this study to investigate the relationship between internal factors and external factors comprising survival vision, organizational learning culture, cost management knowledge, modern management information system, and volatile competitive pressure, which are affecting on value chain costing capability.

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Literature review and hypotheses development

This research investigated five antecedent factors and VCCC. Contingency theory explained the degree of fit between context and structure (Cinquini & Tenucci, 2010). In addition, contingency theory is used to describe strategies that fit into different situations (Otley, 1980). Therefore, the effective operation depends on contextual adaptation to the appropriate environment (Cadez & Guilding, 2008). Hence, fit of VCCC depends on contexts and effects of the situation (Pavlators & Paggios, 2009). The assumptions of the contingency theory suggest that organizational structure is based on four internal factors which consist of survival vision, organizational learning culture, cost management knowledge, modern management accounting system, and external factors consist of volatile competitive pressure on firm operations. The conceptual model presents the relations between antecedents of VCCC, and all of hypotheses resulting with positive effects are presented in Figure 1.

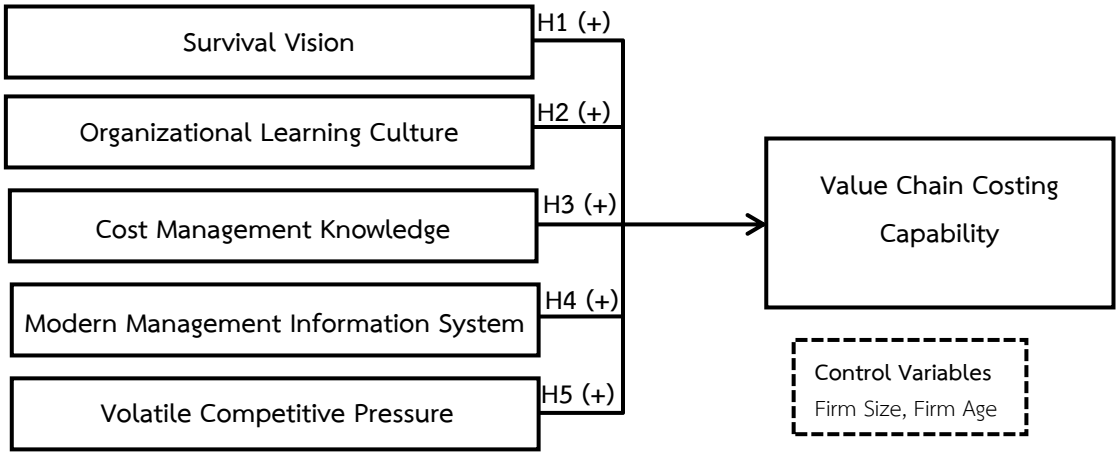

Figure 1 : Conceptual Model of Value Chain Costing Capability Its Antecedent

The Effect of the internal and external factors on Value Chain Costing Capability

Survival Vision (SVV)

Vision refers to the view of the executive involving the determination of the operation direction because vision is caused by knowledge and skills essential to competent practice (Posavac, Kardes, & Brakus, 2010). Moreover, vision relates to the utility and success of survival vision such as strategic management (Foster & Akdere, 2007). In addition, vision helps clarify the direction in product development (Revilla and Rodriguez, 2011). In this research, survival vision refers to the foresight of the focuses on the future target, development of good management system, continuous staff self-development, and the application of technology for systematic management (Komala, 2012; Moore, Ellsworth, & Kaufman, 2011; Posavac, Kardes, & Brakus, 2010). Previous research found survival vision is the variable for successful implementation of cost reduction, and competency and operational activity analysis reflected

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that survival vision was the critical factor for the value chain costing (Lichtenstein & Dade, 2007). Thus, survival vision is a prerequisite for the successful implementation of strategic management or operational activity (Smith, 2013). However, the support of survival vision on value chain costing capability depends on individual decision maker and the level of usable information to support decision making (Haylock, 2011). Based on the literature, survival vision can promote value chain costing capability to strategic operational. Therefore, this research proposes the hypothesized as follows:

Hypothesis 1 : SVV has a positive effect on value chain costing capability.

Organizational Learning Culture (OLC)

Organizational learning are the relationship between learning culture and knowledge management is as the business goal and operational linkage (Bingham & Davis, 2012). In this research, organizational learning culture is defined as the firm's belief, value, and perception on collaborative learning, knowledge sharing in the organization, and continuous presentation of new operation models (Moradi et al., 2013; Saadat & Saadat, 2016). Prior research indicated that organizational learning culture had a significantly positive effect on cost management success (Chung, Yang, & Huang, 2015). Besides, organizational learning is concerned more with how to change the behavior employee that is important for cost reduction competency and cost management in a rapidly changing environment (Tohidi, & Jabbari, 2012). Thus, organizational learning culture can promote VCCC to going from the present position to a future likable position in reply to fast environmental vary. Therefore, the associations are hypothesized as follows:

Hypothesis 2 : OLC will positively relate to value chain costing capability.

Cost Management Knowledge (CMK)

Accounting knowledge and competency of an accounting employee becomes a key factor affecting acceptance strategic for cost management (Cokins, 2014). In addition, CMK mean what accountants need to know in order to undertake their role competently (Mozota & Kim, 2009). In this research, CMK refers to the determination of the organization to learn and search for guidelines, to reduce non-performing activities and to evaluate the performance accurately and suitably (Aksoylu & Aykan, 2013; Walas-Trebacz, 2015). Prior research indicated that accounting knowledge has a significant impact on successful cost accounting execution (Agbejule, & Saarikoski, 2006). Specifically, cost management knowledge has a significantly positive influence on competitive-based cost emphasis through integration and operational linkage (Namnai, Ussahawanitchakit, & Janjarasjit, 2016). Hence, CMK of accountants with high competency readiness brings about the performance of cost management in an organization and can produce value for VCCC. Therefore, this research proposes the hypothesized as follows:

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Hypothesis 3 : CMK will positively relate to value chain costing capability.

Modern Management Information System (MMIS)

MMIS plays a part in the competition of business by integrating management information system for decision-making (Marquez & Caudeli, 2013). Hence, MMIS is a valuable factor for a firm to create an ability of the firm by considering technology coupled with the environment to develop these systems (Noordin et al., 2015). In this research, MMIS defines the determination of the organization on the system to collect and store the internal and external information of the organization in the past, present, and future by using information technology to support the operation and decision making in different ways (Angonese & Lavarda, 2014). Previous research found that the competitive intensity is supported by the value-added cost orientation and value chain cost focus (Rosli, Said & Mohd, 2014). In addition, strategic operational linkage and the business goal are reflected from using an efficient management accounting system in combination with modern technology and the changing environment (Kloviene & Gimzauskiene, 2014). It can also reduce cost and develop new processes for using operational control (Polprasert, Ditkaew & Dechasetsiri, 2015). Therefore, the associations are hypothesized as follows:

Hypothesis 4 : MMIS will positively relate to value chain costing capability.

Volatile Competitive Pressure (VCP)

Competitive pressure refers to the degree of emulation that firm faces in its industry and it is the external factor that significantly influences the business structure, organizational systems and business operations (Dong & Zhu, 2009). The uncertainty of the current environment affects the technology infrastructures to support the operational activity, and cost management strategies (Konings, Cayseele & Warzynski, 2005). In this research, VCP is defined as the firm's perception relating to the uncertainty such as customers' demands, changes in the politics, economy, society, and technology which affect the operation and strategies of the organization (Gogus & Ozer, 2014). Previous research found logistic integration is the process of operational linkage to move raw materials through value-added processes to products that reach customers, thus enabling them to cost capability in a highly competitive market (Polprasert, Ditkaew, & Dechasetsiri, 2015). However, VCP affects the structure and behavior of organizations such as cost reduction capability, cost management, and expenditure report (Laonamtha, Ussahawanitchakit & Boonlua, 2013). Therefore, this research proposes the hypothesized as follows:

Hypothesis 5 : VCP will positively relate to value chain costing capability.

Value Chain Costing Capability (VCCC)

VCCC refers to the firm's ability to record, collect, and analyze information which is related to manufacturing activities, internal and external firm operations with lower cost than competitors, informational presentation correctly and timely, and value creation to customers,

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leading to competitive advantages as well as higher firm performance consecutively (Fearne & Martinez, 2012; Porter, 1985 & Ussahawanitchakit, 2017). From the prior research and literature, the issue of value chain costing receives worldwide attention of researchers and academicians because it is a managerial technology in a sector of management strategies to give essential information involving corporate cost management (Aksoylu & Aykan, 2013; Cinquini & Tenucci, 2010). VCCC is one of the fundamental tools to achieve the success in the cost management of the firm. It also plays a very important role in significant for contingency to decision-making improvement about cost management (Cadez & Guilding, 2008). Moreover, the capability of a firm about value chain costing obtained the new approaches to manage modern enterprise's cost and enhance the competitiveness advantage (Mu & Cui, 2012).

Control Variable

Firm Size was measured by the number of current employees as full-time. Previous research has present that firm size may affect the ability of the firm to operate its business (Namnai, Ussahawanitchakit & Janjarasjit 2016). Firm Age refers to the number of years a firm had been in operation. Previous research indicated that firms with long time operation were more experienced to operate with cost management and new learning, development and investment (Kenyon & Meixell, 2011). Moreover, firm age might affect value chain costing in providing cost information, furthermore with consider to cost management skill (Laonamtha, Ussahawanitchakit & Boonlua, 2013). Thus, firm size and firm age is a control variable that it is a factor supports these hypotheses in this research.

Research Methodology

Sample Selection and Data Collection Procedure

Electronic and electrical (E&E) appliance businesses in Thailand were chosen as the data source to manifest the empirical research. The population in this research was 703 firms, acquired from the database list of the Department of Business Development on its website (www.dbd.go.th, assessed March 30, 2017). The mail surveys were sent to 703 key participants who were accounting executives, accounting directors or accounting managers. The units of analysis used were firms.

Based on prior business research, a 20% response rate for a mail survey, without an appropriate follow-up procedure, is deemed sufficiently (Aaker, Kumar & Day, 2001). As a result, this research determined 703 firms as a sample population for conducting the mail survey.

With consider the questionnaire mailing, 28 surveys were undeliverable because some firms had changed to an unknown location. The valid mailing included 675 mail surveys, from which 153 responses were received but one set was excluded because it was incomplete with response errors. Therefore, there were 152 completed questionnaires. The capable response

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rate was about 22.51 percent. The response rate for a mail survey, without a fit follow-up process, if greater than 20 percent, is considered passable (Aaker, Kumar & Day, 2001). Hence, 152 firms are considered as enough sample size for employing multiple regression analysis.

In order to examine the non-response bias, the model of contrast between responders and non-responders on basic characteristics of samples such as firm size, firm age, business owner type, and firm capital is by tested the t-test statistics, comparing early versus late response (Armstrong & Overton, 1977). As a consequence, there was no significant difference between those groups. It is presumed that the returned questionnaires are without non-response bias problems.

Variable Measurement

To measure each construct in the conceptual model, all variables are anchored by five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) excluding control variables. In addition, all constructs are developed for measuring from definition of each constructs and examine the relationship from theoretical framework and prior literature reviews (Newell & Goldsmith, 2001). Hence, the variable measurements of this study are described as follows :

Dependent Variable

Value Chain Costing Capability (VCCC) was the ending dependent variable in this research. This construct was measured via business goal integration, strategic operational linkage, operational activity analysis, cost reduction competency, and expenditure monitoring report.

Independent Variables

Survival Vision (SVV) was measured the foresight of the firm that focuses on the future target, development of good management system, continuous staff self-development, and the application of technology for systematic management.

Organizational Learning Culture (OLC) was measured as the firm's belief, value, and perception on collaborative learning, knowledge sharing in the organization, and continuous presentation of new operation models.

Cost Management Knowledge (CMK) was measured the determination of the organization to learn and search for guidelines, to reduce non-performing activities and to evaluate the performance accurately and suitably.

Modern Management Information System (MMIS) was measured as the determination of the organization on the system to collect and store the internal and external information of the organization in the past, present and future by using information technology to support the operation and decision making in different ways.

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Volatile Competitive Pressure (VCP) was measured as firm's perception relating to the uncertainty such as customers' demands, changes in the political, economic, social and technological conditions which effect the operation and strategies of the organization.

Control variables in this research included firm size and firm age. For the analysis, firm size was represented by a dummy variable in which 0 meant a firm had total employees less than or equal to 150 employees, and 1 meant a firm had total employees more than 150 employees. Firm age was represented by a dummy variable including 0 (less than or equal 15 years), and 1 (more than 15 years).

Reliability and Validity

In this study, the Cronbach's alpha was used to test the reliability of the questionnaire. Coefficient alpha indicates the degree of internal consistency among items in questionnaires that should be greater than 0.70 (Hair et al., 2010). In this study, convergent validity was tested by the factor loading, each of construct should be greater than the 0.40 cut-off and all factors are statistically significant (Hair et al., 2010). The results of measure validation show in table 1.

Table 1 presents all variables with factor scores between 0.745 - 0.954 indicating that there is the construct validity. Moreover, the reliability of all variable is accepted because Cronbach's alpha for all variables are shown between 0.863 – 0.938.

Table 1 : Result of Measure Validation

Variables	Factor Loadings	Cronbach's Alpha
Survival Vision (SVV)	.800-.912	.880
Organizational Learning Culture (OLC)	.877-.954	.933
Cost Management Knowledge (CMK)	.799-.814	.863
Modern Management Information System (MMIS)	.813-.929	.882
Volatile Competitive Pressure (VCP)	.820-.913	.938
Value Chain Costing Capability (VCCC)	.745-.879	.880

Statistical Techniques

All dependent and independent variables in this study were the metric scale. Therefore, OLS regression was an appropriate technique to test all hypotheses. From the conceptual model and hypotheses, the following four equation models are formulated:

Equation: $VCCC = \alpha + \beta_1 SVV + \beta_2 OLC + \beta_3 CMK + \beta_4 MMIS + \beta_5 VCP + \beta_6 FS\ \beta_7 FA + \varepsilon$

Results and Discussion

Table 2 shows descriptive statistics and correlation matrix for all variables. Correlation coefficients of variables are ranging from 0.345 - 0.785. With respect to potential problems

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relating to multicollinearity, variance inflation factors (VIF) were used to test the intercorrelations among independent variable. In this study, the VIFs ranged from 1.074 to 3.337, well below the cut-off value of 10 (Hair et al., 2010), meaning that the independent variables were not correlated with each other. Therefore, there were no substantial multicollinearity problems encountered in this study.

Table 2 : Descriptive Statistics and Correlation Matrix

Variables	VCCC	SVV	OLC	CMK	MMIS	VCP	FS	FA
Mean	4.076	4.030	4.012	4.150	4.192	4.262	n/a	n/a
S.D	.505	.621	.602	.575	.564	.643	n/a	n/a
VCCC	1							
SVV	.476***	1						
OLC	.468***	.785***	1					
CMK	.682***	.591***	.500***	1				
MMIS	.558***	.601***	.526***	.614***	1			
VCP	.534***	.472***	.345***	.645***	.443***	1		
FS	.095	.026	-.003	.051	.038	.072	1	
FA	-.037	-.014	.062	-.015	.219***	-.126	.262***	1

*** $p<0.01$

Table 3 shows the results of the OLS regression analysis of the relationships between survival vision, organizational learning culture, cost management knowledge, modern management information system, volatile competitive pressure and VCCC.

For the antecedents of VCCC, the results show that SVV has no significant influence on VCCC ($\beta 1$ = -0.124, $p > 0.01$). It may be implied that firms cannot adapt and integrate survival vision to match with VCCC. The survival vision of the business was difficult to integrate into all capabilities for setting the vision and continuous adjustment of vision to conform to the current business situation. When survival vision was inappropriate to the present business environment, it made the firm overlook existing value resources for operational control. This result indicated that if a firm's survival vision was not up to date, it caused the firm to omit the usefulness of VCCC. Similarly, clear vision was linked with the ability to set policy, enable goal achievement and connect mind-mapping for following the performance of the firm and improving its day-to-day operations (Haylock, 2011). In addition, the firm should integrate its body of knowledge, skills, and situation assessments (Koury, 2010). Thus, SVV cannot help firms to have VCCC. Therefore, Hypothesis 1 is not supported. Secondly, OLC has a significant

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influence on VCCC (β2 = 0.192, p < 0.05). Consistent with prior research found that OLC could effectively solve the problem of production management. This means that the firm should have belief, value, and perception of collaborative learning, knowledge sharing in the organization, and continuous presentation of new operation models. Likewise, learning the culture of an organization in accounting was resulted in a successful cost management (Whitaker, Mithas, & Krishnan, 2010). Besides, learning culture in an organization could develop new knowledge from sharing employees experience in both productions and follow up reports resulted in the ability of the business operations (Bingham and Davis, 2012). Thus, firms with greater OLC help firms to have VCCC. Therefore, Hypothesis 2 is supported. Thirdly, CMK has a significant positive impact on VCCC (β3 = 0.438, p < 0.01). Consistent with prior research found that main CMK supported the organization on VCCC. This means the organization should be determined to learn and search for guidelines, to reduce non-performing activities and to evaluate the performance accurately and suitably. Likewise, CMK affected growth in manufacturing industry in terms of production costs and monitoring performance (Agbejule & Saarikoski, 2006). This relation could be able to increase competitive capability in industries. Furthermore, accounting knowledge was associated with successful cost accounting implementation and higher cost accountant competency (Namnai, Ussahawanitchakit, & Janjarasjit, 2016). Likewise, personal experience in CMK is the ability of the business to influence the operation of the business to achieve the target in a good way (Mozota & Kim, 2009). Thus, firms with greater CMK help firms to have VCCC. Therefore, Hypothesis 3 is supported.

Fourthly, MMIS has a significant positive impact on VCCC (β4 = 0.196, p < 0.10). Consistent with prior research found that MMIS allowed the company to increase operational efficiency and reduces production costs. This means that the firm had determination of the organization on the system to collect and store the internal and external information of the organization in the past, present, and future by using information technology to support the operation and decision making in different ways. This result related to management information systems was the infrastructure that supported information for executives of organization's current strategy to manage costs and reduce costs (Polprasert, Ditkaew, & Dechasetsiri, 2015). Furthermore, an information management system supports the work of various parties to run the data at the right time, resulting in good cost management in the organization (Rosli, Said, & Mohd, 2014). Thus, firms with greater MMIS help firms to have VCCC. Therefore, Hypothesis 4 is supported. Finally, VCP has a significant positive impact on VCCC (β5 = 0.151, p < 0.05). Consistent with prior research found that the VCP kept the business adapting to the rapidly changing business environment, keeping track of costs and production activities. Likewise, the business of manufacturing technology had been successfully achieved cost and decision-making goals for better control of production

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reporting activity (Gogus & Ozer, 2014). Besides, the external competitive pressures were changing rapidly (Laonamtha, Ussahawanitichakit, & Boonlua, 2013).Thus, businesses were trying to report, monitor performance and evaluate to reduce external uncertainties. Thus, VCP can help firms to have VCCC. Therefore, Hypothesis 5 is supported.

Table 3 : Results of Hierarchical Regression Analysis for Effects of Antecedents of Value Chain Costing Capability

Independent Variables	Dependent Variables[a]
	Value Chain Costing Capability
Survival Vision (SVV : H1)	-.124 (.105)
Organizational Learning Culture (OLC : H2)	**.192**** (.094)
Cost Management Knowledge (CMK : H3)	**.438***** (.089)
Modern Management Information System (MMIS : H4)	**.196***** (.083)
Volatile Competitive Pressure (VCP : H5)	**.151**** (.078)
Firm size (FS)	.122 (.120)
Firm age (FA)	-.020 (.129)
Adjusted R^2	.502
Maximum VIF	3.337

*** p<0.01, ** p<0.05, * p<0.10, [a] Beta coefficients with standard errors in parenthesis

Contributions

This study examines the effecting factors on VCCC in electronic and electrical appliance businesses in Thailand. The explanation is based on the contingency theory focusing on the ability of a firm to fit in the contexts according to the changing environment. The findings of this study support the concept of the contingency theory in appropriate view with flexibility for firms. The best choice in some situation might not be the best for the other. The present research reveals that organizational learning culture, cost management knowledge, modern management information system, and volatile competitive pressure have influence on VCCC, reflecting that the business executive should support and maintain the four factors mentioned above. Moreover, cost management knowledge is considered as the best choice as

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a positive signal for the executive. To obtain VCCC efficiency, the executives should support resources and budget for this strategy to consolidate competitive performance as well as new opportunities for business operation.

Conclusion

The purpose of this study is to examine the affects of five antecedents, including survival vision, organizational learning culture, cost management knowledge, modern management information system, and volatile competitive pressure on VCCC. The results indicated that organizational learning culture, cost management knowledge, modern management information system, and volatile competitive pressure had significant positive influence on VCCC. Interestingly, survival vision did not have a positive effect on VCCC. Some limitation of this study should be mentioned. Firstly, the instrument used in this research was only a type of questionnaires for data collection. Therefore, future research could develop other research methodologies to test this conceptual framework of antecedents of VCCC. For example, qualitative in-depth interviews may help to explore the up-to-date point of views of reality from the chief accounting executive, the accounting director or the accounting manager of each certified electronic and electrical appliance businesses. This qualitative methodology stimulates the whole picture and the comprehensive understanding of antecedents of VCCC. Secondly, in this research, survival vision did not have positive effect on VCCC. As a result, future research is required on studying other moderating variables to enhance the relationships between VCCC and its antecedents. Future research may shed light on board characteristics (i.e., board size, board independence, board gender) as alternate moderating variables of the VCCC framework.

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