
RELATIONSHIP MODEL OF STRATEGIC COST MANAGEMENT IMPLEMENTATION
AND ITS ANTECEDENTS AND CONSEQUENCE



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ABSTRACT

The current climate of intense competition, strategic cost management implementation has become a popular cost and operations management technique to improve the operational efficiency for firms to stay competitive. This research investigates the effects of strategic cost management implementation on operational efficiency. Top management supports, competitive learning, integrate resource management and accountant competency is assumed to become the antecedents of strategic cost management implementation. Transportation businesses in Thailand were selected as the sample. Questionnaire is used as an instrument for data collection and accounting manager/director is key informant. Data were collected from a sample of 105 firms. The Ordinary Least Squares (OLS) regression analysis is a method for testing the hypotheses. The results indicated that top management support, accountant competency have a significant positive effect on strategic cost management implementation. Moreover, this research suggests that strategic cost management has implementation effects on operational efficiency. It also contributes directions to enhance the good characteristics of top management support and accountant competency that are key elements to improve strategic cost management implementation.

Keywords: strategic cost management implementation, top management support, competitive learning, integrate resource management, operational efficiency.

INTRODUCTION

In the contemporary business environment, increased global competition has motivated firms to improve their operation and gain a competitive advantage by leveraging profit. Consequently, firms need to estimate future cost information in the process of predicting earnings (Weiss, 2010). Currently, the role of strategic cost management implementation is one of the important key that provides cost information (Ilic, Milicevic and Cvetkovic, 2010). Strategic cost management is built on both cost accounting and managerial accounting, and assumes knowledge of both, leading to a competitive advantage in terms of cost, quality and firm performance (Cooper and Kapland, 1998). On the other hand, strategic cost management has a broader focus. Strategic cost includes cost reduction as a primary concern, but

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also but also looks to increase revenues, improve productivity and customer satisfaction, and at the same time improve the strategic position of the firms. Significantly, strategic cost management is also a set of techniques that frames the cost calculation system that functions towards aiding the decision making process, the achievement of the goal and activities of the firm. Accordingly, continuously garnering and acting upon the overall strategic cost management provide the means to reduce cost and improve operational efficiency and increase profitability.

The ASEAN economic community (AEC) will be fully established by 2015 and is expected to improve competitiveness. However, the overall economy of Thailand may still tend towards a decline. Moreover, transportation businesses are expected to grow as economic activity spread to the region as the factors support such as 1) the expansion of private investment to the region 2) growth in trade at border crossings, and 3) entering the ASEAN Community. Indeed, transportation businesses still face many challenges, including costs of transportation, such as fuel prices, economic slowdown, political conflicts and reluctant cooperation in transport between countries. In a free market economy, transportation costs are framing forces of both industrial structure and regional distribution of the economy. Therefore, transportations businesses need to enhance their ability to create new value for their customers and still operate at a profit (Fu, 2007). Strategic cost management implementation is one of contemporary management accounting techniques that provide cost information usefulness to develop strategic decision making, sustainable competitive advantage crucial to operating more efficiently in a highly competitive environment (Sulaiman et al., 2005). Likewise, transaction cost theory describes the importance of strategic cost management implementation through which organizations systematically generate and modify their operating routines to enhance their effectiveness (Williamson, 1981). Transaction cost theory describes the importance of strategic cost management implementation through which organizations systematically generate and modify their operating routines to enhance their effectiveness. Strategic cost management implementation is a strategic tool and should be used within proper channels

The purpose of this research is to examine the effects of top management support, competitive learning, integrated resource management, and accountant competency on strategic cost management implementation. Also, the effects of strategic cost management implementation on operational efficiency. The key research questions in the current are: 1) How does the top management support influence on strategic cost management implementation?, 2) How does the competitive learning affect strategic cost management implementation?, 3) How does the integrate resource management affect strategic cost management implementation?, 4) How does the accountant competency affect strategic cost management implementation?, and 5) How does strategic cost management implementation affect operation efficiency?.

THEORETICAL FOUNDATION

The core of transaction cost theory focuses on transactions and costs that attend accomplishment transactions by one institutional mode rather than another. Also, the unit of analysis is the transaction and firm's motive for minimizing transaction costs which is central to this approach. The transaction is a transfer of a good or service across some boundaries (Williamson, 1981). Moreover, the transaction cost theory supposes that companies try to minimize the

costs of exchanging resources with the environment, and that companies try to minimize the bureaucratic costs of exchanges within the company. Companies are therefore weighing the costs of exchanging resources with the environment, against the bureaucratic costs of performing activities in-house.

This research applies transaction cost theory in the context of strategic cost management implementation and its antecedents and consequences. Shank and Govindarajan (1992) identified that strategic cost management implementation supports improvements in decision making and improves a firm's operation. (Shank and Govindarajan, 1992; McNair, Polutnik and Silvi, 2001) and results in allocation of resources effectively. Additionally, the optimal application of strategic costs management effectively and adds customer value (Shank and Govindarajan, 1992; Ellram, 2002). Moreover, Geyskens, Steenkamp and Kumar (1999) suggest that the transaction cost theory supports for both make-versus-buy and ally-versus-buy decisions. In summary, strategic cost management implementation can improve a firm's operational performance through improved cost and value competitiveness (Cooper and Slagmulder, 2003). Therefore, transaction cost theory provides a useful framework to develop hypotheses about the relationships among strategic cost management implementation and operational efficiency.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Strategic cost management implementation is one approach in contemporary management. Under the conditions of the current economy, strategic cost management implementation concentrate on easing management's decision making by providing information on costs and other information in the processes of strategic analysis. The conceptual, linkage, and research model present as shown in Figure 1.

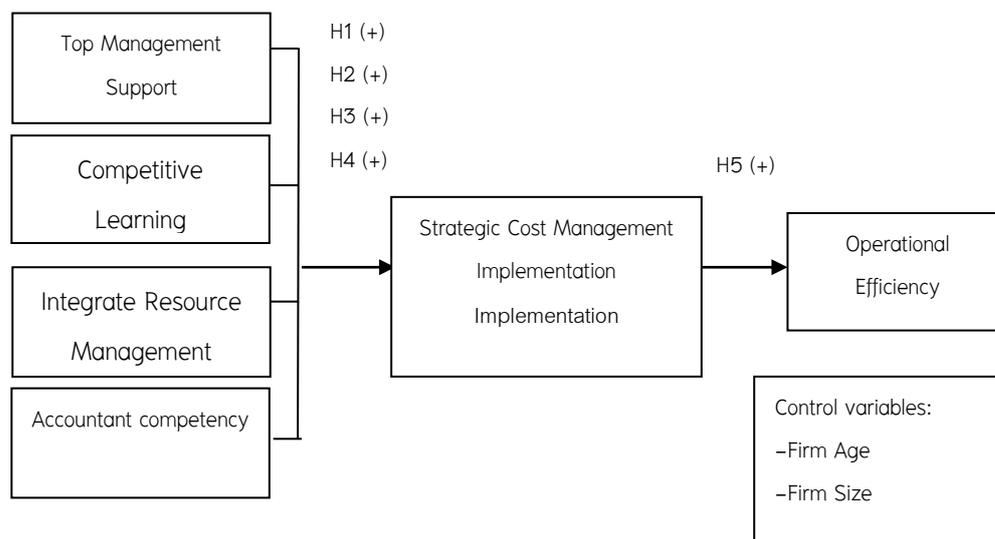


Figure 1 Relationship model of strategic cost management implementation and its antecedents and consequence

Top management support

Top management support is defined as an action involvement, vision, and direction goal of leaders create achievement throughout process implementation of new techniques that provide information usefulness to develop strategic decision making and sustainable competitive advantage (Sulaiman et al., 2005). Research support from top management is also an important key factor for the success of the strategic implementation (Young and Jordan, 2008). Top management support means the deal will create an atmosphere that will offer funding, manpower, training, knowledge, trust, and hope to be successful in accounting for quality of information in the operation of the organization (Masquefa, 2008; Young, and Jordan 2008). Managers understand the benefits of success in the accounting impact to performance and a commitment the senior management to drive success (Bernroider, 2008; Ngai, 2008). Moreover, Anand (2004) stressed that top management support has a significant influence on strategic cost management implementation. Additionally, prior researches indicates that top management support is a key factor affecting strategic cost management implementation (Wouter et al., 2005; Taba, 2005; Baird, Harrison, and Reeve, 2007 and Krumwiede, 2008). Thus, the hypothesis is proposed as follows:

Hypothesis 1: Top management support will positively relate to strategic cost management implementation.

Competitive learning

Competitive learning refers to an ability of firms to study variation of customer needs and the dynamics of competitive force, resulting in continuously adapting to operational performance (Chen et al., 2009). Competitive learning might be an important constraint in the implementation of a firm's specific manufacturing strategy to improve organization efficiency (Nicolaou, 2002). Currently, business environment is characterized by the fast change in customer, suppliers, competitors, technologies, and regulators. In order to achieve goals, firms must be agile and be able to handle extreme changes, survive unprecedented threats, and capitalize on emerging business opportunities (Pralhad, 2009). As increases competitive, diverse types of operational expertise, diverse skills and knowledge are needed to develop solutions and competitiveness (Fredricks, 2005). Also, competitive learning affects financial performance from strategic cost management (Skerlavaj et al., 2007). Therefore, it leads to the hypothesis as below:

Hypothesis 2: Competitive learning will positively relate to strategic cost management implementation.

Integrate Resource Management

Integrate resource management refers to utilization of various resources toward minimizing the resources in economizing, including the use of shared resources efficiently (Balkin, Markman and Gomez-Megja, 2001). With integrated resource management, all resource values are considered when planning and decision-making processes that coordinate resource use so that the long-term sustainable benefits are optimized and conflicts among users are minimized. Consistently, Myhr and Spekman (2002) and Labodova (2004) suggested that the higher integrated resource management is, the more likely that it will gain greater efficiency in planning and forecasting. Likewise, each department with collaboration in integrated resource management affects increases in quality and productivity, as a result reducing overall costs that affect consequence effective cost management (Myhr and Spekman, 2002). Also, the

more highly integrated resource management is, the more likely that it will have greater strategic cost management implementation. Hence, hypothesis 3 is formulated as follows:

Hypothesis 3: Integrate resource management will positively relate to strategic cost management implementation.

Accountant Competency

Accountant competency is defined as an ability and willingness to perform accountancy tasks that increases competent performance in certain tasks, encompassing professional knowledge, skills, abilities, experience and personality of accountants (Baird, Harrison, and Reeve, 2007). The task of accountants with high competency brings about the performance of strategic cost management in organization. Prior literature in the field of accountant competency demonstrates that accountant competency has a significant impact on cost management implementation (Chenhall, 2003). Chenhall (2004) and Taba (2005) emphasized that training for accountant competency has a significant positive influence on cost management success. Also, Tontiset and Ussahawanitchakit (2010) point out that accountant competency is associated with successful cost accounting implementation. Hence, the hypothesis is proposed as follows:

Hypothesis 4: Accountant competency will positively relate to strategic cost management implementation Strategic cost management implementation

Strategic cost management implementation is a process of cost management techniques achieved by analyzing and presenting cost information for developing the strategic position of an enterprise that views cost strategically (Apak et al., 2012). Accordingly, strategic cost management implementation based on the concept of Porter is Competitive advantage. Shank (1992) develops the Shank model of strategic cost management that provides a series of analysis methods, which could give insight into strategic management, i.e. strategic value, chain analysis, strategic position analysis and strategic cost driver analysis. The implementation of strategic cost management, if it provides additional information for contracting purposes and cost allocation, can serve a coordination purpose when multiple agents have correlated private information Agbejule and Saarikoski (2006), Pizzini (2006), and Cadez and Guilding (2008) found that cost accounting and cost management implementation impacted on firms' performance. Moreover, Nolan (2004) also found that successful activity based costing implementation have a significant impact on financial performance, such as profit margin, three-year average holding period returns and average cumulative abnormal returns. Likewise, the findings of Mijoc, Starcevic and Mjoc (2015) highlight that the contemporary cost management methods affect the financial performance of companies. Hence, firms having strategic cost management implementation tend to acquire greater effectiveness of operation. Thus, the hypotheses are proposed as follows:

Hypothesis 5: Strategic cost management implementation will positively relate to operational performance.

RESEARCH METHODS

Sample Selection and Data Collection Procedure

In this research, the sample was selected from transportation businesses. A mailed survey was used for data collection. The key informants in this research were accounting managers/ accounting directors. The questionnaire was sent to 197 firms. The number of valid mails was 194, with 110 responding and, among these, only 105 being usable. To detect possible response bias problems between respondents and non-respondents, a t-test comparison of the means of all variables between early and late respondents was conducted, corresponding with the test for non-response bias by Armstrong and Overton (1977). The result presents no significant difference between early and late respondents and demonstrates non-response bias between respondents and non-respondents. The late respondents represent non-respondents; therefore, non-response bias was accounted for in this research.

Questionnaire Development and Variable Measurement

Overall, all constructs in the model were measured with multiple-item scales. Each of these variables was measured by a five-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Most items were derived from the literature as follows: Top management support was evaluated via four-item scale relating executive emphasis on the action involvement, vision, and direction of high-level executives providing the impetus needed to develop and implement new techniques to provide useful information to develop strategic decision-making.

Competitive learning is measured via five-item scale, with a continuously adaptive enterprise that is concentrated on firm learning achieved through satisfying changing customer needs, understanding the dynamics of competitive forces, foreseeing increased new competitors, understanding new customers, and market requirements. Integrate resource management is accessed via the ability of firms to realize many benefits from various resource uses in order to minimize the resources of economies.

Accountant competency is measured by the degree of knowledge, skill, attitudes, coordination, knowledge sharing and competence of accountant in relation to strategic cost management that provides value of information to achieving the organization goal.

Strategic cost management implementation is measured by a process to use cost related activities achieved by analyzing and presenting cost information for developing the strategic decisions. Strategic cost management implementation used five-item.

Firm size is defined as total assets of the firm. It is a dummy variable which 0 means a firm has total assets lower than or equal 100,000,000 Baht and 1 means a firm has total assets more than 100,000,000 Baht.

Firm age refers to the period of time in business. It is a dummy variable which 0 means firm has the period of time in business lower than or equal 15 years and 1 means firm has operated for more than 15 years.

Methods

In this research, factor analysis was implemented to evaluate the underlying relationships of a large number of items, and to determine whether they can be reduced to a smaller set of factors. The factor analyses conducted were done separately for each set of the items representing a particular scale due to limited observations. With respect to the confirmatory factor analysis, this analysis has a high potential to inflate the component loadings. Thus, a higher rule-of-thumb, a cut off value of 0.40, was adopted (Nunnally and Bernstein, 1994). All factor loadings are greater than the 0.40 cut-off, and are statistically significant. The reliability of the measurements was further evaluated by Cronbach alpha coefficients. In the scale reliability, Cronbach alpha coefficients are greater than 0.70 (Nunnally and Bernstein, 1994). The scales of all assess appear to produce internally consistent results; thus, these measures are deemed appropriate for further analysis because they express an accepted validity and reliability in this study. Table: 1 below presents the results for both factor loadings and Cronbach alpha for multiple-item scales.

Table 1: results of measure validation

Items	Factor Loadings	Cronbach Alpha
Operational efficiency (OE)	0.847–0.935	0.929
Strategic Cost Management Implementation (SC)	0.815–0.922	0.910
Top Management Support (TM)	0.868–0.872	0.914
Competitive Learning (CL)	0.839–0.908	0.869
Integrate Resource Management (IR)	0.876–0.969	0.957
Accountant Competency (AC)	0.875–0.911	0.903

The ordinary least squares (OLS) regression analysis is used to test and examine the hypothesized effects of top management support, competitive learning, integrate resource management and accountant competency on strategic cost management implementation and strategic cost management implementation effects on operational efficiency. Because all dependent variables, independent variables, and control variables in this research were neither nominal data nor categorical data, OLS is an appropriate method for examining the hypothesized relationships (Aulakh, Kotabe and Teegen, 2000). With the interest to understand the relationships in this research, the research models of these relationships are depicted as follows.

$$\text{Equation 1: } SC = \alpha_1 + \beta_1 TM + \beta_2 CL + \beta_3 IR + \beta_4 AC + \beta_5 FA + \beta_6 FS + \varepsilon_1$$

$$\text{Equation 2: } OE = \alpha_2 + \beta_7 SC + \beta_8 FA + \beta_9 FS + \varepsilon_2$$

RESULTS AND DISCUSSION

In Table: 2, the descriptive statistics and correlation matrix for all variables are presented. With respect to potential problems relating to multicollinearity, variance inflation factors (VIF) were used to provide information on the extent to which non-orthogonality among independent variables inflates standard errors. The VIFs range from 1.22 to 3.49, well below the cut-off value of 10 as recommended by Neter, Wasserman and Kutner (1985), meaning the independent variables are not correlated with each other. Therefore, there were no substantial multicollinearity problems encountered in this research.

Table 2: descriptive statistics and correlation matrix

Variables	OE	SC	TM	CL	RE	AC	FA	FS
Mean	4.207	4.209	4.702	4.438	4.235	3.959	3.542	3.304
s.d.	0.604	0.611	0.413	0.550	0.722	0.654	0.747	0.606
OE								
SC	0.603***							
TM	0.544***	0.428***						
CL	0.541***	0.312***	0.762***					
RE	0.692***	0.659***	0.425***	0.339***				
AC	0.225***	0.402***	0.110	0.466***	0.338***			
FA	0.406***	0.501***	-0.186	0.281***	0.503***	0.097		
FS	0.451***	0.102	-0.406	-0.092	0.293***	-0.027	0.677***	

***p<.01, **p<.05, *p<.10, Beta coefficients with standard error in parenthesis

Table 3 shows the results of OLS regression analysis that top management support has a significant positive influence on strategic cost management implementation ($\beta_1 = 0.531$, $p < 0.01$). This result indicated that top management support is a key factor affecting on strategic cost management implementation (Chenhall (2004), Krumwiede and Suesmair (2007). Consistent with the study of Anderson (1995) found that organizational factors, such as top management support affected on strategic cost management implementation significantly. Addition, Anand (2004) provide that top management support has a significant influence on strategic cost management implementation.

Therefore, Hypothesis 1 is supported.

Table 3: results of OLS regression analysis

Independent Variables	Dependent Variable	
	EQ. 1 SC	EQ. 2 OP
TM	.531*** (.098)	
CL	-.037 (.110)	
IR	.077 (.081)	
AC	.240** (.072)	
SC		.740*** (.081)
FA	.840*** (.272)	.698*** (.330)
FS	.462*** (.279)	.649*** (.356)
Adjusted R ²	.721	.562

*p<.10, **p<.05, ***p<.01, Beta coefficients with standard errors in parenthesis.

However, Table 3 revealed the effect of competitive learning had no significant positive influence on strategic cost management implementation ($\beta_2 = -0.037$, $p > 0.10$). Although, prior study suggested that competitive learning affects financial performance from strategic cost management (Skerlavaj et al., 2007). A possible explanation is that organizations need to have adequate resources and capacity in terms of staff, time, technology and creativity to drive performance over its competitors. **Thus, Hypothesis 2 is not supported.**

Also, Table 3 presented the effect of integrate resource management as having no significant positive influence on strategic cost management implementation ($\beta_3 = 0.077$, $p > 0.10$). From the result in this research, there is a possibility of having multi-step processes of integrates resource management. For example, firms need to analyze resource requirement, allocation, and share or integrate resource usage for each department that may limit a strategic cost management implementation. **Thus, Hypothesis 3 is not supported.** Conversely, Table: 3 showed the effect of accountant competency which had a significant positive influence on strategic cost management implementation ($\beta_4 = 0.240$, $p < 0.05$). The results suggest that accountant competency is associated with successful cost management

implementation. Chenhall (2004) and Taba (2005) also found that training for accountant competency has a significant positive influence on cost management success. **Thus, Hypothesis 4 is supported.**

Moreover, the results from the study showed that strategic cost management implement had a significant positive influence on operational performance ($\beta_1 = 0.740$, $p < 0.01$). Several authors agree that strategic cost management implementation is important of operational performance, such as Chenhall (2004), Agbejule and Saarikoski (2006), Pizzini (2006), and Cadez and Guilding (2008). When examining this matter, Kee (2004) stressed that the superiority of cost management, in relation to alternative cost systems, is useful for supporting operational and strategic decisions. Likewise, the findings of Mijoc, Starcevic and Mjoc (2015) highlighted that the contemporary cost management methods affected the financial performance of companies. **Therefore, Hypothesis 5 is supported.**

The findings of this research support that the transaction cost theory describes the importance of strategic cost management implementation through which organizations systematically generate and modify their operating routines to enhance their effectiveness. Strategic cost management implementation supports improvement in decision making and improves a firm's operation through improved cost.

Furthermore, the results of this research indicate that top management support, accountant competency influence on strategic cost management implementation, and strategic cost management implication improve operational efficiency as an operational management tool. Thus, firms may emphasis application of strategic cost management implementation to gain competitive advantage. Thus, executives should enhance the useful characteristics of top management support and accountant competency that are key elements to improve strategic cost management implementation.

CONCLUSION

The prime objective of this research was to examine the influences of strategic costs management implementation impact on operational efficiency. Firstly, top management support, competitive learning, integrated resource management and accountant competency are hypothesized to direct strategic cost management implementation. Direct strategic cost management implementation is also hypothesized to direct operational efficiency. In this research, transaction cost theory is applied to establish hypotheses linking each construct in this research. Transaction cost theory is implemented to explain why transportation businesses in Thailand should recognize the importance of strategic cost management implementation. Accounting directors or accounting managers of each firm are chosen to be key informants because they are likely to have direct effect on accounting practices. Moreover, they are well suited to provide the details of strategic cost management in each firm. The results revealed that top management support and accountant competency have a significant positive impact on strategic cost management implementation which improves operational efficiency. Future research should attempt to study on other potential variables. Other methods may apply in the future such as in-depth interviews, and case studies.

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