Received: Nov 8, 2018 **Revised:** Feb 21, 2019 **Accepted:** Mar 6, 2019

STRATEGIC MANAGERIAL ACCOUNTING EFFECTIVENESS OF THE FIRMS WITHIN THAI LISTED COMPANIES: IMPACTS ON COST LEADERSHIP AND FIRM WEALTH

Nuttavong Poonpool[1], Teerawat Purateeranrath[2], Pakorn Sujchaphong[3], Parnsiri Poonpool[4]
Mahasarakham University[1,3], Surindra Rajabhat University[2], College of Asian Scholars[4]
Nuttavong.p@acc.msu.ac.th[1], teerawat.pura@gmail.com[2], pakorn.s@mbs.msu.ac.th[3], Parnsiri@cas.ac.th[4]

Abstract

The study examined the impact of strategic managerial accounting effectiveness and firm wealth, where cost leadership was taken as a mediator. The key participants in this study were Chief Executive Officers (CEOs) who worked in Thai listed companies. Of the surveys completed and returned, only 293 were usable. The ordinary least squares (OLS) regression analysis was employed to estimate parameters in hypotheses testing. The findings show that strategic managerial accounting effectiveness, which consists of lean improvement, risk management, and performance evaluation, has the significant positive effect on cost leadership ($p<0.05$). Cost leadership significantly mediates the relationship between strategic managerial accounting effectiveness and firm wealth ($p<0.1$). However, strategic managerial accounting effectiveness has the significant positive effect on firm wealth ($p<0.05$). Therefore, a key decision for managers in all levels and functions is to focus at strategic managerial accounting effectiveness that can improve and develop cost leadership's effectiveness and boost firm wealth.

Keywords: strategic managerial accounting effectiveness; cost leadership; firm wealth

บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์ เพื่อทดสอบผลกระทบของประสิทธิผลทางการบัญชีบริหารเชิงกลยุทธ์ที่มีต่อความมั่งคั่งทางธุรกิจ ภายใต้เงื่อนไขที่กำหนดให้การเป็นผู้นำทางด้านต้นทุนเป็นตัวแปรคั่นกลางสำหรับบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย โดยการเก็บรวบรวมข้อมูลจากผู้บริหารสูงสุด จำนวน 293 คน และใช้แบบสอบถามเป็นเครื่องมือ สถิติที่ใช้ในการวิเคราะห์ข้อมูล ได้แก่ การวิเคราะห์การถดถอยแบบกำลังสองน้อยที่สุด ผลการวิจัย พบว่า 1) ประสิทธิผลทางการบัญชีบริหารเชิงกลยุทธ์ที่ประกอบด้วย การปรับปรุงแบบลีน การจัดการความเสี่ยง การประเมินผลการปฏิบัติงาน มีผลกระทบเชิงบวกต่อการเป็นผู้นำทางด้านต้นทุนอย่างมีนัยสำคัญทางสถิติ ($p<0.05$) และ 2) การเป็นผู้นำทางด้านต้นทุนที่เป็นตัวแปรคั่นกลางระหว่างประสิทธิผลทางการบัญชีบริหารเชิงกลยุทธ์และความมั่งคั่งทางธุรกิจอย่างมีนัยสำคัญทางสถิติ ($p<0.1$) อย่างไรก็ตาม ประสิทธิผลทางการบัญชีบริหาร ยังคงมีผลกระทบเชิงบวกต่อความมั่งคั่งทางธุรกิจโดยตรง อย่างมีนัยสำคัญทางสถิติ ($p<0.05$) ดังนั้น การตัดสินใจของผู้บริหารทุกระดับและทุกหน้าที่ความรับผิดชอบจำเป็นต้องมุ่งเน้นประสิทธิผลทางการบัญชีบริหารเชิงกลยุทธ์ที่สามารถปรับปรุงและพัฒนาประสิทธิผลของการเป็นผู้นำทางด้านต้นทุน เพื่อส่งเสริมให้เกิดความมั่งคั่งทางธุรกิจที่เพิ่มขึ้น

คำสำคัญ: ประสิทธิผลทางการบัญชีบริหารเชิงกลยุทธ์ การเป็นผู้นำทางด้านต้นทุน ความมั่งคั่งทางธุรกิจ

Introduction

Strategic managerial accounting effectiveness refers to the learning outcome of planning and controlling the budget of a company (Appelbaum et al., 2017). Learning outcome is a key of management accounting that allows a company to predict impending expenditures to help reduce the chance of going over budget. Learning outcome is often overwhelmed by the inherent complexities associated with assessing and improving the strategic managerial accounting effectiveness. Strategic managerial accounting effectiveness development must be viewed as a continuous improvement, risk management, and performance evaluation (Ibarrondo-Dávila et al., 2015).

Lean improvement is a method for identifying opportunities for streamlining work and reducing waste. Lean improvement can be viewed as a formal practice or an informal set of guidelines. Many companies have shifted focus to more formal approaches to project and process management such as lean methodologies. These methodologies prescribe ways to identify savings opportunities and put those savings mechanisms into place. Lean improvement is in a primary focus, in addition to high customer service standards and the reduction of waste in the forms of cost, time and defects (Marius et al., 2012). Working to constantly improve is the number one way which many companies reduce operating overhead. Lean improvement helps companies streamline their workflows. Efficient workflows save time and money, allowing their employees to reduce wasted time and effort.

Risk management aims to facilitate the exchange of information and expertise across countries and across disciplines. Its purpose is to generate ideas and promote good practice for those involved in the company of managing risk. All too often, assessments of risk are crudely made and the consequences of getting things wrong can be serious, including lost opportunities, loss of company, loss of reputation and even life. This research examines both the problems and potential solutions (Otley, 2016).

Performance evaluation is annual performance review that is a key component of employee development. The performance review is intended to be a fair and balanced assessment of an employee's performance. Performance evaluation functions are the area of modeling, measurement, and evaluation of performance aspects of computing and communication systems (Deng and Zhang, 2017).

Strategic managerial accounting effectiveness includes continuous improvement, risk management, and performance evaluation can create cost leadership with a strategy that companies use to achieve competitive advantage by creating a low-cost-position among its competitors (Nuttavong Poonpool et al, 2017). In other words, it's a company's ability to maintain lower prices than its competitors by increasing productivity and efficiency, eliminating waste, or controlling costs. Cost leadership strategies and strong economic forecasts can help companies improve its market share in the economic marketplace. Companies may also be able to create a distinct competitive advantage over competitors in its company industry or sector. (Noordin et al., 2015).

Developing models for the effects of strategic managerial accounting effectiveness on firm wealth via cost leadership as a mediator is a challenge as the literature on strategic managerial accounting effectiveness is vast, varied, and evolving. Yet, there was not any systematic testing about effects of strategic managerial accounting effectiveness on firm wealth via cost leadership as a mediator within Thailand and abroad. These have motivated researches to continue to develop improved models with this research question.

Research Question

This research will offer useful guidance for measuring and implementing strategic managerial accounting effectiveness and facilitate further research in this area. The research question of this work is "how does the strategic managerial accounting effectiveness affect firm wealth via cost leadership as a mediator?"

Research Objective

The purposes of this study are to identify the effects of strategic managerial accounting effectiveness on cost leadership and to determine the impact of strategic managerial accounting effectiveness on firm wealth through cost leadership of listed companies in the Stock Exchange of Thailand.

Relevant literature review

The research model of this study is illustrated in figure 1. It shows the effects of strategic managerial accounting effectiveness includes lean improvement, risk management, and performance evaluation can create cost leadership with a strategy that companies use to achieve competitive advantage by creating a low-cost-position among its competitors (Nuttavong Poonpool et al, 2017). In other words, it's a company's ability to maintain lower prices than its competitors by increasing productivity and efficiency, eliminating waste, or controlling costs. Cost leadership strategies and strong economic forecasts can help companies improve its market share in the economic marketplace. Companies may also be able to create a distinct competitive advantage over competitors in its company industry or sector. (Noordin et al., 2015).

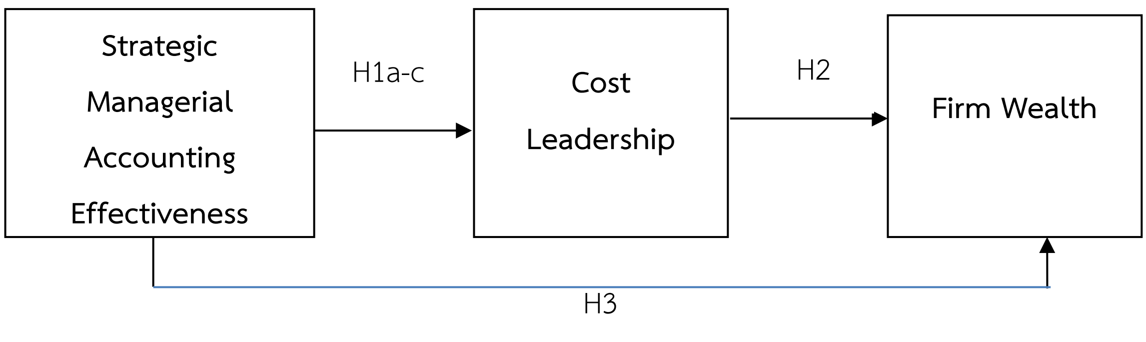

Figure 1: Strategic Managerial Accounting Effectiveness of the Firms within Thai Listed Companies: Impacts on Cost Leadership and Firm Wealth

Effects of lean improvement

Strategic managerial accounting effectiveness refers to the process of lean improvement in order to cut company expenses of a company (Ibarrondo-Dávila et al., 2015). The best companies recognize the accounting information to be highly important to lean improvement in all processes. Strategic managerial accounting effectiveness concept requires people at every level in the organization to be constantly looking for ways to increase efficiency, effectiveness, and profitability (Marius et al., 2012).

Lean improvement is management accounting continue to identify and support opportunities to improve the cost, quality, and timeliness of the information (Cipriano et al., 2017). Lean improvement includes cost management, discount rates, capacity management, just-in-time production, distribution channel management, and competitive intelligence, benchmarking, performance measurement, and managing change (Kumarasiri and Gunasekarage, 2017).

Strategic managerial accounting effectiveness considers the concept of continual improvement to be the best practice because it encourages managers and employees to find ways to cut excess costs and operations (Masquefa et al., 2017).

Thus, lean improvement has a positive relationship with cost leadership. Therefore, the following hypothesis is posited:

H1a: The higher the lean improvement of strategic managerial accounting effectiveness, the more likely that the firm achieves greater cost leadership.

Effects of risk management

Strategic managerial accounting effectiveness refers to the process of risk management in order to developing the quality of management processes; it stands out by analyzing the events that have never materialized within the organization. Risk management is a proactive process of identifying, analyzing and preparing responses to risk factors in order to mitigate risk (Arquero et al., 2017). Risk management includes avoidance of risk, risk mitigation, transfer of risk, and risk acceptance (Libby et al., 2015).

Firstly, avoidance is the easiest way for a company to manage its identified risk. Secondly, risk mitigation is managing risk through mitigation or reduction. Transfer of risk takes place by paying a premium to an insurance company in exchange for protection against substantial financial loss. And lastly, risk acceptance can also be implemented through the acceptance of risk (Otley, 2016).

Effective risk management practices are comprehensive in recognizing and evaluating all potential risks and determining the balance in an organization's risk appetite (Arquero et al., 2017). The goal of risk management is less volatility, greater predictability, fewer surprises, arguably most important, and the ability to bounce back quickly after a risk event occurs. These goals can recently build a high performance implementation (Libby et al., 2015).

Thus, risk management has a positive relationship with cost leadership. Therefore, we posit the hypothesis as follows:

H1b: The higher risk management of strategic managerial accounting effectiveness, the more likely those firms achieve greater cost leadership.

Effects of performance evaluation

Strategic managerial accounting effectiveness refers to the process of performance evaluation in order to a formal and productive procedure to perceive an employee's work and results within their job responsibilities. (Barman et al., 2017). Performance evaluation refers to annual performance review with relevant and timely information in an annual report prepared by using the strategic managerial accounting model. The performance evaluation is intended to be a fair and balanced assessment of an employee’s performance which is a key component of company development (Deng and Zhang, 2017).

Performance evaluation is a tool used to measure individual performance and to develop employees into high-performing individuals. The people are valuable resources of an organization (Luo et al., 2017). Performance is assessed from the monetary incomes yields to an employee’s organization which is more reliant on cost and benefit analysis (Ma et al., 2017).

Managers and accountants in many organizations are creating new performance measurement systems that support dramatic improvements in products, processes, and people (Su et al., 2017). These professionals understand that measurement should focus on monitoring all critical activities in an organization in order to anticipate and prepare for future decisions about cost leadership (Barman et al., 2017).

Thus, performance evaluation has a positive relationship with cost leadership. Therefore, we posit the hypothesis as follows:

H1c: The higher performance evaluation of strategic managerial accounting effectiveness seek, the more likely those firms achieve greater cost leadership.

Consequences of cost leadership

The cost leadership strategy refers to marketing of a company as the cheapest source for a good or service (Acquaah, 2013). Cost leadership is a term used when a company projects itself as the cheapest manufacturer or provider of a particular product or commodity in a competition. It is difficult to deploy the strategy because the management must constantly work on reducing cost at every level to remain competitive. A company has to produce goods which are of acceptable quality and specific to a set of customers at a price which is much lower or competitive than other companies producing the same product (Merlo et al., 2012). This means that companies need to minimize costs and pass the savings on to customers. This allows the company to sell items at low prices and to profit margins at a high volume (Panwar et al., 2016).

Thus, this research implies that a firm with high cost leadership gains high firm wealth. Hence, the following hypothesis is proposed:

H2: The cost leadership has a positive relationship with firm wealth.

Effects of strategic managerial accounting effectiveness

Strategic managerial accounting effectiveness refers to the process of lean improvement, risk management, and performance evaluation in order to build wealth of a company (Pattarasiri et al., 2018). Strategic managerial accounting effectiveness helps owners, managers and employees make decisions through an ongoing effort to improve products, services or processes, an identifying, assessing and controlling threats to an organization's capital and earnings, and an equitable measurement of an employee's contribution to the workforce, produce accurate appraisal documentation to protect both the employee and employer, and obtain a high level of quality and quantity in the work produced (Noordin et al., 2015). These are decided under quantitative and qualitative information on operational and financial performance. Therefore, strategic managerial accounting effectiveness is a tool in controlling operations for improving performance of the organization (Ibarrondo-Dávila et al., 2015).

Thus, this research implies that a firm with high strategic managerial accounting effectiveness will gain high firm wealth. Hence, the following hypothesis is proposed:

H3: Strategic managerial accounting effectiveness has a positive relationship with firm wealth.

Research methods

Sample

For this research, the sample was selected from the firms within Thai listed companies. A mailed survey was used for data collection. The questionnaire was sent to 864 firms within Thai listed companies. The key participants in this study were Chief Executive Officers (CEOs). Of the surveys completed and returned, only 293 were usable. These usable participants include 31% of industrials; 24% of agro & food industry; 21% of property & construction; 15% of consumer products; 5% of resources; 4% of technology. The effective response rate and usable was approximately 33.91% follows Asker, Kumar and Day (2001). However, the non-response bias did not appear to be a problem in the study on an overall basis.

Measure

All the variables were obtained from the survey. The independent variables include lean improvement, risk management, and performance evaluation as strategic managerial accounting effectiveness (Cipriano et al., 2017). Lean improvement includes cost management, discount rates, capacity management, just-in-time production, distribution channel management, and competitive intelligence, benchmarking, performance measurement, and managing change (Kumarasiri and Gunasekarage, 2017). Risk management is less volatility, greater predictability, fewer surprises, arguably most important, and the ability to bounce back quickly after a risk event occurs. Performance evaluation refers to annual performance review with relevant and timely information in an annual report prepared by using the strategic managerial accounting model. The performance evaluation is intended to be a fair and balanced assessment of an employee’s performance which is a key component of company development (Deng and Zhang, 2017). Therefore, strategic managerial accounting effectiveness was measured on 5-point Likert scales (i.e., 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree). Most of the scales employed have been adopted from the existing and validated scales used in the extant literature to fit the current situation. Cost leadership is about minimizing the cost to the organization of delivering products and services. Cost leadership was measured on 5-point Likert scales (i.e., 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree). It is measured by the mediator variable that deals with strategic managerial accounting effectiveness and firm wealth. The dependent variables include firm wealth encompasses three specific areas of firm outcomes, Firstly, financial performance (e.g. profits, return on assets, and return on investment). Secondly, product market performance (e.g. sales and market share); and finally, shareholder return (e.g. total shareholder return and economic value added). Firm wealth was measured on 5-point Likert scales (i.e., 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree).

In addition, the control variables are firm age and size. Firm age was measured by the number of years a firm has been in existence with a dummy variable (e.g., number of years since 1 – 10 = 1, other = 0) (Zahra, Ireland and Hitt, 2000). The firm's size was measured with the number of employees in a firm with a dummy variable (e.g., number of employees from 1 to 500 = 1, others = 0) (Arora and Fosfuri, 2003).

Method

Confirmatory factor analysis (CFA) was employed to investigate the validity of constructs. Furthermore, factor scores were used to estimate for regression analysis. This research demonstrates the results of factor loading and Cronbach's alpha coefficiencies. All factor loadings are greater than 0.6 (Hair et al., 2006) and are statistically significant. Cronbach's alpha of all variables are greater than 0.7 (Nunnally and Berstein, 1994). Overall, the results indicate the reliability and validity of these constructs.

The ordinary least squares (OLS) regression analysis was employed to estimate parameters in hypotheses testing. Three equation models are shown as follows:

Equation 1: $CL = \beta_{01} + \beta_1 LI + \beta_2 RM + \beta_3 PE + \beta_4 FA + \beta_5 FS + \varepsilon$

Equation 2: $FW = \beta_{02} + \beta_6 CL + \beta_7 FA + \beta_8 FS + \varepsilon$

Equation 3: $FW = \beta_{03} + \beta_9 SMAE + \beta_{10} FA + \beta_{11} FS + \varepsilon$

SMAE is strategic managerial accounting effectiveness; LI is lean improvement; RM is risk management; PE is Performance evaluation; CL is cost leadership; FW is firm wealth; FA is firm age and FS is firm size as measured by dummy variable; ε is error term.

Results and discussion

Table 1 shows the descriptive statistics and correlation matrix analyzed by Pearson correlation coefficiencies. Although it indicates a high correlation between independent variables, it does not have severe multicollinearity problems according to the VIFs range from 1.00 to 7.42 (Hair et al., 2006).

Table 1 Descriptive statistics and correlation matrix

Constructs	FW	LI	RM	PE	CL	FA	FS
Mean	3.56	3.57	3.47	3.65	3.62	-	-
Standard Deviation	0.55	0.59	0.58	0.59	0.66	-	-
Firm Wealth (FW)							
Lean improvement (LI)	0.59*						
Risk Management (RM)	0.72**	0.53*					
Performance Evaluation (PE)	0.50	0.27	0.27				
Cost Leadership (CL)	0.60*	0.83**	0.44	0.55*			
Firm Age (FA)	0.39	0.40	0.37	0.38	0.40		
Firm Size (FS)	0.28	0.28	0.23	0.30	0.24	0.38	

* Correlation is significant at the 0.05 level (2-tailed)

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

Impacts of strategic managerial accounting effectiveness on its consequence

Table 2 presents the results of OLS regression analysis of the relationships between strategic managerial accounting effectiveness and cost leadership. To test hypotheses 1a – 1c, this study examined the relationships between strategic managerial accounting effectiveness (i.e., lean improvement, risk management, and performance evaluation) and cost leadership. The results show that all independent variables consisting of lean improvement, risk management, and performance evaluation have a significant positive effect on cost leadership (b_1 in the narrative and the coefficient in the table 2 = .063, $p < 0.05$; b_2 = .076, $p < 0.05$; b_3 = .051, $p < 0.05$).

Hypothesis 1a is supported. Strategic managerial accounting effectiveness considers the concept of lean improvement to be the best practice because it encourages managers and employees to find ways to cut excess costs and operations (Masquefa et al., 2017) .

Hypothesis 1b is supported. Effective risk management practices are comprehensive in recognizing and evaluating all potential risks and determining the balance in an organization's risk appetite. The goal of risk management is less volatility, greater predictability, fewer surprises, arguably most important, and the ability to bounce back quickly after a risk event occurs. These goals can recently build a high performance implementation (Libby et al., 2015).

Hypothesis 1c is supported. Managers and accountants in many organizations are creating new performance measurement systems that support dramatic improvements in products, processes, and people. These professionals understand that measures should focus on monitoring all critical activities in an organization in order to anticipate and prepare for future decisions about cost leadership (Barman et al., 2017).

Table 2 Results of OLS regression analysis

Independent Variables	Dependent variable
	CL
Lean improvement (LI)	0.063**
	(0.021)
Risk Management (RM)	0.076**
	(0.062)
Performance Evaluation (PE)	0.051**
	(0.054)
Firm Age (FA)	0.033*
	(0.019)
Firm Size (FS)	0.03*
	(0.019)
Adjusted R-square	0.864

Note: Standard error is in parentheses.

** p< .05

* p< .10

Table 3 Results of OLS regression analysis

Independent Variables	Dependent variable
	FW
Cost leadership (CL)	0.061*
	(0.043)
SMAE	0.142**
	(0.163)
Firm Age (FA)	0.033
	(0.023)
Firm Size (FS)	0.021
	(0.023)
Adjusted R-square	0.506

Note: Standard error is in parentheses.

** p< .05

* p< .10

Impacts of cost leadership on its consequence

Table 3 presents the results of the relationships between cost leadership and entering into firm wealth. To test hypothesis 2, this study examined the relationship between cost leadership and firm wealth. The result shows that cost leadership has a significant positive effect on firm wealth (b_6 in the narrative and the coefficient in the table 3 = .061, $p < 0.1$). That is, hypothesis 2 is supported. The cost leadership strategy refers to marketing of a company as the cheapest source for a good or service. A company has to produce goods which are of acceptable quality and specific to a set of customers at a price which is much lower or competitive than other companies producing the same product (Merlo et al., 2012). This means that companies need to minimize costs and pass the savings on to customers. This allows the company to sell items at low prices and to profit margins at a high volume.

Impacts of strategic managerial accounting effectiveness on firm wealth

Table 3 presents the results of OLS regression analysis of the relationships between strategic managerial accounting effectiveness and firm wealth. To test hypothesis 3, this study examined the relationship between strategic managerial accounting effectiveness and firm wealth. The results show that a strategic managerial accounting effectiveness has a significant positive effect on firm wealth (b_9 in the narrative and the coefficient in the table 3 = .142, $p < 0.05$).

That is, hypothesis 3 is supported. Strategic managerial accounting effectiveness helps owners, managers and employees make decisions through an ongoing effort to improve products, services or processes, an identifying, assessing and controlling threats to an organization's capital and earnings, and an equitable measurement of an employee's contribution to the workforce, produce accurate appraisal documentation to protect both the employee and employer, and obtain a high level of quality and quantity in the work produced. These are decided under quantitative and qualitative information on operational and financial performance (Noordin et al., 2015). Therefore, strategic managerial accounting effectiveness is a tool in controlling operations for improving performance of the organization (Ibarrondo-Dávila et al., 2015).

Theoretical contributions and future directions for research

This study provides important theoretical contributions extending on prior studies by incorporating both perspectives of strategic managerial accounting effectiveness including lean improvement, risk management, and performance evaluation in the same model and links this strategic managerial accounting effectiveness to firm wealth via cost leadership as a mediator. Especially, there is significant direct positive relationship between cost leadership and firm wealth. Finally, further research should reexamine this research model in other group for more generalization.

Practical contributions

For executive managers and firms' owners, this study helps them to understand and know that strategic managerial accounting effectiveness is an important factor that motivates the firms within Thai listed companies. Especially, cost leadership is the mediator of the relationship between strategic managerial accounting effectiveness and firm wealth. Therefore, strategic managerial accounting effectiveness is the term used to describe new information management and accounting methods that attempt to create and provide a wide range of innovative costing techniques or cost management techniques, such as attribute costing; life cycle costing; quality costing; target Costing; and activity-based costing management (ABCM). Consequently the information leads to the identification of ways in which customers may be made more profitable, information claimed to enable businesses pursue the quest for superior performance.

Conclusion

This study investigates the effects of Lean improvement, risk management, and performance evaluation on firm wealth via cost leadership as a mediator. The data were collected from 293 Chief Executive Officers (CEOs) who worked in Thai listed companies. The findings show that lean improvement, risk management, and performance evaluation have the most powerful effects on cost leadership. Furthermore, the relationship between strategic managerial accounting effectiveness and firm wealth is mediated by cost leadership in this empirical research. Interestingly, there is a direct positive relationship between strategic managerial accounting effectiveness and firm wealth.

References

Acquaah, M. (2013). Management control systems, business strategy and performance: A comparative analysis of family and non-family businesses in a transition economy in sub-Saharan Africa. *Journal of Family Business Strategy*. 4(2): 131-146.

Appelbaum, D. et al. (2017). Impact of business analytics and enterprise systems on managerial accounting. *International Journal of Accounting Information Systems*. 25: 29-44.

Arquero, J. et al. (2017). Relationships between communication apprehension, ambiguity tolerance and learning styles in accounting students. *Revista de Contabilidad*. 20(1): 13-24.

Arora, A. and A. Fosfuri. (2003). Licensing the market for technology. *Journal of Economic Behavior & Organization*. 1522, 1-19.

Asker, A. et al. (2001) Marketing Research. New York: John Wiley and Sons.

Barman, M. et al. (2017). Performance and impact evaluation of solar home lighting systems on the rural livelihood in Assam, India. *Energy for Sustainable Development*. 38: 10-20.

Cipriano, X. and G. Gamboa, et al. (2017). Developing indicators to improve energy action plans in municipalities: An accounting framework based on the fund-flow model. Sustainable Cities and Society. 32: 263-276.

Deng, F. and L.-Y. Zhang (2017). Elimination of policy conflict to improve the PDP evaluation performance. *Journal of Network and Computer Applications*. 80: 45-57.

Ibarrondo-Dávila, M. et., al. (2015). Managerial accounting for safety management. The case of a Spanish construction company. *Safety Science*. 79: 116-125.

Hair, J. et al. (2006). Multivariate data analysis. New Jersey: Pearson Educations, Inc.

Kumarasiri, J. and A. Gunasekarage (2017). Risk regulation, community pressure and the use of management accounting in managing climate change risk: Australian evidence. *The British Accounting Review*. 49(1): 25-38.

Libby, R. et al. (2015). Regulation and the interdependent roles of managers, auditors, and directors in earnings management and accounting choice. *Accounting, Organizations and Society*. 47: 25-42.

Luo, X. et al. (2017). Performance evaluation of an agent-based occupancy simulation model. *Building and Environment*. 115: 42-53.

Ma, L. et al. (2017). Economic performance evaluation of process system design flexibility options under uncertainty: The case of hydrogen production plants with integrated membrane technology and CO2 capture. *Computers & Chemical Engineering*. 99: 214-229.

Marius, C. et al. (2012). Managerial Accounting – a Source of Information for an Efficient Management in SME. *Procedia - Social and Behavioral Sciences*. 62: 521-525.

Masquefa, B. et al. (2017). Developing appreciation of micro-organizational processes of accounting change and indicating pathways to more ‘Enabling Accounting’ in a micro-organizational domain of research and development. *Critical Perspectives on Accounting*. 44: 59-82.

Merlo, O. et al. (2012). Marketing's reputation and influence in the firm. *Journal of Business Research*. 65(3): 446-452.

Noordin, R. et al. (2015). Performance Outcomes of Strategic Management Accounting Information Usage in Malaysia: Insights from Electrical and Electronics Companies. *Procedia Economics and Finance*. 31: 13-25.

Nuttavong Poonpool et., al (2017) Impact of internal control success on invester confidence of listed companies in the stock exchange of thailand (set). *RMUTT Global Business and Economics Review*. 12 (1), 43.

Otley, D. (2016). The contingency theory of management accounting and control: 1980–2014. *Management Accounting Research*. 31: 45-62.

Panwar, R. et al. (2016). The effect of small firms' competitive strategies on their community and environmental engagement. *Journal of Cleaner Production*. 129: 578-585.

Pattarasiri Thiptanamanee. et al. (2018). The effects of antecedents on modern human resource accounting implementation: empirical study of information and communication technology firms in thailand. *Journal of Thonburi University*. 12 (29), 19-29.

Su, S. et al. (2017). China’s megaregion policy: Performance evaluation framework, empirical findings and implications for spatial polycentric governance. Land Use Policy. 63: 1-19.

Zahra, S.A. et al. (2000). “Privatization and entrepreneurial transformation: Emerging issues and a future research agenda.” *Academy of Management Review*, 25 (3), 509–24.