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Factors Influencing the Application of Strategic Management Accounting: A Study of Manufacturing Enterprises in Hanoi

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ABSTRACT: Strategic management accounting (SMA) information helps managers determine the strategy and strategic position of the business. At the same time, SMA helps managers see and re-evaluate problems so that they can draw on their experiences and lessons for decision-making and control. Currently, manufacturing enterprises in Hanoi are aware of the important role of strategic management accounting information, but the level of application of strategic management accounting techniques is low. This article aims to evaluate the factors affecting the application of strategic management accounting in manufacturing enterprises in Hanoi, thereby making recommendations for these enterprises to increase the use of strategic management accounting information to help business managers make business decisions.

KEYWORDS: Strategic management accounting, factors, Hanoi.

1. INTRODUCTION

Stemming from the characteristics of information as well as information needs for strategic management, it is easy to see the breakthrough role in providing information for each technique through the content of each SMA technique. Each technique focuses on the core problem, forming a set of main issues to be able to obtain a reliable source of information to support the administrator in the process of performing the functions in each stage of strategic management. SMA information helps managers determine the strategy and strategic position of the business because the related techniques take into account external factors such as the competitive environment (Simmond, 1981). Simultaneously identify risks so that managers can have mitigation plans or action plans, and at the same time allow businesses to monitor the progress of strategy implementation (Roslender and Hart, 2003). SMA information helps managers have a basis for planning. Planning is considered a core function, helping managers analyze and forecast key issues and limit possible risks with the least damage. Therefore, information from SMA techniques provides clear information for each object that managers need to plan, whether for short-term or long-term planning. Strategic management accounting information helps managers make decisions. Every day, managers make many different decisions. For example, which investment option should choose? What property should buy? How should the product change? Selling at what price to be competitive, or what strategy is needed to maintain a position or increase market share? These decisions all require specific amounts of information, tailored to each situation. SMA information helps managers perform reviews. This is the last step of the administrator after making a decision and implementing it, helping the administrator to see and re-evaluate the problem, so that the administrator will draw experiences and lessons for decision-making and control. This article aims to evaluate the factors affecting the application of strategic management accounting in manufacturing enterprises in Hanoi, thereby making recommendations for these enterprises to increase the use of strategic management accounting information to help business managers make business decisions.

2. LITERATURE REVIEW

Up until now, there have been many studies focusing on explaining the causes and effects of factors on the application of SMA in enterprises. Prominent in these works are the studies of Piere and Odea (1998), Joshi (2001), Szychta (2002), Sulaiman et al. (2004), and Doan Ngoc Phi Anh (2012). Most of the studies on the factors affecting the application of SMA in enterprises are based on random theory to determine the influencing factors. However, the factors affecting each study are not exactly the same.

The first is competition, or the degree of competition in the market, which is the factor most studies are interested in. Research by authors Kaplan (1991), Sulaiman et al. (2004), Doan Ngoc Phi Anh (2012), and Kariuki (2016) all show that the level of use of the

SMA technique is proportional to the level of competition in the enterprise. This means that when competition is increasing, businesses need information to serve corporate governance and help managers make more effective decisions.

The second factor in many studies is firm size. The research works of the authors Pierce and O'Dea (1998) and Abbler et al. (2008) all consider size as a factor that affects the application of SMA techniques in enterprises. Large enterprises often have more management information needs as well as financial resources to apply modern management accounting techniques such as SMA. In Western countries, the use of the ABC method is often associated with firm size (Chenhall and Langfield Smith, 1998), and large firms often value cost information more (Hoque, 2000). Research results by Piere and ODea (1998) also show that large-scale enterprises have a higher status in applying management accounting techniques than small-sized enterprises, especially technical methods related to control and evaluation. However, the level of influence of firm size on the application of the SMA technique also has exceptions in some studies. Research by Lollanen (2010) suggests that the size of medium and large enterprises is not the main factor affecting the application of modern SMA in manufacturing enterprises in Canada. Similarly, the study of Van Triest and Eslshat (2007) also found no relationship between firm size and the characteristics of the cost accounting system.

The third factor mentioned by the studies is corporate strategy. Guilding (2002), in a research study on an exploratory investigation of SMA's integrated contingency model, surveying 500 large Slovenian enterprises, found four factors affecting the use of SMA in enterprises. It is corporate strategy, deliberate corporate strategy formulation, market orientation and business size. Mohamad et al (2014) studied the factors affecting the use of SMA in the Malaysian government's affiliated companies, providing a research model consisting of two variables, firm strategy and technical information level in the enterprise. The research results show that both of these factors have a positive influence on the use of SMA techniques in enterprises.

Besides the factors affecting the application of SMA mentioned in most of the overseas studies, such as level of competition, enterprise size, and business strategy, there are a number of studies that make comments about other factors. For example, James (2013) studies the influence of factors on the application of activity-based costing in Jamaican financial companies. The research results show three factors that have an important influence on the application of this costing technique: awareness of the ABC method's ability to control costs, the overall cost ratio in total costs, and competitors' actions in ABC adoption.

In Vietnam, the most prominent research work of author Doan Ngoc Phi Anh (2012), research on factors affecting the application of strategic management accounting in Vietnamese enterprises, was conducted based on a survey of 220 medium and large enterprises in the entire territory of Vietnam. Doan Ngoc Phi Anh (2012) studied the factors affecting the application of SMA in Vietnamese enterprises, giving three factors: the level of use of SMA is proportional to the level of competition of enterprises; the level of use of SMA is proportional to management decentralization; and business performance is proportional to SMA usage. However, this study has not addressed the perception of usefulness, ease of use, or the influence of socio-environmental conditions on the use of SMA techniques. For the purpose of analyzing factors affecting the application of SMA in manufacturing enterprises in Hanoi, the author proposes a research model of influencing factors based on the TAM model. TAM theory asserts that perceived usefulness, perceived ease of use, and environmental influences are fundamental determinants of technology adoption and use.

3. RESEARCH METHOD

Implementation process

Step 1: We build a questionnaire on Google Forms, send it to accountants and business managers via email using a convenient sampling method, and send it to friends, relatives, and partners. …

Step 2: The number of survey questionnaires distributed was 150, sent to 150 enterprises, and the number of votes collected was 128 from 128 enterprises, reaching 85.3%. All receipts met the required information requirements.

Step 3: We analyzed the data on SPSS 22 software with the following tools: checking the reliability of the scale using Cronbach's alpha; EFA exploratory factor analysis; correlation analysis; and regression analysis.

Research scale

Inheriting from previous theoretical studies, the proposed hypotheses:

Hypothesis 1 (H1): Recognizing the usefulness of SMA will have a positive influence on the application of SMA in manufacturing enterprises in Hanoi.

Usefulness is defined as the degree to which accountants and managers believe that using the SMA will make their work more efficient (Davis, 1989). Perceived usefulness describes the extent to which individuals believe that SMA is appropriate for their job requirements. Perceived usefulness has a positive influence on intention to use (Lin et al., 2005; Tang and Chiang, 2009) from the accountant's and managers' point of view on SMA (Davis, 1993; Yu et al., 2012).

Hypothesis 2 (H2): Awareness of the ease of use of SMA will have a positive influence on the application of SMA in manufacturing enterprises in Hanoi.

Perceived ease of use is the degree to which a person believes that using a technology or technique will not be difficult. Perceived ease of use is a construct associated with an individual's assessment of the effort involved in using the system. While potential users may believe that a technology will be useful, they may also believe that the technology will be too difficult to use. Davis (1989) suggested that perceived use may be superior to ease of use. According to Venkatesh et al. (2003), perceived ease of use stems from the perceived ease of use proposed in the TAM technology adoption model. Davis (1989) shows that an application that is perceived as easy to use by individuals is likely to be accepted. Perceived ease of use is determined by the ease of interacting with the system.

Hypothesis 3 (H3): Environmental influences encourage the use of SMA in manufacturing enterprises in Hanoi.

Environmental impact is defined as the degree to which an individual perceives that those important to them believe they should adopt a new technology or technique (Venkatesh et al., 2003). Social influence describes how individuals perceive that those who are important to them will support the adoption of technology. Taylor (2004) argues that when users actually use a new system, their expectations come from their direct experience and are less influenced by others. The intention to apply SMA is influenced by close friends, by people who influence the user's work, by accounting professionals (Singh et al., 2010), and by managers in the business themselves. Managers are people who directly use information from SMA to make decisions, so their need to use information has an important influence on the application of SMA in enterprises.

Specific measures in the factor research model:

"Perceived usefulness" is measured by 5 scales: Useful in providing information to managers at all levels; Increase efficiency in business decision-making; Helpful in understanding competitors; Helpful in customer reviews; Necessary and appropriate for the business.

“Perceived ease of use” is measured by 2 scales: Understanding SMA is not difficult; Easy to use SMA

“Environmental influence” is measured by 3 scales: Partners, customers and suppliers suggest that strategic management accounting should be applied in making business decisions; Managers intimately apply strategic management accounting in making business decisions that affect decision making; An experienced administrator advises.

Apply the 5-point Likert scale: 1- Strongly disagree; 2 - Disagree, 3 - Normal, 4 - Agree, 5- Strongly Agree.

Table 1. Scale description table

No	Factor	Code	No. Variables
1	Perceived usefulness	HU	5
2	Perceived ease of use	SD	2
3	Environmental influence	MT	3

4. RESULTS

4.1. Evaluate the reliability of the scale

Table 2. Reliability Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Cronbach's Alpha = .729				
HU1	16.77	2.712	.595	.647
HU2	16.59	2.716	.472	.690
HU3	16.70	2.576	.585	.645
HU4	16.48	2.787	.493	.725
HU5	16.71	2.916	.430	.705
Cronbach's Alpha = .719				
SD1	4.02	.456	.562	.
SD2	3.88	.419	.562	.

Cronbach's Alpha =.707				
MT1	7.87	1.407	.432	.499
MT2	8.12	.970	.467	.440
MT3	7.88	1.370	.475	.563

The analysis results of the group of perceived usefulness factors show that the Cronbach's Alpha coefficient of the scale is 0.729 > 0.6, the correlation coefficients of the total variables of the observed variables in the scale are all greater than 0.3, and no the case of removing any observed variable can make the Cronbach's Alpha of this scale greater than 0.729. Therefore, all observed variables are accepted and will be used in the next factor analysis.

The analysis results of perceived usefulness group show that the Cronbach's Alpha coefficient of the scale is 0.719 > 0.6, the correlation coefficients of the total variables of the observed variables in the scale are all greater than 0.3 and not Is there any case where removing the observed variable can make the Cronbach's Alpha of this scale greater than 0.719. This proves that the variables are reliable enough in terms of coherence for the assessment of factors affecting the application of SMA.

The analysis results of the group environmental influence factors show that the Cronbach's Alpha coefficient of the scale is 0.707 > 0.6, the correlation coefficients of the total variables of the observed variables in the scale are all greater than 0.3 and There is no case where the removal of the observed variable can make the Cronbach's Alpha of this scale greater than 0.707. This proves that the variables are reliable enough in terms of coherence for the assessment of factors affecting the application of SMA.

4.2. Exploratory factor analysis

The coefficient KMO = 0.786>0.05 shows that the study has enough observed variables to constitute a factor. The significance level Sig.=0.000<0.05% shows that the Bartlett test is statistically significant and shows that the analysis of factors is appropriate.

Table 3. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.786
Bartlett's Test of Sphericity	Approx. Chi-Square	303.827
	df	45
	Sig.	.000

Table 4. Rotated Component Matrix[a]

	Component		
	1	2	3
HU1	.786		
HU2	.520		
HU3	.779		
HU4	.680		
SD1			.826
SD2			.835
MT1		.629	
MT2		.838	
MT3		.587	

The results show that 9 observed variables all have factor loading coefficients larger than the standard (0.50) and 1 variable has factor loading coefficients smaller than the standard, so in case of 1 variable being eliminated: Necessary and suitable for business (HU5). Thus, the group of factors affecting the application of SMA in manufacturing enterprises in Hanoi city consists of 3 groups with 9 variables, namely: useful group, easy to use group and environmental influence group. The usefulness group consists of four variables: useful in providing information, effective in decision-making, useful in understanding competitors, and useful in evaluating customers. The ease-of-use group consists of two variables: the uncomplicated SMA and the easy-to-use SMA. The environmental impact group consists of 3 variables: used by partners, customers, suppliers, close managers, and recommended by experienced administrators.

4.3. Multivariate regression analysis

Table 5. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.664[a]	.441	.431	.37984

The coefficient R2 = 0.441 shows that the usefulness, ease of use, and environmental influence can explain 44.1% of the total impact of factors on the intention to apply SMA in manufacturing enterprises area of Hanoi.

Hypothesis testing about the overall fit of the model, value F=46,158 with sig.=000 < 5%. Prove that the R squared of the population is not 0. It means that the built linear regression model is suitable for the population.

Table 6. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.319	3	6.660	46.158	.000[b]
	Residual	16.881	124	.144		
	Total	30.200	127			

Table 7. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.594	.368		1.612	.110		
	HU	.528	.096	.434	5.507	.000	.768	1.302
	SD	.226	.065	.354	4.14	.000	.768	1.302
	MT	.329	.078	.335	4.247	.000	.768	1.302

The analysis results show that the values in column Sig. <5% shows that all three independent variables have a statistically significant impact on the dependent variable. The relationship between the variables is shown by the following equation:

VD = 0.594 + 0,528 * HU + 0,226 * SD + 0,329 * MT

5. CONCLUSION

The regression results support the following hypotheses: Useful; Ease of use, environmental influence all have positive and statistically significant relationships to the intention to apply SMA in manufacturing enterprises in Hanoi. The usefulness affects the intention to apply the SMA with a coefficient of 0.528, while the ease of use and the influence of the environment are lower with the coefficients of 0.226 and 0.329, respectively. Therefore, in order to increase the use of SMA in manufacturing enterprises in Hanoi, each enterprise needs to:

First, focus on factors with a high degree of agreement, including elements in the group of usefulness factors. Raise awareness of the usefulness of using SMA. The managers themselves need to learn and be propagated to realize that SMA is useful in providing information to managers, SMA increases the efficiency of management work, and SMA is necessary and suitable for enterprises. At that time, the intention to apply SMA to manufacturing enterprises in Hanoi will increase significantly.

Second, improve the ease of use and environmental impact of using the SMA. Business administrators and corporate management accounting departments need to learn about SMA. When there is a certain understanding of SMA, managers of manufacturing enterprises in Hanoi will find it easy to apply SMA to provide information. Besides, in order to improve the intention to apply SMA,

business managers and management accounting departments of manufacturing enterprises in Hanoi should be consulted and communicated about the usefulness and ease of use of SMA through seminars and through talks by experts, good managers, and friends in the industry who have been successfully applying SMA to provide information to managers.

Thus, when managers of manufacturing enterprises in Hanoi have access to information about SMA, let them realize that SMA is useful, learning SMA is not difficult, applying SMA is easy, management accounting friends are using SMA successfully, and recommending them to use SMA will enhance their intention to apply SMA in business.

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