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The Application of Strategic Management Accounting: Evidence from the Consumer Goods Industry in Vietnam*

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Abstract

This article analyzes factors affecting the application of strategic management accounting in different enterprises in Vietnam's consumer goods industry, providing more empirical evidence on factors affecting the application of strategic management accounting. The research method used a questionnaire survey of managers at all levels, chief accountants, and accountants from 72 consumer goods enterprises in Vietnam. The survey results collected 290 questionnaires, however, due to invalid questionnaires with many blank cells, 284 questionnaires were finally selected. Quantitative research was carried out with SPSS 25 software. Research results show that 6 factors have a positive influence on the application of strategic management accounting including awareness of the business market, business strategy, technology, corporate culture, qualification of management accountants, decentralization of management, in which technology has the strongest influence on the application of strategic management accounting in consumer goods enterprises in Vietnam. The standardized Beta coefficient extracted from the multiple linear regression equation reveals that the technology factor has a high standardized Beta coefficient (0.176) compared to other factors. Based on the research results, the author has proposed recommendations to improve the ability of consumer goods businesses to successfully apply strategic management accounting techniques, thereby contributing to improving competitiveness and performance of consumer goods enterprises.

Keywords: Strategic Management Accounting, Consumer Goods Industry, Vietnam

JEL Classification Code: M40, M41

1. Introduction

In the highly competitive and integrated market, strategic management accounting is considered by many scholars as the intersection between accounting and strategic management. The definition of strategic management accounting was first introduced by Simmonds (1981), later, many scholars continue to develop the definition of Strategic Management accounting such as by Bromwich (1990), Langfield-Smith (2008), and Ma et al. (2009). However, up to this point, there is no universal and unified definition of strategic management accounting. This is because each scholar relies on different personal points of view when defining strategic management accounting. However, in all these definitions, three things in common: they are all oriented to the environment outside the entity when making decisions based on all financial and non-financial data, and they are all long-term oriented.

The consumer goods industry is an industry with impressive growth in recent years. In the first 6 months of 2020, Vietnam's economy under the impact of the COVID-19 epidemic slowed down industry growth, many businesses went bankrupt, workers lost their jobs and social distancing made businesses struggle to maintain their operations and forced them to look for new development options. In the last 6 months of 2020, when the economy gradually recovered, sales of consumer goods and the consumer price index stabilized. Consumer behavior is changing, with greater interest in health foods, price sensitivity, evolving online

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shopping tendencies, and the FMCG business expanding into the countryside.

The consumer industry has many potentials and advantages to develop and grow stronger. The pressure on businesses to compete for domestic and international markets is increasing all the time, shortening product life cycles and increasing buyer demand for high-quality goods. The main cause of this competitive pressure is economic integration along with the explosion of science and technology 4.0. During this period, the goal of sustainable development and enhancing operational performance is always a priority for organizations. Therefore, enterprises in the consumer goods industry in Vietnam need to strengthen control tools, including strategic management accounting - an effective tool for management.

Strategic management accounting is an important tool to help business managers towards sustainable development goals. This study aims to examine factors that influence the successful implementation of strategic management accounting in enterprises in the consumer goods industry in Vietnam, thereby providing some recommendations for businesses to implement strategic management accounting.

2. Literature Review and Hypotheses

Erserim (2012) investigated relationships among organizational culture, firm characteristics, the perceived environment of firms, and the usage levels of management accounting practices. In this study, organization culture, firm characteristics, and perceived external environment of firms are considered as independent variables, and the usage of management accounting practices is considered as a dependent variable. A firm's characteristics are operationalized by using the firm's size, age, formalization, and centralization. The perceived external environment is operationalized by dealing with perceived environmental uncertainty and competitive intensify. The study argued that how organizational and environmental variables affect the usage level of management accounting practices.

Kamilah (2002) investigated factors that affect the use of management accounting practices (MAPs) in Malaysian medium-sized firms in the manufacturing sector. A quantitative research design involving the use of a postal questionnaire was carried out to investigate the influences of key contingent factors on MAPs. The survey was conducted on 500 Malaysian medium-sized firms in the manufacturing sector which elicited 110 useable responses. The results indicated that the size of the firm, the intensity of market competition, the commitment of the owner/manager of the firm, and advanced manufacturing technology have significant influences on the use of certain MAPs. Thus the research provided support for a contingency-based explanation for the use of MAPs and identifies new variables such as the commitment of owner/manager as one of the key factors that affect the extent of use of MAPs in smaller firms.

McChlery et al. (2005) focused upon the role, function, and scope of the financial management systems operating in the small business sector of the economy. The research sought to understand why in certain firms' robust financial systems exist whereas in others they are seen to be weak. To this end, the role of the accounting profession as it affects financial management systems was investigated. The study produced some interesting results. Bookkeeping systems adopted for financial accounting scored positively which may well be linked to the high preponderance of integrated computer systems adopted by firms. Management accounting systems did not score as well as financial accounting overall. Whilst smaller businesses were most likely to be dissatisfied with their management accounting systems, long-established firms were as likely to be dissatisfied with their financial and management accounting systems as more recently established entities.

Ismail and King (2007) sought to identify different levels of alignment and then investigated the factors that influenced alignment. In particular, it focused on the alignment between the requirements for accounting information (AIS requirements) and the capacity of accounting systems (AIS capacity) to generate the information, in the specific context of manufacturing SMEs in Malaysia. Using a mail questionnaire, data from 214 firms was collected on nineteen accounting information characteristics for both requirements and capacity. The fit between these two sets was explored using the moderation approach and evidence was gained that AIS alignment in some firms was high. Cluster analysis was used to find two sets of groups that could be considered more aligned and less aligned. The study then investigated some factors that might be associated with a small firm's level of AIS alignment. Findings from the study suggested that AIS alignment was related to the firm's: level of IT maturity; level of owner/manager's accounting and IT knowledge; use of expertise from government agencies and accounting firms; and the existence of internal IT staff.

Ahmad (2012) provided empirical evidence on the application of a wide range of management accounting practices in Malaysian SMEs in the manufacturing sector. Data was collected from a postal survey by distributing questionnaires to 160 managers and accountants. The research results showed that traditional management accounting methods (MAPs) such as traditional budgeting, costing, and financial efficiency measures are widely used by enterprises in this country. The results showed that a significant number of firms have adopted one or more financial and non-financial measures, but their dependence on financial measures is greater than on non-financial measures.

In addition, there are many other empirical studies studying the factors affecting the implementation of strategic

management accounting (Cravens & Guilding 2001; Cadez & Guilding, 2007; Chenhall, 2008; Tuan Mat et al., 2010; Fuadah et al., 2020).

Anh (2012) surveyed 220 medium and large-sized enterprises in Vietnam. Using quantitative research methods, evaluating SEM, the article shows that there is evidence of a positive positive influence of competition and management decentralization on the implementation of strategic management accounting. The results indicated that competitiveness and managerial decentralization are two major factors that profoundly affect the application of strategic management accounting (SMA) in Vietnam and that SMA devices can help improve the business performance financially and non-financially. Therefore, the author also recommends that the company should organize operations under decentralized management to promote greater use of strategic management accounting.

Pham et al. (2018) attempted to assess the level of management accounting practices (MAPs) in manufacturing companies in Vietnam. They also explored the impact of potential contingency factors on the current level of MAPs in the sample of studied companies from the industrial sector in Vietnam. The study examined the hypotheses that MAPs in Vietnamese manufacturing firms are affected by a range of contingent variables. Quantitative research was conducted by sending questionnaires to the target respondents that comprise both accountants and managers in 160 manufacturing enterprises in the north of Vietnam. The first main findings from the study revealed that MAPs in Vietnam are mainly traditional rather than contemporary ones, and oriented toward the short-term rather than the long-term. The second main research findings resulted from the multiple regression model shows that MAPs in Vietnam are significantly affected by company size, the commitment of directors, advanced manufacturing technology, and a distinct number of products. However, no significant associations are found between MAPs and the intensity of competition from the emerging market as hypothesized in this study. Research findings were based on recommendations to promote the application of contemporary practices and enhance management accounting functions in manufacturing companies in Vietnam.

In addition, there are many other empirical studies studying the factors affecting the implementation of strategic management accounting in Vietnam such as Nguyen and Le (2020) and Pham et al. (2020).

For assessing the impact of the above-described factors on accounting strategic management in FMCG businesses in Vietnam, the researchers used 6 hypotheses as follows:

H1: *Business market perception has a positive relationship with strategic management accounting in consumer goods businesses.*

H2: *Business strategy has a positive relationship with strategic management accounting strategy in consumer goods enterprises.*

H3: *Technology has a positive relationship with strategic management accounting in consumer goods enterprises.*

H4: *Corporate culture has a positive relationship with strategic management accounting in consumer goods enterprises.*

H5: *The level of management accountants has a positive relationship with accounting strategic management in consumer goods enterprises.*

H6: *Management decentralization has a positive relationship with strategic management accounting in consumer goods enterprises.*

3. Research Methods

The research method used includes a survey (through a questionnaire) of businesses in the consumer goods industry to assess the factors affecting the implementation of strategic management accounting. Implementation of strategic management accounting, Business market awareness, Business strategy, Technology, Corporate culture, Qualification of management accountants, Management hierarchy are measured on a five-level Likert scale with levels - Very good, good, average, not good, and weak. The 5-level Likert scale is used in many studies, so the author also quantifies each factor according to five levels. Quantitative research was carried out with the software SPSS 25.

The scope of the research is all businesses in the consumer goods industry. Research data is collected in the form of face-to-face interviews and email interviews with managers and employees working in different positions, managers at all levels, chief accountants and accountants, of 72 consumer goods enterprises. The survey results collected 290 questionnaires. After eliminating the invalid questionnaires due to many blank cells, the author chose to use 284 questionnaires.

From the research overview, the proposed research model is as follows:

$$\text{SMA} = \beta_1 + \beta_2 \times \text{PEU} + \beta_3 \times \text{OS} + \beta_4 \times \text{TE} + \beta_5 \times \text{CU} + \beta_6 \times \text{HQ} + \beta_7 \times \text{MH} + E$$

4. Results

4.1. Testing the Scale

The results of evaluating the reliability of the scale by Cronbach's Alpha show that the scales have reliability greater than 0.6 and the correlation coefficient of the total variable is greater than 0.3. All scales satisfy the conditions

for EFA exploratory factor analysis. The reliability of the scales is summed up in Table 1 below.

4.2. Exploratory Factor Analysis

Factor analysis was performed with Principle Component extraction, Varimax rotation for the dependent observed variable. The results show that the coefficient KMO = 0.853 (condition > 0.5); significance level and Bartlett test = 0.000 (condition < 0.05), which shows that EFA analysis is appropriate. The total variance extracted is 62,443 % > 50%, and factor loading factors are all greater than 0.5, so they are satisfactory. The official scale after EFA processing includes 23 observed variables (Table 2).

4.3. Regression Results

In Table 3, adjusted *R* squared reflects the influence of the independent variables on the variation of the dependent variable - in this case, 6 factors (awareness of the business market, business strategy, technology, corporate culture, qualifications of management accountants, management hierarchy) influence 61.3% of the variation in the implementation of strategic management accounting in consumer goods enterprises. The Durbin-Watson coefficient is 1.833, which is between 1.5 to 2.5, so there is no first-order sequence autocorrelation.

To check if the regression model is consistent with data sets collected and has a meaningful application or not, the authors test the suitability of the model through accreditation ANOVA as follows (Table 4).

Sig test $F = 0.000 < 0.05$, so the regression model evaluates the influence of 6 factors (Awareness about the business market, business strategy, technology, corporate culture, qualification of management accountants, management hierarchy) on the ability to implement strategic management accounting in consumer goods enterprises.

The model's *F*-statistic has a Sig value. = 0.000 < 0.05 shows that the model fits the data set and can be generalized. VIF coefficients are all less than 2, so there is no multicollinearity between components that do not appear in the research model.

Regression results showing the influence of 6 factors on strategic management accounting of consumer goods enterprises are shown in Table 5.

Regression results show that:

VIF coefficients are all < 2: no multicollinearity occurs.

The sig test value for each independent variable < 0.05: all variables are significant in the model.

The regression model is written as follows:

$$SMA = 0.396 + 0.143PEU + 0.019OS + 0.176TECH + 0.032CULT + 0.158MH + 0.051HQ + E$$

From the chart in Figure 1, we see a normal distribution curve is superimposed on the histogram. This curve is bell-shaped, which is consistent with the graph of the normal distribution. Mean is close to 0, the standard deviation is 0.989 which is close to 1, so the distribution is approximately normal, and the assumption of normal distribution of residuals is not violated.

The Scatter Plot chart in Figure 2 between normalized residuals and normalized prediction values helps us to detect whether existing data violates linear association assumption count or not. As a result of the output graph, the distribution points of the residuals fluctuate around the zero coordinate lines and do not scatter too far.

5. Discussion and Recommendations

Based on the results of quantitative research on factors affecting strategic management accounting of consumer goods enterprises, the following conclusions can be drawn:

Table 1: Scale Test Results

No	Variable Name	Symbol	Number of Observed Variables	Cronbach's Alpha	Smallest Total Variable Correlation Coefficient
1	Implementation of strategic management accounting	SMA	4	0.818	0.602
2	Awareness of the business market business	PEU	5	0.825	0.527
3	Business strategy	OS	5	0.698	0.368
4	Technology	TECH	4	0.796	0.533
5	Corporate culture	CULT	3	0.706	0.409
6	Qualification of management accountant	HQ	3	0.689	0.420
7	Management hierarchy	MH	3	0.886	0.780

Table 2: Results of EFA Analysis

	Factor					
	1	**2**	**3**	**4**	**5**	**6**
PEU2	0.773					
PEU4	0.742					
PEU3	0.735					
PEU5	0.627					
PEU1	0.610					
MH3		0.889				
MH2		0.888				
MH1		0.855				
TECH2			0.789			
TECH4			0.667			
TECH1			0.618			
TECH3			0.594			
OS5				0.728		
OS2				0.724		
OS1				0.675		
OS3				0.662		
OS4				0.524		
HQ2					0.789	
HQ1					0.787	
HQ3					0.543	
CULT3						0.756
CULT1						0.712
CULT2						0.699

Table 3: Statistical Results of Factors

Model Summary					
Model	***R***	***R* Squared**	***R* Squared**	**Estimated Error of Standard Deviation**	**Durbin Coefficient-Watso**
1	0.788[a]	0.622	0.613	0.52597	1.833

[a]Predictors: (Constant), HQ, MH, OS, CULT, PEU, TECH; [b]Dependent Variable: The SMA.

Table 4: Suitability Test (ANOVA)

Model		**Sum of Squares**	***df***	**Mean Square**	***F***	**Sig.**
1	Regression	125.847	6	20.975	75.817	0.000[b]
	Residual	76.631	277	0.277		
	Total	202.478	283			

[a]Dependent Variable: SMA; [b]Predictors: (Constant), HQ, MH, OS, CULT, PEU, TECH.

Table 5: Regression Results of Multiple

Coefficients								
Model Unnormalized		Unstandardized Coefficients		Standardized Coefficients	*t*	Sig.	Multicollinear Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.396	0.293		1.350	0.003		
	PEU	0.168	0.058	0.143	2.885	0.004	0.556	1.798
	OS	0.029	0.058	0.019	0.506	0.004	0.938	1.066
	TECH	0.149	0.057	0.176	2.387	0.000	0.534	1.871
	CULT	0.036	0.050	0.032	0.710	0.000	0.674	1.484
	MH	0.133	0.034	0.158	3.900	0.000	0.836	1.196
	HQ	0.073	0.062	0.051	1.186	0.002	0.749	1.335

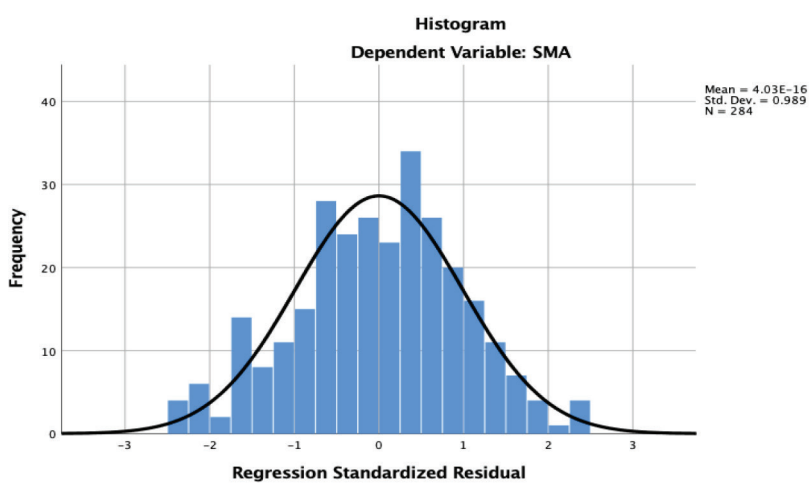

Figure 1: Normalized Residual Frequency Plot

$$SMA = 0.396 + 0.143PEU + 0.019OS + 0.176TECH + 0.032CULT + 0.158MH + 0.051HQ + E$$

The standardized Beta coefficient extracted from the multiple linear regression equation reveals that the technology factor has a high standardized Beta coefficient (0.176) compared to other factors. The normalized beta coefficients of the remaining factors are business market awareness (0.143), business strategy (0.019), corporate culture (0.032), managerial accounting staff (0.158), and decentralization of management (0.051).

Thus, technology, qualifications of management accountants, and awareness of the business market are the factors that have the strongest influence on strategic management accounting application by consumer goods enterprises. This can be explained by the fact that for businesses in the consumer goods industry, technology, the level of management accountants, and good business market awareness will positively affect the performance of management accounting.

From the results of the study of factors affecting strategic management accounting of consumer goods enterprises, the author makes some recommendations to implement strategic management accounting, thereby contributing to improving the operational efficiency of consumer goods enterprises.

Technology is considered as the core factor for all activities of consumer goods enterprises, with software being used to support accounting and corporate governance playing a critical role in the integration process. Leaders need to promote investment in infrastructure and software

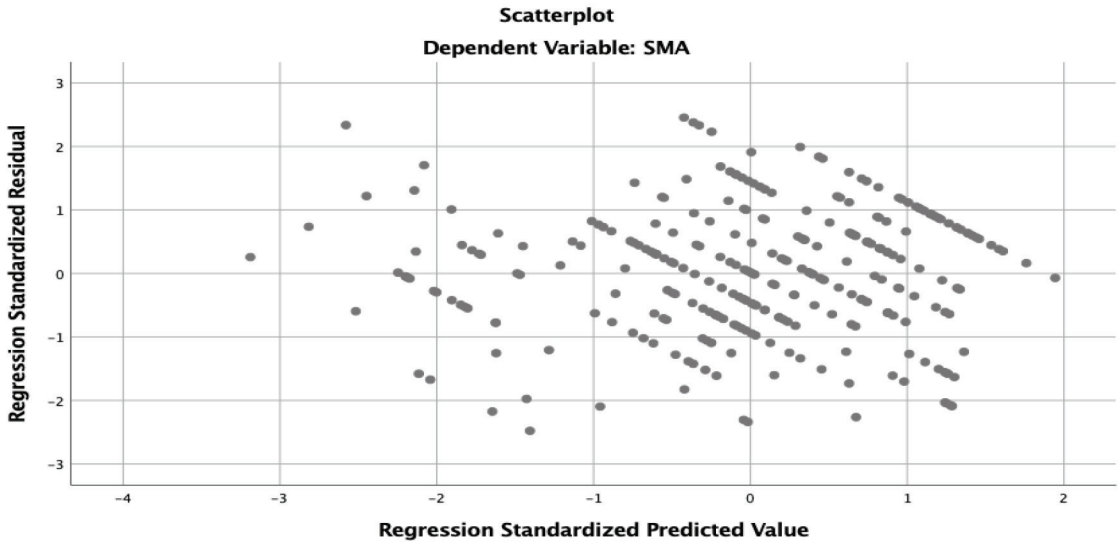

Figure 2: Scatter Plot Chart Testing Linear Association Assumption

applications for management accounting. Choosing high-quality software that can integrate a variety of management practices, such as EPR planning software, is extremely effective in accounting and human resource planning.

When consumer goods enterprises have a higher awareness of market fluctuations, the more strategic management accounting techniques are used. Therefore, the author proposes that the consumer goods industry must have an effective internal communication strategy so that the members understand the opportunities as well as the challenges in the current business market. This helps all members of the consumer goods industry in understanding the requirements that must be met to respond to fluctuations brought on by the competitive environment. It also motivates members of the consumer goods business to regularly study and continuously update their knowledge and strengthen the necessary skills, and this helps them easily accept the application of accounting techniques and new strategic management.

Enterprises in the consumer goods industry should develop a training program plan, regularly foster professional expertise, or invite strategic management accounting experts to advise, design, and train their accountants in effective strategic management accounting, to create conditions for strategic management accountants to work smoothly, providing useful information for strategic management. In addition, businesses in the consumer goods industry should create conditions for their employees to improve their professional qualifications or gain experience in effectively applying strategic management accounting techniques in their units. In addition, leaders who are interested in business strategy, corporate culture, and good management decentralization will contribute to the effective application of strategic management accounting techniques in other units.

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