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Factors Affecting Application of Cost Management Accounting: Evidence from Small and Medium Enterprises in Vietnam*

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Abstract

The article analyzes the impact of factors affecting the application of management accounting in Vietnamese small and medium enterprises. It provides more empirical evidence on the factors affecting the application of cost management accounting. The research methodology involved a questionnaire survey of managers at all levels, and chief accountants and accountants of 65 Vietnamese construction enterprises. 220 questionnaires were collected in total, out of which 14 invalid questionnaires were not used due to many blank cells. The 5-level Likert scale is familiarly used in many studies, so the author also quantifies each factor according to five levels. Quantitative research was carried out with SPSS 25 software. Research results show that 4 factors positively influence the application of cost management accounting, including Business strategy, Management cost control, level of accounting staff, and Manager's point of view on cost management accounting. The level of accounting staff factor has the strongest influence on the application. Based on the research results, the author has proposed recommendations to improve the application of cost management accounting techniques of construction enterprises, thereby contributing to enhancing competitiveness and efficiency activities of construction enterprises in Vietnam.

Keywords: Cost Management Accounting, Construction Enterprises, Vietnam

JEL Classification Code: M40, M41

1. Introduction

Cost management accounting is an integral part of the accounting system in general and cost management accounting in particular. Present in the nature of accounting, it is responsible for organizing the accounting information system in the enterprise. Cost management accounting is an important information channel to help managers build, organize, implement, check, control, evaluate activities and make optimal decisions. Cost management accounting includes the following basic contents: Identify and classify costs; Building norms and cost estimates; Operating cost accounting and product costing; Analysis of cost fluctuations; Cost management accounting reporting system; and analyzing cost information. When organizing cost management accounting in enterprises, they must pay attention to the efficiency of the accounting apparatus, avoiding the situation that the organizational apparatus is too cumbersome, inflexible and inefficient (Vaivio, 2004, Innes & Mitchell, 1995; Laitinen, 2006).

Enterprises operations in general and construction enterprises in particular, cost management accounting proves to have an organic relationship with the overall management function. Accordingly, in order to achieve the objectives of operating and managing business activities, business managers need to plan and estimate costs on the basis of the set goals, organize and execute the plan and check and evaluate the implementation of the plan, concretize the information on the Management's direction and operation.

In addition, cost management accounting also has a vital role in resource allocation because it can help administrators

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calculate and choose to make the most optimal decision for the distribution of available resources in an optimal fashion. For example, when information about cost management accounting is provided honestly, managers can have enough information to make operating decisions in favor of the business. The information may include the situation of costs, income and profit results of each field, and the existing risks (interest rate risk, liquidity risk, rate risk, price risk etc.).

The construction industry has achieved high business performance and has prospects for development in the coming years. However, this is a business associated with social responsibilities such as environment, noise, and dust. With the potential to develop the construction industry from 2020–2030, with the desire to maximize profits from investors, shareholders push business managers to be flexible in the management process. Therefore the managers must develop short-term and long-term strategies. For this they need information related to cost management accounting to have a basis for making timely, effective and appropriate decisions to help businesses stand firm in an economy with many opportunities. society and many challenges in order to promote the strengths of the industry, develop socio-economic and protect the environment, contribute to the sustainable economic development of Vietnam.

This study aims to examine the influence of the application of cost management accounting in the Vietnamese construction enterprises. This is done to give some recommendations for small and medium enterprises to apply management accounting successfully.

2. Literature Review

Many studies on factors affecting the application of cost management accounting have been done, such as by Herath (2007), Chenhall (2004), Laitinen (2006), Diefenbach et al. (2018), Fuadah et al. (2020).

Herath (2007) identified that there are 5 factors affecting cost management accounting: strategy, organization, information needs, implementation methods and corporate culture. Chenhall (2004) examines the role of conflict in implementing activity-based cost management (ABCM). Successful attention to ABCM behavioral implementation helps in cognitive conflict associated with ABCM applications, and it is specifically useful for product planning and cost management. Lack of awareness to these factors generates affective conflict associated with less successful applications. Results of an empirical study of 56 managers indicate that cognitive conflicts interfere between ABCM behavioral implementation factors and beneficial outcomes. However, while there were significant negative associations between affective conflict and beneficial outcomes, there were no significant associations between behavioral implementation factors and affective conflict.

Laitinen (2006) research explores Management Accounting Change (MAC) in Finland based on a survey of 145 firms. MAC is measured in 15 management accounting practices. Four categories of factors are used to explain MAC. Organizational factors include variables on status, organizational uncertainty, strategy, products, perception, and competition. Financial factors are traditional financial ratios. Motivational factors may decelerate or accelerate MAC. Management tool factors describe tools used by the Management. The PLS regression extracted factors from the categories are used to explain MAC by a structural single equation model (SEM). In all, the SEM explains about 50% of MAC, Diefenbach et al. (2018). Based on a sample of 251 European companies, we investigate the impact of CMCS on cost efficiency and organizational performance using structural equation modeling. Our results indicate that CMCS increase organizational performance and that this effect is mediated by cost-efficiency. For the relative importance of the individual components of CMCS, we find statistical differences between the weights. Five elements are important for establishing a CMCS, but two groups can be separated. Creating a cost-conscious culture and the right set of CMCS methods have the highest impact on forming a CMCS. A moderation analysis further reveals that the effects of CMCS on organizational performance and cost efficiency are higher for radically than for incrementally innovative firms.

Anh (2012, 2016), Nguyen and Le (2020), Pham et al. (2020), when researching the impact factors of strategic cost management accounting, the author identified and successfully verified that there are 3 factors affecting cost management accounting, which are management hierarchy, performance, and level of competition.

3. Research Methods and Models

3.1. Research Method

The research method used involved a survey of construcstion enterprises with the help of a questionnaire to evaluate the factors affecting the application of cost management accounting. Applying cost management accounting, Business strategy, Controlling management costs, Qualifications of accountants, and Managers' views on cost management accounting were measured on a five-level Likert scale with the parameters: Very good, good, average, not good, weak. The author uses the standard 5-level Likert scale method, generally used in many studies. In this way, each factor is according to the five levels. SPSS 25 software was used for the Quantitative research.

The scope of the research is construction enterprises in Vietnam. Research data is collected through face-to-face interviews and email interviews with managers, employees working in different positions, managers at all levels, chief

accountants and accountants of 65 Vietnamese construction enterprises. The survey results collected 220 questionnaires. After eliminating the invalid questionnaires due to many blank cells, the author used 206 questionnaires.

3.2. Research Model and Hypothesis

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

$$CMA = \beta_1 + \beta_2 \times BS + \beta_3 \times MC + \beta_4 \times AQ + \beta_5 \times MP + E$$

While assessing the impact of factors on the application of management accounting in Vietnamese small and medium enterprises, the study uses 4 detailed hypotheses as follows:

H1: *Business strategy has a relationship and has the same direction with the application of cost management accounting in Vietnamese construction enterprises.*

H2: *Management cost control has a positive relationship with the application of cost management accounting in construction enterprises Vietnam.*

H3: *The level of accountants has a positive relationship with the application of cost management accounting in Vietnamese construction enterprises.*

H4: *Managers' views on management accounting Cost has a positive relationship with the application of cost management accounting in Vietnamese construction enterprises.*

4. Research Results

4.1. Testing the Scale

The results of evaluating the scale's reliability 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 the table below (Table 1).

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 = 0.795 (condition > 0.5); Significance level and Barlett test = 0.000 (meet condition < 0.05) show that EFA analysis is appropriate. The total variance extracted is 59,560 % > 50%, factor loading factors are all greater than 0.5, so they are satisfactory. The official scale after EFA processing includes 4 independent variables with 15 observed variables as proposed (Table 2).

Table 2: Results of EFA Analysis

Rotation Matrix Table				
	Factor			
	1	2	3	4
BS4	0.896			
BS3	0.864			
BS2	0.838			
BS1	0.705			
AQ1		0.742		
AQ3		0.696		
AQ4		0.686		
AQ2		0.665		
MC1			0.851	
MC2			0.759	
MC3			0.667	
MP4				0.780
MP1				0.644
MP2				0.585
MP3				0.539

Table 1: Scale Test Results

No	Variable Names	Symbol	Number of Observed Variables	Cronbach's Alpha	Smallest Total Variable Correlation Coefficient
1	Applying cost management accounting	CMA	4	0.740	0.462
2	Business strategy	BS	4	0.858	0.607
3	Management cost control	MC	3	0.689	0.439
4	Qualifications of accountants	AQ	4	0.711	0.415
5	Manager's point of view on cost management accounting	MP	4	0.624	0.382

4.3. Regression Analysis

Adjusted *R* squared reflects the degree of influence of the independent variables on the variation of the dependent variable, in this case, 4 factors (Business strategy, Management cost control, Accounting staff qualifications) Management accounting, Manager's perspective on cost management accounting) affects 56.8% to the application of cost management accounting of Vietnamese construction enterprises. The Durbin-Watson coefficient is 1,736, ranging from 1.5 to 2.5, so there is no first-order sequence autocorrelation (Table 3).

In order to check the regression model are consistent with data sets collected and meaningful application or not, the authors continue testing 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 4 factors (Business strategy, Management cost control, Qualification of accounting staff, Manager's opinion about cost management accounting) to the application of cost management accounting of Vietnamese construction 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.

The regression results show that the impact of the 4 factors to apply management accounting costs of the Vietnam enterprises are shown in the table below (Table 5 & Figure 1).

$$CMA = -0.090 + 0.212\ BS + 0.472\ AQ + 0.187\ MC + 0.189MP + E\ Normalized$$

Table 3: Statistical Results of Factors

	Model Summary				
Model	***R***	***R*-Squared**	***R*-Squared**	**Estimated Error of Standard Deviation**	**Durbin Coefficient-Watson**
1	0.754[a]	0.568	0.559	0.46840	1.736

[a]Predictors: (Constant), MP, BS, MC, AQ. [b]Dependent Variable: CMA.

Table 4: Suitability Test (ANOVA Model)

Model		**Sum of Squares**	**df**	**Mean Square**	***F***	**Sig.**
1	Regression	57,986	4	14,496	66,073	0.000[b]
	Residual	44,100	201	0.219		
	Total	102.085	205			

Table 5: Results of Regression Multiple

Coefficient								
Model		**Unnormalized coefficient**		**Standardized Coefficients**	***t***	**Sig.**	**Multicollinear Statistics**	
		B	**Std. Error**	**Beta**			**Tolerance**	**VIF**
1	(Constant)	–0.090	0.269		–0.336	0.737		
	BS	0.167	0.039	0.212	4.280	0.000	0.873	0.167
	AQ	0.447	0.050	0.472	8.951	0.000	0.772	1.295
	MC	0.183	0.049	0.187	3.733	0.000	0.861	1.162
	MP	0.263	0.075	0.189	3.479	0.001	0.729	1.373

Sig test value for each independent variable < 0.05: all variables are significant in the model. Beta coefficients are all positive: all variables have the same effect on the dependent variable

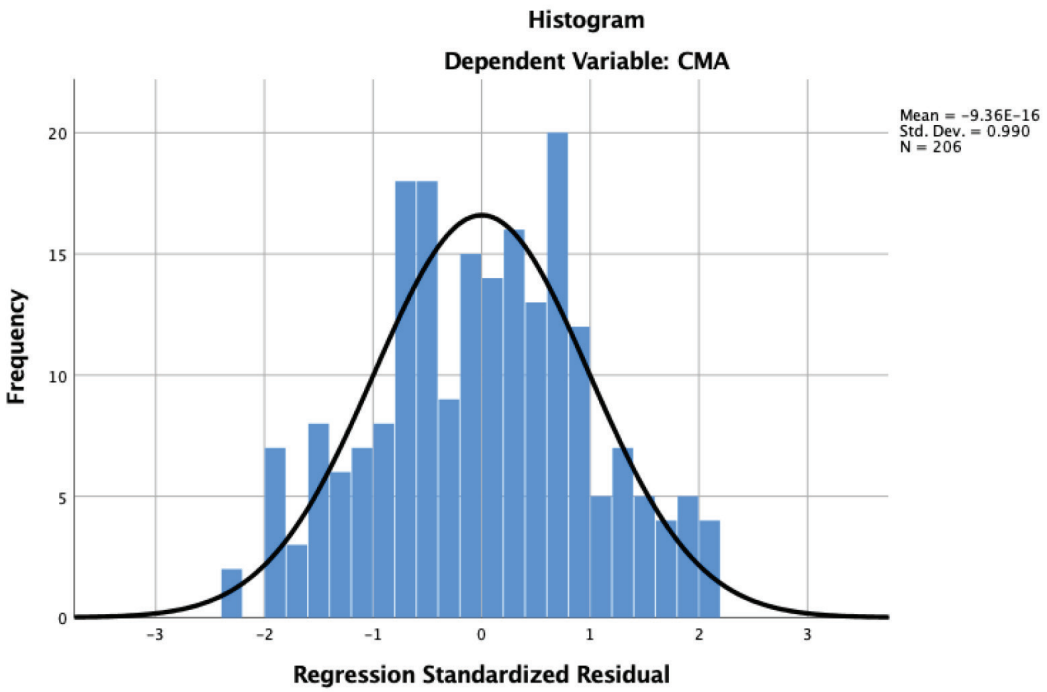

Figure 1: Frequency Histogram

5. Conclusion and Recommendations

Based on the results of quantitative research on factors affecting the application of cost management accounting in Vietnamese construction enterprises, the following conclusions can be drawn:

The multiple linear regression equation extracted by standardized Beta coefficient shows that the factor of accounting staff qualification has a higher standardized Beta coefficient (0.472) than all other factors. The standardized beta coefficients of the remaining factors are: business strategy (0.212), management cost control (0.187), and managers' views on cost management accounting (0.189).

From the results of research on factors affecting cost management accounting of Vietnamese construction enterprises, the author makes some recommendations to apply cost management accounting, thereby contributing to improve the operational efficiency of enterprises as follows:

Professional qualifications of accountants significantly influence the application of cost management accounting in construction enterprises, especially technical Modern and complex management accounting. Therefore, improving accounting quifications and updating modern management accounting knowledge is a necessary condition for management accounting techniques in general and modern management accounting techniques, in particular, to be applied. It is used in enterprises to assist enterprises in using resources effectively, thereby maintaining and increasing their competitive position in the market.

The role of managers has a significant influence on the enterprise's business strategy in making short-term and long-term strategies. Managers must have a vision and understanding of the industry, market and future direction. Managers who have a suitable business strategy and are interested in cost management accounting will improve their ability to apply it, thereby contributing to improving the operational efficiency of the business.

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