

Factors influencing the adoption of management accounting in Vietnamese construction firms

ABSTRACT

The global trend of heavily relying on management accounting aims to give important insights to corporate executives, assisting informed decision-making and boosting overall business operations. However, the use of management accounting principles differs by industry sector in Vietnam. The objective of this study was to explore the impact of various factors on the usage of management accounting in Vietnamese construction firms. The Ordinary Least Squares pool method was used to analyze data from a random survey of 180 firms. The findings revealed that company size, culture, and competitiveness all impact the adoption of management accounting in Vietnam's construction firms at levels of 0.081, 0.525, and 0.016, respectively. The study suggests boosting the use of management accounting to secure the long-term growth and development of enterprises in Vietnam's construction industry.

Keywords: *Management accounting, firm size, culture, competition, construction enterprises.*

Các nhân tố ảnh hưởng đến việc vận dụng Kế toán quản trị trong các doanh nghiệp xây dựng tại Việt Nam

TÓM TẮT

Việc áp dụng rộng rãi kế toán quản trị trên thế giới được chứng minh là quan trọng cho sự phát triển ổn định của doanh nghiệp. Tuy nhiên, kế toán quản trị được áp dụng ở Việt Nam tùy thuộc vào từng nhóm ngành nghề khác nhau, nghiên cứu này nhằm khám phá mức độ tác động của các nhân tố có ảnh hưởng hướng đến việc vận dụng kế toán quản trị trong các doanh nghiệp xây dựng tại Việt Nam. Nghiên cứu sử dụng dữ liệu khảo sát ngẫu nhiên 180 doanh nghiệp và phương pháp pool Ordinary Least Squares. Kết quả cho thấy quy mô, văn hóa và sự cạnh tranh là 3 nhân tố có tác động tích cực đến việc vận dụng kế toán quản trị trong các doanh nghiệp xây dựng tại Việt Nam và mức độ tác động lần lượt là: 0,081; 0,525 và 0,016. Qua đó, bài viết khuyến nghị gia tăng việc thực hiện kế toán quản trị nhằm đảm bảo sự phát triển của các doanh nghiệp xây dựng tại Việt Nam.

Từ khóa: Kế toán quản trị, quy mô, văn hóa, cạnh tranh, doanh nghiệp xây dựng.

1. INTRODUCTION

"Management accounting has been formed and mentioned in the Accounting Law in Vietnam since 2003." However, understanding and application of the adoption of management accounting, as well as instructions on applying management accounting, are still at a low level. The majority of empirical studies on the use of management accounting in Vietnam either focus on general research across industries (Nguyen et al.; Le Thi Tu Oanh et al.; Nguyen Thu Hien)^{1,2,3} or only on small and medium firms (Ngoc Toan Nguyen et al.)⁴. Few extensive research analyzes the impact of factors on the usage of management accounting in each industry (Nguyen Thi Huyen Tram and Pham Ngoc Toan; Vu et al.)^{5,6}, especially the construction industry in Vietnam. The study examines and analyzes the factors that impact the adoption of management accounting in Vietnamese construction firms. The author employed the least squares (OLS) model to randomly survey 270 firms. The findings show that the size of the business, organizational culture, and market competitiveness have a positive impact on managerial accounting.

2. CONTENT

2.1. Definition of management accounting

"Vietnam Accounting Law defines: Management accounting is the collection, processing, analysis and provision of economic and financial information

according to management requirements and economic and financial decisions within the accounting firms".

2.2. Literature review and hypothesis development

Previous studies were conducted according to different sizes and types of businesses, studied at different times with a relatively diverse number of samples and variables used, notably Vu et al.⁶, Nguyen et al.¹, Huynh Tan Dung and Huynh Thi Thanh Thao⁷, Albaddad and Mahmoud Nassar⁸, Kordlouie and Hosseinpour⁹, Nguyen Thi Huyen Tram and Pham Ngoc Toan⁵, Hawari and Mahmoud Nassar¹⁰.... Some studies examine components and their impact on management accounting implementation across multiple provinces or more widely within an entire nation. Nguyen et al.¹ surveyed company managers, chief accountants, and accounting staff from 65 small and medium enterprises in Vietnam, using SPSS 25 software to run OLS regression to discover that control of management costs and accountant qualifications have an impact on management accounting implementation. Huynh Tan Dung and Huynh Thi Thanh Thao⁷ discovered that the state and accounting professional organizations, management policies, business characteristics, culture Enterprise transformation, level of competition, employee training, and employee qualifications have a positive impact on the implementation of management accounting. Similarly, Ngoc Toan Nguyen et al.⁴ examined 238 enterprises in Hanoi and found comparable positivity with variables like

CEO awareness of management accounting, levels of competition, firm size, age, and the leadership accounting level of management. Mbali et al.¹¹ found that environmental factors play a significant role in the adoption of management accounting in small and medium-sized manufacturing businesses in South Africa.

According to Vu et al.⁶; Le Thi Tu Oanh et al.², bigger companies frequently have more complicated resources and management systems than small businesses. As a result, the use of management accounting techniques and technologies in major corporations is growing (Mbali et al.)¹¹. According to Nguyen Thu Hien³, Abdel-Kader and Luther¹², Mbali et al¹¹; Vu Thi Kim Anh et al.⁶; Albaddad and Mahmoud Nassar⁸ affirm that the current trend of company size has a positive influence on the adoption of management accounting, this result is similar to Hawari and Mahmoud Nassar¹⁰; Nguyen Thi Huyen-Tram and Pham Ngoc Toan⁵; Ngoc Toan Nguyen et al.⁴. Therefore, the following theory is proposed:

H1: The adoption of management accounting is positively influenced by the firm size.

Corporate culture is defined as the knowledge and conduct standards of colleagues in an organization (Davies et al.)¹³. It is a critical management measure for assessing organizational success (Davies et al.)¹³. Ersirim¹⁴, Le Thi Tu Oanh et al.² have demonstrated that different types of company culture have a favorable impact on the application of managerial accounting. As a result, the following hypothesis is developed in this study:

H2: The use of management accounting has a good link with corporate culture.

Business management is a critical component of operating operations for company development (AhMad and Zabri)¹⁵. However, key leaders' understanding of this issue in their units differs (Toan and My Nuong)¹⁶, resulting in various impacts on management accounting implementation (Nguyen et al.). Therefore, this study propose the hypothesis:

H3: Corporate leaders' awareness is related to management accounting adoption..

Information technology is frequently used in database and management accounting application processes (Vu Thi Kim Anh et al.)⁶. As a result, conducting a needs assessment and providing the unit with machinery and technology will facilitate the process of implementing management accounting at the unit. Furthermore, the proliferation of technology has an impact on decision-making (Kordlouie and Hosseinpour)⁹. The author suggests H4 as follows:

H4: Management accounting adoption benefits from advances in information technology.

Businesses must create excellent brands in order to attract more customers. To accomplish this, the organization must increase service quality. According to Hawari and Mahmoud Nassar¹⁰ and AhMad and Zabri¹⁵, a company's competitive edge is driven by numerous diverse aspects that form a higher, differentiated value and justify limited resources accordingly by allocating information. As a result, the following hypothesis is proposed in this study:

H5: The use of management accounting is influenced positively by market competitiveness.

2.5. Methodology

This study obtains data by conducting interviews at 270 construction enterprises in Vietnam from June to September 2023. Accountants, chief accountants, and directors were among those questioned. Samples that do not fit the standards, will be eliminated from the study; the final sample size is 212 observations.

Following Mbali et al.¹¹, Tran Hong Van and Tran Thi Phuong Lan¹⁷. The proposed research model follows:

$$POS_i = \alpha + \beta_1 SIZ_i + \beta_2 CUL_i + \beta_3 PER_i + \beta_4 IFO_i + \beta_5 MAR_i + \varepsilon$$

Where: POS_i is the adoption of management accounting, SIZ_i (firm size), CUL_i (culture), PER_i (perception), IFO_i (technology), MAR_i (competition).

2.6. Results and discussion

Table 1. Descriptive statistics

	N	Min	Max	Mean	Standard deviation
POS	212	4,00	5,00	4,6594	0,33846
SIZ	212	4,00	5,00	4,2909	0,35960
CUL	212	2,50	3,50	3,1085	0,48924
PER	212	2,25	4,50	3,4222	0,49687
IFO	212	2,75	4,75	3,7606	0,57614
MAR	212	3,00	5,00	4,1434	0,45437

Source: Author's calculations

Table 1 reveals that the average level of management accounting adoption is 4.65, with POS having a maximum value of 5 and a minimum value of 4, demonstrating that construction enterprises are indeed utilizing management accounting to increase company effectiveness. When compared to the results of Le Thi Tu Oanh et al.² for enterprises in the sectors of manufacturing and commercial services in Vietnam where the level of management accounting adoption is only approximately 3.5, the results are better. The findings confirm that management accounting is being considered as a foundation for firms that grow sustainably.

Table 2. Correlation coefficients

	SIZ	CUL	PER	IFO	MAR	VIF
SIZ	1					1,03
CUL	-0,05	1				1,00
PER	-0,06	-0,00	1			1,16
IFO	-0,13*	-0,04	0,37**	1		1,22
MAR	0,10	-0,03	-0,12	-0,22**	1	1,06

*, **. Significance at 0.05, 0.01. Source: Author's calculations

Table 2 demonstrates that the model ensures "no multicollinearity phenomenon occurs" because the correlation coefficients are all less than 0.5 and VIF 2 is more than 1.

Table 3. Multivariate regression results

	Beta	t	Sig.
(Constant)	2,68	8,74	0,00
SIZ	0,08	1,86	0,06
CUL	0,52	16,69	0,00
PER	-0,00	-,024	0,80
IFO	-0,01	-0,37	0,70
MAR	0,01	1,45	0,06

Y: POS Source: Author's calculations

Table 3 displays the Sig value of SIZ 0.01 and the Beta coefficient (SIZ) > 0. As a result, the SIZ variable is positively related to the POS variable. The explanation for this is that because construction enterprises expand in size, the more complex system construction and management develop. As a result, the requirement for management accounting expands, increasing systems and procedures, as well as strengthening management accounting implementation. Consistent with the findings of Vu et al.⁶, Mbali et al.¹¹, Nguyen Thu Hien³, and cost and contingency theory, hypothesis H1 is accepted. Table 3 demonstrates that company culture is favorably related to the adoption of management accounting. Nguyen Thu Hien³, Nguyen Thi Huyen Tram and Pham Ngoc Toan⁵ had similar results. Corporations strive for smooth functioning and departmental coordination. As a result, businesses frequently establish the company's cultural basis and always cooperate and share work to implement plans, comply with laws, and strive towards business goals, which helps increase the efficiency of applying management accounting. Hypothesis H2 is so accepted.

Similarly, according to the research of Hawari and Mahmoud Nassar¹⁰, AhMad and Zabri¹⁵, market competition has a good link with management accounting applications. As a result, H5 is acknowledged and explained as the increasing degree of competition necessitates organizations to improve their abilities and knowledge of corporate governance while also building stronger brands than their competitors. In the market, there is a player. When management accounting is implemented, proper resource allocation will improve.

Finally, table 3 demonstrates that the variables managers' perception and information technology have no statistical significance, therefore conclusions regarding the influence of perception and information technology on management accounting applications cannot be drawn. This could be due to organizations failing to pay attention or believing that the expenses outweigh the benefits of implementing management accounting. As a result, reject hypotheses H3 and H4.

3. CONCLUSION

This study examines the elements that influence the adoption of management accounting in Vietnamese construction firms. According to the findings of the study, the size of the firm, organizational culture, and market competition all have a positive effect on the adoption of management accounting in construction enterprise firms. Based on the findings, the paper supports companies to apply specific solutions in practice to achieve specific effects such as: investing in knowledge and improving accounting expertise for personnel, complying with regulations and corporate culture; developing processes to effectively manage resources and estimates, investing in research and development of science and technology to innovate products and customer service quality.

The following limitations remain with the study: (1) Errors may occur during the sample survey and data processing process. (2) the impact of a variety of other factors such as corporate strategy, accounting staff quality... Researchers can continue to overcome the restrictions mentioned above in order to learn more fully about this topic.

REFERENCES

1. Nguyen, C. T., Nguyen, T. D., & Ngo, H. T. Factors Affecting Application of Cost Management Accounting: Evidence from Small and Medium Enterprises in Vietnam, *The Journal of Asian Finance, Economics and Business*, **2022**, 9(4), 185-190.
2. Le, Thi Tu Oanh, Thi Ngoc Bui, Thi Thu Phong Tran, and Quoc Hung Nguyen. Factors Affecting the Application of Management Accounting in Vietnamese Enterprises. *Uncertain Supply Chain Management*, **2020**, 8(2), 403–22.
3. Nguyễn Thu Hiền. *Vận dụng kế toán quản trị trong doanh nghiệp: các nhân tố tác động và ảnh hưởng của nó đến hiệu quả kinh doanh*, *Tạp chí Kinh tế & Phát triển*, **2019**, 268(10), 51-60.
4. Nguyen, Ngoc Toan, Thi Thuy Hong Nguyen, Thi Thanh Thuy Chu, Dinh Dong Nguyen, and Thi To Phuong Nguyen. Factors Affecting the Application of Management Accounting in Small and Medium Enterprises in Hanoi, Vietnam, *Management Science Letters*, **2019**, 9(12), 2039–50.
5. Huyen-Tram, Nguyen Thi, and Pham Ngoc Toan. Factors Affecting the Application of Environmental

Management Accounting in Construction Companies in Ho Chi Minh City, *Proceedings 2018 4th International Conference on Green Technology and Sustainable Development*, **2018**, 487–492.

6. Vu, Thi Kim Anh, Bich Ha Dam, and Thi Thuy Van Ha. Factors Affecting the Application of Strategy Management Accounting in Vietnamese Logistics Enterprises. *Journal of Distribution Science*, **2022**, 20(1), 27-39.

7. Huỳnh Tân Dũng và Huỳnh Thị Thanh Thảo. Các nhân tố ảnh hưởng đến việc vận dụng kế toán quản trị trong các doanh nghiệp nhỏ và vừa tại tỉnh Bình Dương, *Tạp chí Khoa học và Công nghệ*, **2021**, 51(03).

8. Albaddad, Omar, and Mahmoud Nassar. Factors Influencing the Implementation of Management Accounting Systems in Small and Medium Sized Enterprises in Dubai, *International Business Research*, **2017**, 11(1), 245.

9. Kordlouie, H. R., & Hosseinpour, A. Management Accounting Practices In Small And Medium-Sized Enterprises Regarding The Impact of Organizational DNA, *International Journal of Business Quantitative Economics and Applied Management Research*, **2018**, 4(8), 22-31.

10. Hawari, Eman AL-, and Mahmoud Nassar. The Factors Affecting the Different Management Accounting Practices in Small and Medium Sized Enterprises in Jordan. *International Journal of Academic Research in Business and Social Sciences*, **2018**, 7(12), 970–978.

11. Mbali, Portia Msomi, Musawenkosi Ngibe, and John Nyide Celani. Factors Influencing the Adoption of Management Accounting Practices (Maps) by Manufacturing Small and Medium Enterprises (Smes) in Durban, Kwazulu-Natal, *International Journal of Entrepreneurship*, **2019**, 23(4).

12. Abdel-Kader M. and Luther. R. The impact of firm characteristics on management accounting practices: A UK-based empirical analysis, *The British Accounting Review*, **2008**, 40, 2-27.

13. Davies, H. T., Nutley, S. M., & Mannion, R. Organisational culture and quality of health care, *BMJ Quality & Safety*, **2000**, 9(2), 111-119.

14. Erserim, Alper. The Impacts of Organizational Culture, Firm's Characteristics and External Environment of Firms on Management Accounting Practices: An Empirical Research on Industrial Firms in Turkey, *Procedia - Social and Behavioral Sciences*, **2012**, 62, 372–376.

15. Ahmad, K., & Zabri, S. M. Factors explaining the use of management accounting practices in Malaysian medium-sized firms, *Journal of Small Business and Enterprise Development*, **2015**, 22(4).

16. Toan, Pham Ngoc, Le Thi, and My Nuong. Factors affecting the use of management accounting at public units on the area of Ho Chi Minh city, *International Conference On – CIFBA*, **2020**, 663–72.

17. Trần Hồng Vân, Trần Thị Phượng Lan. Các nhân tố ảnh hưởng đến việc vận dụng kế toán quản trị chiến lược trong các doanh nghiệp Việt Nam, *Tạp Chí Nghiên cứu Tài chính – Marketing*, **2021**, 59(5).

APPENDIX A

Table A. Scale test for reliability and CFA analysis

Factor	Variable	Factor Loading	Total variable correlation	Cronbach's Alpha	Results	
POS	POS1	0,767	0,586	0,763	Significant: 0,000 KMO: 0,663 Eigenvalues: 2,578 Total variable correlation: 51,556%	
	POS2	0,742	0,512			
	POS3	0,738	0,565			
	POS4	0,707	0,439			
	POS5	0,627	0,561			
SIZ	SIZ1	0,905	0,714	0,702	Sig: 0,000 KMO: 0,752 Eigenvalues: 1,791 Total variable	
	SIZ2	0,829	0,326			
	SIZ3	0,608	0,555			
CUL	CUL1	0,985	0,962	0,980		
	CUL2	0,984	0,962			
PER	PER1	0,962	0,908	0,965		
	PER2	0,930	0,867			
	PER3	0,920	0,907			
	PER4	0,911	0,971			
IFO	IFO1	0,955	0,935	0,935		
	IFO2	0,951	0,833			
	IFO3	0,879	0,944			
	IFO4	0,760	0,687			

MAC	MAR1	0,905	0,467	0.782	correlation: 77.064%
	MAR2	0,793	0,379		
	MAR3	0,743	0,630		
	MAR4	0,669	0,765		
	MAR5	0,510	0,606		

Source: Author's calculations