

STRATEGIC MANAGEMENT ACCOUNTING BY PUBLIC UNIVERSITIES IN VIETNAM: COMPARISON BY ORGANIZATION STRUCTURE

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ARTICLE INFO		ABSTRACT
Received:	15/8/2023	The study aims to compare the use of strategic management accounting (SMA) by organizational structure (level of autonomy, year of establishment, and student size) of Vietnamese public universities. Survey data was collected from 142 accountants of Vietnamese public higher education institutions through questionnaires and regression analysis using SPSS 22 software. The results show that in terms of autonomy, the fully autonomous universities have the most impact on the use of strategic management accounting, followed by non-autonomous universities, and semi-autonomous universities only have an impact on the use of financial metrics. In terms of year of establishment, only universities established less than 20 years old have an impact on the adoption of strategy and use of financial metrics. In terms of student size, the university that enrolls over 5000 students/year has an impact on the use of strategic management accounting in 04 contents, and the one with an enrollment size of fewer than 2000 students/year has an impact on 02 contents of strategic management accounting. The research results help universities to put more emphasis on strategic management accounting information in decision making taking into consideration the organizational structure. This study complements the existing literature review regarding strategic management accounting content and the impact of organizational structure (ownership, age, size) on the use of strategic management accounting by public universities in Vietnam.
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KẾ TOÁN QUẢN TRỊ CHIẾN LƯỢC TRONG CÁC TRƯỜNG ĐẠI HỌC CÔNG LẬP VIỆT NAM: SO SÁNH THEO CẤU TRÚC TỔ CHỨC

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THÔNG TIN BÀI BÁO		TÓM TẮT
Ngày nhận bài:	15/8/2023	Nghiên cứu nhằm so sánh việc sử dụng kế toán quản trị chiến lược (SMA) theo cấu trúc tổ chức (mức độ tự chủ, năm thành lập và quy mô sinh viên) của các trường đại học công lập Việt Nam. Dữ liệu khảo sát được thu thập từ 142 kế toán của các cơ sở giáo dục đại học công lập Việt Nam thông qua bảng hỏi, phân tích hồi quy bằng phần mềm SPSS 22. Kết quả cho thấy xét theo mức độ tự chủ, các trường tự chủ toàn bộ có tác động nhiều nhất đến sử dụng kế toán quản trị chiến lược, tiếp đến là trường chưa tự chủ, còn các trường tự chủ một phần chỉ có tác động về sử dụng thước đo tài chính. Xét theo năm thành lập, chỉ có các trường thành lập dưới 20 năm mới có tác động đến áp dụng chiến lược và sử dụng thước đo tài chính của kế toán quản trị chiến lược. Xét theo quy mô sinh viên, trường tuyển sinh trên 5000 sinh viên/năm có tác động đến việc sử dụng kế toán quản trị chiến lược theo 04 nội dung, trường có quy mô tuyển sinh dưới 2000 sinh viên/năm có tác động đến 02 nội dung của kế toán quản trị chiến lược. Kết quả nghiên cứu giúp các trường chú trọng hơn thông tin của kế toán quản trị chiến lược trong việc ra quyết định có xem xét đến cấu trúc tổ chức. Nghiên cứu này bổ sung cho các tài liệu tổng quan hiện có liên quan đến nội dung kế toán quản trị chiến lược và tác động của cấu trúc tổ chức (sở hữu, tuổi, quy mô) đến việc sử dụng kế toán quản trị chiến lược của các trường đại học công lập Việt Nam.
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TỪ KHÓA		
Kế toán quản trị chiến lược		
Trường đại học công lập		
Mức độ tự chủ		
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1. Introduction

Facing the increasingly fierce competition of international integration, Vietnamese public universities have been assigned autonomy in operation by the State. The assignment of university autonomy is stipulated in the Law on Education but started to be put into practice under Resolution 77/NQ-CP dated October 24, 2014 [1]. Autonomy allows university students to learn to decide on their issues in terms of task performance, autonomy in organizational structure, personnel, financial autonomy, and enrollment. According to the Ministry of Education and Training, up to now, Vietnam has 141 out of 232 universities (61%) eligible for autonomy [2]. When switching to an autonomous mechanism, the need to use the information for decision-making for administrators of public universities becomes even more urgent to enhance operational efficiency. In this context, universities cannot lack the important management tools that are strategic management accounting (SMA).

The term SMA was first introduced by Lord [3], but later, SMA became better known from the work of Bromwich [4], Roslender and Hartb [5]. SMA is usually defined as a group of techniques for providing and analyzing financial information about the production costs of enterprises and competitors and always closely follows the enterprise's strategy [6], [7]. According to Simmonds [8], SMA helps managers determine the strategy and strategic position of the organization because the related techniques take into account external factors such as the competitive environment. SMA information helps managers plan, forecast key issues, and limit possible risks, from which to compare and evaluate for control and review effectiveness.

SMA at organizations in general and universities, in particular, is of interest to many scholars. According to Evi Marlina [9], the research on SMA in universities has been concentrated for more than 10 years. Studies on SMA before 2013 focused on the concordance between the university's strategic and operational management accounting design, including the relevance and effectiveness of operations. The studies after 2013 focused on the role of SMA in improving the performance of universities, using more complex tools such as quality management systems and balanced scorecards to achieve university performance.

Cropper and Cook [10] point out that many universities are not satisfied with their cost accounting systems and are looking for ways to change them. With the financial resources for universities increasingly limited, it is necessary to offset the costs from the revenue of the courses to better manage the resources.

Parker [11] mentions the changes by which higher education is affected, thereby affecting the strategy and use of accounting information. Factors including the context of globalization, financial pressures, funding sources, and all of these pressures have permanently changed the higher education system in terms of information acquisition and decision-making, especially the domination of intellectual culture by commercial values.

Tommaso Agasisti et al. [12] researched evaluation information on the effectiveness of SMA at four major Italian universities stemming from the rapidly changing environment for universities in Europe since the mid-1980s when the government granted financial autonomy to universities. This change has posed challenges for administrators and management accounting systems of universities. The study analyzed and recommended the SMA of these universities with two aspects: resource allocation and new training programs.

Jocelyn Horne and Baiding Hu [13] evaluated the performance of Australian universities by estimating the cost-effectiveness of 36 universities in the period 1995 – 2002. From random variable analysis, the results found that universities were not operating effectively according to the current use of costs and suggested the application of personal management responsibility for better cost control.

Agassiti and Johnes's research on performance evaluation in Italian universities in the face of the rapid change in the higher education environment in Europe when the Government grants financial autonomy to universities [14]. Research results show that the change in cost structure and efficiency of management accounting techniques will reduce profits in universities.

Owino, Munene, and Ntayi [15] studied responsibility accounting, a tool of SMA in Ugandan public universities. The study found that there is a system of responsibility accounting in public universities; where costs and revenues are accrued and reported from the faculties and from the faculty to university management, the department head has the authority to administer their budget allocation estimates. However, responsibility accounting that follows the hierarchical model in public universities is still fuzzy. The characteristics of public universities are administrative reporting, affecting the use of information for decision-making by the Board of Directors.

Yasmiza et al. [16] analyzed the role of management accounting information in decision-making in Malaysian public universities. The research has shown that the leadership of Malaysian public universities is interested in the most important types of accounting information, which are reports, estimates, and SMA. It also shows that teamwork and taking responsibility are the most in-demand skills for accountants in Malaysian public universities.

Most quantitative research on SMA in universities has focused on higher education strategies, competitiveness, or how higher education strategies can be used to gain competitive advantage [9]. Among the studies on SMA, the studies that are cited, mentioned, and used a lot for reference are [17], [18]. Cadez and Guilding [17] identified 16 individual SMA tools grouped into five categories, namely performance planning, control and measurement, strategic costing, competitor accounting, and accounting client. The results of this study also assess that the use of SMA is positively related to the adoption of strategy and organization size. Lachmann et al. [18] pointed out that the content of SMA includes strategy application, strategic planning, use of SMA techniques, strategic reporting, financial and non-financial information, and decision-making strategy. According to this study, SMA also applies very diversely, depending on the organizational structure characteristics (ownership, size, age) of the unit. According to Phi Anh [19], SMA information is affected by the size of the organization, the business environment factors, and the characteristics of the business industry of the organization.

There are not many studies on SMA in Vietnam and these researches focus on applying in enterprises, such as [19], [20]. These studies have assessed the level of application of SMA in Vietnamese enterprises, from the perspective of management accounting techniques and other factors as size and age of enterprises. Thus, there has been no research on applying SMA in universities in general and public universities in particular in Vietnam. So, the objective of this study is to compare the use of SMA information considering the influence of the degree of autonomy, the number of years of establishment, and the number of annual enrollments of public universities in Vietnam.

2. Research methods

From the theoretical overview study, the authors built a questionnaire to evaluate the use of SMA in Vietnam's universities considering the degree of autonomy, the number of years of establishment, and the size of students. The scale was inherited according to Cadez and Guilding [17] and Lachmann et al. [18], in which SMA includes Apply (AD), Planning (LKH), Techniques (KT), Financial Information (TC), Non-Financial Information (PTC), Report (BC) and Making Decision (RQD) (Table 1).

Table 1. Scale description table

No.	The scale	Encryption	No. of Items
1	Apply	AD	03
2	Planning	LKH	03
3	Techniques	KT	06
4	Financial Information	TC	05
5	Non- Financial Information	PTC	03
6	Report	BC	04
7	Making Decision	RQD	03

(Source: Prepared by the authors, 2023)

After determining the scale according to the theoretical synthesis, the research steps are as follows:

A questionnaire was built on Google form, divided into 3 main parts: (i) Quality management accounting; (ii) Public universities information; (iii) Personal information of survey respondents. The sections on quality management accounting used a 5-point Likert scale, from "1-Strongly disagree" to "5-Strongly agree". The number of students and the number of years of the establishment were used Logarithmic function.

The official questionnaire was built on Google form and sent to 172 universities via email and Zalo social network. The results received 142 votes, representing the chief accountants and accountants of 102 public universities. Each unit (headquarters, branch, dependent establishment) corresponds to 01 votes. After data encryption and cleaning, 142 votes were all valid for analysis.

Data were analyzed on SPSS 22 software using the following tools: (1) Descriptive statistical analysis; (2) Reliability test and exploratory factor analysis; (3) Regression Linear analysis to explain the relationship between the application of SMA (01 dependent variable) according to 06 independent variables. The independent variables were averaged to serve as a basis for analysis and comparison by degree of autonomy, number of years of establishment, and student size.

Regarding the sample size, the total number of responses was 142 votes. According to the degree of autonomy, fully autonomous public universities account for the highest proportion (47.2%), followed by universities with partial autonomy (43.7%), and the rest are non-autonomous universities (9.2%). In terms of years of establishment, universities established from 20 to less than 40 years old account for the highest percentage (33.1%), followed by 40-60 years (24.6%), two groups of universities with 60 years or more and under 20 years accounted for quite similar proportions. In terms of student size, most universities have many students from 2,000 to 5,000 (75%), followed by universities with less than 2,000 students (33.1%), universities with more than 5,000 students accounting for the lowest percentage.

3. Research results and discussion

The results of the analysis to evaluate the use of SMA in public universities in Vietnam are affected by the degree of autonomy, the number of years of establishment, and the number of students in the universities. The analysis of reliability and exploratory factors of groups including AD, BC, LKH, TC, PTC, KT, and RQD all met the requirements for regression analysis.

Table 2. Comparison of SMA usage by the degree of autonomy

Degree of autonomy	AD	BC	PTC	TC	KT	RQD	LKH	Adjusted R Square	F-value
Nonautonomy	1.190**	.450	-.266	-1.136**	.713	.436	.270	.695	4.906**
Semi autonomy	.106	-.231	.024	.671**	-.266	.234	.031	.212	3.341***
Full autonomy	.284**	-.133	.166	.409***	-.205	-.051	.313**	.258	4.281***

(* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$)

(Source: Prepared by the authors, 2023)

When comparing the application of SMA according to the degree of autonomy, Table 2 shows that the Adjusted R Square value reflects the level of interpretation of the degree of autonomy affecting the use of SMA information, for the non-autonomous field. The highest level of explanation is followed by total autonomy, and finally semi-autonomy. The Sig value < 0.05 shows that the model and data are suitable. Looking at the details of the contents of the SMA according to the degree of autonomy, we see that there is a different impact between the university on the application of financial measures (TC), according to which, the semi-autonomous university applies financial measures that have the strongest and positive impact on SMA information use, followed by fully autonomous fields, while non-autonomous fields have the opposite effect. Regarding strategic application (AD), non-autonomous universities have the strongest impact, followed by fully autonomous universities, while semi-autonomous universities have no impact. Strategic planning (LKH) is only statistically significant in the field of total

autonomy. The remaining contents of SMA such as strategic reporting (BC), non-financial measures (PTC), SMA techniques (KT), and decision-making (RQD) do not have enough basis to conclude on the impact of the autonomy level to the application of SMA. In general, fully autonomous universities have the most impact on SMA use (AD, TC, LKH), followed by non-autonomous universities (AD, TC), while partially autonomous universities only have an impact on the use of financial measures (TC).

Table 3. Comparison of SMA usage by year of establishment

Founded year	AD	BC	PTC	TC	KT	RQD	LKH	Adjusted R Square	F-value
< 20 years	.296**	-.039	.064	.272**	-.089	-.078	.121	.160	4.048***
> 60 years	.363	-.500	.214	.410	-.129	.394	.225	.228	2.181*

(* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$)

(Source: Prepared by the authors, 2023)

Comparing the application of SMA by year of establishment (Table 3), only universities with less than 20 years of establishment and more than 60 years of establishment are statistically significant. The Adjusted R Square value shows that the explanation for the number of years of establishment affects the use of SMA of universities over 60 years higher than that under 20 years. The Sig value < 0.1 shows that the model and data are suitable. However, when considering in detail, only universities with less than 20 years of age have an impact when applying strategy (AD) and using financial measures (TC), while over 60 years old ones do not have enough grounds to conclude in this study.

Table 4. Comparing SMA usage by the number of students

Number of students	AD	BC	PTC	TC	KT	RQD	LKH	Adjusted R Square	F-value
< 2000	.253**	-.040	.102	.189	-.112	-.109	.206*	.093	2.377**
> 5000	.318*	-.486*	.098	.658**	-.198	.360*	-.006	.336	4.330***

(* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$)

(Source: Prepared by the authors, 2023)

The application of SMA according to student size (Table 4), only universities with enrollment size of fewer than 2000 students/year and over 5000 students/year are statistically significant. The Adjusted R Square value shows that the explanation for the impact of student size on SMA application is higher for universities with more than 5000 students compared to universities with less than 2000 students. Sig value < 0.5 shows that there is a good fit of the model and data. When looked at in detail, the school's enrollment of over 5000 students/year has an impact on strategic use (AD), strategic reporting (BC), use of financial metrics (TC), and decision-making (RQD). Universities with an enrollment size of fewer than 2000 students/year only have an impact on the application of Strategy (AD) and Planning (LKH). In terms of strategic application (AD), universities that enroll more than 5000 students per year have a stronger impact than universities with fewer than 2,000 students per year.

Thus, when considering the application of SMA according to the degree of autonomy of Vietnamese public universities, the results show that fully autonomous universities have the most impact on the use of SMA (AD, TC, LKH), followed by non-autonomous universities (AD, TC), and semi-autonomous universities only have an impact on the use of financial measures (TC). This shows that autonomous public universities have paid more attention to SMA information. This result has been consistent with the characteristics of Vietnam's public universities as these universities are gradually transforming from the state protection mechanism, funded and coordinated by the state to operate autonomous operations. Universities need to change to adapt and improve the effectiveness of their operations. When switching to an autonomous mechanism, universities must operate like businesses, and self-balancing, and management accounting will be clearer. Therefore, public universities that are fully autonomous have focused on applying

management accounting more and more diversely than partially autonomous universities, and those that are not yet autonomous. This result is also the basis for showing the urgency of using management accounting information when universities move to an autonomous mechanism. This result is consistent with the study of Lachmann et al. when arguing that the use of SMA depends on the organizational structure of the unit [18]. This result also agrees with Parker's study, which shows that changes in financial pressure and funding sources affect the use of management accounting information [11]. However, this study did not find a significant impact of partially autonomous and non-autonomous universities on the use of SMA information.

Considering by the year of establishment, only universities under 20 years old have an impact when applying the strategy (AD) and using financial measures (TC), the remaining universities are not statistically significant. This shows that public universities under 20 years old have paid more attention to basic SMA information on financial strategies and metrics. The interest in SMA information of this group of universities is appropriate when universities are still young, the use of SMA information helps universities have an assessment of the strategy, and find the right strategy to find a foothold in the market, focusing on financial measures in decision-making. This result is also consistent with Lachmann et al. when assessing the impact of organizational structure on the organization's use of SMA [18].

Considering the size of students, the school which enrolls more than 5000 students/year has an impact on the use of SMA according to the contents of Applying Strategy (AD), strategic reporting (BC), using financial metrics (TC), and decision-making (RQD), while universities with an enrollment size of fewer than 2000 students/year only have an impact on the application of strategy (AD) and Planning (LKH). The impact of the remaining fields on the use of SMA was not statistically significant. The application of SMA by universities enrolling over 5000 students/year and less than 2000 students/year shows that these are large and small groups of universities according to the number of students interested in SMA information, contributing to the supply of SMA information to support long-term school decision-making. The study is consistent with the results of Cadez and Guilding, Lachmann et al., and Phi Anh on whether the use of SMA is affected by the size of the organization [17] - [19].

4. Conclusion

The study examines and evaluates the use of SMA according to the degree of autonomy, year of establishment, and size of students/year of Vietnamese public universities. The results show that the degree of autonomy, year of establishment, and number of students have different impacts on the use of SMA. In terms of autonomy, fully autonomous universities have the most impact on SMA use (AD, TC, LKH), followed by non-autonomous universities (AD, TC), and partially autonomous universities only have the effect of using financial measures (TC). In terms of years of establishment, universities established less than 20 years old have an impact when applying strategy (AD) and using financial measures (TC), the remaining universities are not statistically significant. In terms of student size/year, the schools which enroll over 5000 students/year have an impact on the use of SMA according to the contents of applying Strategy (AD), strategic reporting (BC), using metrics finance (TC), and decision making (RQD), while universities with an enrollment size of fewer than 2000 students/year only have an impact on the application of strategy (AD) and Planning (LKH), universities from 2,000 to 5,000 students/year do not have enough evidence to conclude about the impact of using SMA due to its lack of statistical significance.

The research results contribute to helping universities improve the information provided to managers to have a stronger environmental orientation and future direction. To be able to provide strategic management information for long-term and sustainable development, accountants and managers need additional knowledge related to the use of SMA techniques. Research results help universities find orientations for sustainable development when the environment is changing and

competition is getting fiercer. For the governing body, promoting autonomy in universities is necessary to help them achieve better performance. In addition, this study complements the existing literature review related to the content of SMA and the impact of organizational structure (ownership, age, size) on the use of SMA by public universities in Vietnam.

REFERENCES

- [1] Vietnam National Assembly, *Education Law of the National Republic of the Socialist Republic Of Vietnam No. 38/2005/QH11, dated June 14, 2005*, 2005.
- [2] Vietnam Ministry of Education and Training, "Higher education statistics for the 2019 - 2020 school year," 2021. [Online]. Available: <https://moet.gov.vn/thong-ke/Pages/thong-ko-giao-duc-dai-hoc.aspx?ItemID=7389>. [Accessed June 18, 2023].
- [3] B. R. Lord, "Strategic management accounting: the emperor's new clothes?" *Management Accounting Research*, vol. 7, no. 3, pp. 347-366, 1996.
- [4] M. Bromwich, "The case for strategic management accounting: The role of accounting information for strategy in competitive markets," *Accounting, Organizations and Society*, vol. 15, no.1, pp. 27-46, 1990.
- [5] R. Roslender and S. J. Hart, "In search of strategic management accounting: theoretical and field study perspectives," *Management Accounting Research*, vol. 14, no. 3, pp. 255-279, 2003.
- [6] C. Guilding, K. S. Cravens, and M. Tayles, "An international comparison of strategic management accounting practices," *Management accounting research*, vol. 11, no. 1, pp. 113-135, 2000.
- [7] K. Langfield-Smith, "A review of quantitative research in management control systems and strategy," *Handbooks of Management Accounting Research*, vol. 2, pp. 753-783, 2006.
- [8] N. W. Simmonds, "Genotype (G), environment (E) and GE components of crop yields," *Experimental Agriculture*, vol. 17, no. 4, pp. 355-362, 1981.
- [9] E. Marlina, "Strategic Management Accounting And University Performance: A Critical Review," *Academy of Strategic Management Journal*, vol. 19, no. 2, pp. 1-5, 2020.
- [10] P. Cropper and R. Cook, "Developments, Activity-Based Costing in Universities - Five Years On," *Public Money & Management*, vol. 20, no. 2, pp. 61-68, 2000, doi: 10.1111/1467-9302.00213.
- [11] L. D. Parker, "It's been a pleasure doing business with you: a strategic analysis and critique of university change management," *Critical Perspectives on Accounting*, vol. 13, no. 5/6, pp. 603-619, 2002.
- [12] T. Agasisti and C. Salerno, "Assessing the Cost Efficiency of Italian Universities," *Education Economics, Taylor & Francis Journals*, vol. 15, no.4, pp. 455-471, 2007.
- [13] J. H. BaidingHu, "Estimation of cost efficiency of Australian universities," *Mathematics and Computers in Simulation*, vol. 78, no. 2-3, pp. 266-275, 2008.
- [14] T. Agasisti and G. Johnes, "Heterogeneity and the Evaluation of Efficiency: the Case of Italian Universities," *Applied Economics*, vol. 42, no. 11, pp. 1365-1375, 2010, doi: 10.1080/00036840701721463.
- [15] P. Owino, J. Munene, and J. Ntayi, "Does responsibility accounting in public universities matter?" *Cogent Business & Management*, vol. 3, no. 1, pp. 1-10, 2016.
- [16] L. Yasmiza, H. J. Ummi, R. A. Syamsul, and I. A. Madya, "Management Accountant Practice in Malaysian Public Sector," *World Applied Sciences Journal*, vol. 35, no. 8, pp. 1482-1489, 2017, doi: 10.5829/idosi.wasj.2017.1482.1489.
- [17] S. Cadez and C. Guilding, "An exploratory investigation of an integrated contingency model of strategic management accounting," *Accounting, Organizations and Society*, vol. 33, no. 7-8, pp. 836-863, 2008.
- [18] M. Lachmann, T. Knauer, and R. Trapp, "Strategic management accounting practices in hospitals: empirical evidence on their dissemination under competitive market environments," *Journal of Accounting and Organizational Change*, vol. 9, no. 3, pp. 336-369, 2013.
- [19] D. N. A. Phi, "Factors Affecting the Use and Consequences of Management Accounting Practices in A Transitional Economy: The Case of Vietnam," *Journal of Economics & Development*, vol. 18, no. 1, pp. 54-73, 2016, doi: 10.33301/2016.18.01.04.
- [20] H. V. Tran and T. P. L. Tran, "Application scope of strategic management accounting in Vietnamese enterprises," *Industry and Trade Magazine*, vol. 19, no. 8, 2020. [Online]. Available: <https://tapchicongthuong.vn/bai-viet/muc-do-van-dung-ke-toan-quan-tri-chien-luoc-trong-cac-doanh-nghiep-viet-nam-75089.htm>. [Accessed June 18, 2023].