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**STRATEGIC MANAGEMENT ACCOUNTING IN VIETNAMESE
CONSTRUCTION ENTERPRISES**

Major: Accounting

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SUMMARY OF DESERTATION IN ACCOUNTING

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The desertation can be found at:

- The library of Hanoi University of Industry
- Vietnam National Library

INTRODUCTION

1.1 Rationale for the study

In the context of globalization, digital transformation, and the increasing emphasis on sustainable development (ESG), the business environment has become increasingly dynamic, while competition among enterprises has intensified. These changes require firms not only to maintain effective cost control but also to develop the capability to formulate, implement, and adapt their strategies based on a comprehensive and timely management information system. Consequently, relying on traditional management approaches is no longer a viable option. To survive and achieve sustainable growth, enterprises need a management system that effectively integrates operational execution with long term strategic vision (Kaplan, 1996).

The construction industry has distinctive economic and technical characteristics that differentiate it from manufacturing and service sectors. Industry context plays a critical role in shaping management accounting systems (Messner, 2016). Construction projects involve large capital investments, long life cycles, and high levels of uncertainty arising from project uniqueness, site conditions, and material price fluctuations (Taylor, 2021). These characteristics require strategic information beyond cost control, including competitor analysis, customer profitability, and value chain performance (Bromwich & Bhimani, 2005). Consequently, strategic management accounting (SMA) has become essential for construction enterprises to support strategic decision making, optimize resource utilization, and enhance competitiveness throughout the project life cycle.

Empirical evidence from Vietnam indicates that the adoption of SMA in construction enterprises remains limited, with a primary focus on project cost management for short term efficiency and risk control. While these practices support cost control and competitiveness, they fall short in enabling comprehensive strategic analysis and long-term decision making. Advanced techniques such as benchmarking and the balanced scorecard (BSC) are still underutilized. Moreover, the role of accountants in strategic decisions is constrained by limited non-financial expertise, a technically oriented organizational culture, and the lack of integrated data systems incorporating non-financial information.

Existing studies, both domestically and internationally, on SMA have primarily focused on sectors such as manufacturing, tourism, hospitality, and healthcare. Meanwhile, the construction industry which accounts for a significant proportion of GDP, utilizes substantial social resources, and has strong spillover effects on the economy has not received adequate research attention. The lack of studies within the specific context of construction enterprises has created a gap in both theoretical and practical understandings of SMA in Vietnam.

Based on the above considerations, the author selects the research topic entitled “*Strategic management accounting in Vietnamese construction enterprises*” for this dissertation. This study identifies the factors influencing SMA adoption and examines its impact on firm performance in Vietnamese construction enterprises, providing practical implications for improving competitiveness and managerial effectiveness.

1.2 Research objectives

The study is directed toward the following specific objectives:

- ✓ To systematize and clarify the theoretical foundations of SMA, thereby providing a basis for examining the current state of SMA adoption and the factors influencing its adoption in Vietnamese construction enterprises.
- ✓ To investigate and analyze the current practices of SMA adoption in Vietnamese construction enterprises.
- ✓ To develop a research model and empirically test the proposed model and research hypotheses in order to examine the effects of the identified factors on SMA adoption and the impact of SMA adoption on the organizational performance of Vietnamese construction enterprises.
- ✓ To propose recommendations for promoting the adoption of SMA with the aim of enhancing the organizational performance of Vietnamese construction enterprises.

1.3 Research questions

To address the aforementioned specific research objectives, this study is conducted to answer the following research questions:

Question 1: What constitutes the theoretical framework of strategic management accounting in enterprises?

Question 2: What is the current state of SMA adoption in Vietnamese construction enterprises?

Question 3: How do the identified factors influence the adoption of SMA and SMA adoption affect the organizational performance of Vietnamese construction enterprises?

Question 4: What recommendations can be proposed to promote the adoption of SMA in order to enhance the organizational performance of Vietnamese construction enterprises?

1.4 Research subject and scope

- **Research subject:** The dissertation focuses on the theoretical and practical aspects of SMA, including its adoption in Vietnamese construction enterprises and the factors influencing SMA adoption within these enterprises.

- **Research scope:**

➤ **Spatial scope:** The study focuses on Vietnamese construction enterprises on three stock exchanges, namely HNX, HOSE, and UPCOM, in order to ensure both feasibility (in terms of infrastructure and human resources) and relevance (in terms of information requirements) for investigating the application of SMA.

➤ **Temporal scope:** The study has been conducted from July 2023 to the present. In particular, expert interviews were carried out from August 2024 to December 2024 and in September 2025, while the survey was conducted from March 2025 to July 2025.

1.5 Structure of the thesis

The dissertation is structured into three chapters as follows:

Chapter 1: Theoretical foundations of strategic management accounting in enterprises.

Chapter 2: Current practices of strategic management accounting in Vietnamese construction enterprises.

Chapter 3: Recommendations to enhance the adoption of strategic management accounting in Vietnamese construction enterprises.

1.6 Contributions of the thesis

Theoretical contributions

- The dissertation enriches and further refines the concept of SMA.
- It systematizes strategic management accounting techniques (SMATs), clarifying the content, functions, and roles of each technique such as attribute based costing, value chain costing, quality costing, benchmarking, and the BSC. They support strategic decision making.
- It develops a research model identifying the factors influencing the adoption of SMA in Vietnamese construction enterprises, thereby contributing to the theoretical development of SMA research.

Practical contributions

- The dissertation evaluates the current state of SMA implementation in Vietnamese construction enterprises, enabling managers to better understand the extent of application, as well as the strengths and limitations of SMA practices in these firms.
- It identifies the key factors affecting the adoption of SMA in construction enterprises, thereby providing a basis for firms to improve their management accounting systems in support of business strategy.
- It proposes practical solutions to enhance the application of SMA in Vietnamese construction enterprises, contributing to the improvement of longterm operational performance.

CHAPTER 1

THEORETICAL FOUNDATIONS OF STRATEGIC MANAGEMENT

ACCOUNTING IN ENTERPRISES

1.1 Evolution and concept of strategic management accounting

1.1.1 Evolution of strategic management accounting

The evolution of SMA can be divided into four main stages:

- * Emergence stage (1980s): Traditional management accounting was increasingly criticized for failing to meet managers' information needs in an environment of globalization, technological advancement, and intensifying competition.

- * Conceptual development stage (1981–1990): Researchers introduced SMA as a new approach to integrate accounting information with business strategy, marking the beginning of a strategic perspective in management accounting.

- * Technique development stage (1990–2000): During this period, various SMA techniques and tools were developed and refined, shifting the focus from conceptual discussions to practical applications that support strategic decision making and organizational performance.

- * Maturity and empirical research stage (2000–Present): SMA research has expanded significantly, emphasizing the measurement of SMA adoption, the identification of influencing factors, and the evaluation of its impact on organizational performance across different industries and contexts.

1.1.2 Concept of strategic management accounting

1.1.2.1 Business strategy

To understand SMA, it is essential to first understand business strategy. Strategy refers to a long-term plan that guides organizational activities toward achieving strategic objectives and sustaining competitive advantage (Nguyen Thu Ha et al., 2022). It involves both strategy formulation and strategy implementation.

1.1.2.2 Strategic Management

Strategic management is the process of formulating, implementing, and evaluating strategic decisions and actions to enhance organizational performance and achieve competitive advantage.

1.1.2.3 Strategic Management Accounting

Guilding, Cravens et al. (2000) define SMA as an extension of management accounting that provides information to support strategic decision making and strategic control. SMA emphasizes competitor oriented information and assists managers in strategic planning, performance evaluation, control, and decision making.

1.2 Strategic management accounting techniques

Cadez and Guilding identified 16 SMAT and classified them into five categories such as costing, planning/control and performance measurement, strategic decision making, competitor accounting, and customer accounting. To align with the objectives of this study and the context of Vietnamese construction enterprises, this research focuses on seven core SMA techniques:

- Attribute costing: Allocates costs to specific product attributes to support pricing, product design, and profitability analysis (Roslender & Hart, 2003).
- Life-cycle costing (LCC): Estimates and manages costs throughout the entire life cycle of a product or project, from acquisition to disposal (Kerdlap & Cornago, 2020).
- Quality costing: Identifies and measures quality related costs to improve product quality and strengthen competitive advantage.
- Target costing: A cost management technique that determines allowable costs to achieve desired profit objectives while promoting cross functional collaboration (RS & Atkinson, 1989).
- Value chain costing: Analyzes costs across the entire value chain to improve operational efficiency and create competitive advantage (Porter, 1985).
- Benchmarking: A systematic process of comparing organizational performance and practices with industry leaders to identify best practices and performance standards (Rank Xerox, 1979; Nguyen Vu Viet & Mai Ngoc Anh, 2020).
- Balanced Scorecard (BSC): An integrated performance management framework that links financial and non-financial measures with strategic objectives (Kaplan & Norton, 2005).

1.3 Roles of strategic management accounting

1.3.1 Supporting strategic decision making

SMA provides both financial and non-financial information to support strategic decision making and improve managers' understanding of the competitive environment (Simmonds, 1981).

1.3.2 Measuring and evaluating strategic performance

SMA facilitates the monitoring and evaluation of strategic performance, enabling organizations to assess strategic outcomes and make timely adjustments (Bromwich, 1990).

1.3.3 Optimizing costs and resources

SMA supports cost optimization and efficient resource allocation by providing strategic cost information for managerial decision making (Guilding et al., 2000).

1.3.4 Enhancing competitive advantage

By analyzing costs, customer value, competitors, and value chain activities, SMA helps firms strengthen competitive advantage and improve market performance.

1.3.5 Supporting strategic risk management

SMA assists organizations in identifying, assessing, and managing strategic risks, thereby enhancing long term sustainability (Bromwich, 1990).

1.3.6 Improving organizational performance

Previous studies have shown that SMA adoption positively influences organizational performance. Cadez and Guilding (2008), based on a survey of 193 Slovenian firms, found that SMA provides timely and reliable information, leading to better strategic decisions and improved business performance.

1.4 Factors influencing the adoption of strategic management accounting

1.4.1 Theoretical foundations

- Contingency theory suggests that organizational practices depend on contextual factors rather than a single best approach. Key contingencies influencing management accounting include the external environment, organizational characteristics, experience, and technology (Lawrence & Lorsch, 1967).

- The diffusion of innovation theory (Rogers, 1962; 2003) explains how new ideas and management practices are adopted within organizations over time. In this context,

SMA is regarded as an innovation when it is perceived by managers as a new management practice compared with existing accounting systems (Damanpour, 1991; Rogers et al., 2014).

1.4.2 Factors influencing SMA adoption

Previous international and Vietnamese studies indicate that SMA adoption is influenced by multiple factors, which can be grouped into three categories: (1) strategic and managerial factors; (2) organizational structure, size, and resource factors; and (3) environmental and technological factors.

CHAPTER 2

CURRENT PRACTICES OF STRATEGIC MANAGEMENT ACCOUNTING IN VIETNAMESE CONSTRUCTION ENTERPRISES

2.1. Characteristics of the construction industry affecting the adoption of strategic management accounting in vietnamese construction enterprises

The construction industry possesses distinctive characteristics that differentiate it from traditional manufacturing and service sectors, thereby requiring specific management information systems. These characteristics create both pressures and driving forces for the adoption of SMA in order to enhance cost management efficiency, decision making, and the competitiveness of Vietnamese construction enterprises.

Key features of the construction industry including project-based operations, high levels of risk, intense competition, complex supply chains, and increasing demands for transparency generate a strong need for SMATs. These characteristics make SMA an essential management tool, enabling firms to control strategic costs, improve bidding success rates, enhance project performance, manage risks and quality, and strengthen long-term competitive advantage.

2.2. Research methods used to examine the current state of strategic management accounting in vietnamese construction enterprise

2.2.1 Qualitative method

To assess the current state of SMA adoption in Vietnamese construction enterprises, this dissertation employs a mixed methods approach, combining qualitative and quantitative methods to provide a comprehensive understanding of SMA practices in reality. Based on the literature review, the study defines the scope of SMA by focusing on strategic management accounting techniques (SMATs). For the qualitative approach, the theoretical review identified 16 SMATs. Subsequently, the author conducted in depth interviews with a group of experts (Group A), comprising five selected scholars who have published research in management accounting, SMA, or finance in the context of construction enterprises. The purpose of these interviews was to evaluate the suitability of SMATs for application in Vietnamese construction enterprises. The findings from

Group A interviews identified a set of SMATs considered appropriate for implementation in Vietnamese construction enterprises.

2.2.2. Quantitative method

2.2.2.1 Research hypotheses and research model

*** Research hypotheses**

Based on the literature review and underlying theoretical frameworks, the author proposes several factors influencing the adoption of SMA in construction enterprises in Vietnam. The research model is developed based on prior studies and further refined to reflect the specific characteristics of construction firms in Vietnam. Subsequently, expert consultation was conducted, and the model was adjusted to ensure its suitability to the practical conditions of these enterprises. The research hypotheses are formulated as follows:

H1: Market orientation has a positive effect on the adoption of SMA in construction enterprises.

H2: The professional competence of management accounting has a positive effect on the adoption of SMA in construction enterprises.

H3: The use of technology has a positive effect on the adoption of SMA in construction enterprises.

H4: The adoption of SMA has a positive effect on the performance of construction enterprises in Vietnam.

*** Research model**

Based on the theoretical foundations and prior studies, the research model is proposed to examine the factors influencing the adoption of SMA, with appropriate adjustments to the context of Vietnamese construction enterprises. In this model, the independent variables represent the factors affecting SMA adoption in construction enterprises, while the dependent variable is firm performance, with SMA adoption serving as a mediating variable. These relationships are reflected through hypotheses H1, H2, H3, and H4, and are illustrated in the following research model.

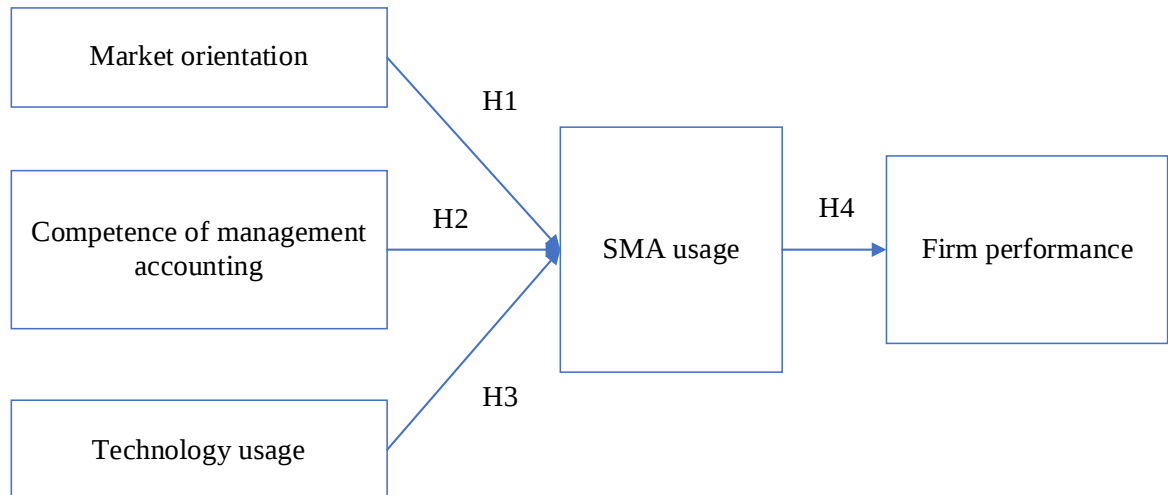


Figure 2.1. Research model

Source: Compiled by the author

Research procedure

To test the proposed theoretical framework, the author conducted a series of analytical steps, including descriptive statistics of the research sample and reliability testing of the measurement scales used in the study. Specifically, the quantitative research procedure was implemented as follows:

For data analysis, SPSS 25 was used for data coding and cleaning. In addition, the author performed descriptive statistical analysis, reliability testing of the measurement scales, and exploratory factor analysis (EFA). Subsequently, validated measurement scales were imported into AMOS 24 to conduct confirmatory factor analysis (CFA) and Structural equation modeling (SEM) in order to test the research hypotheses.

The specific analytical steps are as follows:

- + Descriptive statistics
- + Reliability analysis of measurement scales
- + Exploratory factor analysis (EFA)
- + Confirmatory factor analysis (CFA)
- + Structural equation modeling (SEM) to test the research hypotheses by examining the relationships among the constructs.

2.2.2.2 Development of measurement scales for factors influencing strategic management accounting

The research model is developed based on a comprehensive review of SMA studies, particularly the work of Cadez and Guilding (2008), in which SMA is influenced by factors grounded in contingency theory. Building upon and adapting this framework to the context of the Vietnamese construction industry, the proposed model examines the effects of three key factors market orientation, the professional competence of management accounting staff, and the use of technology on the adoption of strategic management accounting. This approach ensures the robustness and reliability of the SMA measurement scale, as it captures both the extent to which SMATs are applied within enterprises and the involvement of accounting personnel, which is a necessary condition for the effective implementation of these techniques.

2.2.2.3 Descriptive statistics of the research sample

The purpose of this study is to examine the impact of various factors on the adoption of SMA and its subsequent effect on business performance in Vietnamese construction enterprises. Accordingly, the survey questionnaires were distributed to managers and accountants working in construction enterprises on the stock market.

A total of 650 questionnaires were distributed, of which 379 were returned. The questionnaire included screening questions to ensure that respondents were appropriate for the research objectives. After removing invalid responses and flat data, 350 valid observations remained, which constitute the final sample size of the study.

2.3 Current use of strategic management accounting techniques in Vietnamese construction enterprises

To evaluate the current use of SMATs in Vietnamese construction enterprises, this dissertation adopts a mixed methods approach, combining qualitative and quantitative methods to provide a comprehensive assessment of the level of adoption in practice.

(1) Qualitative research findings

The results of in-depth interviews, conducted until data saturation was achieved, with five academic experts and eleven senior managers from construction enterprises indicate that several SMATs are particularly essential in the construction industry context. These include target costing, LCC, competitor analysis and benchmarking, quality costing, value chain costing, and the BSC.

(2) Quantitative research findings

Based on 350 valid responses collected from construction enterprises on the Vietnamese stock market, the data were processed using SPSS and analyzed through descriptive statistics to determine the extent of application of each SMAT. The statistical indicators employed include mean, standard deviation, variance, and frequency of use.

Overall, the quantitative findings are consistent with the expert evaluations obtained from the qualitative study. The results indicate that the adoption of SMA in construction enterprises remains at an early stage, primarily focusing on techniques directly related to project cost management, while more comprehensive strategic analysis techniques are still applied to a limited extent. Techniques that support project competitiveness, cost control, and risk mitigation such as target costing (TC), quality costing (QC), and LCC are more widely adopted. In contrast, long term strategic techniques requiring multidimensional data and advanced management systems such as benchmarking and the BSC remain underutilized. The adoption of SMA is found to depend significantly on accounting capabilities, the use of technology, and the firm's market orientation.

2.4 The role of strategic management accounting in enhancing the performance of vietnamese construction enterprises

The results of the quantitative analysis highlight the significant role of strategic management accounting in improving firm performance. These findings underscore the need to further investigate the factors influencing the adoption of SMA in Vietnamese construction enterprises. Accordingly, it is essential to propose practical solutions that align with the operational realities of construction firms, thereby supporting the achievement of their strategic objectives.

2.5 Analysis of factors influencing the adoption of strategic management accounting in vietnamese construction enterprises

2.5.1 Reliability testing of measurement scales

Cronbach's Alpha coefficient was first employed to eliminate inappropriate variables. The results of the reliability analysis indicate that the overall Cronbach's Alpha values for all scales are greater than 0.6. In addition, no observed variable has a Cronbach's Alpha value (if deleted) higher than the overall Cronbach's Alpha, and the item-total correlation coefficients of all observed variables exceed the threshold of 0.3.

These results confirm that all measurement scales used in the study satisfy reliability requirements and are suitable for inclusion in the exploratory factor analysis (EFA).

2.5.2 Exploratory factor analysis (EFA)

The EFA results show that five factors were extracted from the initial 28 observed variables. All five factors have Eigenvalues greater than 1, and the total variance explained by the extracted factors is 67.831% (greater than 50%). This indicates that the extracted factors account for 67.831% of the variation in the data, confirming that the dataset is appropriate for factor analysis.

2.5.3 Confirmatory factor analysis (CFA)

Unidimensionality of the measurement scales

Most model fit indices reach acceptable levels. Although the GFI is 0.897, slightly below the recommended threshold of 0.9, it is still considered acceptable due to the small deviation (0.003), as suggested by Hair, Risher et al. (2019). Overall, the indices used to assess unidimensionality meet the required criteria. Therefore, the constructs used in the study demonstrate unidimensionality, and the research model is consistent with the empirical data. In addition to testing unidimensionality, the study also evaluates convergent validity, discriminant validity, and reliability to ensure robustness and minimize potential measurement errors, thereby contributing to both theoretical and practical implications.

Convergent validity

The measurement scales are considered to achieve convergent validity when standardized factor loadings exceed 0.5 and p -values < 0.05 , indicating that the observed variables are statistically significant.

Unidimensionality (Internal consistency of constructs)

The correlation coefficients among the constructs are all less than 1, indicating that the constructs are distinct from one another. Therefore, the measurement scales satisfy the requirement of unidimensionality, and no multicollinearity issue is detected among the constructs. The research model is thus appropriate for the observed data.

Discriminant validity

The p -values < 0.05 , indicating that the constructs used in this study achieve discriminant validity.

Reliability and average variance extracted (AVE)

The table below presents detailed results of the reliability and variance extracted for the measurement scales:

Table 2.1: Summary of statistical indicators

	CR	AVE	MSV	HQ	SMAU	NL	CN	DH
HQ	0.949	0.725	0.399	0.852				
SMAU	0.894	0.560	0.228	0.477	0.748			
NL	0.908	0.625	0.056	0.236	0.173	0.791		
CN	0.895	0.684	0.143	0.378	0.328	0.128	0.827	
DH	0.880	0.647	0.399	0.632	0.421	0.163	0.309	0.804

(Source: Survey data analysis)

The study employs CR and AVE to assess the reliability and validity of the measurement scales used. The results presented in the table above indicate that all CR > 0.7 and all AVE > 0.5, confirming that the measurement scales achieve satisfactory composite reliability and convergent validity. Furthermore, the MSV is lower than the AVE for all constructs, indicating adequate discriminant validity. Therefore, all measurement scales used in the model meet the required reliability and validity criteria and are retained for subsequent analyses.

2.5.4 Structural equation modeling (SEM)

SEM is a widely used method for testing theoretical models. The model fit results of the SEM analysis are presented below:

Table 2.2: Model fit indices

Indicator	Threshold	Result	Evaluation
CMIN/df	≤ 3	2.102	Good
GFI	≥ 0.9	0.879	Acceptable
CFI	≥ 0.9	0.958	Good
TLI	≥ 0.9	0.952	Good
RMSEA	≤ 0.6	0.056	Good
PCLOSE	≥ 0.01	0.042	Good

(Source: Survey data analysis)

Therefore, the model employed in this study is well fitted to the empirical data, and the following hypotheses are accepted:

Table 2.3: Summary of research results

Hypothesis	Test Result
H1: Market orientation has a positive effect on the adoption of SMA in construction enterprises.	Accepted
H2: The professional competence of management accounting has a positive effect on the adoption of SMA in construction enterprises.	Accepted
H3: The use of technology has a positive effect on the adoption of SMA in construction enterprises.	Accepted
H4: The adoption of SMA has a positive effect on the performance of construction enterprises in Vietnam.	Accepted

(Source: Survey data analysis)

2.6 Evaluation of the current practices of strategic management accounting in vietnamese construction enterprises

2.6.1 Evaluation of the content of strategic management accounting in vietnamese construction enterprises

The findings indicate that seven SMATs are appropriately applied in the context of Vietnamese construction enterprises, including target costing, project life-cycle costing, quality costing, attribute-based costing, value chain costing, benchmarking, and BSC. Among these techniques, attribute-based costing exhibits the highest level of adoption, followed by quality costing and value chain costing, which also demonstrate relatively high levels of application. The remaining four techniques LCC, target costing, benchmarking, and the BSC are applied at comparatively lower levels.

2.6.2 Evaluation of the role of SMA adoption in influencing firm performance in vietnamese construction enterprises

A review of previous studies on strategic management accounting, together with the findings of this dissertation, confirms the significant role of SMA adoption in enhancing the performance of construction enterprises in Vietnam. Building on prior research, this study employs a combination of qualitative and quantitative methods to examine the impact of key factors including market orientation, the professional

competence of management accounting staff, and the use of technology on the adoption of SMA in Vietnamese construction enterprises.

2.6.3 Evaluation of factors influencing the adoption of strategic management accounting in vietnamese construction enterprises

The research findings indicate that market orientation, the professional competence of management accounting staff, and the use of technology are key factors influencing the adoption of SMA in Vietnamese construction enterprises. The effects of these factors are interpreted as follows:

*** Market orientation**

The results show that market orientation has a strong influence on the adoption of SMA in Vietnamese construction enterprises.

*** Professional competence of management accounting staff**

The findings indicate that the professional competence of management accounting staff has a positive effect on SMA adoption. This suggests that professional competence is a necessary condition to drive the effective implementation of SMA in practice.

*** Use of technology**

The results demonstrate that the use of technology has a positive and significant effect on SMA adoption, reflecting the current management practices of Vietnamese construction enterprises in the context of ongoing digital transformation.

CHAPTER 3

RECOMMENDATIONS TO ENHANCE THE ADOPTION OF STRATEGIC MANAGEMENT ACCOUNTING IN VIETNAMESE CONSTRUCTION ENTERPRISES

3.1 Prospects for the development of the construction industry in Vietnam

In recent years, the construction industry in Vietnam has shown a clear recovery trend and opened up numerous opportunities for medium and long term development, thereby creating a favorable foundation for improving SMA systems in construction enterprises. According to a report by the General Statistics Office under the Ministry of Finance (2025), the value added of the construction sector increased by 7.87% compared to the previous year, contributing 0.57 percentage points to the overall growth of the economy. At the same time, the national GDP in 2024 grew by 7.09% compared to 2023. Within the economic structure, the industry and construction sector with construction as a key component has made a significant contribution to overall growth, clearly reflecting its role in macroeconomic development.

3.2 Requirements for improving strategic management accounting in vietnamese construction enterprises

Based on the literature review and theoretical foundations, as well as the specific characteristics of the construction industry, the current level of SMA adoption, and the information needs of managers in construction enterprises, the author identifies several requirements for improving SMA in Vietnamese construction firms as follows:

First, SMATs should be refined to align with the operational characteristics of construction enterprises in Vietnam.

Second, the improvement of SMA must ensure both effectiveness and cost efficiency.

Third, SMA systems should meet the information needs required to support planning, cost control, and managerial decision making in Vietnamese construction enterprises.

3.3 Recommendations to enhance the adoption of strategic management accounting in vietnamese construction enterprises

The research findings indicate that Vietnamese construction enterprises need to implement specific solutions to improve SMA practices in order to enhance business

performance. Based on these considerations, the dissertation proposes the following recommendations:

(1) Improving the system of SMA techniques in Vietnamese construction enterprises

**** Expanding the application of comprehensive strategic tools***

First, develop the BSC as an integrated performance measurement tool in construction enterprises.

Second, develop LCC for projects/construction works to improve the quality of information supporting strategic planning, control, and decision-making processes.

Third, apply benchmarking in construction enterprises to identify capability gaps, support strategic positioning, and enhance competitiveness.

**** Integrating multidimensional data***

One of the current limitations is that management data remains fragmented, primarily focusing on cost or project progress, while lacking non-financial information such as construction quality, customer satisfaction, and occupational safety. To address this issue, enterprises should:

- + Develop centralized databases.
- + Establish multidimensional reporting systems.
- + Update data in real time by utilizing technologies such as IoT, construction management software, or ERP systems to automatically collect data, reduce errors, shorten processing time, and provide timely feedback to management.

The integration of multidimensional data will facilitate the implementation of modern SMATs, thereby enhancing forecasting capabilities, risk analysis, and comprehensive strategic decision-making.

(2) Enhancing the role and competencies of accountants in strategic decision-making in vietnamese construction enterprises

**** Developing accountants' capabilities in analyzing and processing non-financial information.***

- + Develop specialized training programs to enhance accountants' understanding of non-financial aspects relevant to construction operations.

- + Provide training in strategic analysis skills, enabling accountants to master modern SMATs such as the BSC, LCC and benchmarking, as well as to analyze non-financial data and formulate strategic recommendations.

- + Foster soft skills, including communication, presentation, consulting, and negotiation skills, to enable accountants to actively participate in decision making meetings with technical departments, project management teams, and senior management.

*** Strengthening cross functional collaboration**

A major barrier in construction enterprises is the dominance of a technically oriented culture, where decisions are often driven by engineering departments, limiting accountants' involvement in strategic decisions. To address this issue, construction enterprises should:

- + Promote cross functional collaboration by establishing regular meetings among accounting, project management, technical departments, and senior management to exchange strategic information.

- + Develop integrated decision-making processes in which accountants participate in feasibility assessments, cost forecasting, project risk analysis, and the selection of optimal alternatives.

- + Encourage a culture of mutual learning, where technical departments recognize the value of accounting information, thereby fostering a data driven decision making environment.

*** Involving accountants directly in strategic planning**

Strong commitment from top management is required to empower accountants to actively participate in the strategic decision-making process within enterprises.

*** Developing periodic strategic reporting systems**

- + Establish financial forecasting and strategic cost reporting systems.

- + Provide regular reports to top management to support timely and informed decision-making.

- + Integrate reporting technologies by utilizing business intelligence (BI) tools, ERP systems, and project management software to automate data collection, analysis, and reporting processes, thereby reducing errors and improving responsiveness.

(3) Enhancing the use of digital technologies to improve the level and effectiveness of strategic management accounting adoption in construction enterprises in vietnam

In the context of the fourth industrial revolution, digital transformation has become an inevitable trend in the economy. Strengthening the application of digital technologies is therefore considered a key solution to enhance both the extent and effectiveness of SMA implementation in Vietnamese construction enterprises.

First, enterprises should invest in and develop integrated management information systems, particularly enterprise resource planning (ERP) systems, construction project management software, management accounting systems, and centralized databases. Second, firms should adopt advanced data analytics tools and digital technologies such as BI, AI, robotic process automation (RPA), big data analytics, and blockchain to enhance the quality of strategic analysis. Third, enterprises need to standardize and digitalize the entire SMA process, including data collection, information processing, planning, analysis, and strategic reporting. Fourth, alongside technological investments, enterprises should improve the digital capabilities and strategic analytical skills of management accounting staff through specialized training in data analytics, information systems management, financial modeling, and the application of digital technologies in strategic management. Finally, enterprises should develop a digital transformation roadmap aligned with their long-term development strategy, in which SMA is positioned as a key informational pillar supporting management and decision-making processes.

(4) Recommendations for top management of construction enterprises to enhance the adoption of strategic management accounting

- + Top management should strengthen the strategic role of the accounting function in corporate governance. It is essential to shift the perception of accounting from a mere recording and financial reporting function to a strategic partner in strategy formulation and implementation.
- + Promote market orientation and align SMA adoption with long-term strategic development goals.
- + Invest in enhancing the professional competence of management accounting staff.
- + Accelerate digital transformation to support SMA implementation.

- + Establish performance evaluation mechanisms based on SMA frameworks.
- + Foster a data driven management culture and enhance transparency in information disclosure.

(5) Recommendations for management accountant in enterprises

- + Proactively transform their role from “record keeping accountants” to “strategic partners.” Accountants should recognize the shift in their professional role toward providing advisory support and contributing to strategic decision making.
- + Enhance professional competencies in SMA and construction project management. Accounting staff should actively update their knowledge of modern SMATs such as target costing, LCC, value chain analysis, benchmarking, BSC, and scenario analysis.
- + Strengthen data analytics skills and the application of digital technologies.
- + Actively participate in strategic planning and decision-making processes. Early and in-depth involvement in strategic decisions will improve the effective use of accounting information and elevate the role of the accounting function.
- + Enhance cross-functional collaboration. Close coordination with other departments enables accountants to access comprehensive information on project progress, quality, costs, and risks, thereby improving the quality of SMA analysis.
- + Develop a long-term cost and value management mindset. Instead of focusing solely on controlling incurred costs, accountants should adopt a “cost design” approach from the strategic planning stage, particularly during budgeting, bidding, and project selection processes.

3.4. Conditions for implementing the proposed solutions

Condition 1: Enhancing market orientation and responsiveness to competitive signals

Enterprises should establish systematic mechanisms for market information collection, regularly updating data on material prices, bidding competition intensity, public private investment trends, and customer demand across different construction segments. The management accounting function should play a central role in processing and transforming this information into strategic reports that support decision making.

Condition 2: Promoting the development of strategic management accounting capabilities with strong commitment from top management

Enterprises need to foster the development of management accounting capabilities from a strategic perspective, with strong commitment from senior management in assigning responsibilities and empowering management accountants to participate in various stages of strategic development.

Firms should encourage accountants to be involved in project evaluation, financial feasibility assessment, and risk identification. In addition, enterprises should provide advanced professional training in budgeting, sensitivity analysis, and project cost simulation. Priority should be given to recruiting and developing personnel with advanced professional certifications such as CPA, CFO, and CMA. The higher the competence of accounting staff, the more significant their contribution to strategic decision-making, thereby improving overall firm performance.

Condition 3: Strengthening commitment to technology adoption and digital transformation in project cost management

Enterprises should integrate systems such as ERP, BIM, PMIS, cost management software (e.g., CostX, GXD), and data analytics tools to ensure that accountants have access to real-time data for cash flow forecasting, cost estimation, and strategic decision-making.

Digital transformation provides a foundation for reducing cost inefficiencies, enabling real time monitoring of project progress and quality, and optimizing project performance and profitability.

Condition 4: Enhancing the use of SMA as a tool for competitive advantage

Enterprises should prioritize the implementation of competitor analysis and benchmarking, project value chain analysis, the BSC, and life-cycle financial forecasting. SMA enables firms to base decisions on forward looking data rather than historical reports, thereby enhancing bidding competitiveness and optimizing long-term performance.

SCIENTIFIC PUBLICATION

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