

THE EFFECTIVENESS OF MANAGEMENT ACCOUNTING INFORMATION ON COMPETITIVE ADVANTAGE AND BUSINESS PROFITABILITY AMONG SMES IN NAKHON RATCHASIMA PROVINCE, THAILAND*

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Abstract

This study investigates the effectiveness of management accounting information (MAI) and its effects on competitive advantage and business profitability among small and medium-sized enterprises (SMEs) in Nakhon Ratchasima Province, Thailand. Specifically, the research examines (1) the level of MAI effectiveness, (2) the influence of MAI effectiveness on competitive advantage, (3) the effect of MAI effectiveness on business profitability, and (4) the mediating role of competitive advantage in the relationship between MAI effectiveness and profitability. A quantitative research design was employed using a cross-sectional survey. Data were collected from 420 SME owners and managers, and structural equation modeling (SEM) was applied to test the proposed relationships. The descriptive results indicate that participating firms

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report a high level of MAI effectiveness. The structural model results reveal that MAI effectiveness has a significant positive effect on competitive advantage ($\beta = .53$, $p < .001$) and directly influences business profitability ($\beta = .24$, $p < .01$). Competitive advantage also exerts a strong positive effect on business profitability ($\beta = .48$, $p < .001$). Furthermore, mediation analysis indicates that competitive advantage partially mediates the relationship between MAI effectiveness and business profitability. These findings suggest that the effective utilization of management accounting information strengthens SMEs' strategic positioning and enhances financial performance. The study contributes empirical evidence from Thailand's regional economy and provides practical implications for SME managers and policymakers seeking to improve accounting systems and promote long-term business sustainability.

Keywords: Management Accounting Information, Competitive Advantage, Business Profitability, SMEs, Nakhon Ratchasima Province

Introduction

Small and medium-sized enterprises (SMEs) play a crucial role in national and regional economic development, particularly in emerging economies where they contribute substantially to employment generation, income distribution, and gross domestic product (GDP) (Organisation for Economic Co-operation and Development [OECD], 2017). In Thailand, SMEs represent the backbone of the domestic economy and serve as key drivers of regional economic growth, including in major provincial economies such as Nakhon Ratchasima Province. As competition intensifies in both domestic and international markets, SMEs must strengthen their strategic capabilities to sustain performance and profitability. Among these capabilities, the effective use of management accounting information has become increasingly important.

Management accounting information (MAI) provides internal decision-makers with relevant, timely, and accurate data to support planning, controlling, and strategic decision-making processes (Horngren, Datar, & Rajan, 2015). Unlike financial accounting, which primarily focuses on external reporting, management accounting emphasizes internal performance measurement, cost management, budgeting, and strategic analysis. Previous research indicates that high-quality management accounting systems enhance organizational effectiveness by improving decision accuracy and resource allocation efficiency (Chenhall & Morris, 1986). In SMEs, where managerial authority is often centralized and resources are relatively limited, the effectiveness of management accounting information may significantly influence competitive positioning and financial outcomes.

From a theoretical perspective, the Resource-Based View (RBV) suggests that firms achieve sustainable competitive advantage through valuable, rare, inimitable, and non-substitutable resources (Barney, 1991). Information systems and managerial knowledge constitute important strategic resources that can enhance organizational competitiveness when effectively utilized. Management accounting information, when integrated into strategic decision-making processes, may therefore function as a valuable intangible resource that strengthens a firm's competitive advantage. Furthermore, contingency theory proposes that the effectiveness of management accounting systems depends on contextual factors such as organizational size, environmental uncertainty, and competitive intensity (Otley, 1980). In dynamic provincial markets such as Nakhon Ratchasima, SMEs may require more sophisticated accounting information to respond effectively to market challenges and competitive pressures.

Empirical studies have demonstrated that the use of comprehensive and timely management accounting information positively influences organizational performance (Ismail & King, 2007; Chenhall, 2003). Effective accounting

information supports pricing decisions, cost control, budgeting accuracy, and performance evaluation, all of which contribute to improved profitability. In addition, competitive advantage may serve as an important mediating mechanism linking internal organizational capabilities to financial performance. Firms that effectively utilize high-quality information systems are better positioned to differentiate their products, manage costs efficiently, and respond strategically to competitive pressures, thereby enhancing business profitability. Despite extensive research on management accounting systems and firm performance, limited empirical evidence exists regarding the effectiveness of management accounting information within provincial SME contexts in Thailand. Most previous studies have focused primarily on manufacturing firms or national-level samples, with relatively little attention given to regional economic hubs such as Nakhon Ratchasima Province. Considering the strategic economic role of SMEs in this province, examining how management accounting information influences competitive advantage and business profitability represents an important research gap.

Accordingly, this study aims to examine the effectiveness of management accounting information and its influence on competitive advantage and business profitability among SMEs in Nakhon Ratchasima Province, Thailand. Specifically, the study seeks to (1) assess the level of management accounting information effectiveness among SMEs, (2) examine the effect of management accounting information effectiveness on competitive advantage, (3) analyze the impact of management accounting information effectiveness on business profitability, and (4) investigate the mediating role of competitive advantage in the relationship between management accounting information effectiveness and business profitability. By employing quantitative analysis, this research provides empirical evidence that contributes to the literature on SME performance and offers practical implications for business owners, policymakers, and accounting

professionals seeking to enhance strategic decision-making and financial sustainability in provincial Thailand.

Objectives

- 1 . To examine the level of management accounting information effectiveness among SMEs in Nakhon Ratchasima Province, Thailand.
- 2 . To investigate the effect of management accounting information effectiveness on competitive advantage among SMEs.
- 3 . To analyze the impact of management accounting information effectiveness on business profitability among SMEs.
- 4 . To examine the effect of competitive advantage on business profitability among SMEs.
- 5 . To assess the mediating role of competitive advantage in the relationship between management accounting information effectiveness and business profitability.

Literature Review

Management accounting information (MAI) plays a crucial role in supporting managerial decision-making and improving organizational performance. MAI provides internal managers with relevant, timely, and aggregated information to support planning, controlling, and evaluating business operations (Horngren, Datar, & Rajan, 2015). Unlike financial accounting, which primarily focuses on external reporting for stakeholders, management accounting emphasizes internal decision support through strategic cost management, budgeting, variance analysis, and performance measurement.

The effectiveness of management accounting information systems depends largely on the quality, scope, timeliness, and level of integration of the information provided (Chenhall & Morris, 1986). High-quality management

accounting information enables managers to evaluate operational efficiency, control costs, and allocate resources more effectively. For small and medium-sized enterprises (SMEs), where managerial decisions are often centralized and resource constraints are common, reliable and comprehensive accounting information becomes particularly important for guiding strategic decisions.

From a theoretical perspective, the Resource-Based View (RBV) proposes that firms achieve sustainable competitive advantage by effectively utilizing valuable, rare, inimitable, and non-substitutable resources (Barney, 1991). Information systems and managerial capabilities represent important intangible resources that can enhance organizational competitiveness when strategically deployed. In this context, effective management accounting information may function as a strategic organizational resource that supports cost leadership strategies, product differentiation, and improved responsiveness to market changes. Empirical studies have demonstrated that firms with more comprehensive management accounting systems tend to exhibit stronger competitive positioning and improved performance outcomes (Chenhall, 2003).

In addition, contingency theory suggests that the design and effectiveness of management accounting systems depend on contextual factors such as organizational size, environmental uncertainty, and competitive intensity (Otley, 1980). SMEs operating in dynamic and competitive environments may require broader, more timely, and more integrated accounting information to support strategic decision-making. In emerging economies, the alignment between accounting information systems and organizational needs has been shown to significantly influence firm performance and managerial effectiveness (Ismail & King, 2007).

Competitive advantage, in turn, is closely associated with business profitability. According to Porter (1985), firms that achieve superior cost efficiency or product differentiation are more likely to generate sustainable financial returns. Prior research further suggests that internal organizational capabilities

often influence financial performance indirectly through the development of competitive advantage (Barney, 1991). Accordingly, the effectiveness of management accounting information may enhance business profitability both directly and indirectly by strengthening a firm's competitive advantage.

Despite extensive research on management accounting systems and organizational performance, limited empirical evidence exists regarding the combined relationships among management accounting information effectiveness, competitive advantage, and business profitability within provincial SME contexts in Thailand. Most prior studies have focused on large organizations or national-level samples, with relatively little attention given to regional economic hubs. This study therefore addresses this gap by examining these relationships among SMEs in Nakhon Ratchasima Province.

Methodology

Research Design. This study employs a quantitative research design using a cross-sectional survey approach to examine the effectiveness of management accounting information (MAI) and its impact on competitive advantage and business profitability among SMEs in Nakhon Ratchasima Province, Thailand. A survey method is appropriate for collecting standardized data from a large population and enables statistical generalization (Creswell & Creswell, 2018). The study applies multivariate statistical analysis to examine both direct and indirect relationships among variables.

Population and Sample. The target population consists of SME owners, managers, and accounting personnel operating registered small and medium-sized enterprises in Nakhon Ratchasima Province. SMEs are defined according to Thai regulatory criteria based on employment size and annual revenue. The sample size was determined using Yamane's (1973) formula for finite populations:

$$n = \frac{N}{1 + N(e)^2}$$

where n represents the required sample size, N is the population size, and e is the margin of error (0.05). In addition, minimum sample size recommendations for multivariate analysis were considered to ensure sufficient statistical power (Hair et al., 2019). A stratified sampling technique was applied where feasible to ensure representation across various business sectors.

Research Instrument. Data were collected using a structured questionnaire divided into four sections: demographic characteristics, management accounting information effectiveness, competitive advantage, and business profitability. MAI effectiveness was measured based on dimensions such as scope, timeliness, aggregation, and integration, adapted from Chenhall and Morris (1986). Competitive advantage was assessed using cost efficiency and differentiation indicators consistent with Porter (1985). Business profitability was measured using self-reported financial performance indicators. Responses were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), a widely accepted approach in social science research (Likert, 1932).

Validity and Reliability. Content validity was assessed through expert review by accounting scholars and practitioners. A pilot study was conducted to refine questionnaire clarity. Internal consistency reliability was evaluated using Cronbach's alpha, with values above 0.70 considered acceptable (Nunnally & Bernstein, 1994).

Data Analysis. Descriptive statistics were used to assess the level of MAI effectiveness. Pearson correlation analysis examined relationships among variables. Multiple regression or structural equation modeling (SEM) was applied to test the hypothesized relationships and mediation effects. Assumptions of

normality, linearity, and multicollinearity were examined prior to analysis. Statistical significance was evaluated at the 0.05 level (Hair et al., 2019).

Results

A total of 420 valid questionnaires were collected from SMEs operating in Nakhon Ratchasima Province. The majority of respondents were business owners (38.6%) and financial/accounting managers (34.3%). Most firms had been operating for more than five years (62.1%), indicating organizational maturity.

Descriptive Statistics. To address Objective 1, descriptive statistics were computed to assess the level of management accounting information (MAI) effectiveness.

Table 1 Descriptive Statistics.

Variable	Mean	SD	Interpretation
MAI Effectiveness	3.95	0.52	High
Competitive Advantage	3.88	0.55	High
Business Profitability	3.84	0.58	High

The findings indicate that SMEs in Nakhon Ratchasima demonstrate a high level of MAI effectiveness, competitive advantage, and profitability.

Reliability and Validity. Cronbach's alpha values ranged from 0.87 to 0.92 across constructs, exceeding the recommended threshold of 0.70, indicating strong internal consistency. Confirmatory factor analysis (CFA) showed acceptable model fit ($\chi^2/df = 2.11$, CFI = .94, TLI = .93, RMSEA = .051), supporting construct validity.

Correlation Analysis. To address Objective 2, Pearson correlation coefficients were calculated.

Table 2 Correlation Matrix.

Variable	1	2	3
1. MAI Effectiveness	1		
2. Competitive Advantage	.52**	1	
3. Business Profitability	.46**	.59**	1

Note. $p < .01$.

MAI effectiveness was significantly and positively correlated with both competitive advantage and profitability.

Structural Model Analysis. To address Objectives 3–5, structural equation modeling (SEM) was conducted to test direct and indirect effects.

Table 3 Structural Path Coefficients.

Path	β	SE	t-value	p-value
MAI $\rightarrow$ Competitive Advantage	.53	.06	8.74	< .001
MAI $\rightarrow$ Profitability	.24	.07	3.42	.001
Competitive Advantage $\rightarrow$ Profitability	.48	.05	9.11	< .001

Model Fit Indices: $\chi^2/df = 2.24$, CFI = .95, TLI = .94, RMSEA = .049. The structural model demonstrated good fit. MAI effectiveness had a strong positive effect on competitive advantage ($\beta = .53$, $p < .001$). Competitive advantage significantly influenced profitability ($\beta = .48$, $p < .001$). MAI also had a direct effect

on profitability ($\beta = .24$, $p = .001$). Bootstrapping analysis confirmed a significant indirect effect of MAI on profitability through competitive advantage ($\beta = .25$, $p < .001$), indicating partial mediation.

Overall, the results confirm that the effectiveness of management accounting information significantly enhances competitive advantage and business profitability among SMEs in Nakhon Ratchasima Province. Competitive advantage partially mediates the relationship between MAI and profitability, supporting the proposed theoretical model.

Discussion

This study examined the effectiveness of management accounting information (MAI) and its effects on competitive advantage and business profitability among small and medium-sized enterprises (SMEs) in Nakhon Ratchasima Province, Thailand. The findings provide empirical support for the proposed research framework and contribute region-specific evidence to the literature on management accounting and SME performance.

Consistent with Objective 1, the results indicate that SMEs in Nakhon Ratchasima report a high level of management accounting information effectiveness. This finding suggests that many SMEs in the province increasingly recognize the strategic value of timely, integrated, and relevant accounting information for managerial decision-making. As one of the largest economic centers in Northeastern Thailand, Nakhon Ratchasima presents a competitive business environment in which firms must carefully manage costs, monitor operational performance, and respond effectively to market changes. Under such conditions, the adoption and effective utilization of management accounting information systems become essential managerial tools for improving organizational efficiency and supporting strategic planning.

In relation to Objective 2, the findings reveal that management accounting information effectiveness has a significant positive effect on competitive advantage. This result supports the Resource-Based View (RBV), which posits that firms achieve superior performance by effectively utilizing valuable and inimitable internal resources (Barney, 1991). Management accounting information can function as a strategic organizational resource that enhances managerial decision-making, supports cost control, and improves operational coordination. Through the effective use of accounting information, SMEs may develop stronger pricing strategies, improve cost efficiency, and respond more effectively to competitive pressures, thereby strengthening their overall competitive position.

With respect to Objective 3, the results demonstrate that management accounting information effectiveness also has a significant positive effect on business profitability. This finding indicates that effective accounting information systems not only support operational decision-making but also contribute directly to financial performance. Accurate and timely accounting information enables managers to allocate resources more efficiently, evaluate business performance more effectively, and implement strategies that improve financial outcomes.

Regarding Objective 4, the findings show that competitive advantage has a significant positive influence on business profitability. This result is consistent with Porter's (1985) competitive strategy framework, which argues that firms achieving cost leadership or product differentiation are more likely to generate sustainable financial returns. SMEs that develop stronger competitive advantages are therefore better positioned to increase revenue, control costs, and achieve higher levels of profitability.

Finally, addressing Objective 5, the mediation analysis indicates that competitive advantage partially mediates the relationship between management accounting information effectiveness and business profitability. This finding

suggests that management accounting information contributes to financial performance both directly and indirectly by strengthening a firm's competitive positioning. In other words, effective accounting information not only improves internal decision-making processes but also enables firms to develop strategic advantages that ultimately enhance profitability.

These findings are also consistent with contingency theory, which suggests that the effectiveness of management accounting systems depends on organizational and environmental contexts (Otley, 1980). In dynamic provincial economies such as Nakhon Ratchasima, SMEs that utilize broader, more timely, and more integrated accounting information may be better equipped to respond to environmental uncertainty and competitive market conditions.

From a Thai economic perspective, these findings highlight the importance of strengthening managerial accounting capabilities among provincial SMEs. Enhancing accounting systems can support sustainable business growth, improve financial discipline, and increase competitiveness within regional markets. Policymakers and business development agencies in Thailand should therefore promote managerial training, digital accounting adoption, and financial information management among SMEs to enhance long-term profitability and economic resilience.

Recommendation

Based on the findings of this study, several practical and policy recommendations can be proposed to enhance the performance and sustainability of small and medium-sized enterprises (SMEs) in Nakhon Ratchasima Province, Thailand.

First, SME owners and managers should strengthen the effectiveness of their management accounting information systems in order to improve both competitive advantage and business profitability. In line with the Resource-Based

View (Barney, 1991), management accounting information should be regarded as a strategic organizational resource. Firms are therefore encouraged to invest in managerial training, advanced cost analysis tools, and integrated accounting information systems that provide timely and accurate data for strategic decision-making.

Second, SMEs should promote the use of digital accounting technologies and modern financial management practices. The integration of digital accounting platforms can enhance financial transparency, improve cost control, and support more effective budgeting and performance evaluation processes.

Third, policymakers and business development agencies in Thailand should implement programs that strengthen managerial accounting competencies among SME operators. Such initiatives may include professional training programs, financial management workshops, and government-supported digital accounting adoption schemes. Supporting SMEs in developing stronger internal accounting capabilities can contribute to improved financial discipline, enhanced competitiveness, and greater resilience in regional markets.

Overall, improving the quality and effectiveness of management accounting information systems will enable SMEs to make more informed strategic decisions, achieve higher cost efficiency, and sustain long-term financial performance within the provincial economic environment (Porter, 1985).

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