Nghiên cứu tác động của việc áp dụng các kỹ thuật kế toán quản trị đến hiệu quả hoạt động của các doanh nghiệp tỉnh Bình Định

TÓM TẮT

Nghiên cứu này đánh giá các nhân tố ảnh hưởng đến việc áp dụng các kỹ thuật kế toán quản trị (KTQT) và tác động của việc áp dụng các kỹ thuật KTQT đến hiệu quả hoạt động của các doanh nghiệp (DN) tỉnh Bình Định. Dữ liệu thu thập từ 150 DN tỉnh Bình Định thông qua bảng hỏi khảo sát được đưa vào phân tích mô hình cấu trúc tuyến tính với mục đích kiểm định, đo lường mức độ ảnh hưởng của các nhân tố đến việc áp dụng các kỹ thuật KTQT cũng như tác động của việc áp dụng các kỹ thuật KTQT đến hiệu quả hoạt động của các DN tỉnh Bình Định với sự hỗ trợ của phần mềm AMOS. Kết quả nghiên cứu cho thấy Nhận thức của nhà quản trị, Cạnh tranh, Công nghệ thông tin, Cấu trúc DN, Văn hóa DN và Nguồn lực triển khai đều có ảnh hưởng đến việc áp dụng các kỹ thuật KTQT. Đồng thời, việc áp dụng các kỹ thuật KTQT có tác động tích cực đến hiệu quả hoạt động của các DN tỉnh Bình Định. Kết quả nghiên cứu thực nghiệm này giúp nhà quản trị định hướng và đẩy mạnh áp dụng các kỹ thuật KTQT trong công tác quản trị DN nhằm nâng cao hiệu quả hoạt động và phát triển bền vững của DN.

Từ khóa: *Kỹ thuật kế toán quản trị, hiệu quả hoạt động, tác động, doanh nghiệp, Bình Định*.

Research on the impact of applying management accounting practices on the operational effectiveness of enterprises in Binh Dinh Province

ABSTRACT

This study evaluates the factors influencing the application of management accounting practices (MAP) and the impact of these practices on the operational effectiveness of enterprises in Binh Dinh province. Data was collected from 150 enterprises in Binh Dinh through a survey questionnaire, which was analyzed using structural equation modeling to test and measure the extent of influence of the factors on the application of MAP, as well as the impact of MAP application on the operational effectiveness of enterprises in Binh Dinh, with the support of AMOS software. The research results indicate that manager's perception, competition, information technology, business structure, corporate culture and resource implementation all influence the application of MAP. Additionally, the application of MAP has a positive impact on the operational effectiveness of enterprises in Binh Dinh province. These empirical research findings help managers to guide and enhance the application of MAP in enterprise management to improve operational effectiveness and ensure sustainable development of the enterprises.

Keywords: *Management accounting practices, operational effectiveness, impact, enterprises, Binh Dinh*

1. INTRODUCTION

The economy of Bình Định is increasingly developing and integrating deeply into both domestic and international markets. Enterprises face pressure to innovate their operational processes, management practices, enhance competitiveness, and improve operational effectiveness. According to the 2024 socio-economic census of Bình Định province, most enterprises in the area are small and medium-sized, lacking advantages in capital, with limited management experience and outdated technology. While the number of enterprises is rapidly increasing, their operational effectiveness remains low. This situation is attributed to the global and Vietnamese economic conditions not fully recovering from the Covid-19 pandemic, alongside increasingly fierce competition. Enterprises are facing many difficulties and challenges, such as a lack of orders, insufficient capital, scarcity of raw materials, low quality of labor, and inflation driving up production costs. Additionally, low management levels and a rapidly changing, unstable business environment, along with the complexity and diversity of economic transactions arising in the production and business activities of enterprises, exacerbate the situation.

In particular, the cost management effectiveness of enterprises is poor, leading to high incurred costs and limited operational effectiveness. The application of management accounting techniques in management not only supports managers in making timely and accurate decisions but also helps enterprises optimize costs, improve productivity, increase profits, and enhance operational effectiveness

This study aims to identify and measure the extent of the impact of various factors on the application of MAP in enterprises in Binh Dinh province and to analyze the impact of MAP application on the operational effectiveness of these enterprises. The results of this study will provide managers with a basis to enhance the implementation of MAP in enterprise management.

2. LITERATURE REVIEW

Research on MAP has been of interest to several authors and has been conducted in two main directions: studying the factors that influence the application of MAP in enterprises and examining the impact of MAP application on the operational effectiveness of enterprises.

2.1. Studying the factors that influence the application of MAP in enterprises

To identify and test the influence of various factors on the application of MAP, the authors conducted surveys in enterprises across different fields, industries, and countries. The results show that the application of MAP in enterprises is influenced by various factors, both internal and external to the enterprises.[1]

Some researchers argue that competition is a key factor affecting the application of MAP in enterprise management. According to Ahmad,[2] competition creates tension, instability, uncertainty, and risk for enterprises, thereby prompting them to adjust their control systems, use resources wisely, and make timely business decisions. This leads to enterprises enhancing the implementation of MAP in management to adapt to the opportunities and challenges in today's volatile business environment. Similar results were found in studies by Al – Omiri and Drury,[3] Hoque,[4] Doan,[5] Hung[6] regarding the positive relationship between the level of competition and the level of MAP application. However, O'Cornor et al.,[7] as well as Pham et al.,[8] found no relationship between competition and the application of MAPs in enterprises.

The research by Pierce and O'Dea,[9] Joshi,[10] Haldma and Laats,[11] El-Ebaishi et al.,[12] and Ahmad[13] found that the size of enterprises positively influences the application of MAP. Specifically, larger enterprises tend to apply MAP more than small and medium-sized enterprises. Additionally, William and Seaman[14] found that changes in MAP methods occur more frequently in small enterprises compared to large ones. Furthermore, William and Seaman[14] discovered a relationship between organizational structure and the application of MAP. Specifically, enterprises with decentralized organizational structures tend to change MAPs methods and techniques in their accounting systems more than those with centralized structures. Similarly, Abdel-Kader and Luther[15] also found that the application of MAP in enterprises with a high level of decentralization is greater than in those with low decentralization. Meanwhile, Hoque[4] found that decentralization does not influence the application of MAP.

Pham et al.,[8] identified a positive influence of production technology on the application of MAP in manufacturing enterprises in northern Vietnam. In particular, enterprises with advanced production technology prioritize the application of modern MAP.

Macias[16] studying the application of MAP in Spanish enterprises, found an increase in the level of MAP application when ownership shifted from state-owned enterprises to private enterprises. Additionally, the author discovered that enterprises with joint ventures with foreign partners tend to apply modern MAP more than those without such joint ventures.

Ismail and King[17] found a positive relationship between the level of information technology, the manager's understanding of accounting, and the level of consulting from professional organizations and auditing firms with the application of MAP in small and medium sized enterprises in Malaysia.

When investigating the reasons for the low usage of MAP in Sri Lanka, Subasinghe and Fonseka[18] found that corporate culture is the main factor influencing the application of MAT in this country, while the perceptions of senior managers, the need for planning, and market instability have little or no impact.

Another factor influencing the application of MAP is the availability of implementation resources. Bui et al.,[19] found that enterprises with sufficient resources, including human and financial resources, experience a swift and favorable implementation of MAP, yielding effective results.

Hung[6] while examining the factors affecting the application of MAP in small and medium-sized enterprises in Vietnam, discovered that business strategy is the strongest influencing factor on the application of MAP.

Recently, Tuan[20] studying on the application of MAP in enterprises in northern Vietnam, found that information technology, the qualifications of accounting staff, and management interest positively influence the application of MAP.

The study by Lan[21] examined the factors influencing the application of strategic management accounting practice in Vietnamese enterprises. The results identified seven factors that positively influence the application of strategic MAP, which are: environmental instability, competition, ownership structure, business strategy, market orientation, organizational structure and information technology.

2.2. Examining the impact of MAP application on the operational effectiveness of enterprises

This research direction has attracted considerable interest from many researchers and has been approached from various angles. Some authors study the application of specific MAP and their impact on the operational effectiveness of enterprises. Phornlaphatrachakorn[22] assessed the impact of budgeting techniques on the operational effectiveness of enterprises in Thailand; Jusoh, Hoque, and James analyzed the influence of the Balanced Scorecard (BSC) on the operational effectiveness of manufacturing enterprises in Malaysia and Australia. Ojra, Al-Mawali,[26] Turner et al.,[27] examined the impact of strategic MAP on the operational effectiveness of enterprises; Elhamma and Zhang[28] demonstrated that Activity-Based Costing (ABC) techniques have yielded better results for enterprises in Morocco. Similar results were found in the studies by Hoque and James,[24] Kennedy and Graves[29] showing that enterprises applying ABC achieve superior results compared to those that do not.

At the same time, some other authors have examined how the combination of two or more MAPs affect the operational effectiveness of enterprises. Maiga and Jacobs[30] investigated the simultaneous application of ABC and BSC techniques on company performance; Banker et al.,[31] suggested that combining ABC with total quality management techniques would help enterprises improve performance, quality, and reduce costs, thereby enhancing operational effectiveness. Additionally, many studies indicate that the compatibility of the MAP system with the enterprise's strategy and business environment will help improve operational effectiveness. Cadez and Guilding[32] pointed out that MAPs aligned with the chosen business strategy will enhance company performance. Abdel Al and McLellan[33] commented that an organization with a good combination of MAP and strategy will have a positive and significant impact on performance. This viewpoint is supported by research evidence from Baines and Langfield,[34] Ah Lay and Jusoh[35]. However, it is clear that most of the studies mentioned show the mediating relationship of changes or applications of MAP affecting performance under competitive pressure or changing business environments, but they have not yet demonstrated the direct impact of applying MAP on operational effectiveness. Therefore, recently, some authors have assessed the direct impact of applying MAP on enterprise performance, such as the study by Nuhu et al.,[36] which surveyed 127 public sector organizations and enterprises in Australia using Structural Equation Modeling (SEM). The results indicated that enterprises applying more modern MAPs achieve better operational effectiveness. Similarly, Maziriri[37] used regression analysis to study 280 small and medium sized enterprises in South Africa regarding business outcomes when applying MAPs, which were divided into five functional groups: cost systems, budgeting, performance evaluation, decision support information, and strategic analysis. The results showed a positive impact of applying MAP on the operational effectiveness of small and medium sized enterprises in South Africa, except for decision support information, which was not statistically significant due to the mismatch between the current decision making model and small enterprises. Similar studies,[26,27,38] have also shown a positive relationship between the application of MAP and the operational effectiveness of enterprises.

On the contrary, some research findings indicate that the application of MAP does not significantly affect the operational effectiveness of enterprises. For example, Banker[39] suggested that in a highly unstable business environment, the application of ABC techniques does not impact the operational effectiveness of enterprises. Similarly, Ittner et al.,[40] found no relationship between the use of ABC techniques and the operational effectiveness of enterprises. Asmilia and Sugiyarti[41] surveyed 73 bank managers in Indonesia, and their results showed that while the application of strategic MAP has an impact on competitive advantage, it does not significantly affect the operational effectiveness of banks. This finding aligns with the results of studies by Young and Selto,[42] Perrera et al.,[43] who also found no relationship between the use of non-financial performance measures and organizational effectiveness, or very little evidence showing that the use of non-financial resource measures in just- in - time (JIT) inventory models is related to differences in operational effectiveness. Phornlaphatrachakorn[22] found evidence indicating that budgeting significantly influences resource utilization and business productivity; however, it does not affect the operational effectiveness of Thai enterprises.

In Vietnam, there are still relatively few studies focusing on the impact of applying MAP on the operational effectiveness of enterprises.

Anh[5] affirmed that the application of MAP has a positive impact on the operational effectiveness of enterprises. According to the author, the more MAPs Vietnamese enterprises apply, the higher the resulting effectiveness, both financially and non-financially.

Similarly, Toan and Nương[44] found a positive impact between the application of MAP and financial performance in Vietnamese manufacturing enterprises; however, the authors did not find a relationship between MAP and non-financial outcomes. This is consistent with the research results of Thanh[45], which indicated that the application of MAP contributes to increasing the operational effectiveness of manufacturing enterprises in Vietnam. Likewise, the study by Trinh[46] also found that the application of strategic MAP contributes to enhancing the operational effectiveness of listed enterprises on the Vietnamese stock market, while also discovering that the application of strategic MAP mediates the impact between intellectual capital and operational effectiveness. The studies by Quy,[47] Lan[21] also concluded that there is a positive relationship between the application of strategic MAP and the operational effectiveness of enterprises from both financial and non-financial perspectives. Furthermore, the application of MAP plays a mediating role in the relationship between various factors and the operational effectiveness of enterprises.[48]

Thus, the overview indicates that the results of previous studies still contain many contradictions, leading to inconsistencies in the relationship between the application of MAP and the operational effectiveness of enterprises. The differences primarily focus on the non-financial achievements of enterprises. This can be explained by the assessment of operational effectiveness in studies on MAP, which consider both financial and non-financial results. However, the authors tend to focus more on financial achievements. Additionally, most studies show an indirect relationship between the management application of MAP and the operational effectiveness of enterprises, where the application of MAP as a mediator, fitting into the strategy or contextual factors. Through the review of research, it is evident that empirical studies on the direct impact of the application of MAP on operational effectiveness are limited. Therefore, due to the lack of evidence as well as uncertainty and inconsistency in research results regarding the direct influence of MAP application on enterprise effectiveness, this represents a research gap that requires more empirical studies in various countries to provide additional empirical evidence and fill this gap.

3. RESEARCH METHODOLOGY

3.1. Research model and hypotheses

Through a literature review of related studies on the factors influencing the application of MAP and operational effectiveness in enterprises, combined with in-depth interviews with experts, the research team developed the following research model:

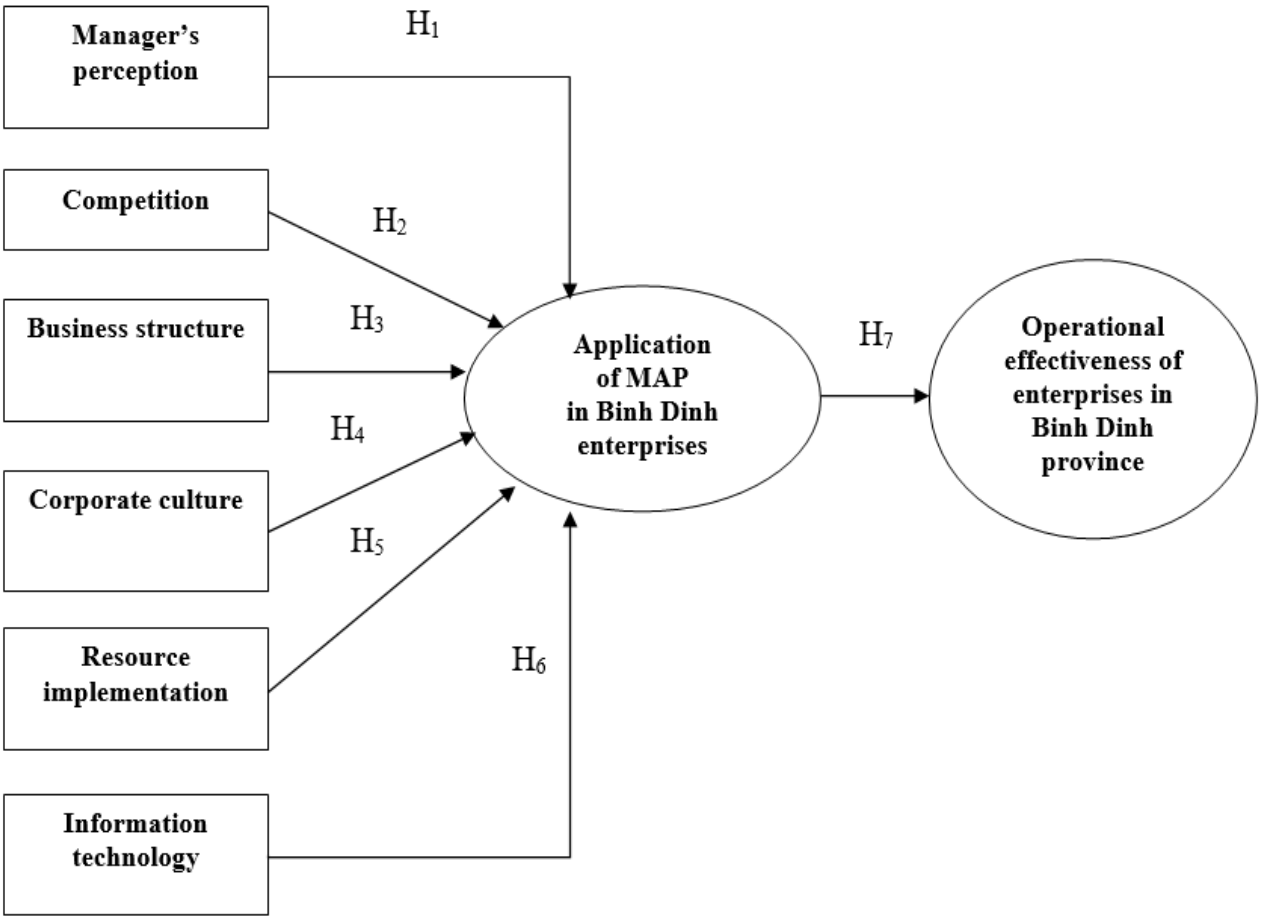

Figure 1. Research model

(Resource: proposed by the research team)

From the research model, based on two fundamental theoretical foundations including uncertainty theory and sociology theory, as well as related previous studies, the research team developed the following research hypotheses:

H_1: Manager's perception positively influences the application of MAP in Binh Dinh enterprises.

H_2:Competition positively influences the application of MAP in Binh Dinh enterprises.

H_3:Organizational structure positively influences the application of MAP in Binh Dinh enterprises.

H_4:Corporate culture positively influences the application of MAP in Binh Dinh enterprises.

H_5:Implementation resources positively influence the application of MAP in Binh Dinh enterprises.

H_6: Information technology positively influences the application of MAP in Binh Dinh enterprises.

H_7: The application of MAP positively influences the operational effectiveness of enterprises in Binh Dinh province.

3.2. Research methodology

This study uses a mixed research method. In this, the qualitative research method with expert interviews including directors, chief accountants of enterprises, researchers, and experienced lecturers in management accounting helps the research team identify factors and refine the measurement scale of the factors influencing the application of MAP and operational effectiveness of enterprises in Binh Dinh province.

Quantitative data is collected through a survey distributed to enterprises in Binh Dinh province across various fields and business sectors. Each enterprise receives one survey. A total of 200 surveys were distributed, and 180 were returned; however, only 150 valid surveys met the criteria for inclusion in the study. Subsequently, this data is used to assess the reliability of the measurement scale, conduct exploratory factor analysis, confirmatory factor

analysis, and structural equation modeling with the support of SPSS 25 and AMOS software.

4. RESULT AND DISCUSSION

4.1. Evaluating the reliability of the measurement scale

The reliability of the measurement scale is assessed through Cronbach's Alpha coefficient and the total item correlation coefficient. According to Tho,[49] the scale is considered reliable when the Cronbach's Alpha ≥ 0.6 and the total item correlation of the observed variables is greater than 0.3. Observed variables with a total item correlation coefficient less than 0.3 will be excluded.

The results of the reliability assessment of the measurement scale for the factors in the research model are detailed in Table 1.

Table 1. Results of the reliability assessment of the measurement scale of variables

Measurement items	Corrected Item – Total Correlation	Cronbach's Alpha if Items deleted	Cronbach's Alpha
Manager's perception (NT)			**0.974**
NT1_ Business managers highly appreciate the usefulness of the management accounting practices tools	0.875	0.935	
NT2_ Business managers have knowledge of the technical tools of management accounting	0.926	0.918	
NT3_ Business managers have a high demand for applying management accounting practices	0.798	0.953	
NT4_ Managers accept a high cost in investing to apply management accounting practices	0.925	0.915	
Competition (COMP)			**0.948**
COMP1_ A significant difference in sales revenue among different products in the business	0.838	0.939	
COMP2_ The business faces strong competition in the global market	0.912	0.933	
COMP3_ The sales and distribution channels of the business are diverse	0.866	0.937	
COMP4_ The quality of the products and services of the business has increased significantly	0.891	0.935	
COMP5_ The diversity of products and services	0.727	0.948	
COMP6_ Price competition among businesses in the same industry is very strong	0.773	0.945	
COMP7_ The business responds flexibly to the activities and policies of its competitors	0.796	0.943	
Organizational structure (STRUC)			**0.831**
STRUC1_ Diverse skills for employees	0.451	0.828	
STRUC2_Employee training	0.770	0.788	
STRUC3_ Cross-functional team	0.542	0.813	
STRUC4_ Establish a culture of participation	0.592	0.806	
STRUC5_ Management training	0.650	0.797	

STRUC6_ Lean organizational structure	0.530	0.814	
STRUC7_ Teamwork	0.884	0.767	
STRUC8_ Enhancing employee capabilities	0.070	0.858	
Corporate culture (CULT)			**0.818**
CULT1_ Support from managers to employees in the enterprise	0.613	0.809	
CULT2_ Mutual support among employees from different departments in the enterprise	0.713	0.706	
CULT3_ Consensus on the common development goals of the enterprise	0.700	0.721	
Implementation resources (RES)			**0.878**
RES1_ Fully equipped software and computers support the implementation of MAPs	0.847	0.750	
RES2_ Budget for implementing MAPs	0.735	0.853	
RES3_ There are skilled experts and experienced accounting staff in applying MAPs	0.714	0.871	
Information technology (IT)			**0,811**
IT1_ The application of information technology will effectively support the budgeting process	0.806	0.692	
IT2_ The application of information technology will effectively support decision-making	0.526	0.812	
IT3_ The application of information technology will effectively support decision evaluation	0.701	0.726	
IT4_ The application of information technology will effectively support strategic analysis	0.526	0.809	
Application of MAP in Binh Dinh enterprises			**0.925**
MAP1_ Implementing MAP in cost classification	0.898	0.889	
MAP2_ Implementing MAP in budget preparation	0.751	0.919	
MAP3_ Implementing MAP in decision support	0.763	0.917	
MAP4_ Implementing MAP in decision evaluation	0.766	0.917	
MAP5_ Implementing MAP in strategic analysis	0.859	0.898	
Operational effectiveness of enterprises in Binh Dinh province (PERF)			**0.856**
PERF1_ Financial performance (Operating revenue; Revenue growth; Gross profit)	0.741	0.810	
PERF2_ Non-financial performance (Machine utilization rate; Quality of products and services; Development of new products and services)	0.622	0.835	

(Source: Analysis results from SPSS software)

Based on the results of the reliability test of the measurement scale presented in Table 1, it shows that the Cronbach's Alpha coefficients of the factors are all greater than 0.6. The total correlation coefficient for the factor 'Business Structure' with the observed variable STRUC8 is less than 0.3, so this observed variable will be removed from the measurement scale of this

factor. The remaining factors have correlation coefficients of the observed variables with the total variable all greater than 0.3, so they will be retained. Thus, the measurement scales of the factors in the research model all achieve reliability.

4.2. Exploratory factor analysis

After evaluating the reliability of the measurement scales of the factors, the authors' group continued to assess the validity of the measurement scales of the factors in the research model using exploratory factor analysis (EFA) with promax rotation. The results of the exploratory factor analysis are presented in Table 2.

Table 2. Results of KMO and Bartlett tests for independent factors

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.707
Bartlett's Test of Sphericity	Approx. Chi-Square	3636.389
	df	351
	Sig.	0.000

(Source: Analysis results from SPSS software)

KMO = 0.707 > 0.5 indicates that exploratory factor analysis is suitable for the actual data. At the same time, sig. = 0.000 < 0.05 means that the observed variables have a linear correlation within each measurement scale.

The extracted variance ratio is 74.96% > 50%, indicating that 74.96% of the variation in the independent factor is explained by the observed variables of the factor. Additionally, based on the rotated factor matrix, it shows that the observed variables converge according to the measurement scale constructed by the authors.

For the MAP factor, the exploratory factor analysis results show KMO = 0.85 > 0.5, indicating that the exploratory factor analysis is appropriate for the actual data. At the same time, sig. = 0.000 < 0.05 indicates that the observed variables have a linear correlation within the measurement scale of the MAP factor

Similarly, for the PERF factor, the exploratory factor analysis results show KMO = 0.87 > 0.5, indicating that the exploratory factor analysis is suitable for the actual data. At the same time, sig. = 0.000 < 0.05 means that the observed variables have a linear correlation within the measurement scale.

4.3. Confirmatory factor analysis

To assess the fit of the measurement model with the actual data, the authors' group continued to conduct confirmatory factor analysis. According to Hu and Bentler,[50] if the CFA analysis results in CMIN/df ≤ 3, TLI and CFI ≥ 0.9, and RMSEA ≤ 0.08, then the model is considered to fit the actual data.

The results of the confirmatory factor analysis of the research model are presented in Table 3.

Table 3. Results of confirmatory factor analysis

Index	Value
CMIN	1.009,018
df	503
P_value	0,000
CMIN/df	2,006
CFI	0,901
TLI	0,910
RMSEA	0,074

(Source: Analysis results from AMOS software)

Based on Table 3, it shows that CMIN/df = 2.006 < 3; CFI = 0.901 > 0.9; TLI = 0.910 > 0.9; RMSEA = 0.074 < 0.08, so the measurement model fits the actual data.

4.4. Structural equation modeling analysis

Structural equation modeling analysis is used to assess the fit of the structural model with the research data. The results of the structural equation modeling analysis are presented in Figure 2.

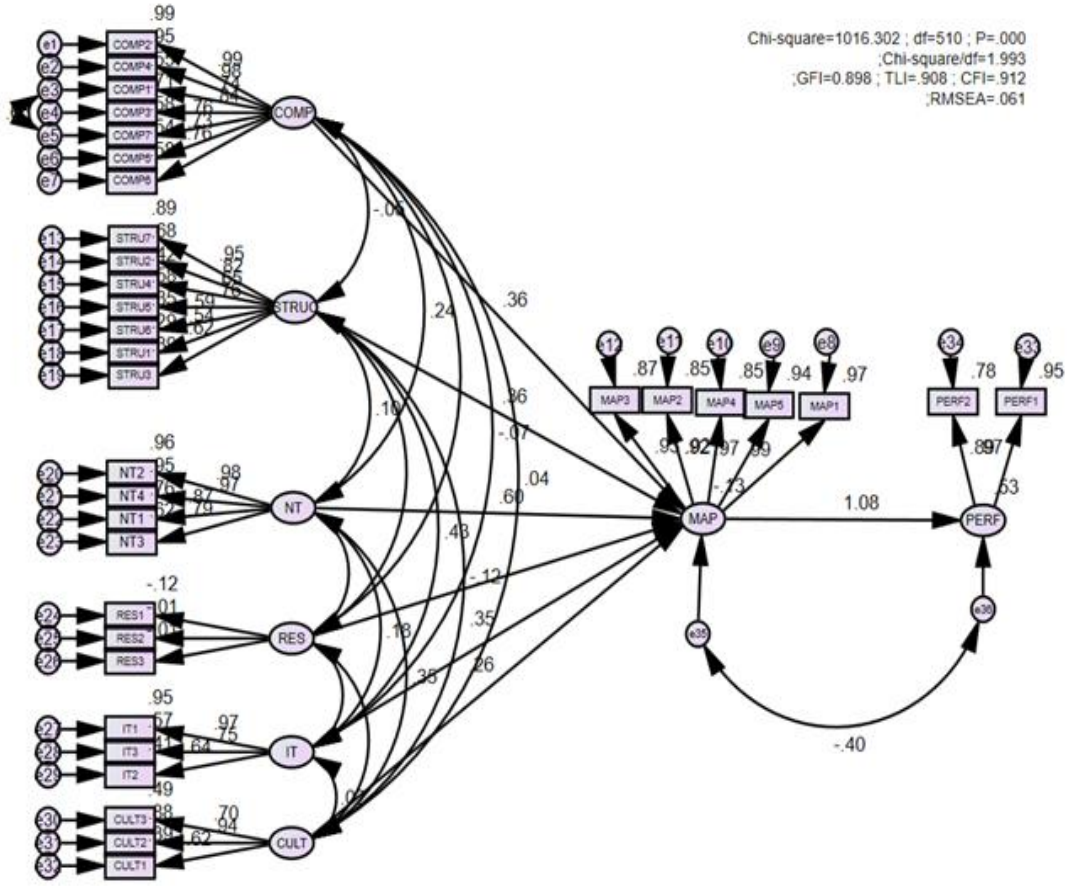

Figure 2. Structural equation modeling

(Source: Analysis results from AMOS software)

Based on Figure 2, it shows that CMIN/df = 1.993 < 3; CFI = 0.912 > 0.9; TLI = 0.908 > 0.9; RMSEA = 0.061 < 0.08, so the structural model fits the actual data.

Table 4. Results of the model test

Path	Estimated coefficent	Standard deviation	Critical value	P-value	Hypothesis	Conclusion
MAP ← NT	0.608	0.075	8.105	***	H_1	Accepted
MAP ← COMP	0.388	0.046	8.348	***	H_2	Accepted
MAP ← STRUC	0.401	0.049	8.24	***	H_3	Accepted
MAP ← CULT	0.28	0.035	7.931	***	H_4	Accepted
MAP ← RES	0.145	0.046	3.147	0.002	H_5	Accepted
MAP ← IT	0.365	0.044	8.299	***	H_6	Accepted
PERF ← MAP	1.101	0.073	15.186	***	H_7	Accepted

Note: ***=0,000

(Source: Calculation results from AMOS software)

Based on Table 4, it shows that all research hypotheses have P-values < 0.05, so all research hypotheses are accepted. At the same time, the estimated impact coefficients of the factors NT, COMP, STRUC, CULT, RES, and IT on MAP are all positive; this indicates that the factors of Managerial Perception, Competition, Business Structure, Corporate Culture, Implementation Resources, and Information Technology positively influence the application of management accounting techniques in enterprises in Binh Dinh province.

Table 5. Standardized Coefficients

Path	Standardized coefficients
MAP ← NT	0.603
MAP ← STRUC	0.361
MAP ← COMP	0.355
MAP ← IT	0.347
MAP ← CULT	0.256
MAP ← RES	0.121
PERF ← MAP	1.08

(Source: Calculation results from AMOS software)

Table 5 shows that manager's perception is the factor with the strongest influence on the application of MAP in enterprises in Binh Dinh province, with a standardized regression coefficient of 0.603. The remaining factors have gradually decreasing levels of influence, including: business structure, competition, information technology, corporate culture, implementation resources. This result aligns with previous studies by Pham et al.,[8] indicating that the application of management accounting techniques is strongly influenced by management. Once managers understand the importance and benefits that management accounting brings, they will commit to and support the implementation of these techniques.

Additionally, the factors of business structure, competition, information technology, corporate culture, implementation resources also have a significant impact on the application of management accounting practices in enterprises in Binh Dinh province. This emphasizes the necessity of building a streamlined business structure, focusing on decentralization and delegation; enhancing competitive capacity; investing in information technology, as well as resources, and developing corporate culture to optimize the application of advanced and modern management accounting techniques, thereby improving the operational efficiency of enterprises.[20, 21,22]

The standardized impact coefficient of MAP on PERF is 1.08, indicating that the application of management accounting techniques positively affects the operational efficiency of enterprises in Binh Dinh province. This suggests that enterprises in Binh Dinh that implement MAPs in their management practices will achieve higher operational effectiveness compared to those that do not apply these techniques, both in financial and non-financial aspects. This result is consistent with the studies of Anh,[5] Toan and Nuong,[44] Thanh[45]...

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

This study has identified five factors influencing the application of MAP in enterprises in Binh Dinh province, including: the perception of enterprise managers, organizational structure, competition, information technology, corporate culture and implementation resources. The perception of enterprise managers is the most significant factor affecting the application of MAP. Additionally, the study has verified that the application of MAP indeed has a positive impact on enhancing the operational effectiveness of enterprises in Binh Dinh province.

5.2. Recommendations

Based on the research results, to enhance the application of MAP in management practices to improve operational effectiveness, enterprises in Binh Dinh Province need to focus on implementing the following fundamental solutions.

5.2.1. Enhancing manager's awareness

The success of applying MAPs in enterprises in Bình Dinh province largely depends on the perception of the managers. Therefore, to promote the application of MAPs, the first and most important step is for the managers themselves to innovate their mindset, actively seek to understand the benefits and effectiveness that MAPs can bring to the enterprises, and provide practical support to

managers in planning, controlling, and making quick, timely, and accurate decisions, thereby enhancing the competitiveness and operational effectiveness of the enterprises.

5.2.2. Business restructuring

To effectively and successfully apply MAPs, enterprise leaders need to focus on organizing training sessions, equipping employees with diverse knowledge and skills, and enhancing the qualifications and expertise of the workforce. They should also establish a culture of participation among all employees in the organization's activities. Additionally, enterprises should regularly train and enhance leadership and management skills for managers at all levels to ensure they have the capability to manage, operate, and fulfill their assigned tasks effectively. Furthermore, enterprises should consider organizing a streamlined and efficient management structure to maximize the usefulness and value of MAP in enterprise management.

5.2.3. Building corporate culture

Enterprises in Binh Dinh province need to build a culture of support between managers and employees, mutual support among staff across different departments, and consensus on the common development goals of the entire enterprise. Effectively implementing these three aspects will facilitate the rapid and smooth application of MAP, enhancing the effectiveness of enterprise management, ensuring that all enterprise goals are achieved, and increasing operational effectiveness over time.

5.2.4. Enhancing and adequately preparing resources for implementation

The application of MAP in enterprises requires resources in terms of human capital, finance, and technical infrastructure. Therefore, enterprises in Binh Dinh province need to focus on investing in accounting human resources, financial potential, and modern technical infrastructure and equipment to ensure that the application of MAP in enterprise management proceeds quickly and smoothly, reducing time and saving costs.

5.2.5. Application of information technology in business management

In the context of Industry 4.0, the application of information technology (IT) in accounting and enterprise management is a necessary and inevitable trend. To avoid being left behind, enterprises in Binh Dinh province need to enhance their investment and systematically apply IT in management, particularly by purchasing, installing, and utilizing cloud accounting software and comprehensive enterprise management software that integrates various subsystems and links departments within the enterprise, such as ERP software. Furthermore, it is essential to implement emerging technologies of the Industry 4.0 revolution, including artificial intelligence, cloud computing, big data, and blockchain, to create a foundation for applying modern MAP in enterprise management practices. Implementing these measures will undoubtedly significantly improve the management effectiveness as well as the operational efficiency of enterprises in Binh Dinh Province.

5.3. Conditions for implementation

5.3.1. On the part of the State and relevant authorities

The government needs to create a favorable legal environment for enterprises to implement MAP in their management practices. In this regard, the Ministry of Finance should develop and issue circulars on MAP, supporting and guiding enterprises in Binh Dinh province specifically, and those across the country generally, on how to implement these techniques. Additionally, the Ministry of Finance should collaborate with the Department of Finance of Binh Dinh province to regularly organize workshops and conferences to help managers and accounting staff in enterprises within the province gain access to and understand the nature and benefits of MAP when applied in enterprise management.

5.3.2. On the part of the accounting professional association

As the professional regulatory body, the Vietnam Accounting and Auditing Association needs to enhance the role and expertise of the accounting workforce in enterprises in Binh Dinh province by organizing training sessions for managers, chief accountants, and accounting staff in local enterprises. This will help them access and understand MAP, thereby promoting the application of these techniques in enterprise management to improve operational effectiveness.

5.3.3. On the part of accounting education and training institutions

To implement MAPs in enterprises in Bình Định province, the role of accounting education and training institutions in the province is very important. In particular, Quy Nhon University needs to strengthen connections with local enterprises, periodically review and update the content of the Management Accounting course in its training program to ensure that the curriculum is current, relevant to practice, and equips students and trainees with knowledge and skills related to MAPs in enterprises. This will provide high-quality human resources with the knowledge and skills to quickly and effectively apply MAPs in management practices at enterprises in Binh Dinh province.

.5.3.4. On the part of enterprises in Binh Dinh province

It is necessary to raise awareness among managers in enterprises about the diversity of MAPs and to choose methods suitable for the field of operation, scale, and specific characteristics of the enterprise. Additionally, enterprises should implement clear financial management decentralization, delegate authority, and assign management and control responsibilities to each manager, department, and unit within the enterprise. Companies need to establish a system of specific MAP indicators that align with their goals and ensure comparability over different periods. Moreover, managers in Binh Dinh province should cultivate a culture of innovation within their enterprises and actively prepare the necessary resources in terms of personnel, finance, infrastructure, etc., to successfully apply MAPs in management practices.

To achieve this, enterprises in Binh Dinh must develop a team of accounting staff who not only possess professional expertise but also have a deep understanding of the business operations of the enterprise and the skills to use software to accurately process, analyze, and evaluate accounting information that supports timely decision-making by managers. They should seek financial resources both internally and externally to fund investments and upgrades of information infrastructure systems, including hardware and software, to facilitate the application of MAPs.

On the other hand, the leadership of enterprises should focus on investing in and upgrading information technology infrastructure, applying new technologies from the Fourth Industrial Revolution such as ERP software, cloud computing, artificial intelligence, and big data in enterprise management. This will leverage the advantages of these technologies to provide diverse and flexible information that better meets the information needs of managers in Binh Dinh province in today's volatile and highly competitive business environment.

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