

ERP AND AI DRIVEN PERFORMANCE OF MANAGEMENT ACCOUNTING SYSTEMS

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ABSTRACT

In contemporary society, the utilization of management accounting has achieved considerable popularity. To optimize sustainable business performance and mitigate future risks, companies should promptly leverage the micro-economy to regain market share and reveal their true capabilities. This is essential to optimize their business performance. The emergence of artificial intelligence (AI) and the progressive evolution of enterprise resource planning (ERP) have both instigated substantial transformations in contemporary civilization. Nevertheless, contemporary civilization has also been profoundly transformed by these two advancements. The fundamental question we face is how to efficiently deploy the new management accounting tool in contemporary industry. This is our paramount focus. This study indicates the potential for combining enterprise resource planning (ERP) with artificial intelligence (AI) to enhance efficiency and evaluate the research trend in Vietnam for the fiscal year 2025. This will be conducted to assess the research trend. To evaluate the market, now integrating AI with ERP to supplant traditional management accounting functions, a self-administered online survey employing quantitative methods is developed. Furthermore, it utilizes a five-point Likert scale to assess the market. Finally, this study's findings indicate that the market's response is advantageous for its adaption in both the present and future. This applies to both the present and the future. For AI to remain aligned with the advancements made thus far, it must be regarded as an essential element of the specialized ERP system designed to facilitate effective management accounting in practice.

Keywords: Management Accounting, AI, ERP, Business Performance

1. INTRODUCTION

1.1 Current Business Scenario

Management accounting provides information to managers and other employees. Because of this relationship, management accounting is more focused on as business management and administration evolve. However, ERP software is a technology approach that integrates several applications into modules of a single software package to automate business resource tasks from A to Z. ERP software unifies and standardizes data across departments and operations including purchasing, production, and HR. Therefore, ERP's integrated information system has made management accounting easier and more important. With the ERP system, businesses can easily collect and retrieve data on each department's daily operations, building norms, flexibly planning operations, analysing differences, predicting cash flow, determining the business's future value, or collecting costs, determining activities, and controlling costs to streamline operations or manage costs by activity (Thuy, 2023).

Furthermore, ERP is a significant integrated business management system in Vietnam. The ERP market in Vietnam was still quite small. According to the Vietnam Federation of Commerce and Industry (VCCI), 1.1% of Vietnamese firms used ERP software in 2006 and 7% in 2008. According to the Ministry of Industry and Trade, 17% of Vietnamese companies used ERP in

2014 (VECITA, 2014). Most companies don't comprehend ERP's relevance or have the resources and funds to implement it. Vietnam has deeper and more complete international integration than before. Vietnam had commercial, trading, and investment links with over 220 nations and territories in 2015. Integration presents many potentials but also tremendous hurdles and severe competition. Companies also understand the role of IT in ERP. After the Covid-19 outbreak, up to 98% of corporate leaders considered ERP application was necessary to manage market problems and opportunities, according to Microsoft. ERP applications in Vietnam will be widespread in banking, commerce, retail, garment, packaging, mechanical engineering, interior design, and other industries by 2022 (Thuy, 2023).

In the past, bookkeeping, transaction reconciliation, inventory tracking and management, accounting, financial reporting, etc. used to take 80-90% of accountants' time. As science and technology advance, ERP software saves accountants time. Accountants will spend more time analysing, planning, estimating, forecasting, budgeting, and advising management on management accounting. This helps business bookkeeping (Thuy, 2023).

On other hand, Vietnam is developing its AI business to contribute to economic and social growth, but not yet reaching the level of leading Asian countries in AI application. In detail, the banking sector is particularly notable for using AI to innovate business models and improve customer experience. Most AI products and solutions are produced by Vietnamese IT businesses. The corporations' AI investments caused this. The 2022 AI Readiness Index placed Vietnam 55th, Singapore 2nd, Malaysia 29th, and Thailand 31st. This index has 39 criteria in three categories: government policy, technology, and data infrastructure (Vietnam Economic Magazine, 2023).

In addition, there is a growing trend toward incorporating management accounting into the Vietnamese market in order to maximize the sustainable growth of businesses and the stable market's work performance. According to the explanation provided above, however, businesses and the market as a whole need to make use of artificial intelligence and enterprise resource planning (ERP) as the advanced management stool in order to assist Vietnamese companies in efficiently joining the regional or global market. As a result, the integration of artificial intelligence and enterprise resource planning (ERP) into management accounting will become an essential requirement at present and the future.

1.2 Research Problem

Initially, we are considering how to adapt management accounting to the present as well as the potential Vietnamese market, since it is an unavoidable necessity for the Vietnamese micro-economy, particularly for firms operating in Vietnam today. However, how enterprises can actually adapt to it is a crucial challenge at present.

Furthermore, numerous challenges exist regarding the practical adoption of management accounting. Firstly, the present operations of SMEs reveal certain challenges in the implementation of international accounting standards. Circular No. 53/2006/TT-BTC, issued on June 12, 2006, serves as the sole legal foundation for international accounting in enterprises and small to medium-sized enterprises (SMEs). Secondly, the international accounting is constrained or formalized due to its non-mandatory nature. Vietnamese SMEs exhibit a deficiency in global accounting knowledge and awareness. Thirdly, resource-related concerns. Owing to resource limitations, SMEs infrequently employ full-time foreign accountants. Fourth, regarding the global application of accounting, in Vietnam, the size of a firm strongly influences the utilization of international accounting as a management instrument. Fifth, regarding the acknowledgment

that information technology in international accounting has not been prioritized, the advancement of the Fourth Industrial Revolution has led to investments in SME accounting through accounting software. Due to the lack of interest from SMEs, international accounting IT investments have been typically integrated with the development of general accounting systems (Tham, 2023).

According to Tham's explanation (2023), the adaption of management accounting appears to be hindered in the absence of information technology, resulting in suboptimal effectiveness thus far. However, with the rapid globalization of information technology, can enterprises in Vietnam effectively apply traditional information technology (ERP) to facilitate their adaptation? Consequently, it continues to be a possible worry for the perspectives of practical researchers and the intricacies of practical management. Additionally, the ERP will undergo innovation, and strategies for enhancement will be developed to achieve the ultimate objective in the subsequent phase. It appears to identify the definitive and possible solution in this context. The Vietnamese market is undergoing a transformation in its business structure, with an increasing integration of AI in the workplace. Consequently, AI will serve as the superior answer for innovating ERP and ultimately for the adaption of management accounting. This is a fundamental study concern here. We are analysing the impact of the integration of AI and ERP on management's practical adaptation for optimal performance. We want to address it's as the study problem (Creswell, 2002) feasible results for the subsequent phase.

1.3 Study Objectives

The study is intended to focus on two sub-objectives, outlined below. This discussion will focus on the adaptation of management accounting inside contemporary Vietnamese firms and its potential for implementation, which constitutes the project's primary sub-objective. Furthermore, the second aspect will concentrate on the application of artificial intelligence alongside advanced information technology. The study examines the possible effects of combining management accounting with an artificial intelligence-enhanced enterprise resource planning system. Additionally, it examines the potential use of management accounting in the emerging business of advanced information technology currently underway and anticipated in the future in Vietnam. Moreover, should the Vietnamese market successfully integrate management accounting with the advantageous backing of ERP and AI, it would serve as an inspiration for other markets in Asia, Africa, and South America to replicate its effective methodologies in the workplace.

1.4 General Population Group's Identification

This study is to investigate research objectives pertaining to foreign investments and Vietnamese investments in Vietnam, explicitly excluding the multinational group level. The selection of research interviewers will be restricted to individuals, either Vietnamese or international, who possess a professional certification in accounting and taxation, including a high school diploma, diploma, bachelor's degree, or equivalent qualifications. These individuals assume roles as accountants, accounting officers, or heads of accounting departments within organizations. The job interview will focus on persons of all ages and genders who do not have any limitations on work experience.

1.5 Significance of the Study

The study places an emphasis on the efficient use of management accounting within Vietnamese practices, which is further enhanced by the technological help provided by advanced information

technology on a global scale. The research will carry out its own research and tests inside the Vietnamese market for two distinct situations, which are described in more detail below.

The purpose of this research is to analyze the effectiveness of combining information that has been upgraded by artificial intelligence into management accounting in the Vietnamese market, both at the present moment and in the past. This evaluation is part of the initial investigation that the research is conducting. It will also be convincing the certain evidence for popularizing these modern and workable scenarios within the companies that are operating at the present time when coming with the traditional scenario when management accounting had been supported by the conventional information technology in all actuality. This will be the reason why it will be successful.

Furthermore, with regard to the second scenario, it is able to persuade the market to use management accounting as an efficient and appropriate management tool within the context of start-up businesses that are creating advanced information technology with the impacts of artificial intelligence. Currently, there are a number of artificial intelligence business modules being developed in the Vietnamese industry. Additionally, the specific demand of applying management accounting in order to maximize their profits will be likewise vital and inevitable in depth.

2. MATERIALS AND METHODOLOGY

2.1 Literature Review

Using enterprise resource planning (ERP) that has been enhanced by artificial intelligence (AI) as a new accounting tool to accomplish safe, shared, and increased transparency and confidence in management accounting's work performance is the focus of this evaluation.

2.1.1 Definition of ERP

It was possible to investigate the ERP concept from a variety of perspectives. First and foremost, enterprise resource planning (ERP) was a commodity, a product that was embodied as computer software. The second point to consider was that enterprise resource planning (ERP) could be viewed as a developmental objective that aimed to integrate the activities and data of an organization into a unified framework. In the third place, enterprise resource planning (ERP) was an essential component of an infrastructure that offers a solution to organizations (Klaus, 2002).

2.1.2 Definition of AI

Prior to providing a clear definition of AI, individuals could make three valid assumptions. The first assumption was Church's thesis, which posited that every computational device could be represented by a program. This indicated that we could search for AI among the collection of programs. The second assumption posited that AI functions as a step device, wherein at each step it received an input from an external source, represented as a letter from a finite alphabet Σ , and produces an output, represented as a letter from a finite alphabet Ω . The third assumption posited that AI operated inside an environment that provided it with incremental knowledge at each step and received the AI's output. Additionally, individuals assumed that the environment could be affected by the knowledge generated by AI. This environment could be either natural or manufactured, and we shall denote it as "world" (Dobrev, 2012).

2.1.3 Definition of the traditionally management operating stages

Planning involved establishing performance expectations and objectives for individuals and organizations to direct their efforts towards attaining organizational goals. It also encompassed the criteria that will be employed to assess the fulfilment of expectations and objectives.

Engaging employees in the planning process aided their comprehension of the organization's objectives, the necessary actions, the rationale behind them, and the expected standards of execution (Needles, Powers, Mills, & Anderson, 1999).

Planning in isolation could not ensure appropriate operational outcomes. Management must execute the strategic and operational strategies by doing actions or tasks that optimize the utilization of available resources. Efficient operations necessitate the recruitment and training of staff, as well as the identification of operational tasks that reduced waste and enhanced the quality of products or services. Monitoring entailed the continual assessment of performance and the provision of regular feedback to personnel and teams regarding their advancement towards achieving their objectives. Continuous monitoring enabled the assessment of staff performance and the early identification and resolution of issues.

Development included training, providing activities that introduce new skills or responsibilities, refining work processes, or using other methods to improve execution. Development programs could boost performance and help employees adjust to workplace changes. Rating was the evaluation of an employee's or group's performance against the criteria and benchmarks in their performance plan, followed by a summary and rating. Rewarding employees individually and collectively for their performance and contributions to the agency's objectives involved incentives and recognition (Needles, Powers, Mills, & Anderson, 1999).

2.1.4 Emergent Literature on ERP Involved in Management Accounting's Adaptation done from Prior Global Researches

There are 32 recent prior research papers, which have investigated the applications of ERP in information technology, accounting information systems, inventory management, management accounting, and accounting processes, was discovered from the specific period of 2020 to 2024. Indetail,Belfo (2013),Aduloju(2014), Imene (2020), Praveen (2020), Seyedan (2020), Poyda-Nosyk (2023), Sinha (2024),Arkhipova (2024), Hasanah (2024), Papiorek (2024),Halimuzzaman (2024),Abobakr (29024), Vukman (2024), Syed (2024), Johri (2024), Heese (2024), Ugbebor (2024), Efe (2024), Rashid 92024), and otherspredominantly advocated for the adaptation of ERP in various ways to enhance the efficacy of management accounting tools in practice, especially, positive affecting on planning, management control and business making decision. In the subsequent stage, we would like to present the Vietnamese researchers engaged in management accounting and its current viable scenario.

2.1.5 Emergent Literature on ERP Involved in Management Accounting's Adaptation done from Prior Vietnamese Researches

The study's sub-conclusion from Tran (2020),Hien (2021), Pham (2021),CHU (2022),Le (2023), Huong(2024),and others indicated that domestic researches have persuaded Vietnamese firms to enhance their accounting and management accounting practices through ERP, resulting in improved management control and decision-making outcomes.

2.1.6 Emergent Literature on AI Involved in Management Accounting's Adaptation done from Prior Global Researches

The study intended to cite 55 previous research studies regarding the integration of AI in management accounting and its practical application from 2017 to 2024. And then, Cao (2015),Mancini (2017),Al-Htaybat (2018),Stancheva-Todorova (2018),Gulin (2019),Lehner (2019), Andreassen (2020),Gotthardt (2020),Li (2021), Zhai (2021),Tiron (2021), Kerzel (2021), Damerji (2021), Wu (2021, May),Vărzaru (2022), Coman (2022), Gonçalves (2022), Hasan (2021), Han (2023), Luo (2018),Secinaro (2024), Sundström (2024),Sinha (2024), Groenewald

(2024),Bauskar(2024), Shchyrba (2024), Mgammal (2024), Hamza (2024), Brabete(2024), Kuaiber (2024), Rahim (2024), Abdelhalim (2024), Hendarmin (2024), Rautiainen (2024), Elmegaard (2024), Amer (2024), Nadi (2024), Han (2024), Fülöp (2024), Simina (2024), Zhang (2024), and others posited that global research has prompted firms to upgrade their accounting and management accounting practices through AI, resulting in improved planning, management control, and decision-making outcomes.

2.1.7 Emergent Literature on AI Involved in Management Accounting's Adaptation done from Vietnamese Researches

The sub-conclusion of the study by Le (2023), Anh (2024), Pham (2021), Chen (2024), and others suggests that domestic research has encouraged Vietnamese enterprises to augment their accounting and management accounting procedures via AI, leading to enhanced management control and decision-making results.

2.1.7 Emergent Literature on the combination between ERP and AI Involved in Management Accounting's Adaptation done from Prior Global Researches

The study aimed to reference 14 prior global studies about the integration of A and ERP in management accounting and its actual implementation till 2025. Venkatesh (2023),Barna (2024),Khamis (2024), Choudhuri, S. S. (2024), Pokala, P. (2024), Nyathani (2024), Jawad (2024), Jaya (2024),Arief (2024), Jackson (2024), and others asserted that global research has compelled organizations to enhance their accounting and management accounting processes using AI and ERP, leading to superior planning, management control, and decision-making results.

The study's sub-conclusion indicates that several research efforts have prompted Vietnamese firms to strengthen their accounting and management accounting practices through the integration of ERP and AI, resulting in improved effectiveness in management accounting outcomes. Currently, as AI gains prominence globally, particularly in the Vietnamese market, there is an imperative need to adapt Management Accounting inside microeconomics, supported by modern ERP modules enhanced by AT. The paper identifies numerous contemporary global research initiatives that have been conducted, along with a handful that have taken place in Vietnam recently. Finally, the study examined 41 previous research works both within and outside Vietnam, and their findings convincingly indicate that management accounting may be enhanced through the effective integration of ERP and AI.

2.2 Methodology

2.2.1 Research Method and Design Appropriateness

The essential data required for the study objectives were gathered via a survey administered among various firms, institutions, and other organizations in Vietnam in 2024. A questionnaire has been developed for this aim and is randomly sent to employees, professors, and students in the Accounting, Finance, and Commerce departments participating in business operations for their organizations in 2024, across various management levels. The quantity of assessed questionnaires was genuine questionnaires. Resolution data were examined with the statistical software SSPS and ASMO.

Quantitative data were gathered through a self-administered questionnaire, wherein employees indicated their likelihood on a 5-point scale: [5] strongly agree; [4] agree; [3] neutral; [2] disagree; [1] strongly disagree. Copies of the online questionnaire were distributed in person to the respondents. Additional data is obtained from secondary sources. Secondary data is obtained from articles published in reputable periodicals, books, and dissertations.

2.2.2 Population, Sampling, Data Collection Procedures and Rationale

The chosen business entities were classified according to the type of firms in 2025. The study analysed Vietnamese and foreign-invested firms in significant sectors in Southern Vietnam. The non-probability sampling method was subsequently employed for the study, utilizing the class sample to represent the diverse types of investors in Vietnam. The gender, educational attainment, and occupation of the questionnaire respondents were considered in the assessment of the sample's characteristics. Hair et al. (2014) stipulated that the minimum sample size for doing Exploratory Factor Analysis (EFA) was 50, with a preference for 100 or more. Some academics proposed that the ratio of observations to an investigated variable, currently at 5:1 or 10:1, could be adjusted to 20:1. The Statistical Package for the Social Sciences was employed to analyse the research data (SPSS). Furthermore, the study will incorporate reliability assessments.

2.2.3 Internal and External Validity

We analysed 100 earlier studies up to 2025 to evaluate how the integration of AI with ERP might enhance the management accounting framework for corporate success. According to the Proceedings of the International Conference on Business Excellence, Sciendo, vol. 18(1), pages 1290-1305, authored by Barna Laura-Eugenia-Lavinia, Ionescu Bogdan-Ştefan, and Hurducaci. Gorea Corina-Cătălina, Bucharest University of Economic Studies, Bucharest, Romania, 2024, will disclose the foundational research conducted in Vietnam at present. Initially, we examined 100 cases in our literature up to the present. We have determined that, in fact, relatively few prior studies have addressed the same research topic and setting as our project in present Vietnam at all.

2.2.4 Research Design

The study design comprises five primary dependent elements and one independent element that together constitute the research framework. The model in Figure 1. illustrates the contemporary scenario of management accounting's performance in planning, management control, and business decision-making, predominantly influenced by ERP systems and artificial intelligence (AI).

Table1. Research 's model, Note: illustration based on the prior study (Barna, 2024)



2.2.5 Study Hypothesis

The study demonstrated the incremental innovative interaction between AI and ERP to manage and enhance sustainable business profitability within organizations. Consequently, it elucidates the null hypotheses as follows.

Ho1: Organizations in Vietnam do not seek to utilize AI to enhance the efficacy of management accounting.

Ho2: Organizations in Vietnam do not pursue the use of ERP to improve the effectiveness of management accounting.

Ho3: Organizations in Vietnam do not endeavour to leverage advancements from ERP, particularly AI breakthroughs in management accounting, to impact corporate planning.

Ho4: Organizations in Vietnam do not want to utilize enhancements from ERP, including AI innovations, for management accounting that impact management control.

Ho5: Organizations in Vietnam do not adopt developments in ERP, particularly AI technologies, for management accounting that affect corporate decision-making.

2.2.6 Statistical Analysis

A self-administered questionnaire was used to gather quantitative data, and it asked employees to rate their likelihood of agreeing on a 5-point scale ([5] strongly agree; [4] agree; [3] neutral; [2] disagree; and [1] strongly disagree). Cronbach's Alpha should be 0.7 or higher for a good scale (Nunnally, 1978). A scale with one-dimensionality and dependability should have 0.7 or higher Cronbach's Alpha. An initial exploratory study can use a Cronbach's Alpha of 0.6 (Hair, 2009). The scale is more reliable with higher Cronbach's Alpha.

The KMO (Kaiser-Meyer-Olkin) coefficient is an index utilized to assess the appropriateness of component analysis. The KMO value must attain a minimum of 0.5 ($0.5 \leq \text{KMO} \leq 1$), which is a requisite requirement for the appropriateness of factor analysis. If this number is below 0.5, factor analysis may be unsuitable for the research dataset. And, Bartlett's test of sphericity assesses the correlation among observed variables within the factor. It is essential to recognize that a prerequisite for doing factor analysis is that the observed variables, which represent several dimensions of the same component, must exhibit correlation among themselves. This point pertains to the convergent value in the aforementioned EFA study. Consequently, if the test indicates no statistical significance, component analysis should not be utilized for the variables in question. Bartlett's test is statistically significant (Bartlett's Test sig < 0.05), indicating that the observed variables are interrelated within the factor. Moreover, the eigenvalue serves as a prevalent criterion for ascertaining the number of factors in exploratory factor analysis (EFA). According to this criterion, only factors having an Eigenvalue greater than 1 are preserved in the analytical model.

Next, Total Variance Explained of 50% or greater indicates the appropriateness of the EFA model. When considering the variation as 100%, this value indicates the percentage of extracted factors that are retained and the percentage of observed variables that are discarded. Finally, Factor loading, or factor weight, denotes the connection between observable variables and the factor. A larger factor loading indicates a stronger association between the observed variable and the factor, and conversely. Hair et al. (2010) assert that a coefficient loading of 0.5 in Multivariate Data Analysis indicates a high-quality observed variable, with a minimum threshold of 0.3.

The T-test is a statistical instrument that aids in the comparison of one or two populations' means when applying the hypothesis testing technique (Paul, 2008).

3. RESULTS, DISCUSSION

3.1 Sample Characteristics

The study considered the use of a nonprobability sample. The research identifies a total of 38 study variables that require categorization. an individual to be incorporated into the group. The study examines 15 distinct independent factors, focusing specifically on the influence of AI and ERP. Consequently, based on Hair et al. (2014), it is anticipated that a minimum of 75 (15x5) research surveys from practice will be persuasive, and 107 online survey have already been

investigated practically. Furthermore, it acquired sample statistics. The majority of participants were under the age of 30. The majority of respondents possess fewer than five years of industry experience. Ultimately, the majority of research issue survey samples indicated that Vietnamese capital predominates in firms and other organizations. Consequently, we are confident that it will furnish sufficient proof to support the research endeavor conducted here.

3.2 Research Variables

Table 2. Description of Research Variables

Code No	Description of Research Variable	Code
A	Artificial Intelligence (AI) Impact on Management Accounting	
1	Management accounting will benefit from AI's accuracy and error reduction.	AIMA01
2	Data entry and management accounting reporting will benefit from AI.	AIMA02
3	AI helps data entry and management accounting reporting.	AIMA03
4	AI will help organizations use management accounting to cut costs and optimize resources.	AIMA04
5	AI will boost information processing and management accounting report quality.	AIMA05
B	Enterprise Resource Planning (ERP) to Management Accounting	
1	ERP speeds up managerial accounting.	AEMA01
2	ERP improves managerial accounting by storing and controlling data and information.	AEMA02
3	ERP supports management accounting tools to better manage financial, physical, and human resources.	AEMA04
4	ERP helps management accounting create more accurate and complete accounting data.	AEMA05
5	ERP supports management accounting tools to maximize earnings.	AEMA06
6	ERP does or will support cost management accounting tools.	AEMA07
7	ERP will aid Management Accounting to save time.	AEMA08
8	ERP supports management accounting to decrease human errors in organizational accounting.	AEMA09
9	Better ERP systems will affect Management Accounting to control and monitor information.	AEMA10
10	ERP will improve financial, physical, and human resource management in Management Accounting.	AEMA11
C	Management Accounting Improved by ERP Including AI Innovation	
C1	Management control	MC
1	Management accounting improved by ERP, integrating AI innovation, which boosts efficiency, productivity, and market competitiveness.	MC01
2	ERP, integrating AI innovation, makes revenue, cost, and profit	MC02

	reports automated for companies using improved management accounting.	
3	Companies using ERP to better management accounting incorporate AI breakthroughs that extract data from invoices, receipts, and other financial records, decreasing manual work and enhancing accuracy.	MC03
4	Companies integrating ERP Management Accounting with AI innovation will increase revenue, cost, and profit management accuracy.	MC04
5	Companies using ERP-enhanced management accounting with AI innovation will improve production efficiency and cost management.	MC05
6	Using management accounting data to produce cash and analyze product and service portfolio performance is cheaper for companies using ERP-enhanced management accounting with AI.	MC06
7	Companies employing ERP-enhanced Management Accounting with AI will improve business line growth assessment.	MC07
8	Company cost estimation for human resource acquisition will improve with ERP management accounting and AI innovation.	MC08
9	Companies using ERP-enhanced Management Accounting, including AI advancements, will affect internal control performance assessments.	MC09
10	ERP-enhanced Management Accounting with AI innovation will help companies design and evaluate cost structures more efficiently.	MC10
11	Companies using ERP-enhanced Management Accounting with AI will improve production resource price assessment efficiency.	MC11
12	Companies using ERP-enhanced Management Accounting with AI innovation will improve corporate capital structure assessment efficiency.	MC12
C2	Decision Making	
1	ERP with AI improves management accounting, enabling firms to make educated, rapid, and market-relevant choices.	MD01
2	ERP-enhanced Management Accounting with AI innovation will enrich decision-making processes by delivering data-driven analytics to help managers make strategic decisions.	MD02
3	AI-enhanced ERP management accounting affects credit and operational risk assessment. Data can help organizations make better financial and investment decisions.	MD03
4	The organization improves managerial accounting with ERP and AI to make short-term decisions more efficiently.	MD04
5	ERP-implemented management accounting with AI advancements will influence better option selection.	MD05
6	Companies using ERP with AI-enabled management accounting make better long-term investment decisions.	MD06

C3	Business Planning	
1	Companies using ERP and AI to better management accounting are improving accounting quality and offering more relevant information.	ML01
2	Companies using ERP with AI-enhanced Management Accounting will improve spending planning.	ML02
3	Companies using ERP-enhanced management accounting with AI will improve production planning.	ML03
4	Companies using ERP with AI-enabled management accounting are improving planning.	ML04
5	ERP-enhanced Management Accounting companies use AI to analyze accounting results better.	ML05
6	Market trend analysis will improve for companies using ERP-enhanced Management Accounting with AI.	ML06

3.3 Data Analysis and Findings

3.3.1 Reliability test for AI's affecting factors and ERP's affecting factors

The study continues to analyse its research data by assessing the reliability of the 15 independent variables, including those related to AI and ERP, prior to conducting the subsequent precise EFA tests. And, the data results are presented as 0.843 and 0.9 in the references of Figures 01 and 03. Therefore, it compels us to continue testing EFA in the subsequent phase of the data analysis process.

Figure 01. Reliability Statistics

Cronbach's Alpha	N of Items
.843	5

Figure 02. Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AIMA01	16.13	6.944	.657	.809
AIMA02	16.10	6.375	.694	.798
AIMA03	16.20	6.392	.669	.806
AIMA04	16.03	7.316	.568	.832
AIMA05	16.15	6.727	.660	.808

Figure 03. Reliability Statistics

Cronbach's Alpha	N of Items
.900	10

Figure 04. Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AEMA01	37.16	23.733	.565	.896
AEMA02	37.02	23.173	.747	.884
AEMA03	36.93	24.813	.579	.895
AEMA04	36.90	24.241	.612	.893
AEMA05	37.15	23.919	.566	.896
AEMA06	37.05	23.238	.723	.885
AEMA07	37.09	22.964	.702	.887
AEMA08	37.04	23.633	.655	.890
AEMA09	37.05	23.392	.656	.890
AEMA10	36.98	23.423	.717	.886

3.3.2 EFA test 01

The KMO test is conducted in Figure 05, yielding a KMO ratio of 0.886 and a significance level of .000. Consequently, it persuades us to continue evaluating the rotated component matrix and identify AEMA06, AEMA02, AIMA04, and AEMA01, which are unsuitable for the subsequent research phases and should be entirely eliminated.

Figure 05. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.886
Approx. Chi-Square		793.806
Bartlett's Test of Sphericity	df	105
	Sig.	.000

Figure 07. Rotated Component Matrix^a

	Component	
	1	2
AEMA07	.809	
AEMA10	.773	
AEMA08	.731	
AEMA09	.727	
AEMA06	.715	.336
AEMA02	.688	.443
AEMA04	.665	
AEMA03	.613	
AEMA05	.597	
AIMA02		.808
AIMA03		.785
AIMA01		.768
AIMA05		.758
AIMA04	.349	.604
AEMA01	.467	.498

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. A. Rotation converged in 3 iterations.

3.3.3 Reliability retesting for AI's affecting factors and ERP's affecting factors

Following the elimination of the aforementioned study variables, we commenced reliability testing for the remaining variables, confirming a Cronbach's Alpha of 0.832 and 0.859, as illustrated in Figures 08 and 10, both beyond the threshold of 0.7, so ensuring the reliability of the data for subsequent steps.

Figure 08. Reliability Statistics

Cronbach's Alpha	N of Items
.832	4

Figure 09. Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AIMA01	12.01	4.644	.640	.797
AIMA02	11.97	4.086	.711	.763
AIMA03	12.08	4.167	.659	.788
AIMA05	12.03	4.490	.634	.798

Figure 10. Reliability Statistics

Cronbach's Alpha	N of Items
.859	7

Figure 11. Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AEMA03	24.70	11.499	.553	.849
AEMA04	24.68	11.029	.606	.842
AEMA05	24.92	11.033	.506	.858
AEMA07	24.86	10.104	.710	.827
AEMA08	24.81	10.560	.663	.834
AEMA09	24.82	10.400	.661	.834
AEMA10	24.75	10.553	.695	.830

3.3.4 EFA test 02

Subsequent to the second assessment of the independent variables' liability, the study recommends reinitiating the KMO test, which yielded a value of 0.846 with a significance level of (.000) in Figure 12. Based on these results, we continue to utilize the Rotated Component Matrix presented in Figure 14 and ascertain that no adverse scenarios have arisen for the 11 independent variables. Consequently, these 11 variables exhibit interrelationships that facilitate the final hypothesis testing in the study.

Figure 12. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.846
Bartlett's Test of Sphericity	482.056
Approx. Chi-Square	55
df	.000
Sig.	

Figure 13. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.841	44.006	44.006	4.841	44.006	44.006	3.764	34.215	34.215
2	1.665	15.133	59.139	1.665	15.133	59.139	2.742	24.924	59.139
3	.82	7.455	66.594						

4	0 .72 7	6.611	73.204					
5	.66 5	6.045	79.250					
6	.49 9	4.533	83.782					
7	.48 0	4.359	88.142					
8	.41 5	3.769	91.910					
9	.35 7	3.247	95.157					
10	.30 3	2.759	97.916					
11	.22 9	2.084	100.000					

Extraction Method: Principal Component Analysis.

Figure 14. Rotated Component Matrix^a

	Component	
	1	2
AEMA07	.823	
AEMA10	.768	
AEMA09	.745	
AEMA08	.744	
AEMA04	.695	
AEMA03	.639	
AEMA05	.581	
AIMA02		.836
AIMA03		.801
AIMA01		.768
AIMA05		.756

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

3.3.5 One T Testing

Upon reviewing the EFA testing, the study confirms that credible research data exists to conduct exact One T testing to validate the accountability of its research hypotheses stated above. Figures 16, 18, 20, 22, and 24 indicate a significance (2-tailed) of .000. This indicates that we dismiss the aforementioned study hypotheses.

Figure 15. One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
AIMA01	105	4.02	.759	.074
AIMA02	105	4.06	.864	.084
AIMA03	105	3.95	.881	.086
AIMA05	105	4.00	.809	.079

Figure 16. One-Sample Test

	Test Value = 3.41					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
AIMA01	8.219	104	.000	.609	.46	.76
AIMA02	7.674	104	.000	.647	.48	.81
AIMA03	6.307	104	.000	.542	.37	.71
AIMA05	7.477	104	.000	.590	.43	.75

Figure 17. One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
AEMA03	105	4.22	.635	.062
AEMA04	105	4.25	.690	.067
AEMA05	105	4.00	.784	.077
AEMA07	105	4.07	.788	.077
AEMA08	105	4.11	.738	.072
AEMA09	105	4.10	.771	.075
AEMA10	105	4.17	.713	.070

Figure 18. One-Sample Test

	Test Value = 3.41					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
AEMA03	13.051	104	.000	.809	.69	.93
AEMA04	12.433	104	.000	.838	.70	.97
AEMA05	7.707	104	.000	.590	.44	.74
AEMA07	8.542	104	.000	.657	.50	.81
AEMA08	9.780	104	.000	.704	.56	.85
AEMA09	9.232	104	.000	.695	.55	.84
AEMA10	10.938	104	.000	.761	.62	.90

Figure 19. One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
MC01	105	4.05	.777	.076
MCO2	105	4.04	.771	.075
MCO3	105	4.10	.808	.079
MC04	105	4.10	.664	.065
MC05	105	4.10	.728	.071
MC06	105	4.09	.748	.073
MC07	105	3.99	.803	.078
MC08	105	4.05	.836	.082
MC09	105	4.08	.756	.074
MC10	105	4.07	.788	.077
MC11	105	4.09	.810	.079
MC12	105	4.03	.802	.078

Figure 20. One-Sample Test

	Test Value = 3.41					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
MC01	8.411	104	.000	.638	.49	.79
MCO2	8.346	104	.000	.628	.48	.78
MCO3	8.814	104	.000	.695	.54	.85

MC04	10.722	104	.000	.695	.57	.82
MC05	9.651	104	.000	.685	.54	.83
MC06	9.254	104	.000	.676	.53	.82
MC07	7.411	104	.000	.580	.43	.74
MC08	7.811	104	.000	.638	.48	.80
MC09	9.033	104	.000	.666	.52	.81
MC10	8.542	104	.000	.657	.50	.81
MC11	8.549	104	.000	.676	.52	.83
MC12	7.902	104	.000	.619	.46	.77

Figure 21. One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
MD01	105	3.95	.813	.079
MD02	105	4.02	.772	.075
MD03	105	4.09	.695	.068
MD04	105	4.04	.706	.069
MD05	105	4.08	.703	.069
MD06	105	4.05	.801	.078

Figure 22. One-Sample Test

	Test Value = 3.41					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
MD01	6.835	104	.000	.542	.39	.70
MD02	8.085	104	.000	.609	.46	.76
MD03	9.963	104	.000	.676	.54	.81
MD04	9.115	104	.000	.628	.49	.76
MD05	9.711	104	.000	.666	.53	.80
MD06	8.155	104	.000	.638	.48	.79

Figure 23. One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
ML01	105	4.02	.866	.084
ML02	105	4.03	.727	.071
ML03	105	4.12	.689	.067
ML04	106	4.14	.710	.069
ML05	105	4.08	.781	.076
ML06	105	4.09	.810	.079

Figure 24. One-Sample Test

	Test Value = 3.41					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
ML01	7.208	104	.000	.609	.44	.78
ML02	8.723	104	.000	.619	.48	.76
ML03	10.614	104	.000	.714	.58	.85
ML04	10.613	105	.000	.732	.59	.87
ML05	8.744	104	.000	.666	.52	.82
ML06	8.549	104	.000	.676	.52	.83

4. CONCLUSIONS

The research article presents its conclusive findings here with precision. The two preceding tests of EFA corroborate that, among the 15 independent variables, 11 components remain for the subsequent phases of the investigation. Four factors were eliminated in the final step to assess the viability of the proposed study ideas. AIMA04 (AI assists organizations in utilizing management accounting to reduce costs and optimize resources), AEMA01 (ERP accelerates managerial accounting), AEMA02 (ERP enhances managerial accounting by storing and managing data and information), AEMA06 (ERP facilitates cost management accounting tools). Moreover, the research results refute the five aforementioned theories. Alternatively, it compels them to understand the exact circumstances defined below.

Ho1: It rejects Ho1. Organizations in Vietnam should endeavour to employ AI to improve the effectiveness of management accounting. However, it does not guarantee that AI will assist firms in utilizing management accounting to save expenses and maximize resources.

Ho2: It also rejects Ho2. Organization in Vietnam should adopt ERP systems to enhance the efficacy of management accounting. However, it also endorses the notion that ERP enhances managerial accounting by facilitating the storage and control of data and information, accelerates managerial accounting processes, and supports cost management accounting tools.

Ho3: It furthermore dismisses Ho3. Organizations in Vietnam should endeavour to leverage advancements from ERP, particularly AI breakthroughs in management accounting, to impact corporate planning.

Ho4: It rejects the null hypothesis, Ho4. Organizations in Vietnam want to utilize enhancements from ERP, including AI innovations, for management accounting that impact management control.

Ho5: It refutes the null hypothesis, Ho5. Organizations in Vietnam need to adopt developments in ERP, particularly AI technologies, for management accounting that affect corporate decision-making.

5. RECOMMENDATION

The research article demonstrates the beneficial integration of ERP and AI to enhance and rectify corporate governance elements, such as management accounting, hence revealing sustainable business success. The paper elucidates the fundamental trend of AI integration in ERP and

management accounting within organizations, both presently and in the foreseeable future, to ensure their survival in both domestic and global markets.

Furthermore, based on the study's findings, future studies can continue to refine the effective integration of accounting technology in enterprise resource planning and management accounting, and advocate for organizations to implement these specific tools in practice comprehensively.

Another perspective regards this as a limitation of the study about the practical application of AI into ERP and the enterprise's management accounting tools. However, it enhances management's confidence to implement management accounting tools that will now incorporate AI and ERP. Thus, it considers its social commitment to the development of economies such as the contemporary Vietnamese micro market in depth.

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