FACTORS AFFECTING THE APPLICATION OF MANAGEMENT ACCOUNTING OF REVENUE, COSTS, AND BUSINESS RESULTS

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Abstract

The effective management accounting of revenue, costs, and business results holds significant importance in enterprise management accounting, particularly for businesses situated in countries with fragile economies such as Vietnam. However, the current situation of applying accounting of revenue, costs, and business results at enterprises, in general, and electricity enterprises in Northern Vietnam, in particular, still has many limitations. Therefore, this article aims to promote the level of effective management accounting for revenue, costs, and business results. A quantitative study was undertaken, involving the distribution of questionnaires to 57 companies within the electricity sector in Northern Vietnam. The collected data was then analyzed using Excel and Statistical Package for the Social Sciences (SPSS) 22 software. The findings of the study reveal that there are six elements influencing the management accounting of revenue, costs, and business results in electricity enterprises, including 1) the amount of financial accounting information provided; 2) enterprise size; 3) corporate culture; 4) qualifications/quality of accounting staffs; 5) level of awareness of business managers, and 6) availability of information technology. Therefore, the article proposes a recommended solution to ameliorate the management accounting of revenue, costs, and business results in electricity enterprises in Vietnam.

Keywords: Management Accounting, Application of Management Accounting, Management Accounting of Revenue, Cost, Business Results

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1. INTRODUCTION

Financial accounting and management accounting have coexisted within the enterprise accounting system for an extended period. These two accounting systems have a mutually supportive relationship to ensure the function of collecting, processing, and providing accounting information to those who need this kind of information. Currently, in Vietnam, financial accounting is the system that is paid more attention to by enterprise managers and information users; it is the main source of information and plays a crucial role in assisting managers in decision-making, while management accounting receives less interest. This situation is reflected by the volume of published scientific studies and how the regulatory regime controls management accounting less than financial accounting.

According to the Association of Chartered Certified Accountants (ACCA, 2020), management accountants offer a broad spectrum of vital financial analysis services to organizations. They create, formulate, and assess financial data to ensure that leadership teams possess dependable figures to inform their crucial strategic decisions. Thus, it can be understood that due to the sharp business acumen requirements and quick grasping of diverse business opportunities, management accounting information in general and management accounting of revenue, costs, and business results are often required to be flexible and fast but must ensure their reliability.

However, due to the nature of diversity, flexibility, not following any legal framework, and only depending on the method of collecting and processing information, the management accounting of revenue, costs, and business results is currently being used little by the electricity enterprises in the North and even other enterprises in Vietnam. In general, the practical application still faces several difficulties.

In Vietnam, the business efficiency of the electricity sector is still limited, and the primary losses are due to various reasons, such as the electricity pricing formula not being linked to the actual cost of electricity production and business, excluding deductions, and increasing input costs for electricity production. These reasons fundamentally stem from the ineffective application of general management accounting and revenue, cost, and business result management accounting. Meanwhile, research works mainly focus on factors affecting the application of management accounting in businesses in general (Abdel-Kader & Luther, 2008; Subasinghe & Fonseka, 2009; Nguyen et al., 2019) or in enterprises operating in specific fields. Chien and Thuy (2016) researched manufacturing enterprises, Erserim (2012) researched industrial enterprises, and Vu et al. (2022) researched logistics enterprises but have not delved into the application management accounting of revenue and cost and business results at enterprises. Therefore, studying the factors affecting the application of management accounting of revenue, costs, and business results in the Northern Vietnam electricity enterprises is a necessary thing to do, and it is meaningful in both theory and reality.

The aim of this research is to identify the factors influencing the application of revenue and cost management accounting and the determination of business results in electricity enterprises in North Vietnam. Subsequently, it seeks to propose solutions to enhance the utilization of this accounting method in strong and more efficient businesses. The paper employed a combination of qualitative and quantitative research methods to conduct the study. Based on the research results, this study will contribute new knowledge through the findings on the factors affecting the application of management accounting of revenue, costs, and business results in Northern Vietnam electricity enterprises. The recommendations provided serve as a robust scientific foundation for policy-making entities and managers to consider improvements aimed at enhancing the effectiveness of this accounting tool.

The article is structured into six main sections. Section 1 introduces the research topic, gaps, and research objectives. Section 2 presents a literature review, providing the basis for the proposed research hypotheses. Section 3 outlines the research model and quantitative research methodology. Section 4 analyzes the results of the quantitative analysis. Section 5 discusses the research findings and, finally, Section 6 provides a conclusion and recommendations.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Literature review

Abdel-Kader and Luther (2008) conducted a study with survey data from 48 units in the United Kingdom. The findings of the research reveal that there are 7 factors affecting the application of management accounting in enterprises in the food industry, including 1) environmental awareness, 2) enterprise size, 3) customers, 4) decentralized organization structure, 5) production technology, 6) total quality management, and 7) just-in-time (JIT) management. By using qualitative research methods together with quantitative research methods, then using Statistical Package for the Social Sciences (SPSS) to analyze collected data from 22 companies in Sri Lanka, the study of Subasinghe and Fonseka (2009) has pointed out that there are a group of 5 factors affecting the application of management accounting in business organizations, including 1) managers' perception, 2) importance of financial accounting, 3) traditional planning and control, 4) support from corporate culture, and 5) market fluctuations. Erserim (2012) conducted a study with survey data from 84 companies in the manufacturing sector in Turkey. Research results have shown that there are 2 factors that positively affect the application of management accounting: corporate culture and organizational characteristics.

In addition, a study by Amara and Benelifa (2017) conducted with collected data from 189 questionnaires in Tunisian companies and another study by Shahzadi et al. (2018) conducted with collected data from 200 different companies in Pakistan have shown that there are two external factors, including 1) environmental uncertainty and 2) competitive market, would influence the application of management accounting. However, a study by Amara and Benelifa (2017) indicates 5 internal factors, including 1) competitive strategy, 2) organizational structure, 3) advanced production technology, 4) total quality management, and 5) JIT management, would affect the application of management

accounting. A study by Amara and Benelifa (2017) indicates 5 other internal factors that affect the application of management accounting, including 1) strategy, 2) structure, 3) size, 4) industry activities, and 5) type of company.

Chien and Thuy (2016) conducted a study of 72 manufacturing enterprises in Vietnam, using quantitative methods through SPSS software. Research results show 6 factors affecting the application of management accounting in manufacturing enterprises, including 1) managers' perception of the usefulness of management accounting information, 2) the amount of provided financial accounting information, 3) enterprise size, 4) management accounting staff's understanding of management accounting, 5) availability of information technology, and 6) supporting factors, such as consulting tools, seminars on applications in enterprises. Research results also show that the level of application of management accounting in manufacturing enterprises in Vietnam is very low, management accounting is just passively applied, and tables were only created according to the requests of managers. Most companies did not apply modern management accounting techniques but only focused on using the very traditional management accounting tools.

Nguyen et al. (2019) conducted research on 238 small and medium-sized enterprises (SMEs) in Hanoi, using quantitative methods through SPSS software, and the findings indicate that the CEO's understanding of management accounting exerts the most significant influence on enterprises' ability to implement management accounting, while the factor of competition level has the least impact. The results also suggest that the size of the enterprise plays a crucial role in moderating the influence of business characteristics on the application of management accounting. Smaller enterprises tend to use management accounting less, and conversely. Additionally, the age of managers correlates with the impact of their awareness on the application of management accounting — younger managers tend to use management accounting more frequently.

Le et al. (2020) conducted research on 120 companies in the manufacturing, trading, and service sectors in Vietnam, using quantitative methods through SPSS software. The findings revealed that five out of 6 factors exhibited a positive correlation with the extent of management accounting application, encompassing: firm size, organizational culture, organizational structure, technology, and human resources operations. Among these, corporate culture had the most significant impact, while managerial opinions had the least influence on the application of management accounting. Conversely, the business environment exerted a negative effect on the implementation of management accounting in enterprises. Considering the research outcomes, the study puts forth suggestions and recommendations for enterprises concerning the utilization of management accounting.

Vu et al. (2022) carried out a study investigating the factors influencing the adoption of strategic management accounting in Vietnamese logistics enterprises. The research employed quantitative methods, and data were gathered by distributing questionnaires to 188 accountants and directors of Vietnamese logistics companies, encompassing transportation, warehousing, and forwarding. Empirical results show that there are five factors that positively impact the application of strategic management accounting in both financial and non-financial aspects, including size, organizational structure, industrial progress, technology, cost of implementing strategic management accounting, and strategy positively.

Dlamini (2022) investigated the factors influencing the implementation of management accounting within SMEs. Research data was collected using semi-structured interviews to obtain data from 88 participants. Research results show that the socio-economic environment, availability of funds, costs and benefits associated with the usage of management accounting, size of the organization, qualifications of accounting personnel, financial literacy of SME owners, and technology are the key determinants, according to the study.

Suryana et al. (2023) have researched the factors influencing the adoption of management accounting for micro-, small and medium-sized enterprises (MSMEs). The independent variables included in the research model include human resources skills, business characteristics, business environment, and business strategy in Indonesia. The research sample is 34 MSMEs enterprises, using a purposive sampling technique. The results of the study demonstrate that human resource skills, business characteristics, business environment, and business strategy have a significant positive impact on the adoption of management accounting both individually and simultaneously.

2.2. Hypotheses development

In line with the research conducted by Hutaibat (2005), Abdel-Kader and Luther (2008), Al-Omiri and Drury (2007), Ahmad and Mohamed Zabri (2015), and Nair and Nian (2017), enterprise size is one of the important factors affecting the application of management accounting in enterprises. In particular, the larger the enterprise, the more standardized the process of building management accounting of that enterprise (Chenhall, 2006). Therefore, our study goes forward with the first hypothesis as follows:

H1: The size of enterprises has a positive impact on the application of management accounting on revenue, costs, and business results in Northern Vietnam electricity enterprises.

Managers' perception of the information usefulness of management accounting has a positive impact on the application of management accounting in enterprises. This is the most important and decisive factor in the implementation of management accounting in manufacturing companies (Kosaiyakanont, 2011; Ahmad & Mohamed Zabri, 2015; Lucas et al., 2013; Chien & Thuy, 2016; Anh, 2012; Nhu, 2020). In addition, the studies of Granlund and Mouritsen (2003) and O'Mahony and Doran (2008) also show that the level of awareness and management of managers influences the application of management accounting in enterprises. On that basis, our study goes forward with the second hypothesis as follows:

H2: The level of awareness and management of enterprise managers has a positive impact on the application of management accounting of revenue, costs, and business results in Northern Vietnam electricity enterprises.

According to the studies of Yang (2006), Chien and Thuy (2016), and Hung (2016), employees' understanding of management accounting is one of

the factors affecting the level of management accounting application. The higher qualifications the accounting staff has, the better they can serve the business activities of enterprises (Anh & Suong, 2018). Therefore, our study goes forward with the third hypothesis as follows:

H3: The level of management accounting staff has a positive impact on the application of management accounting of revenue, costs, and business results in Northern Vietnam electricity enterprises.

Factors such as consulting firms and management accounting education are the motivating factors for the implementation of management accounting in industrial companies in Jordan (Nassar et al., 2011), the results of this study are consistent with the study of Anderson and Lanen (1999). In particular, the supporting factor from universities, conferences, and seminars in Jordan has a negative influence on the implementation and application of management accounting (Nassar et al., 2011). Therefore, our study goes forward with the fourth hypothesis as follows:

H4: Supporting factors have a positive impact on the application of management accounting of revenue, costs, and business results in Northern Vietnam electricity enterprises.

Competitive factors affect the application of management accounting in enterprises (Anderson & Lanen, 1999; Ahmad & Mohamed Zabri, 2015). The use of management accounting information will be affected by the competitive environment (Mia & Clarke, 1999). Firms will not achieve maximum efficiency without competition (Laitinen, 2001). Therefore, the competitive factor and the influence of the application of management accounting are closely linked with each other (Hung, 2016). Because of that, our study goes forward with the fifth hypothesis as follows:

H5: The competitive environment has a positive impact on the application of management accounting on revenue, costs, and business results in Northern Vietnam electricity enterprises.

The business world is changing faster and faster. The globalization of investment in information technology and the high speed of changes in information technology (Alves, 2010). In Vietnam, in the context of the Industrial Revolution 4.0, science and technology always have certain influences on different areas of society. Therefore, information technology also plays an important role (Efendi et al., 2006; Dechow et al., 2006; O'Mahony & Doran, 2008) and has a significant influence on the management accounting system (Dechow et al., 2006; Nair & Nian, 2017). With this, our study goes forward with the sixth hypothesis as follows:

H6: The readiness of information technology has a positive impact on the application of management accounting on revenue, costs, and business results in Northern Vietnam electricity enterprises.

Corporate culture has become more and more important in management control systems (Chenhall, 2006). It affects the level of application in management accounting in Sri Lankan enterprises. According to Erserim (2012), the observed variables of corporate culture factors have an impact on the ability to apply management accounting in enterprises. So, our study goes forward with the seventh hypothesis as follows:

H7: Corporate culture has a positive impact on the application of management accounting on revenue, costs, and business results in Northern Vietnam electricity enterprises.

The change in management accounting is accompanied by a greater dependence on the amount of financial accounting information provided (Baines & Langfield-Smith, 2003). There are various factors related to changes in management accounting, such as motivational factors, organizational factors, and financial factors (Allahyari & Ramazani, 2011). It is hypothesized that the amount of financial accounting information is one of the independent variables that affect the application of management accounting in manufacturing enterprises in Vietnam (Chien & Thuy, 2016). Therefore, our study goes forward with the eighth hypothesis as follows:

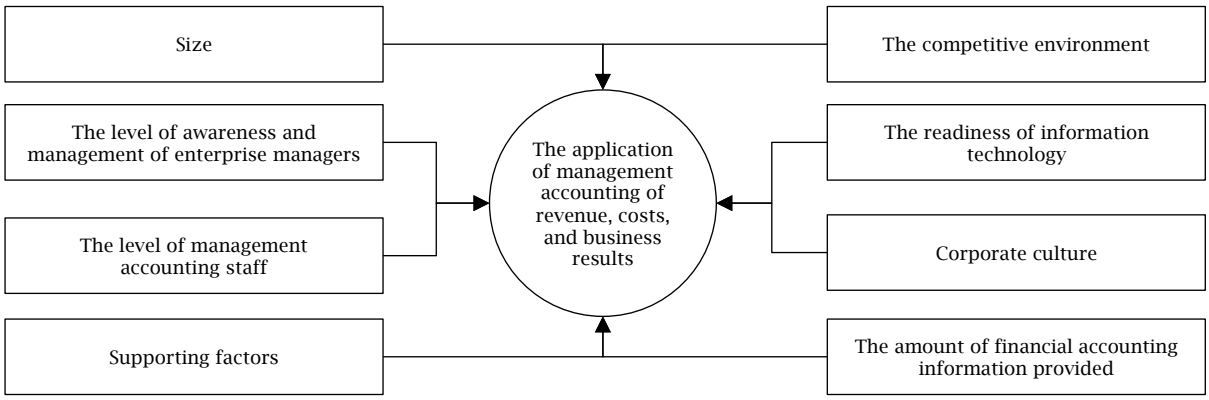
H8: The amount of financial accounting information provided has a positive impact on the application of management accounting of revenue, costs, and business results in Northern Vietnam electricity enterprises.

3. RESEARCH METHODOLOGY

3.1. Research model

Based on the research model of Chien and Thuy (2016), combined with research on the theoretical basis and qualitative research results of Nga et al. (2020), the paper proposes a research model as follows:

Figure 1. Proposed research model



Utilizing the described research model, a survey questionnaire has been developed. It includes observable variables measured on a 5-point Likert scale for the primary content of the questionnaire: 1 = "Strongly disagree", 2 = "Disagree", 3 = "Neutral", 4 = "Agree", and 5 = "Strongly agree". The independent variables are employed to gauge the degree of agreement among research samples concerning the influence of each factor on the implementation of management accounting for revenue, costs, and business results.

3.2. Quantitative research

In this paper, the qualitative and quantitative research methods were used. Methods of qualitative research applied are research-related scientific works that were published in both online magazines and traditional magazines, from both domestic and overseas sources to collect research results serving as a basis for finding research gaps and designing the interview questionnaires. In addition, the vox pop method was also used to quickly interview some experts and managers in Northern Vietnam electricity enterprises. Also, the Excel tool was used to support this research method.

The electricity sector in Vietnam comprises a total of 115 enterprises under 5 corporations. Among them, half of the enterprises are concentrated in the Northern region, under the Northern Power Corporation and the Hanoi Power Corporation, totaling 57 enterprises. To ensure the highest reliability of research results, the article surveys all 57 of these enterprises.

The quantitative research method is carried out based on the data collected from 116 questionnaires from 57 electricity enterprises in North Vietnam. The data collection period is from August 2021 to November 2022. Respondents include managers and chief accountants or accountants. The total number of observations for the survey was 114: while receiving back the total number of 114, there were 5 invalid observations and 109 valid observations that were used for the analysis. Besides, the SPSS 22 software was used to process, synthesize, and analyze the data.

The research data is cross-sectional, and there are linear relationships between the simple variables, so the article chooses to process the data using the SPSS software without resorting to other complex data processing methods. However, the article may also consider replacing the data processing method with partial least squares structural equation modeling (PLS-SEM).

The research data was quantitatively analyzed through the following process:

1. The quality of the measurement scale was assessed using Cronbach's alpha test to determine which observed variables were suitable for inclusion in the scale and which were not.

2. The scale's validity was evaluated through exploratory factor analysis to examine the relationships among the variables within various factors and to identify observed variables that loaded heavily onto multiple factors or were initially misallocated to the wrong factor.

3. Correlation analysis was conducted to assess the close linear relationships between the dependent variables and the independent variables, as well as to identify multicollinearity issues when the independent variables exhibited strong intercorrelations.

4. Regression analysis was employed to determine the relationships between the dependent variable and the independent variables included in the research model while simultaneously checking for the presence of multicollinearity in the research model.

4. RESULTS

4.1. Reliability test (Cronbach's alpha)

The results of the assessment of the measurement scale's quality using Cronbach's alpha test are synthesized in Table 1 below:

Table 1. Summary of results of scale verification

No.	*Group of factors*	*Symbol*	*Scale*	*Overall Cronbach's alpha coefficient*
1	Enterprise size	*ES*	A1, A2, A3, A4	0.869
2	Qualifications of accounting staff	*QAS*	B5, B6, B7, B8, B9	0.771
3	Level of awareness of enterprise managers	*LAEM*	C10, C11, C12	0.786
4	Supporting factors	*SF*	D13, D14, D15, D16, D17, D18, D19, D20, D21	0.875
5	Competitive factors	*CF*	E22, E23, E24, E25	0.879
6	Readiness of information technology	*RIT*	F26, F27, F28, F29, F30	0.793
7	Amount of financial accounting information provided	*AFAIP*	G31, G32, G33, G34, G35, G36, G37	0.872
8	Corporate culture	*CC*	H38, H39, H40	0.866
9	Level of application of management accounting in enterprises	*LAMAE*	I41, I42, I43, I44, I45, I46, I47, I48, I49	0.890

In taking turns to perform Cronbach's alpha test for each factor, we can see the measurement variables are not suitable for variables with a total correlation coefficient of less than 0.3. The results of verifying the reliability of the scale by Cronbach's alpha test show that all factors have Cronbach's alpha coefficient greater than 0.6 and no factor has a total correlation coefficient less than 0.3. In case of removing any variable from the scales, the Cronbach's alpha coefficient in each factor is not greater than the overall Cronbach's alpha coefficient (in the scales, if any variable is removed, it will not make the Cronbach's alpha overall coefficient increase). Thus, through the test analysis, the results of the scales are all eligible and the research data is guaranteed to be included in the analysis in the next steps (Hair et al., 1998).

4.2. Exploratory factor analysis (EFA)

The study performs exploratory factor analysis and takes turns removing the unsuitable variable. According to Hair et al. (1998), with a sample size of at least 100 observations, the factor loading must be from 0.55. Therefore, when analyzing EFA, with a sample of 109 observations, variables with factor loading coefficients less than 0.55 will be removed. Moreover, as outlined by Hoang and Ngoc (2008), EFA analysis must meet specific criteria, including a Kaiser–Meyer–Olkin (KMO) coefficient ranging from 0.5 to 1, the statistical significance of Bartlett's test with a coefficient Sig. < 0.05, and a percentage of variance exceeding 50%. The final results in Table 2 show that the KMO coefficient of the model is 0.708 and Bartlett's test has a significance level (Sig.) equal to 0.000. Therefore, the EFA analysis is consistent with the research data, and the observed variables in the population have a relationship with each other. The analysis results also show that the factor loading is greater than 0.5, so the observed variables are all significant.

Table 2. KMO coefficient and Bartlett's test

Kaiser–Meyer–Olkin measure of sampling adequacy		0.708
Bartlett's test of sphericity	Approx. Chi-square	2018.187
	df	351
	Sig.	0.000

The findings in Table 3 show that the total variance extracted is 81.244% > 50%, proving that 81.244 variations of the factors are explained by the observed variables. So, the discovery factor is suitable. The matrix rotation gathers the observed variables into 8 factors. The stopping point when extracting the eighth factor with the eigenvalue coefficient is 1.113, meeting the requirements. The study calculates the average value of the factors and renames the representative factors as follows:

- *AFAIP:* The average amount of financial accounting information provided;
- *ASF:* The average of supporting factors;
- *ARIT:* The average readiness of information technology;
- *ACC:* The average of corporate culture;
- *ACF:* The average of competitive factors;
- *ALAEM:* The average level of awareness of business managers;
- *AES:* The average of enterprise size;
- *AQAS:* The average level of accounting staff;
- *ALAMAE:* The average level of application of management accounting in enterprises.

Table 3. Summary of total variance extracted

Component	***Initial eigenvalues***			***Extraction sums of squared loadings***	
	Total	***% of variance***	***Cumulative %***	***Total***	***% of variance***
1	6.533	24.197	24.197	6.533	24.197
2	3.592	13.304	37.501	3.592	13.304
3	2.656	9.838	47.339	2.656	9.838
4	2.251	8.338	55.677	2.251	8.338
5	1.986	7.357	63.034	1.986	7.357
6	1.676	6.207	69.241	1.676	6.207
7	1.328	4.919	74.160	1.328	4.919
8	1.113	4.120	78.280	1.113	4.120
9	0.800	2.964	81.244		

4.3. Correlation analysis

Since a prerequisite for regression analysis is that the independent variable must exhibit correlation with the dependent variable, the article conducts a correlation analysis, and the results of this analysis are presented in Table 4 below. The outcomes of the correlation analysis presented in Table 4 show that all independent variables exhibit correlations with the dependent variables.

Table 4. Correlation analysis results (Part 1)

		LAMAE	***AFAIP***	***SF***	***RIT***	***CC***	***CF***	***LAEM***	***ES***	***QAS***
LAMAE	Pearson correlation	1								
	Sig. (2-tailed)									
	N	109								
AFAIP	Pearson correlation	0.383**	1							
	Sig. (2-tailed)	0.000								
	N	109	109							
SF	Pearson correlation	0.341**	0.383**	1						
	Sig. (2-tailed)	0.000	0.000							
	N	109	109	109						
RIT	Pearson correlation	0.027*	-0.041	0.051	1					
	Sig. (2-tailed)	0.000	0.673	0.601						
	N	109	109	109	109					
CC	Pearson correlation	0.369**	-0.233*	-0.192*	-0.125	1				
	Sig. (2-tailed)	0.000	0.015	0.045	0.194					
	N	109	109	109	109	109				

Table 4. Correlation analysis results (Part 2)

		LAMAE	AFAIP	SF	RIT	CC	CF	LAEM	ES	QAS
CF	Pearson correlation	0.074*	0.046	0.310**	-0.080	0.319**	1			
	Sig. (2-tailed)	0.002	0.635	0.001	0.408	0.001				
	N	109	109	109	109	109	109			
LAEM	Pearson correlation	0.211*	0.033	-0.003	0.087	-0.139	-0.036	1		
	Sig. (2-tailed)	0.000	0.730	0.974	0.367	0.150	0.710			
	N	109	109	109	109	109	109	109		
ES	Pearson correlation	0.518**	0.402**	0.346**	-0.079	-0.131	-0.124	0.187	1	
	Sig. (2-tailed)	0.000	0.000	0.000	0.417	0.174	0.199	0.052		
	N	109	109	109	109	109	109	109	109	
QAS	Pearson correlation	0.309**	0.389**	0.428**	0.079	0.030	0.237*	-0.062	0.195*	1
	Sig. (2-tailed)	0.001	0.000	0.000	0.415	0.759	0.013	0.520	0.042	
	N	109	109	109	109	109	109	109	109	109

The correlation coefficients demonstrate statistical significance, with values less than 0.05. In detail, the correlation value between the dependent variable *ALAMAE* and the independent variables is as follows:

- correlation with *AFAIP* of 0.383, the significance level is 1%;
- correlation with *ASF* of 3.41, the significance level is 1%;
- correlation with *ARIT* of 0.027, the significance level is 5%;
- correlation with *ACC* of 0.369, the significance level is 1%;
- correlation with *ACF* of 0.074, the significance level is 5%;
- correlation with *ALAEM* of 0.211, the significance level is 5%;
- correlation with *AES* of 0.518, the significance level is 1%;
- correlation with *AQAS* of 0.309, the significance level is 1%.

As such, the data are suitable to include in the regression analysis.

4.4. Regression analysis

The regression results of ANOVA analysis are shown in Table 5, and the regression results between independent variables *AFAIP, ASF, ARIT, ACC, ACF, ALAEM, AES, AQAS,* and dependent variable *ALAMAE* are shown in Table 6.

The Sig. coefficient. of the test is F = 0.000 < 0.05, so the linear regression model built is suitable for the population.

Table 5. Results of ANOVA analysis

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	21.685	8	2.711	31.137	0.000
	Residual	8.705	100	0.087		
	Total	30.390	108			

Table 6. Results of regression analysis

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.050	0.602		1.744	0.084		
	AFAIP	0.388	0.059	0.346	3.949	0.000	0.680	1.471
	ASF	-0.027	0.088	-0.021	-0.309	0.158	0.591	1.693
	ARIT	0.125	0.062	0.122	3.407	0.000	0.936	1.068
	ACC	0.221	0.079	0.175	2.808	0.002	0.742	1.349
	ACF	0.022	0.059	0.024	0.371	0.112	0.686	1.458
	ALAEM	0.134	0.057	0.131	2.346	0.001	0.921	1.086
	AES	0.150	0.047	0.205	3.188	0.002	0.695	1.438
	AQAS	0.058	0.078	0.147	0.750	0.000	0.713	1.402

The outcomes presented in Table 6 indicate that the variance inflation factor (VIF) coefficients for all factors are below 10, indicating the absence of multicollinearity in the model. The significance coefficients (Sig.) for the independent variables are all below 0.05, with the exception of the factors *ASF* at 0.158 and *ACF* at 0.112. With this, it can be affirmed that these two variables lack significance within the model. The remaining independent variables are significant for the dependent variable. The regression equation is set up as follows:

$$ALAMAE = 1.05 + 0.346AFAIP + 0.205AES + 0.175ACC + 0.147AQAS + 0.131ALAEM + 0.122ACF \quad (1)$$

Table 7. Summary of the research model

Model	R	R-square	Adjusted R-square	Std. error of the estimate	Durbin–Watson
1	0.845[a]	0.714	0.691	0.29505	1.760

Note: The results of the regression analysis for the coefficient R have been labeled as such. a. Predictors: (Constant), AQAS, ACC, ARIT, ALAEM, AES, ACF, AFAIP, ASF.

Through the adjusted R-square coefficient in Table 7, we can see that 6 independent variables in the regression model influence 69.1% of the change of the dependent variable, the remaining 30.9% is due to out-of-model variables and random errors.

5. DISCUSSION

The model analysis results show that there are 6 influencing factors. Hypotheses *H1, H2, H3, H6, H7,* and *H8* are accepted and hypotheses *H4* and *H5* are rejected.

The amount of financial accounting information provided has a positive correlation to accounting applications. This outcome aligns with the findings of prior studies by Baines and Langfield-Smith (2003) and Allahyari and Ramazani (2011). Enterprise size has a positive correlation. This outcome aligns with the findings of prior studies by Hutaibat (2005), Al-Omiri and Drury (2007), Abdel-Kader and Luther (2008), Ahmad and Mohamed Zabri (2015), and Nair and Nian (2017). Corporate culture has a positive correlation. This outcome aligns with the findings of prior studies by Chenhall (2006) and Erserim (2012). The qualifications of the accounting staff have a positive correlation. This result is consistent with previous studies by Yang (2006), Chien and Thuy (2016), Hung (2016), and Anh and Suong (2018). The level of awareness of managers has a positive correlation. This outcome aligns with the findings of prior studies by Kosaiyakanont (2011), Ahmad and Mohamed Zabri (2015), Lucas et al. (2013), Chien and Thuy (2016), and Nhu (2020). Information technology has a positive correlation. This result is consistent with previous works of Granlund and Mouritsen (2003), O'Mahony and Doran (2008), Efendi et al. (2006), Dechow et al. (2006), and Nair and Nian (2017).

6. CONCLUSION

Management accounting for revenue, costs, and business results is considered a part of the management system within an enterprise, playing a vital role in decisions related to the business strategy of the company. Managers at various levels typically utilize managerial management accounting for revenue, costs, and business results information to carry out their management functions and achieve business objectives. Nonetheless, the application of management accounting for revenue, costs, and business results is influenced by various factors, making it necessary to investigate these influencing factors. This research employs quantitative research methods and has demonstrated that financial accounting information quantity has the most significant effect on the utilization of management accounting for revenue, costs, and business results. Subsequently, other factors, in order of descending influence, include enterprise scale, corporate culture, accounting team competence, managerial perception, and the least influential factor information technology. Hence, the suggested potential resolutions for electricity enterprises in Northern Vietnam are as follows:

Firstly, electricity enterprises need to monitor and strengthen the provision of financial information for planning; elaboration of estimate tasks such as estimates of electricity bill collection, estimates of electricity revenue, estimates of internal electricity selling prices; calculating and deciding costs for each job or workshop; preparing reports to provide information to managers in planning operations and strategic planning.

Secondly, it is necessary to pay attention to the size of their units; the output and selling price of electricity; the scale of assets of level 3 and 4 units from communes, wards, districts, provinces/cities. The scale from the commune, ward, district, and province/city level will be very large, this is proportional to the higher need for information of the managers. Therefore, the electricity enterprises need to organize the collection of input information through the processing process, this is to obtain high-quality output information in the operation and management of the managers in the Northern Vietnam electricity enterprises.

Thirdly, to apply management accounting to the management process, enterprises need to build a strong and healthy corporate culture through mutual support among employees in the enterprise; it is necessary to have high trust and consensus in the development goals of the enterprises, this is not only to help develop corporate culture but also to improve the society.

Fourthly, to improve the awareness of learning, professional qualifications, thinking skills, financial analysis, making and analyzing reports on accounting transactions, reading comprehension for legal documents, software using, foreign language for economic transactions, analyzing different aspects of management accounting in enterprises for accounting staffs.

Fifthly, managers need to properly perceive the role of management accounting in enterprises in the current integration conditions. Improving management knowledge through special training courses for managers. This is the motivation to help managers apply management accounting better.

Although the research results have revealed the influencing factors and their degrees of impact on the application of management accounting in electricity enterprises in Northern Vietnam, serving as valuable reference materials for the managers of these enterprises, the study has yet to clarify the influence of applying revenue, cost, and business result management accounting on the operational efficiency of businesses in the electricity sector. Therefore, in the future, more in-depth research is still needed on the application of revenue, cost, and business result management accounting in relation to the operational efficiency of electricity enterprises in Vietnam.

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