


A STUDY ON THE IMPACT OF THE USAGE OF COST INFORMATION ON BUSINESS PERFORMANCE OF ENTERPRISES IN VIETNAM

Dang Lan Anh^A, Pham Thi Bich Thu^B, Le Thi Minh Hue^C



ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received 03 March 2023</p> <p>Accepted 29 May 2023</p>	<p>Purpose: The primary objective of the research was to investigate the correlation between the utilization of cost information and business performance of enterprises in Vietnam, particularly in the context of the Covid-19 pandemic.</p>
<p>Keywords:</p> <p>Cost; Cost Information; Performance; Enterprise in Vietnam.</p>	<p>Design/methodology/approach: A survey was conducted, involving a sample of 380 participants consisting of CEOs, CFOs, managers, board of directors, and individuals in charge of accounting and finance departments. The study employed a structure equation model to analyze the relationship between the use of cost information and business performance.</p>
	<p>Findings: The study revealed a significant and positive impact of cost information utilization on business performance among the surveyed enterprises in Vietnam. Additionally, the study provided recommendations for enterprises in Vietnam on how to make use of cost information for various purposes, including planning, evaluating, decision-making, and cost control, to optimize their business performance.</p>
	<p>Research, Practical & Social implication: The study's results suggest that utilizing cost information effectively can lead to improved business performance and may provide valuable insights for Vietnamese enterprises on how to navigate the challenging and competitive post-Covid-19 economic environment.</p>
	<p>Originality/value: The research employed a structural equation modeling (SEM) approach, and a test for univariate normality demonstrated an outstanding critical skewness ratio value. Furthermore, the kurtosis indicated that the data followed a normal distribution, making it suitable for analysis. Since SEM employs rigorous criteria to evaluate model fit, it can be inferred that the measurement model exhibited a high level of fit. The findings affirm the beneficial impact of utilizing cost information on business performance and offer significant recommendations for Vietnamese businesses in the current post-COVID era.</p>
	<p>Doi: https://doi.org/10.26668/businessreview/2023.v8i6.2429</p>

UM ESTUDO SOBRE O IMPACTO DO USO DE INFORMAÇÕES DE CUSTOS NO DESEMPENHO DE EMPRESAS NO VIETNÃ

RESUMO

Objetivo: o principal objetivo da pesquisa foi estudar a correlação entre o uso de informações de custos e o desempenho comercial das empresas no Vietnã, especialmente no contexto da pandemia de Covid-19.

Projeto/metodologia/abordagem: foi realizada uma pesquisa com uma amostra de 380 participantes composta por CEOs, CFOs, gerentes, membros do conselho e chefes de departamentos de contabilidade e finanças. O estudo utilizou modelagem de equações estruturais para analisar a relação entre o uso de informações de custos e o desempenho dos negócios.

^A PhD in Economics. Lecturer. Faculty of Economics and Business Administration, Hong Duc University. Thanh Hoa Province, Vietnam. E-mail: danglananh@hdu.edu.vn Orcid: <https://orcid.org/0009-0004-3278-4839>

^B PhD in Economics. Lecturer. Faculty of Economics and Business Administration, Hong Duc University. Thanh Hoa Province, Vietnam. E-mail: phambichthu@hdu.edu.vn Orcid: <https://orcid.org/0000-0002-1001-0558>

^C PhD in Economics. Head of Financial Planning Department, Hong Duc University. Thanh Hoa Province, Vietnam. E-mail: lethiminhhue@hdu.edu.vn Orcid: <https://orcid.org/0009-0002-6777-0125>

Resultados: o estudo revelou um impacto significativo e positivo do uso de informações sobre custos no desempenho dos negócios das empresas pesquisadas no Vietnã. Além disso, o estudo fornece recomendações às empresas vietnamitas sobre como usar as informações de custos para várias finalidades, como planejamento, avaliação, tomada de decisões e controle de custos, a fim de otimizar o desempenho dos negócios.

Implicações para a pesquisa, para a prática e para a sociedade: os resultados do estudo sugerem que o uso eficaz das informações de custos pode levar a um melhor desempenho dos negócios e pode fornecer insights valiosos para as empresas vietnamitas sobre como navegar no difícil e competitivo ambiente econômico pós-1929.

Originalidade/valor: a pesquisa empregou uma abordagem de modelagem de equações estruturais (SEM), e um teste de normalidade univariada mostrou um valor crítico excepcional do coeficiente de assimetria. Além disso, a curtose indicou que os dados seguiam uma distribuição normal, tornando-os adequados para análise. Como o SEM emprega critérios rigorosos para avaliar o ajuste do modelo, pode-se deduzir que o modelo de medição teve um alto nível de ajuste. Os resultados confirmam o impacto benéfico do uso de informações de custos no desempenho dos negócios e fornecem recomendações significativas para as empresas vietnamitas na atual era pós-COVID.

Palavras-chave: Custo, Informações de Custo, Desempenho, Negócios no Vietnã.

UN ESTUDIO SOBRE EL IMPACTO DEL USO DE LA INFORMACIÓN SOBRE COSTES EN LOS RESULTADOS DE LAS EMPRESAS DE VIETNAM

RESUMEN

Propósito: El objetivo principal de la investigación era estudiar la correlación entre la utilización de información sobre costes y el rendimiento empresarial de las empresas de Vietnam, especialmente en el contexto de la pandemia Covid-19.

Diseño/metodología/enfoque: Se realizó una encuesta con una muestra de 380 participantes formada por directores generales, directores financieros, gerentes, miembros del consejo de administración y responsables de los departamentos de contabilidad y finanzas. El estudio empleó un modelo de ecuaciones de estructura para analizar la relación entre el uso de información sobre costes y el rendimiento empresarial.

Resultados: El estudio reveló un impacto significativo y positivo de la utilización de información sobre costes en el rendimiento empresarial de las empresas encuestadas en Vietnam. Además, el estudio ofrece recomendaciones a las empresas vietnamitas sobre cómo utilizar la información de costes para diversos fines, como la planificación, la evaluación, la toma de decisiones y el control de costes, con el fin de optimizar su rendimiento empresarial.

Investigación e implicaciones prácticas y sociales: Los resultados del estudio sugieren que la utilización eficaz de la información sobre costes puede conducir a una mejora del rendimiento empresarial y puede proporcionar valiosas ideas a las empresas vietnamitas sobre cómo navegar en el difícil y competitivo entorno económico posterior a la crisis de 1929.

Originalidad/valor: La investigación empleó un enfoque de modelización de ecuaciones estructurales (SEM), y una prueba de normalidad univariante demostró un destacado valor crítico del coeficiente de asimetría. Además, la curtosis indicó que los datos seguían una distribución normal, lo que los hacía aptos para el análisis. Dado que el SEM emplea criterios rigurosos para evaluar el ajuste del modelo, puede deducirse que el modelo de medición presentaba un alto nivel de ajuste. Los resultados confirman el impacto beneficioso de la utilización de información sobre costes en el rendimiento empresarial y ofrecen recomendaciones significativas para las empresas vietnamitas en la actual era post-COVID.

Palabras clave: Costes, Información sobre Costes, Rendimiento, Empresa en Vietnam.

INTRODUCTION

According to Ahmeti Ahmeti, Pula & Shala (2013), as businesses are incapable of producing without incurring costs, it is imperative for them to acknowledge the structure, classification, and cost allocation of their activities. This will enable them to establish prices for their products and services that accurately reflect the costs associated with their operations. In the decision-making process of any organization, the cost information system holds

significant importance. Lepădatu (2018) believed that one of the primary responsibilities of management is to exercise control over the operations, processes, and activity sectors, which ultimately includes cost control. Despite the presence of various control systems such as production control, quality control, and stocks control, the cost information system is crucial as it monitors the outcomes of these systems and their business performance.

In the face of the Covid-19 pandemic, the economy of Vietnam has been confronted with unprecedented challenges and difficulties. In response, it has become imperative for businesses to devise innovative management strategies to gradually mitigate the consequences of the pandemic and improve their business performance. To survive and thrive in a competitive and highly volatile environment in the post-Covid 19 era, enterprises in Vietnam must possess essential information for business management, particularly cost information. Therefore, the usage of cost information (UCI) to serve business management is a crucial and imperative issue. However, Huynh & Hoang (2020), the usage of cost information by Vietnamese businesses currently only serves a few basic purposes such as determining business results and recording costs. Most Vietnamese businesses have not fully optimized the use of cost information to perform administrative functions in order to maximize business efficiency.

Therefore, this study aims to find out whether existing the relationship between usage of cost information and the business performance in Vietnames enterprise thereby providing discussions and implications to improve the use of cost information and contributing to improving the business performance of enterprises in Vietnam in the post-Covid-19 context.

LITURATURE REVIEW

Use of Cost Information for Administrative Purposes

According to White & Clinton (2014), the measurement of cost is expressed in monetary terms, achieved through the utilization of resources or outputs to accomplish specific management objectives, or to create a product or resource to be delivered. Similarly, the International Federation of Accountants (IFAC, 2019) defines cost as the monetary worth of resources expended in producing a product or rendering an activity or service. The requirement for cost information by managers is related to their managerial functions, namely, planning, controlling, performance evaluation, and decision making. Accurate and timely cost information is, therefore, essential for effective management of organizations.

Use of Cost Information for Planning

According to Braimah, Nyarko & Moriarty (2010), cost information plays a vital role in cost estimation and resource allocation, contributing to the efficient planning process of rural water supply and sanitation enterprises in Ghana. The study suggests that cost information also assists managers in predicting risks and identifying potential opportunities. In her study of public sector practice in Croatia, Rogosic (2021) found that cost information is most useful for resource planning. Moreover, Dekker & Smidt (2003) used descriptive statistics to demonstrate that target cost information can impact the competitive environment and unpredictable events. Clark & Fujimoto (1991) argued that roughly 80% of the total product cost is estimated during the product design and development phase. Cooper & Slagmulders (1997) researched target cost information as a product design management approach to ensure the lowest possible product cost while still meeting customer requirements. Dierks & Cokins (2003) emphasize that elaboration of detailed cost estimates for activities is also crucial in management, and that setting activity-based budgeting (ABB) can meet these requirements.

Using of Cost Information for Control

The provision of cost information is crucial for managers to effectively control business activities. This information should include details on costs, selling prices, and profits of business plans, as well as resource consumption in cost centers. The cost information provided must clearly show the variance between the estimated cost and actual cost, the causes of the difference, and the cost center responsible for the cost generation. Managers also require information on the excess production capacity of each activity, workshop, and center in the company to analyze cost fluctuations and identify effective operational control strategies. Rogosic (2021) demonstrates that cost information positively supports businesses when controlling public services. Johnson and Kaplan (1987) emphasize the importance of cost estimation techniques and analysis of differences between estimated and actual costs for effective cost control.

Use Cost Information for Assessment and Decision Making

The objective of business performance assessment is to ensure that the actual results achieved align with the planned objectives. To evaluate the performance of each business division, managers require cost information and analysis of cost fluctuations, relative and absolute comparisons with other segments, other businesses, and the enterprise as a whole. In

order to effectively perform the business performance evaluation function, managers require differential cost information, cost volatility analysis information, and segment cost information.

Decision-making is a critical aspect of the business process, including product pricing and decision-making in special cases. Al-Ghazali (2023) pointed out that determining the cost is where the process of establishing pricing strategy begins, and it is also the primary factor that influences the company's future and its ability to achieve its objectives successfully. Mevellec & Bertrand (2005), based on Activity-Based Costing (ABC), introduced Activity-Based Management (ABM) to evaluate the effectiveness of each activity, determine which activities are unnecessary and should be cut, improve product quality, and increase response time to customer needs. This management approach serves as a basis for maintaining the ABC system. Furthermore, Kaplan & Cooper (1998) contend that information regarding the profit and loss of each product and customer can assist managers in making decisions to either produce more or eliminate a certain product line.

Business Performance

Business Performance is measured in both relative and absolute terms. Neely Gregory & Platts (1995) provides a measure of the performance of an enterprise, which can be a financial measure expressed in profitability, ROA, ROE, ROI, ... or a non-financial measure such as control efficiency, cost control, production efficiency, market share and customer satisfaction. Banker, Chang & Pizzini (2004), Kaplan & Norton (1996) offer a more complex measure through the balanced scorecard. Tippins & Sohi (2003) measure Business Performance through: Return on Investment, Customer Satisfaction, New Product Development, Business Growth, Professionalism and Sales Growth. In which, it is emphasized that the production cycle best shows the efficiency of production and business because the shorter the production cycle, the higher the capital turnover time, the shorter the production time, the better the production capacity. Thus, Business Performance is constituted by Production Cycle, Profit Efficiency, Cost Control Efficiency.

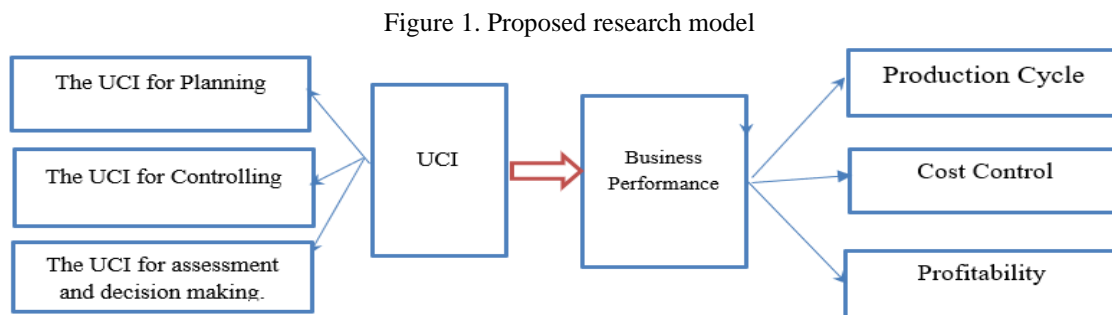
In this study, the authors used the scale of Banker, Chang & Pizzini (2004), Kaplan & Norton (1996), Hoang (2021). Through theoretical and experimental research, the production cycle is measured through the following scales: new product development time, production lead time, delivery reliability, and customer responsiveness. Cost control results are measured through the following scales: direct material costs, direct labor costs, manufacturing overhead and non-manufacturing costs. Profit results are measured on the following scales: market share,

profit margin on sales, asset turnover and return on assets.

RESEARCH MODEL AND HYPOTHESIS

Alrjoub et al. (2023), there is a partial mediating effect of costs of quality on the relationship between timely production and financial performance. Al-Khalidi (2015) pointed out that cost information getting from management accounting system has a statistically significant effect on the decision-making process in Kuwaiti industrial firms. Previous studies indicated that the use of cost information has a positive impact on Business Performance, study hypothesized the following:

H1: The use of cost information has a positive impact on business performance.



Source: Prepared by the authors (2023).

METHODOLOGY

Research progress

The study used both qualitative and quantitative methods. Qualitative methods are used to explore the views of experts and researchers on groups of factors affecting the effectiveness of internal audits. Specifically, in this study, the author conducts in-depth interviews with 10 experts in economics and finance to identify variables representing the use of cost information factor and business performance; and then to correct and supplement observed variables measuring research concepts. Next, the author adjusts the scale, questionnaire and then carries out a preliminary survey with 30 interviewees who are managers, CEOs, CFOs, head of accounting or financing department to edit questionnaire and scales.

The formal study was carried out using a quantitative method. The study conducts a survey with 380 CEOs, CFOs, managers, board of directors, head of finance and accounting department of enterprises in Vietnam to verify the measurement model, the theoretical model and the hypotheses in the model. Research methods are mainly used in the research such as:

Cronbach's alpha reliability analysis, exploratory factor analysis, Pearson's correlation assessment, and regression analysis

- Cronbach's alpha reliability analysis is used to check the correlation of total variables and evaluate Cronbach's Alpha coefficient. If Cronbach alpha ≥ 0.6 is acceptable scale; variables with a total correlation coefficient (Corrected item total correlation) less than 0.3 will be excluded (Nunnally & Bernstein, 1994).
- Exploratory factor analysis (EFA) is a quantitative analysis method used to reduce a set of interdependent measurable variables into a set of significant groups.
- Confirmatory factor analysis (CFA) is a statistical technique used to verify the factor structure of a set of observed variables. CFA allows the researcher to test the hypothesis that a relationship between observed variables and their underlying latent constructs exists.
- Structural equation modeling is a multivariate statistical analysis technique that is used to analyze structural relationships. This technique is the combination of factor analysis and multiple regression analysis, and it is used to analyze the structural relationship between measured variables and latent constructs.

Sampling

In this study, the author selected a sample of 380 CEOs, CFOs, managers, board of directors, head of finance and accounting department of enterprises in Vietnam using a convenience sampling method. The author carried out a survey by sending a mail questionnaire directly to the internal auditors and from January to March 2022. The size of the samples was determined to ensure the reliability of the results of exploratory factor analysis (EFA) and multivariate regression models. According to Hair, Anderson, Tatham and Black (1998), for EFA exploratory factor analysis, the minimum size is 5 times the total number of observed variables in the scales. The article uses a questionnaire with 29 observed variables; therefore, the minimum sample size to be achieved is: $29 * 5 = 145$ observations. For that reason, the author uses a sample size of 520 questionnaires sent to responders. The results obtained 380 valid responses were included in the analysis to test the reliability of the scale measured by Cronbach alpha's index, exploratory factor analysis, confirmatory factor analysis, and Structural equation modeling (SEM) to evaluate the influence of the use of cost information on business performance.

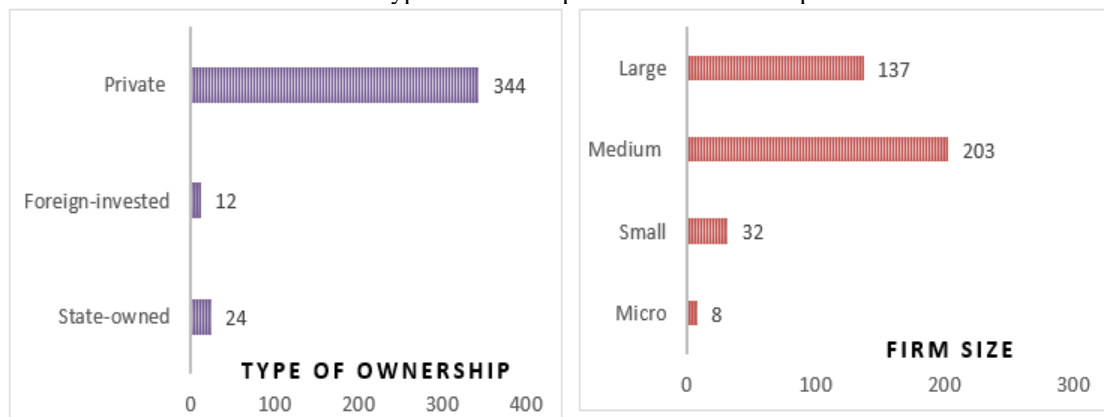
RESULTS

The survey collected a total of 380 valid questionnaires from 380 CEOs, CFOs, managers, board of directors, head of finance and accounting department of enterprises in Vietnam.

In term of ownership, based on the data collected from the survey sample, it has been determined that a majority of the enterprises (344 out of 380) are privately owned. State-owned enterprises and foreign-invested enterprises make up a smaller proportion, with 24 and 12 enterprises, respectively.

In terms of enterprise size, medium-sized enterprises constitute the majority (203 enterprises), followed by large-scale enterprises (137 enterprises). Additionally, the study included 32 small enterprises and 8 micro enterprises that use cost information in their administrative activities.

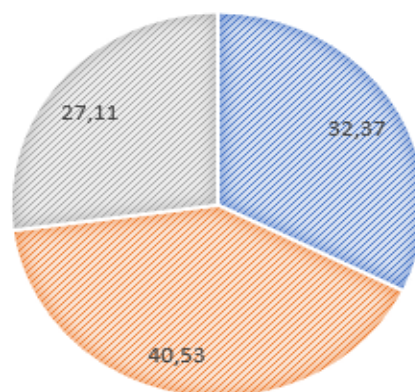
Chart 1. Type of ownership and firm size of samples



Source: Prepared by the authors (2023).

Chart 2. Industry sectors of research sample

■ Agriculture, Forestry, and Fishery ■ Industry and construction ■ Service



Source: Prepared by the authors (2023).

Regarding the industries represented in the survey sample, industrial and construction enterprises account for 40.53% of the total enterprises. Enterprises operating in the service sector comprise 32.37%, while those in the agriculture, forestry, and fishery sector make up 27.11% of the total enterprises.

Cronbach's Alpha Reliability Test

The Cronbach's Alpha reliability test results for independent variables and dependent variables are shown in table 1 listed below.

Table 1. Scale's reliability analysis results

Definition	Variable	Source	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
UCI for planning - Cronbach's Alpha 0.807				
UCI for planning	Cost information is used to make cost estimates, target costs according to the given plan.	Braimah, Nyarko & Moriarty (2010), Rogosic (2021), IFAC, 2000; Tani et al. (1994)	.575	.781
	Cost information is used to allocate resources within the company.	Braimah, Nyarko & Moriarty (2010), Rogosic (2021), IFAC, 2000; Stefanović (2010)	.590	.775
	Cost information used for product/product line/department/center profit forecasting	Braimah, Nyarko & Moriarty (2010), Rogosic (2021), IFAC, 2000; Tani et al. (1994)	.693	.723
	Cost information used for forecasting: risks, opportunities, threats, potentials.	Rogosic (2021), IFAC, 2000; Dekker & Smidt (2003)	.644	.749
The UCI for control - Cronbach'alpha 0.793				
The UCI for control	Using information about the difference between actual costs and norms/estimates for administrative work.	Stefanović (2010), Rogosic (2021), IFAC, 2000; Stefanović (2010)	.533	.765
	Using actual cost information of objects: activities, products/product lines, distribution channels, customers, responsibility centers	Stefanović (2010); Rogosic (2021), IFAC, 2000; Tani et al. (1994)	.498	.772
	Using information of cost fluctuations and causes for managers to control.	Stefanović (2010), IFAC, 2000	.616	.743
	Using cost information to improve operations more efficiently in using resources	Stefanović (2010), IFAC, 2000	.548	.760
	Using information of excess production capacity of the company's operations/facilities/centers	Stefanović (2010), IFAC, 2000	.588	.753
	Using cost information to control and cut costs of operations,	Stefanović (2010), IFAC, 2000	.498	.772

Definition	Variable	Source	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
	products/product lines/departments/centers			
The UCI for assessment and decision making - Cronbach' Alpha 0.824				
The UCI for assessment and decision making	Using cost information to evaluate product/product line/department/center/employee performance.	Stefanović (2010), Mevellec & Bertrand, 2005; Kaplan & Cooper, 1998	.536	.807
	Using cost information to analyze and evaluate customer profitability.	Stefanović (2010); Mevellec & Bertrand, 2005	.596	.796
	Using cost information to make decisions on adding or removing products, product lines, or divisions within a company.	Lepădatu (2018), Rogosic (2021), Kaplan & Cooper, 1998	.593	.797
	Using cost information for managers to make decisions on CVP, resource allocation, reward, self-produce or buy, new technology investment.	Lepădatu (2018), Mevellec & Bertrand, 2005	.545	.805
	Using cost information to determine the selling price for a new product.	Lepădatu (2018), Covalesski (2006)	.553	.804
	Using cost information for periodic price adjustments for existing products.	Lepădatu (2018)	.545	.805
	Use cost information for pricing decisions in special situations: bulk orders, product mixes, excess production capacity.	Lepădatu (2018), Kaplan & Cooper, 1998	.608	.794
Production cycle - Cronbach's Alpha 0.772				
Production cycle	Faster new product development time	Maiga, Nilsson & Jacobs (2014), Banker, Chang & Pizzini (2004); Ittner, Lanen & Larcker (2002); Hoang (2021)	.508	.752
	Faster product production time		.504	.753
	Higher reliability in delivery		.641	.681
	Higher satisfying customer needs of product's feature		.648	.677
Cost control - Cronbach's Alpha 0.799				
Cost control	Savings in direct material costs is increasing	Maiga, Nilsson & Jacobs (2014), Banker, Chang & Pizzini (2004); Ittner, Lanen & Larcker (2002); Hoang (2021)	.633	.739
	Savings in direct labor costs is increasing		.715	.700
	Savings in the overall production cost is increasing		.633	.739
	Savings in overhead costs is increasing.		.479	.812
Profitability - Cronbach's Alpha 0.771				
Profitability	Market share	Maiga, Nilsson & Jacobs (2014), Banker, Chang & Pizzini (2004); Ittner, Lanen & Larcker (2002); Hoang (2021)	.554	.727
	Return on sales		.578	.714
	Asset turnover		.582	.711
	Return on assets		.579	.712

(Source: Processing by SPSS software)

Exploratory Factor Analysis

The exploratory factor analysis uses Principal axis factoring extraction method by Promax rotation. To evaluate whether an exploratory factor analysis is suitable for analysis in this case, the authors use the KMO and Bartlett’s test. In the exploratory factor analysis, the KMO index (Kaiser-Meyer- Olkin) is used to examine the suitability of factor analysis. The KMO value must be between 0.5 and 1, and if the value is less than 0.5, factor analysis may not be appropriate for the data.

Based on table 3, the KMO coefficients were 0.840 (greater than 0.5). The result of Bartlett's Test showed that Sig=0.00 (less than 0.05) (Table 2). Therefore, it is possible to reject hypothesis H0 (the correlation between observed variables is zero), or it can be concluded that the observed variables are correlated with each other overall. These findings demonstrate that the analytical data is completely consistent.

Table 2. KMO and Bartlett test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.840
Approx. Chi-Square		3845.769
Bartlett's Test of Sphericity	df	406
	Sig.	.000

(Source: Processing by SPSS software)

After exploratory analysis of EFA, it can be seen that the model has no difference compared with the research model, no observed variable is excluded from the research variable. There is no new group of factors shown in Table 3.

Table 3. Pattern Matrix

	Factor					
	1	2	3	4	5	6
UCI.DEC7	.733					
UCI.DEC5	.642					
UCI.DEC4	.633					
UCI.DEC1	.622					
UCI.DEC6	.615					
UCI.DEC3	.536					
UCI.DEC2	.527					
UCI.CON4		.728				
UCI.CON2		.679				
UCI.CON6		.621				
UCI.CON3		.583				
UCI.CON5		.580				
UCI.CON1		.565				
CC3			.861			
CC4			.724			

CC2			.655			
CC1			.562			
UCI.PLAN2				.836		
UCI.PLAN1				.765		
UCI.PLAN3				.604		
UCI.PLAN4				.519		
PR3					.718	
PR2					.683	
PR1					.671	
PR4					.611	
PC2						.818
PC1						.737
PC3						.559
PC4						.551

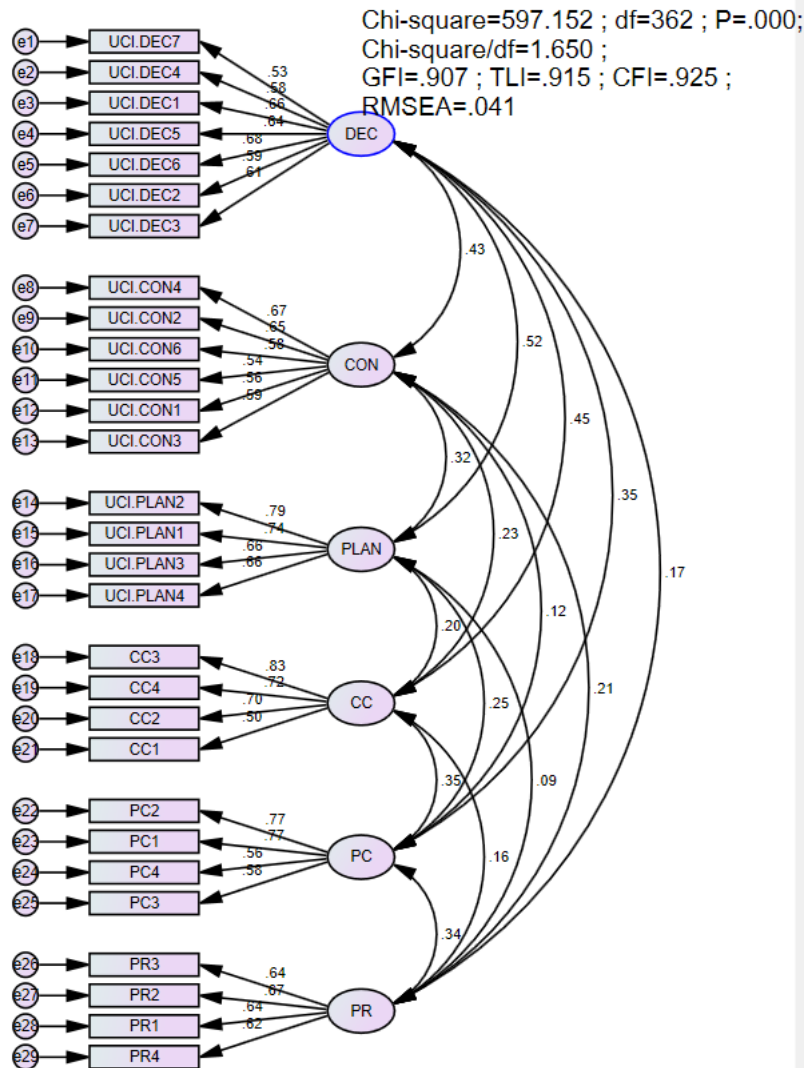
(Source: Processing by SPSS software)

Confirmatory Factor Analysis

Based on the results of the Exploratory Factor Analysis (EFA), six key concepts have been identified in the research model. To evaluate the model fit, several measures have been used, including the Chi-square command (CMIN), Chi-square adjusted for degrees of freedom (CMIN/df), GFI index, TLI, CFI, and RMSEA index. The model is considered suitable for market data when it meets the following criteria: GFI, TLI, CFI values ≥ 0.9 (Bentler & Bonelt, 1980), CMIN/df ≤ 3 (Carmines & McIver, 1981), and RMSEA = $0.041 \leq 0.08$ (Steiger, 1990).

The results of the Confirmatory Factor Analysis (CFA) indicate that the research model is appropriate (Figure 2). The observed variables representing the factors have a significant value of 0.00, indicating that they have a good representation for the CFA model factor. Additionally, the correlation coefficient of each pair of concepts differs from 1 at a 95% confidence level (P-Value = 0.000), indicating that the concepts have achieved discriminant value.

Figure 2. CFA normalization diagram of research model



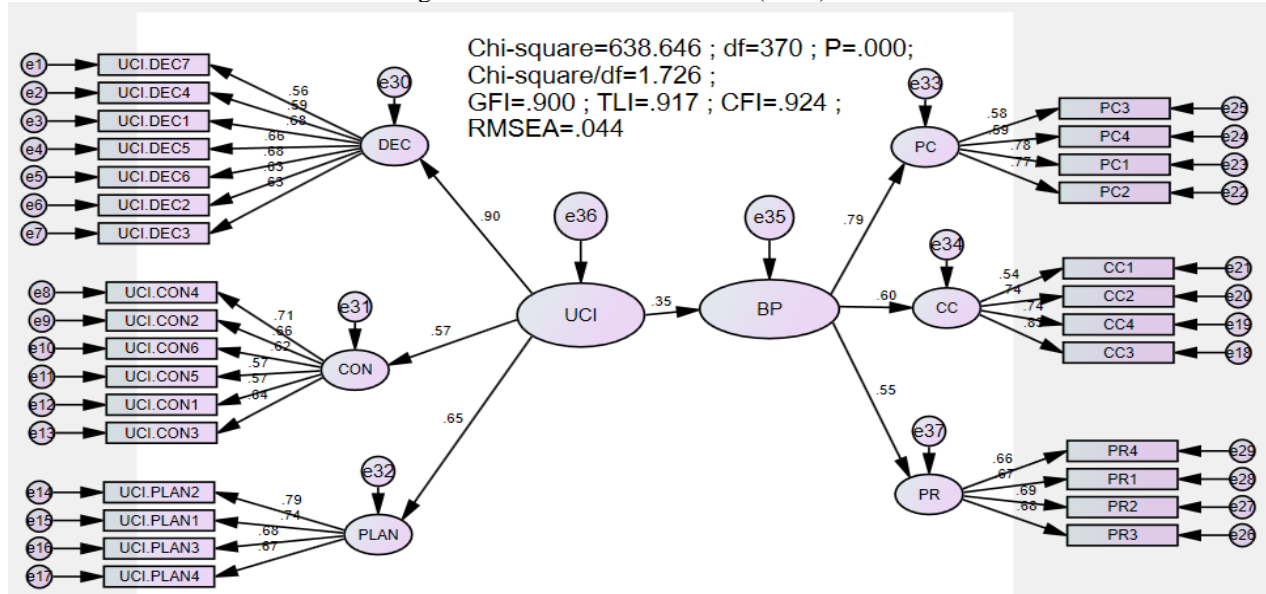
(Source: Processing by Amos software)

The standardized weights are more than 0.5 and the unstandardized weights are statistically significant (sig.<0.000), so the concepts are convergent. This measurement model is appropriate for the research data and there is no correlation among the measurement errors, therefore achieving the property of unidimensionality.

Structural Equation Modeling (SEM)

The study utilized SEM to evaluate the fit of the research model and test the relationships within the initial model. The SEM analysis result of the model with df = 370, Chi-square = 638.646, with a p-value = 0.000 < 0.05, Chi-square/df = 1.680 < 3, GFI = 0.900, TLI = 0.917, CFI = 0.924; RMSEA = 0.044 < 0.08 confirms that the model is suitable for market data (Figure 3).

Figure 3. Linear structural model (SEM)



(Source: Processing by Amos software)

The SEM results show that the relationship between the Use of Cost Information (UCI) and Business Performance (BP) is acceptable ($p < 0.05$). Hypothesis H1 is accepted (p - value less than 0.05), in which the use of cost information for planning has the strongest influence on the Business Performance of enterprises in Vietnam. This result is also consistent with the actual conditions of the companies.

Table 4. Coefficients of the SEM regression model and the results of testing the model's hypotheses.

Factor	SEM. regression		Conclude
	Estimate	P-value	
UCI --> BP	0.35	0.000	Accept

(Source: Processing by Amos software)

The results regarding the causal relationship between the components of the research model are shown in Table 5 with $p < 0.05$, which confirms that the usage of cost information (UCI) has a positive causal relationship with business performance (BP) of enterprises in Vietnam.

DISCUSSION AND IMPLICATIONS

Discussion

Hypothesis H1 posits that the use of cost information has a positive impact on business performance. The test result with p -value = $0.01 < 0.05$ is statistically significant at 99% confidence level, so this hypothesis is fully accepted. This means that the use of cost

information positively affects the improvement of business performance of enterprises in Vietnam. This research result is similar to Leahy's (1998) argument that using cost information in planning period helps businesses reduce costs, increase profits, and become more competitive. It also increases customer and employee satisfaction, as well as better bonding with stakeholders and partners.

Moreover, this result is also similar to the research of Sanford (2009); Ittner, Lanen & Larcker (2002), and Kennedy & Affleck-Graves (2001) on enterprises that use cost information in the activity-based costing to increase profits. The finding of the impact of using cost information on profitability is considered an additional finding alongside the impact of using cost information on cost control effectiveness. If a business is able to control their costs and reduce them gradually, it is highly likely to contribute to increasing profits for the business. Therefore, managers need to enhance the use of cost information in management to increase profitability for the enterprise.

Managerial implications

The research results show that enhancing the use of cost information will increase the effectiveness of business operations. However, to strengthen the use of cost information, it is necessary to focus on the following issues:

❖ *Enhancing the use of cost information for planning.*

Managers need to be aware of the importance of building standards from the beginning of the accounting period, in addition to building standards for direct material costs for each cost object, there are also direct labor costs and shared production costs. At the same time, estimated cost information should be provided for all specific cost items or business segments. Attention should be paid to the application of target costs, perfecting the standard-setting process and budgeting, defining the responsibilities of departments involved in the standard-setting and budgeting process, building a cost standard system, and a flexible budget-oriented cost system. In addition, companies need to enhance the use of cost information to forecast risks, opportunities, and potential in their operations.

❖ *Enhancing the use of cost information for evaluation and decision-making.*

Companies should enhance the use of cost information in evaluation and decision-making. Managers need to focus on building a cost information system to evaluate the effectiveness of each product, product line, department, center, and employee; and focus more on making effective decisions by optimizing the benefits of cost information. In addition,

companies should consider applying modern techniques in analyzing business plans, determining selling prices, determining inventory levels, and necessary purchasing. Most successful companies in the world excel in technology and apply modern management accounting methods.

❖ *Enhancing the use of cost information for control.*

Companies need to enhance the use of cost information on the variance between actual costs and standards/budgets to manage, analyze costs - actual costs of each object, activity, product, distribution channel, responsibility center. Companies can improve their operations more effectively through this. Companies need to regularly find solutions to reduce unnecessary costs, aiming for lean production, and continuous improvement according to kaizen in all stages of production and business operations. This helps companies control costs and use resources effectively within the company.

❖ *Designing a cost accounting system.*

To enhance the efficiency of using cost information for management operations, businesses need to design a suitable cost accounting system that meets the demand for information use and cost creation in the short and long term. As a rule, when designing a cost accounting system, any design process should start by identifying management needs, because the purpose of the cost accounting system is to provide for those needs. Therefore, not every sophisticated and advanced cost accounting system is good, but only a suitable system that can meet specific management needs in specific cases. Managers' needs are for broad, aggregated, and future-oriented information related to external factors for strategic planning purposes, while the need to control operations is internal and specific. Thus, based on this research, the author proposes the design and use of a cost accounting system to provide cost information for management operations including (1) planning, (2) determining selling prices, (3) controlling, and (4) evaluating results and making decisions. When designing a cost accounting system, businesses need to:

- Design a cost accounting system that fits your model, strategy, objectives, and business culture.
- The CEO, CFO, and Chief Accountant play an important role in organizing and designing the cost accounting system. Therefore, it is important to choose and assign a responsible team to design the system.
- When designing a cost accounting system, it is necessary to select the factors of the cost accounting system, and the basic components of the cost accounting system are

structured into 5 components: (a) inputs, (b) inventory valuation method, (c) cost aggregation method, (d) assumptions about cost flows, and (e) accounting methods.

- Refer to the principles and models of cost accounting systems issued by professional accounting organizations around the world to apply to businesses as appropriate.
- Choose experts or consultants outside the company to design a suitable and effective cost accounting system for the investment and operation process if necessary.
- Regularly evaluate the difficulties and conveniences in designing, applying the cost accounting system, and summarize successes and failures in each stage of the system implementation to provide timely policies and solutions for the cost accounting system project to be successful in providing cost information for the management board.

In addition to the findings, the research has a few limitations. Firstly, it focuses solely on the impact of factors related to the utilization of cost information on business performance, overlooking the potential influence of other factors. Secondly, the study had a sample size of 380, which may not be considered large enough, suggesting the need for a larger sample size in future investigations.

REFERENCES

- Al-Ghazali, M. H. I. (2023). Proposal for the Cost Model Based on Causal Activities to Rationalize the Decision-Making Pricing. Applied Study in the General Company for Leather Industries–Baghdad. *International Journal of Professional Business Review*, 8(4), e01370-e01370.
- Alrjoub, A. M. S., Bataineh, A., Al-Qudah, L. A. M., Al-Othman, L. N., Alkarabsheh, F., & Aburish, K. E. (2023). The Impact of Quality Costs as a Mediator in the Relationship Between Management Accounting Systems and Financial Performance: the Case of Jordan. *International Journal of Professional Business Review*, 8(4), e01462-e01462.
- Ahmeti, S., Shiroka-Pula, J., & Shala, V. (2013). The Importance of Investments on Small-and Medium-Sized Enterprises (SMEs) Growth: The Case of Kosovo. *Journal of Modern Accounting and Auditing*, 9(7), 953.
- Banker, R. D., Chang, H., & Pizzini, M. J. (2004). The balanced scorecard: Judgmental effects of performance measures linked to strategy. *The Accounting Review*, 79(1), 1-23.
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological bulletin*, 88(3), 588.
- Bertrand, T., & Mévellec, P. (2005, May). Cohérence Organisationnelle Et Structure Des Modèles Abc/M. In *Comptabilité et Connaissances* (pp. CD-Rom).

- Braimah, I., Nyarko, K., & Moriarty, P. (2010). The use of cost information in planning and decision making in rural water and sanitation service delivery in Ghana. In *IRC Symposium 2010: pumps, pipes and promises*.
- Clark, K. B., & Fujimoto, T. (1991). *Product development performance: Strategy, organization, and management in the world auto industry*. Boston, MA: Harvard Business School Press.
- Cooper, R., & Slagmulder, R. (2004). Interorganizational cost management and relational context. *Accounting, organizations, and society*, 29(1), 1-26.
- Covaleski, M. A. (2006). *Conflicts of Interest: Challenges and Solutions in Business, Law, Medicine and Public Policy*.
- Dekker, H., & Smidt, P. (2003). A survey of the adoption and use of target costing in Dutch firms. *International Journal of Production Economics*, 84(3), 293-305.
- Dierks, P. & Cokins G. (2001). The CAM-I glossary of activity-based management, *Journal of Cost Management (January/February)*, 34-43.
- Hoang, H.C. (2021), Factors affecting the use of cost information and the effects of using cost information on performance - a study in enterprises in southern Vietnam, *Doctor Thesis*, Ho Chi Minh University Economics
- Huynh, L & Hoang, H.C. (2020), Factors affecting the use of cost information in enterprises in the South – Vietnam, *Journal of Industry and Trade*, 22, 12(2020).
- Ittner, C. D., Lanen, W. N., & Larcker, D. F. (2002). The association between activity-based costing and manufacturing performance. *Journal of accounting research*, 40(3), 711-726.
- Johnson, H. T., & Kaplan, R. S. (1987). The rise and fall of management accounting. *Strategic Finance*, 68(7), 22.
- Kaplan, R. S., & Norton, D. P. (1996). *The balanced scorecard: translating strategy into action*. Harvard business press.
- Kaplan, R.S & Cooper, R. (1998). *Cost & effect: using integrated cost systems to drive profitability and performance*. Harvard Business Press.
- Kennedy, T., & Affleck-Graves, J. (2001). The impact of activity-based costing techniques on firm performance. *Journal of management accounting research*, 13(1), 19-45.
- Leahy, A.S (1998), Does the Choice of Profitability Measure Really Matter? The Case of Distributors, *Virginia Economic Journal*, 3, 11-15.
- Lepădatu, G. (2018). MODERN ENTITIES THROUGH COST LEADERSHIP. SPECIFIC ASPECTS OF ENTITY. *Knowledge Horizons. Economics*, 10(3), 52-59.
- Maiga, A. S., Nilsson, A., & Jacobs, F. A. (2014). Assessing the interaction effect of cost control systems and information technology integration on manufacturing plant financial performance. *The British Accounting Review*, 46(1), 77-90.

- McIver, J., & Carmines, E. G. (1981). *Unidimensional scaling* (Vol. 24). Sage.
- Mevellec, P. & Bertrand, T., 2005. ABC/M and cross-functionality. *Paper presented at the EIASM 7th Seminar on Manufacturing Accounting Research*, Tampere, Finland
- Ministry of Planning and Investment (2022), Vietnam Enterprise White Book 2022.
- Neely, A., Gregory, M., & Platts, K. (1995). Performance measurement system design: a literature review and research agenda. *International journal of operations & production management*, 15(4), 80-116.
- Professional Accountants in Business Committee. (2009). Evaluating and improving costing in organizations. *International Federation of Accountants*, 7.
- Rogošić, A. (2021). Public sector cost accounting and information usefulness in decision-making. *Public Sector Economics*, 45(2), 209-227.
- Sanford, R. A. (2009). *The impact of activity-based costing on organizational performance*. Nova Southeastern University.
- Stefanović, R. J. (2010). Cost accounting as the key information core of company management. *Annals-Economy Series*, 4, 23-37.
- Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate behavioral research*, 25(2), 173-180.
- Tani, T., Okano, H., Shimizu, N., Iwabuchi, Y., Fukuda, J., & Cooray, S. (1994). Target cost management in Japanese companies: current state of the art. *Management Accounting Research*, 5(1), 67-81.
- Tippins, M. J., & Sohi, R. S. (2003). IT competency and firm performance: is organizational learning a missing link?. *Strategic management journal*, 24(8), 745-761.
- White, L. R., & Clinton, B. D. (2014). The Conceptual Framework for Managerial Costing. *Institute of Management Accountants (IMA)*.