

## THE IMPACT OF ACCOUNTING INFORMATION QUALITY ON BUSINESS DECISION MAKING EFFECTIVENESS OF SMALL AND MEDIUM ENTERPRISES

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### Abstract

This study aims to determine the impact of accounting information quality on business decision-making efficiency of small and medium-sized enterprises (SMEs) in the Northwest Subregion, Vietnam. The study surveyed 311 people who are chief accountants, accountants in charge, accountants and board of directors of 129 SMEs in the Northwest Subregion, Vietnam. By using the correlation regression model on SPSS 22 software, the regression model results with  $R^2=72.8\%$ . This means that 72.8% of the factors in the quality of accounting information affect the effectiveness of business decision making of SMEs in the Northwest Subregion. In which the factor reflecting the usefulness of accounting information quality has the strongest and most positive impact. Based on the findings, several recommendations have been proposed to improve the quality of accounting information, thereby helping managers of SMEs in the Northwest Subregion be effective in making decisions.

**Keywords:** *Quality of accounting information; Information efficiency; Business decisions; Business efficiency; Effective decision making.*

### 1. Introduction

Accounting information is an important factor that plays a decisive role in effectiveness and efficiency in business management, and the quality of accounting information is indispensable in making appropriate decisions. There are many studies that have shown the role and significance of accounting information in business decision making. Information is an important factor that creates success, adds value and enhances the competitiveness of businesses in the market. In today's fierce competition, businesses that want to stand firm and succeed need to have complete

information, of which accounting information is especially important to ensure completeness, accuracy, usefulness, effectiveness in making business decisions.

Decision making is the process of choosing action options based on cognitive processes from accessible information sources. Useful accounting information plays a central role in management decision making. According to Hall (2008), accounting information is a key component in the management information system, which managers always use in short-term decisions and long-term business strategies. Good quality economic information provided is a tool for administrators to control the economic and financial activities of firms, helping firms grasp challenges and opportunities. Delays in information disclosure due to management qualifications or the ability of the accounting team affect the timeliness and effectiveness of business decision making. In addition, accounting information is important, affecting the operating results of all external parties interested in the enterprise (state management agencies, investors, suppliers, creditors).

Tunji (2012) believes that good accounting information must be available to make correct and accurate decisions, maximize profits and make optimal use of scarce resources. Accounting information is not only necessary for evaluating the past and maintaining the present, it is useful in planning for the future of a business. It is therefore essential to understand the financial position of the business and used as a basis for making any decisions. Strategic decisions have a long-term impact on the business, so they need to be carefully constructed, in which analyzing accounting information to make strategic decisions appropriate to the business is essential. Accounting information helps managers understand their duties better and reduce uncertainty before making decisions. In the open economy in the context of today's digital technology revolution, a successful manager needs a lot of reliable accounting information to be able to make effective business decisions.

According to 2023 statistics, in Vietnam, SMEs account for the majority of 98%. In recent years, the force of SMEs has made an increasingly important contribution to the economy, especially in maintaining and developing production and business, creating jobs for many workers and promoting economic growth. SMEs in the Northwest sub-region in 4 provinces: Hoa Binh, Son La, Dien Bien, Lai Chau have shown a great role in the socio-economic development of the region. However, compared to the whole country, the Northwest Subregion has a divided terrain, so the infrastructure is difficult, and the level of technology and management are barriers that reduce the efficiency of business operations. Business results achieved were not as expected. On the other hand, SMEs in the Northwest subregion are mainly micro-enterprises, owned by individuals in the form of family businesses. Therefore, knowledge of finance, accounting and business management skills are still limited. Through interviews with SME managers in the Northwest Sub-Region, it shows that: There is a significant number of businesses using accounting services to prepare financial reports and submit them to tax authorities according to mandatory regulations. In everyday businesses, there is no regular, specialized accountant. Therefore, some managers have not been able to promote their role in using accounting information in a systematic and methodical way to make business decisions in the enterprise. At the same time, managers also

express their desire for quality, reliable accounting information, ensuring efficiency in using financial resources when making business decisions. Therefore, this study conducted a wide survey of subjects including: Accountants, chief accountants, and SME managers of the Northwest subregion to answer the research question: How does the quality of accounting information affect the effectiveness of business decision making in SMEs in the Northwest sub-region?. With the research context of SMEs headquartered in the business environment in the mountainous provinces of the Northwest sub-region with many businesses operating based on their strengths in the field of agriculture and forestry. Therefore, research needs to show evidence of whether improved accounting information quality factors have an impact on increasing the business decision-making efficiency of managers at these enterprises. From there, the study proposes a number of recommendations to improve the quality of accounting information and improve business decision-making efficiency in SMEs of the Northwest subregion, Vietnam.

## 2. Core theories

Decision making in businesses based on accounting information is made on the basis of some of the following basic theories:

**Agency Theory:** Agency Theory is applied and developed for the purpose of studying organizational behavior and the influence of situational factors on businesses. The studies of Armen Alchian (1965), Ross (1973), Michael Jensen and William Meckling (1976), Michael C. Jensen, Stewart C. Myers and Eugene Fama (1998)... have contributed a lot to the development of Agency Theory in the fields of economics, management and finance. The content of Agency Theory is based on the relationship between one party (principal) and the person who delegates work to another party (agent). In which, the business owner is considered the leader and the manager is the representative, responsible for making decisions on behalf of the owner based on available accounting information. The quality of accounting information is directly related to the decision-making process. The resulting poor quality of information can have detrimental effects on the quality of those decisions (Huang et al., 1999; Gómez-Guillamón & Vidal, 2008, Karilainen, 2014). Jensen, M. C. (1983) and Tran Phuc Hau (2023) share the same view that Agency Theory explains why managers often tend to maximize their benefits and work to minimize risks, with the support of accounting information. The application of this Theory in providing accounting information is to help effectively manage production and business activities, optimize the use of costs and manage risks through your business decisions. Similarly, the research results of Dao Thi Nhung (2020) applied Agency Theory to explain the relationship between the quality of accounting information and the profit management behavior of business managers.

**Decision Theory:** Decision Theory was first used by Luce and Raiffa in their work *Games and Decision* (1957). This theory is a set of economic models whose purpose is to formalize the choice behavior of an economic agent among many possible actions in an uncertain context. The content of the Theory aims to provide methods to find optimal action options in decision situations. Decision theory helps managers and professionals make decisions based on important criteria, evaluate the risks and benefits of each option, and calculate possible outcomes. Applying decision

theory helps decision makers make better and more accurate decisions, reduce risks and increase work efficiency.

***Theory of Resource-Based management:*** The Theory of Resource-Based management was founded by Birger Wernerfelt in 1984. This theory holds that a business can gain a competitive advantage if it implements value creation strategies based on distinctive resources. Meanwhile, the business's current and potential competitors cannot perform. Accordingly, accounting information is considered a strategic resource, one of the competitive advantages of an organization and a key component of management information. With the key role of managing financial resources for businesses, accounting information is an important source of information to support the decision-making process of businesses. And improving the quality so that actual accounting information becomes useful for the decision-making process of businesses.

***Benefit-cost relationship theory:*** his theory has been studied by many authors such as Eckstein (1958), Sanford (1986), Nick (1993), Stuart (2010). Researchers all agree that, when conducting a project or making a business decision, the administrator must compare the benefits brought from that project or decision. In addition, business administrators must also calculate all costs so that the decisions made must ensure the principle that the profits must be greater than the costs.

### **3. Research overview**

On different research aspects, several authors have pointed out the role and meaning of accounting information such as: The influence of accounting information on making business decisions; The role of accounting information as a resource or usefulness for users of accounting information, etc. has been confirmed in some of the following studies:

- Accounting information systems play a vital role in determining a company's performance and efficiency. This is a necessary basis in making the right decisions (Bag, Gupta, Kumar & Sivarajah, 2021). Accounting information systems assist managers in making important decisions by improving the company's operating efficiency and long-term investment approach. Monitoring, planning and monitoring performance is an important part of management accounting. It ensures that the results are accurate in accordance with the budget and forecasts previously established (Hamza et al., 2021).

- Research by Ali & Oudat (2021) also concludes that information is an important resource for the development of a successful and effective company. Information ensures quality through being accurate, valuable and useful so that users have confidence in its quality and authenticity. Accurate data is reflected in a reliable financial report and this will help reflect the true financial position of the company. On that basis, it helps businesses identify financial risks and handle them promptly, helping attract investment and make effective decisions.

- According to research by Ballou et al. (2018) pointed out four characteristics of accounting information that play an important role in businesses: Understandability, importance, reliability and compatibility of information. Obaidat (2007) also argues that reliability in accounting information means that it can be verified, presented truthfully and is reasonably free from errors and deviations.

- Odar et al. (2015) conducted a survey on selected companies in Slovenia and found that financial reports are useful if they are characterized by relevance and timeliness. Xu (2003) believes that the quality of accounting information can be estimated according to four aspects: accuracy, timeliness, completeness and consistency.

According to research by Pham Duc Cuong (2022) on international accounting, it has shown that the accounting information quality standards published by a number of organizations and professional associations have similar standards and different standards such as after:

(i) According to the announcement of the American Accounting Association - AAA (1966), there are a number of standards that demonstrate the usefulness of the quality of accounting information, including: Appropriate, verifiable, and not misleading.

(ii) According to the American Financial Accounting Standards Board (FASB, 1993), the quality of accounting information is demonstrated by the usefulness of information that can help information users make informed decisions. Accordingly, FASB (1993) has proposed two groups of characteristics on requirements for the quality of accounting information: The group of basic characteristics includes relevance and reliability. Secondary characteristics include consistency and comparability.

(iii) The International Accounting Standards Board (IASB) sets standards for measuring the quality of economic concentration in the framework of the concept of financial statements with 4 characteristics: appropriate, reliable, understandable and comparable.

(iv) According to the Association for Control and Auditing of Information Systems/COBIT (1996), in an information technology application environment, the quality of accounting information must first ensure accurate and complete information content. . Next, it is necessary to pay attention to aspects related to information content and issues of information reliability, information fraud, safety, information security and availability to users. The quality of accounting information is assessed through 7 standards including: effectiveness, efficiency, security, integrity, availability, compliance and reliability.

(v) According to Vietnamese Accounting Standard No. 01 (VAS 01 - General Standards) with 6 requirements for accounting information: Honest, objective, complete, timely, easy to understand and comparable presentation.

Some studies show the relationship and influence between the quality of accounting information and business and investment decisions:

- Research by Nguyen Quynh Trang (2020) has proposed a research model including 4 factors of accounting information quality that affect business decisions in enterprises: Effectiveness; Timeliness; Confidentiality and safety; Efficiency. Research results show that all four factors above have a positive influence on business decision making. Among them, the factors Effectiveness and Efficiency are the two factors that have the greatest impact on business decision making.

- Aleisa & Tijjani (2020) investigate the impact of accounting information quality in businesses in Saudi Arabia. The results show that: Relevance, reliability, comparability and consistency are factors that influence businesses' business decisions.

- Another research aspect on the quality of accounting information on financial statements with investment efficiency by Assad, N., Jaafar, A., & Zervopoulos, P. D. (2023) pointed out: The important significance of the impact of accounting information on financial statements on investment efficiency is demonstrated through the optimization of investments by businesses. Managers know how to improve the decision-making process and better assess the risks of projects, thereby allocating capital more effectively. Higher levels of financial reporting information quality increase investor confidence in the company's financial position, leading to higher liquidity. Similar to this study, Perdana, D. (2018) empirical research has shown the impact of accounting information quality and management efficiency on investment capital selection. Merkle, C., A and et. (2022) have the same research results showing that there is an impact of the quality of accounting information on the efficiency of making investment decisions in businesses.

- From the perspective of researching the relationship between the quality of internal control systems and success in decision making through the role of financial information quality by Monteiro, A. M., Vale and et. (2021) shows: Structural equation modeling is used to analyze the cause and effect relationship between the quality of the Internal Control System and success in decision making. The results show that the quality of the Internal Control System directly contributes to the success of decision making. Furthermore, the quality of the Internal Control System and the quality of financial information are factors that determine the success of decision making. The quality of the internal control system has a significant direct impact on the quality of financial information (with a coefficient of determination of 64%) and indirectly on the success of decision making.

Thus, through an overview of research works on the role of accounting information systems, the quality of accounting information and the influential relationship between the quality of accounting information and business decision making. The article has synthesized a system of standards for measuring the quality of accounting information and their implications for business decision making according to Table 1.

**Table 1: Accounting information quality scales**

Attributes	Sources	Meaning
Effectiveness	Nguyen (2020); COBIT (1996); Odar et al. (2015); Ali & Oudat (2021)	The effectiveness of accounting information shows the extent to which it contributes to achieving business goals
Timeliness	Nguyen (2020); Vietnam accounting standards; Xu (2003, 2009); Aleisa & Tijjani (2020); Odar et al. (2015)	The timeliness of accounting information represents the availability of accounting information to meet business decision making
Security, security	Nguyen (2020); COBIT (1996); Vietnam accounting standards; Ali & Oudat (2021)	Accounting information that ensures safety and security is important in the context of information technology

		explosion, avoiding information leaks that affect the effectiveness of decisions.
Useful	Nguyen (2020); COBIT (1996)	The usefulness of accounting information is expressed through the results of accounting information for users, directly the business managers who use accounting information to achieve the desired results.
Accuracy, reliability, honesty	Nguyen (2020); COBIT (1996); AAA (1966); International Accounting Standards (IASB); (FASB, 1993); Xu (2003, 2009); Aleisa & Tijjani (2020)	he accuracy, reliability, and truthfulness of accounting information help avoid making wrong business decisions due to erroneous information.
Consistency and comparability	Vietnam accounting standards; COBIT (1996); AAA (1966); International Accounting Standards (IASB); (FASB, 1993); Xu (2003, 2009); Aleisa & Tijjani (2020)	The consistency and comparability of accounting information helps managers analyze and evaluate financial indicators to make optimal decisions in the business.
Compliance	COBIT (1996); (FASB, 1993)	Accounting information provided to ensure compliance is the basis for forming the reliability and objectivity of information provided to users.
Suitability	AAA (1966); International Accounting Standards (IASB); (FASB, 1993); Aleisa & Tijjani (2020)	Relevance from time to time, meeting the purposes and requirements of managers and users of accounting information
Completeness	Xu (2003, 2009); Vietnam accounting standards; COBIT (1996)	o make decisions related to the use of an enterprise's financial resources accurately and effectively, it is first necessary to ensure the completeness of accounting information.

*Source: Compiled by the authors*

#### 4. Research methodology

Data collected for research includes primary data and secondary data. Primary data was collected through conducting in-depth interviews and distributing survey questionnaires at SMEs in the Northwest subregion. Secondary data collected on financial statement information of some SMEs in the Northwest subregion and research related to the quality of accounting information and business decision making in various types of businesses .

With the primary and secondary data collected, the authors used a combination of qualitative research methods and quantitative research methods as follows:

***Qualitative research methods:***

This method is implemented based on data obtained from in-depth interviews in the following way: Based on criteria compiled from an overview of research on measuring the quality of accounting information and business decision-making effectiveness. The authors developed a questionnaire for in-depth interviews with subjects including: Board of directors of enterprises, in charge of accounting, general accountants and chief accountants of SMEs in the Northwest Subregion. This research step aims to preliminarily eliminate inappropriate evaluation criteria and add appropriate indicators in measuring the quality of accounting information and business decision-making efficiency of enterprises. The results obtained in this research step will eliminate inappropriate scales and select appropriate scales as the basis for building survey questionnaires used in quantitative research.

***Quantitative research methods:***

First of all, the authors built a survey questionnaire on the basis of assessment criteria for the quality of accounting information and criteria for measuring the effectiveness of business decision making of enterprises determined through in-depth interviews. Respondents to the survey questionnaire were company managers, general accountants, accountants in charge and chief accountants of SMEs in the Northwest Subregion. The structure of the questionnaire consists of 3 parts. Part 1: General information about interviewees such as: Age, gender, number of years working, qualifications, position, type of enterprise, charter capital, province; Part 2: About the quality of accounting information; Part 3: The influence on the effectiveness of business decision making of enterprises. Parts 2 and 3 include questions using a 5-point Likert scale, 1 - strongly disagree, 2 - disagree, 3 - neutral, 4 - agree and 5 - strongly agree.

The number of valid questionnaires collected from an extensive survey used in quantitative research is 311 surveys from 129 SMEs in the Northwest Subregion in the provinces of Son La, Dien Bien, Lai Chau, Hoa Binh. Survey respondents come from different types of businesses such as: Manufacturing businesses in the field of agriculture and forestry, businesses doing business in commerce and services, and businesses in the field of basic construction... The questions were almost completely answered in the 311 valid survey forms above (except for a very few questionnaires, there were 1-2 questions left unanswered because the people surveyed did not have enough information to answer. However, the number of incompletely answered questions on a few questionnaires was not significant. Therefore, it does not affect the overall information collected so it is still used in evaluating and analyzing research results). The time for conducting in-depth interviews and the above questionnaire survey is from December 2022 - April 2023.

***Data processing:***

From 311 valid questionnaires, updated and coded on SPSS 22 software and processed according to the following steps:

First of all, the reliability of the scale is tested. Accept observed variables with Cronbach's Alpha reliability coefficient  $> 0.7$ , while eliminating observed variables with total variable



correlation coefficient less than 0.3. Observed variables that ensure reliability are transferred to the Exploratory Factor Analysis (EFA) step to extract meaningful observed variables that converge and separate with the condition that the loading factor is  $>0.5$  and  $0.5 < KOM < 1$ , with the Bartlett test having  $Sig < 0.05$  and Variance Extracted  $> 50\%$ . In the next step, the authors performed regression analysis to evaluate the level of impact of the factors on the dependent variable Business Decision Making Efficiency. Factors with large  $\beta$  coefficients will have a high influence on the dependent variable. At the same time, if the coefficient  $\beta$  has a positive sign, it has a positive influence (positive influence) on the dependent variable, and if  $\beta$  has a negative sign, it has a negative influence (negative influence) on the dependent variable.

In addition, the authors used secondary data obtained from the system of financial statements of a number of SMEs in the Northwest subregion to help generalize the assessment of information provided in financial statements. From there, it shows the current status of the quality and usefulness of accounting information of these businesses.

### 5. Results and discussion

The results of EFA exploratory factor analysis eliminated observed variables with loading coefficients  $< 0.5$ , accepting observed variables with loading coefficients from  $0.5$ , resulting in 2 convergent and divergent factors as follows:

**Table 2: Cronbach’s Alpha coefficient and factor loading of variables in each factor**

Attributes	Component	Cronbach’s Alpha	No. of attributes	Factor
HQ1: Accounting information is stored securely and cannot be accessed or published illegally	.807	.814	7	Accounting information provided is appropriate, safe, and easy to use for managers (HQ)
HQ2: Accounting information and data provided are suitable for each decision-making situation	.780			
HQ3: Accounting information and data can be easily processed by users	.788			
HQ4: The use of resources in the process of collecting, processing, and creating information is ensured to be reasonable	.787			

Attributes	Component	Cronbach's Alpha	No. of attributes	Factor
HQ5: Information can only be deleted, edited, supplemented or destroyed by authorized subjects and must ensure accuracy while being stored or transmitted.	.773			
HQ6: Legitimate users can easily connect, search and access information	.788			
HQ7: There is division of responsibilities, regulations and control of access to accounting information for each individual and relevant department	.798			
HH1: Accounting information and data provided are accurate, honest, neutral and objective	.843			
HH2: Accounting information provides adequate opportunities and risks for businesses to make decisions	.833			
HH3: Accounting information provides appropriate and useful information to evaluate the implementation of plans and operational efficiency of businesses	.829	0.864	6	Usefulness of accounting information for managers (HH)
HH4: Accounting information and data are always updated promptly	.869			
HH5: Management accounting reports (daily reports, weekly reports, monthly reports...) are prepared fully and systematically.	.841			
HH6: Accounting information and data are established for	.831			

Attributes	Component	Cronbach's Alpha	No. of attributes	Factor
decision making and are always available upon request				

According to Table 2, the Loading factor in the factors ensures the standard  $>0.5$  (from 0.773- 0.843). At the same time, the authors tested the reliability of the scale in the above factors and the results met the standard of Cronbach's Alpha coefficient  $> 0.7$  (0.814 and 0.864). Therefore, the above two factors (HQ and HH) ensure the conditions for performing a regression model to evaluate the influence of each factor on the business decision-making efficiency of SMEs in the Northwest Subregion.

Analyzing the statistical significance of the scales of the dependent variable AH (Affect on Business Decision Making Effectiveness) gives the following results:

**Table 3: Reliability Statistics**

Item-Total Statistics				
Attributes	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AH1: Better financial management of business activities	12.30	4.670	.763	.908
AH2: Allocate economic resources more effectively	12.35	4.545	.841	.882
AH3: Decisions are made promptly and at the right time	12.43	4.381	.806	.894
AH4: Choose optimal decisions	12.41	4.333	.832	.885

The statistical reliability coefficient of the items has the Loading coefficient ensuring the standard  $>0.5$  (0.882-0.909), the Cronbach'Alpha coefficient is 0.917  $>0.7$ , ensuring the reliability of the scale.

Regarding the results of analyzing the suitability of the regression model and the percentage explaining the variation of independent factors as follows:

**Table 4: Hệ số KMO and Total Variance Explained**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.794
Bartlett's Test of Sphericity	Approx. Chi-Square	2420.738
	Df	91

Sig.	.000
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<b>Total Variance Explained</b>									
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	5.436	38.828	38.828	5.436	38.828	38.828	4.423	31.591	31.591
2	2.699	19.278	58.106	2.699	19.278	58.106	3.712	26.515	58.106

According to Table 4, KMO coefficient = 0.794 > 0.5 shows that the above factor analysis is appropriate. With the Bartlett test, Sig < 0.000 and Total Variance Explained is 58.1% > 50%, meaning 58.1% of the variation of observed variables is explained by the two factors HQ and HH. This result once again shows that the model explained by the observed variables of the above two factors is suitable for testing the EFA regression model.

Results of running the EFA regression model:

**Table 5: Model summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.853 <sup>a</sup>	.728	.727	.36394	1.875

a. Predictors: (Constant), HQ, HH

b. Dependent Variable: AH

Table 5, has  $R^2 = 0.728$ , meaning 72.8% of the change in the dependent variable AH is explained by 2 independent variables based on the proposed model including: HQ factor and HH factor.

**Table 6: ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	109.439	2	54.720	413.131	.000 <sup>b</sup>
Residual	40.795	308	.132		
Total	150.234	310			

a. Dependent Variable: AH

b. Predictors: (Constant), HQ, HH.

Table 6, coefficient  $F = 413.131$ ,  $Sig = 0.000 < 0.05$ , therefore rejecting the hypothesis that the entire regression coefficient is 0, accepting the hypothesis: There exists a linear relationship between the secondary variable belongs to AH with independent variables HQ, HH.

The results of the regression model of factors affecting business decision-making efficiency in SMEs in the Northwest Subregion are obtained in Table 7 as follows:

**Table 7: Research model regression results**

Coefficients <sup>a</sup>							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	-.348	.198		-1.757	.080		
HQ	-.056	.041	-.043	-1.375	.170	.890	1.123
HH	1.148	.042	.867	27.546	.000	.890	1.123

a. Dependent Variable: AH

Based on the results of Table 7, the regression equation is determined as follows:

$$AH = -0.348 + 1.148*HH$$

The regression model has a VIP coefficient <3, so the regression equation does not have multicollinearity between independent variables. Therefore, the regression model determined above has quality.

In Table 7, the independent variable HH in the model has coefficient  $\beta > 0$  and  $Sig = 0.000 < 0.05$ , therefore the independent variable HH has a positive influence on the business decision-making efficiency of SMEs in the Northwest Subregion, with a statistical significance level of > 95%. The HQ variable has a coefficient  $\beta < 0$  and  $Sig = 0.170 > 0.05$ , so this variable does not ensure reliability at the level of statistical significance.

**6. Discussion and recommendations**

Research results show that: Of the 2 factors in the research model, there is 1 factor that ensures statistical significance with a significance level of >95%. This result shows that the usefulness of accounting information has a positive impact on the business decision-making efficiency of SMEs. The above research model has explained 72.8% of the impact of the Usefulness factor on the Business decision-making effectiveness of SMEs in the Northwest Subregion. The results of this study show similarities with studies such as Nguyen Quynh Trang (2020), Perdana, D. (2018), Assad, N., et. (2023) about the positive influence between factors of accounting information quality and decision-making effectiveness. However, each study presents different aspects and levels of influence. This result also shows compliance with the requirements set out in the content of the Agency Theory, Decision Theory and the Theory of the relationship between Benefits and Costs given above.

From the results of quantitative analysis on the quality of accounting information based on the factor of usefulness of accounting information. At the same time, combined with the results of in-depth interviews on the influence of accounting information on the effectiveness of business decisions in SMEs in the Northwest Subregion provinces. The authors discuss and propose a number of recommendations to improve efficiency in making business decisions as follows:

First, with the survey rating, the majority agreed with the view that provided accounting data showing accuracy, honesty, objectivity, and reliability will have an important influence on

decision-making effectiveness. For example, deciding to allocate an enterprise's financial resources to its activities and making its business plans. Therefore, SMEs in the Northwest sub-region need to organize a system to provide quality accounting information, demonstrating methodicalness and professionalism to meet the requirements of managers for management and administration. On that basis, it helps make effective business decisions.

Second, accounting information provides adequate opportunities and risks for businesses to make decisions. According to in-depth interview results, based on detailed accounting information about inventory provisions, provisions for bad receivables, short-term debts, long-term debts..., has made an important contribution to the financial management of the enterprise. This information has helped managers make effective decisions in determining inventory limits, planning to mobilize and use capital effectively, ensuring liquidity and ensuring continuous operations of the business. Therefore, businesses can proactively plan payments and ensure liquidity of due debts.

Third, it is necessary to increase the quality of accounting information provided on planning data and estimated results of activities. According to the results of in-depth interviews with the Board of Directors, in charge of accounting and chief accountants SMEs in the Northwest Subregion and the survey results, there are quite similar assessments. Most managers believe that accounting information provided about the above factors plays an important role in helping business managers make more effective business decisions. Therefore, the arrangement of accounting personnel in SMEs needs to be paid attention to in order to fulfill the tasks and requirements of providing accounting information for corporate governance. Information provides effective support for managers to organize daily business activities, which meets the task of accurately estimating business results based on the Theory of the relationship between Benefits and Costs.

Fourth, the statistical significance of the scales on the timeliness of accounting information in the study shows the impact role of this factor on the business decision-making efficiency of businesses in the region. Therefore, in order to increase decision-making efficiency, the accounting information required to be provided must always be updated promptly, completely, and systematically with data and information on financial reports and management reports. For management reporting, it is necessary to ensure regular weekly and monthly reporting. In particular, timeliness needs to be demonstrated through accounting information that can be provided immediately when needed for managers to help make decisions at any time.

Fifth, the results of in-depth interviews with a number of typical firms SMEs in the Northwest Subregion show that, with the scale of compact SMEs, firms are always looking for ways to organize an appropriate management apparatus. Therefore, there are a large number of businesses using service accounting to provide financial accounting information to state management agencies instead of choosing a model of organizing a full accounting apparatus at the business. However, this method of organization also has limitations in meeting the requirements of providing timely and detailed accounting information as required by businesses. In addition, the role of providing management accounting information to serve operations, management and

business decision-making has not been carried out systematically, properly and is not performed specifically by the accounting department. Therefore, to improve the quality of accounting information and improve the efficiency of making business decisions based on accounting information, it is necessary to have solutions to organize the accounting apparatus to meet task requirements. In addition, businesses need to increase awareness of the role of management accounting information, apply management accounting to provide information to managers in terms of planning and estimating... With this information base, it can help administrators make quick, effective decisions in allocating resources and deciding on business plans.

**In short**, through comprehensive research, the author has synthesized basic scales to evaluate the quality of accounting information from domestic and foreign studies. On that basis, the study uses qualitative research methods to determine appropriate scales to measure the quality of accounting information for business decision making of SMEs in the Northwest Subregion, Vietnam. Male. These scales are used to build questionnaires for conducting extensive surveys and implementing regression models to identify influencing factors. The regression equation results show that 72.8% of the influence of accounting information quality factors on business decision-making efficiency of SMEs in the Northwest Subregion, Vietnam. Based on the results of this research, the article discussed and proposed a number of recommendations to apply accounting work in practice, contributing to improving the efficiency of business decision making in the Region's small and medium enterprises. However, in this study, the survey sample collected for each business field of the enterprise is still limited in scale. Therefore, assessing the difference in the impact of accounting information quality on business decision-making efficiency according to each field has not been done in research. Future studies that do a better job of collecting research samples that are large enough for each field of business activity will help provide more comprehensive research results on this issue.

## References

- Aleisa, B.A., Tijjani, B. (2020), “*The impact of the quality of accounting information on the decisions of entrepreneurs in Saudi Arabia*”, *Journal of Entrepreneurship Education*, 23(S2).
- Ali, B. J. A., & Oudat, M. S. (2021), “*Accounting information system and financial sustainability of commercial and islamic banks: A review of the literatur*”e, *Journal of Management Information and Decision Sciences*, 24(5), 1-17.
- Ahmad N. Obaidat (2007), “*Accounting Information Qualitative Characteristics Gap: Evidence from Jordan*”, *International Management Review*, Vol. 3 No. 2 2007.
- Assad, N., Jaafar, A., & Zervopoulos, P. D. (2023), “*The interplay of financial reporting quality and investment efficiency: evidence from the USA*”, *Journal of Financial Reporting and Accounting*.
- Ballou, B., Heitger, D. L., & Stoel, D. (2018), “*Data-driven decision-making and its impact on accounting undergraduate curriculum*”, *Journal of Accounting Education*, 44, 14-24.
- Bag, Gupta, Kumar & Sivarajah (2021), “*An integrated artificial intelligence framework for knowledge creation and B2B marketing rational decision making for improving firm*

- performance”, *Industrial Marketing Management*, Volume 92, January 2021, 178-189.
- Biddle, G. C., Hilary, G., & Verdi, R. S. (2009), “How does financial reporting quality relate to investment efficiency?”, *Journal of accounting and economics*, 48(2-3), 112-131.
- Chen, F., Hope, O. K., Li, Q., & Wang, X. (2011). Financial reporting quality and investment efficiency of private firms in emerging markets. *The accounting review*, 86(4), 1255-1288.
- COBIT (1996), international standard for information technology management.
- Dao Thi Nhung (2020), *Factors affecting the quality of accounting information on financial statements of construction enterprises listed on the Vietnamese stock market*, Doctoral thesis, National Economics University.
- Gardi, Abdalla Hamza, Sabir, Mahmood Aziz, Sorguli, Abdullah & Al-Kake (2021), “Investigating the effects of Financial Accounting Reports on Managerial Decision Making in Small and Medium-sized Enterprises”, *Turkish Journal of Computer and Mathematics Education*.
- Gelinas, U.J., Dull, R.B., & Wheeler, P. (2011), “Accounting information steyms”, Botos, MA: Cengage learning.
- Gómez-Guillamón, A. D., & Vidal, J. S. (2008), “The relevance of the audit report for obtaining bank credit”, *Spanish Journal of Finance and Accounting*, 37(138), 255–278.
- Gray, R., Owen, D. and Adams, C. (1996), “Accounting & Accountability: Changes and Challenges in Corporate Social and Environmental Reporting”, Prentice Hall.
- Ismail, N., and King, M. (2007), *Factors influencing the allignment of accounting information systems in small and medium sized Malaysian manufacturing firms*, *Journal of Information and Small Business*, 1, 1-20.
- Jensen, M. C. (1983), *Agency theory and management accounting. In Accounting, organizations, and institutions: Essays in honour of Anthony Hopwood (pp. 163-191). Cambridge University Press.*
- Hall, J. A. (2008), “Accounting information systems”, Mason: SouthWestern Cengage Learning, 2008, 837- 888.
- Huang, KT, Lee, YW & Wang, RY (1999), “Quality Information and Knowledge”, Upper Saddle River: Prentice Hall.
- Karilainen (2014), “Usefulness of Financial Accounting Information in Commercial Lending”, *Business Economics*.
- Merkle, C. A. ., Cortez , P. B. ., & Jeffrey, W. C. . (2022), “Influence of Accounting Information System on Decision Making Process in Audit Firms in USA”, *Journal of Finance and Accounting*, 6(4), 15–24. <https://doi.org/10.53819/81018102t50106>.
- Ministry of Finance (2001, 2002, 2003, 2005), Decision promulgating a system of 26 Vietnamese Accounting standards.
- Monteiro, A. M., Vale, J. M., Cepêda, C. M., & de Almeida Leite, E. M. (2021), “Internal control system quality and decision-making success: The role of the financial information quality”, *Universal Journal of Accounting and Finance*, 9(3), 285-294.
- Nguyen, Q.T. (2020), “Research the impact of accounting information on the decision-making process of Vietnamese enterprises”, *Scientific and commercial Journal*, No. 142/2020, 33-44.



- Perdana, D. (2018), “*Accounting Information System Quality and Capital Investment Selection from a Management Perspectivetreatment–Indonesian evidence*”, International Journal of Business Management and Economic Research(IJBMER), Vol 9(2),2018,1236-1243.
- Tran Phuc Hau (2023), “*Agency Theory in researching factors affecting cost management accounting in enterprises*”, Journal of Accounting and Auditing.
- Xu, H.J. (2003). “Critical success factors for accounting information systems data quality”, Diss. University of Southern Queensland, 2003.