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Factors Affecting the Quality of Accounting Information Systems of Tourism Enterprises in Da Nang City

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Abstract

Researching factors affecting the quality of accounting information systems of tourism businesses in Da Nang city to propose recommendations to improve the quality of accounting information systems of businesses Traveling in Da Nang city. In this study, the author directly interviewed 210 tourism businesses in Da Nang city using the convenience sampling method. Through the survey process, the number of questionnaires collected after filtering, there are 203 valid survey questionnaires, which can be used for analysis in research. Data collected from survey subjects are used to evaluate the scale using the Reliability Analysis tool through Cronbach's Alpha coefficient, EFA exploratory factor analysis (Exploratary Factor Analysis), Coefficient of correlation analysis, and Regression Analysis. Research results show that there are 4 groups of factors identified as having a positive influence on the quality of accounting information systems, including: External experts, Support from senior administrators, qualification of accountant and Level of information provision. Through the influence of each group of factors, the author also makes a number of recommendations to improve the quality of the accounting information system: Maintain contact with outside experts; Training accounting staff with good professional qualifications and proficient use of accounting software and office information technology software; linking the responsibilities of administrators with related departments...

Keywords: Accounting Information System, Tourism Businesses, Influencing Factors

1. Introduction

Da Nang with its favorable geographical location, located right on the North-South transport axis of road, rail, sea and international air, is an advantage for the city in developing tourism and is one of the most popular destinations in Asia. Danang has both mountains, rivers and coastal plains... which are ideal conditions to develop tourism with many diverse types such as eco-tourism, yachting, swimming, windsurfing, Sea sports, mountain climbing expeditions, vacations... and a number of other types of high-end services. By the end of 2020, Da Nang city had 1,239 tourist accommodation establishments.

Da Nang tourism has had a remarkable development with a rapid increase in the number of domestic and foreign tourists. In the first 11 months of 2023, the total number of visitors to Da Nang reached 8,228 thousand with 6,853 thousand visitors served by accommodation establishments and 1,375 thousand visitors served by travel establishments (of which international visitors reached 2,285 thousand arrivals), exceeding 100% over the same period in 2022. The average number of days of stay for overnight guests is 1.76 days/visit (of which international visitors are 2.34 days/visit, domestic guests are 1.39 days/visit) [1]. Therefore, the tourism industry in Da Nang is considered one of the industries with rapid growth, bringing a large source of income to the economy, creating many job opportunities for people. To be able to attract customers and create a competitive advantage, which is a vital factor for businesses in today's unstable business environment, businesses must strive to improve all aspects of business operations, including Improving the organization's accounting information system is necessary, units will lose the opportunity to gain competitive advantage when they provide poor quality accounting information systems, this leads to consequences: Will cause users to make misleading judgments or information forecasts (Baltzan, 2012).

Accounting information systems play an important role in business operations. Many decisions are based on information obtained from accounting information systems (Noravesh, H 2009). Reality shows that the accounting information system in tourism businesses in Da Nang city still has some limitations, especially domestically invested tourism businesses. The organization of the accounting information system still only focuses on providing financial accounting and tax accounting

information without paying attention to the role of analysis, information consulting as well as control support in business operations to all levels of management. The cause of this situation is partly from administrators not appreciating the role of the accounting system, limited funding in allocating to the accounting system and from the accounting apparatus when providing Providing information to users is not complete, timely and appropriate, thus not meeting its role of providing information well.

Starting from the above practice, the author has analyzed factors affecting the organization of accounting information systems at tourism enterprises, thereby providing a basis for empirical research to evaluate factors affecting the quality of accounting information systems at tourism businesses in Da Nang city.

2. Research facility
2.1 Accounting information system
Information is defined as a collection of facts that have been organized and processed to provide meaning to a user. Useful information in decision-making activities (Gelinas *et al.*, 2008).

Accounting information is economic information; It is related to the economic and financial activities of business organizations. Characteristics that make information useful: Relevance, reliability, completeness, timeliness, understandability, and verifiability (Romney *et al.*, 2012) [8].

An accounting information system is a combination of people, hardware, software, and network systems to collect, process, store, and provide both financial and non-financial information for users without distinction between inside or outside the enterprise. There are many different concepts of accounting information systems. According to O'Brier *et al* (2008), an accounting information system is a set of resources including: People and equipment, designed to convert financial and other data into information. An information system depends on human resources of hardware, software, data and networks. According to Romney *et al* (2015) [2], Accounting information system is an information system that collects, records, processes data and provides financial, accounting and non-financial information for decision making users, as well as other stakeholders. According to Grande *et al.* (2011), an accounting information system is defined as an information technology application tool to help manage and control economic and financial issues of businesses. The accounting information system is the main component of the enterprise information system, as it is the only system that can provide the overall information of the enterprise to both internal and external users (Mihalache, 2011). According to Bodnar *et al* (2001) [3], accounting information systems include the following components: System operators; processes and procedures in collecting, processing and storing information; organizational and processing data; Data processing software; technological equipment; and internal control and document security.

2.2 Quality of accounting information system
Hall (2011) believes that the basic purpose of an accounting information system is to provide accounting information to relevant parties. An effective accounting information system will improve the quality of financial and accounting reports. accounting (Sajady *et al.*, 2008) and poor information quality can have an adverse impact on decision making (Huang, Lee, and Wang 1999).

According to FASB, the quality of accounting information includes: Appropriate and reliable; Consistent and comparable, according to the IASB, the quality of accounting information is demonstrated by: Understandable, relevant, reliable and comparable. The IASB and FASB Convergence Project defined the quality of accounting information as having the following characteristics: Relevance, truthfulness, comparability, verifiability, timeliness, and understandability. According to Accounting Law No. 88/2015/QH13 and Accounting Standard No. 1, the attributes of accounting information quality are truthful, objective, complete, timely, comparable and verifiable.

2.3 Proposed research model
Based on a review of domestic and foreign documents along with the theoretical foundations just presented above, the author proposes a research model "factors affecting the quality of accounting information systems of tourism businesses in Da Nang city" includes factors such as the following model:
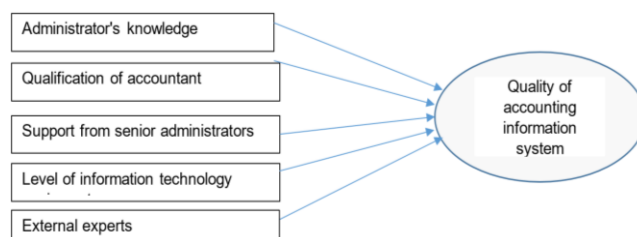
Fig 1: Proposed research model

Table 1: Interpretation of variables in the research model

Factors in the Model		Measure
Administrator's knowledge (K)		
K1	The administrator is knowledgeable about accounting and taxes	
K2	Administrators are knowledgeable about information technology	
K3	Administrators are knowledgeable about software and applications in business operations	Likert 1-5
K4	Administrators are knowledgeable in analyzing and developing accounting information systems	
Qualification of accountant (Q)		
Q1	Accounting staff understand laws, standards and accounting regimes	
Q2	Accountants can apply accounting knowledge to solve real-life situations at businesses	
Q3	Accountants understand accounting software	Likert 1-5
Q4	Accounting staff have the ability to synthesize, analyze and advise information to users	
Q5	Accounting staff can apply modern IT applications in collecting, processing and providing information to users.	
Support from senior administrators (S)		
S1	Administrators always appreciate the importance of the quality of accounting information systems	
S2	Administrators participate in the process of establishing policies and guidelines for the operation of accounting	

	information systems	
S3	Administrators always support the training of accounting staff to develop comprehensive capacity	Likert 1-5
S4	Administrators ensure the budget meets the requirements of the accounting information system	
Level of information provision (I)		
I1	Reliable accounting software, ensuring accuracy and safety in processing and providing information	
I2	Accounting software can update new regulations and user requirements	
I3	Accounting software can integrate and link data with other functional software in the business	Likert 1-5
I4	Hardware system, support equipment, stable Internet network, meet system operating requirements	
External experts (E)		
E1	The accounting - auditing company provides good support for the accounting information system at the unit	
E2	Software solution providers, developing accounting information systems at the unit	Likert 1-5
E3	Hardware and network solution providers meet the needs for operating the accounting information system at the unit	
E4	Training units support capacity building of the accounting information system at the unit	
Quality of accounting information system (QAIS)		
QAIS1	Information from accounting information systems is always available	
QAIS2	The information content from the accounting information system is clear, easy to understand and well formatted	Likert 1-5
QAIS3	Information from the accounting information system is complete and accurate	
QAIS4	Accounting information systems provide relevant information to users.	
QAIS5	Information from accounting information systems is comparable and verifiable	

2.4 Some related studies

There are many authors researching this issue.

Nguyen Phuoc Bao An (2018) [4], researched factors affecting the success of accounting information systems in Vietnamese enterprises, showing that the success of accounting information systems is greatly influenced from the accountant's perception of the usefulness and ease of use of the information system and the actual use of the accounting information system; User nature, project nature, and manager support impact the success of an accounting information system through the transmission role of awareness and actual use.

Zulaikha (2019) [5], in studying the factors influencing the implementation of accounting information system and its results on the quality of information for user use in MSMEs in Semarang City. The results show that there is a positive and significant influence between manager knowledge and manager commitment to accounting information system implementation. Therefore, implementation affects the quality of accounting information for MSMEs.

Doan Thi Chuyen (2020) [6], factors affecting the quality of accounting information systems of public healthcare units in the Southeast region, Research results show that: Commitment Management, accounting staff qualifications, internal control, data quality, and organizational culture have a positive relationship with the quality of accounting information systems.

Dong Quang Chung and colleagues (2020) [7], researched factors affecting the quality of accounting information systems in foreign-invested enterprises in Binh Duong province, the study identified and gave found that there are 5 factors affecting the quality of accounting information systems in foreign-invested enterprises in Binh Duong, including: Support from managers; Operational goals; Reporting objectives; Compliance goals; and Efficiency of accounting software and applications. Among them, the most influential factor is the efficiency of software and accounting applications.

3. Research methods
3.1 Data collection methods

Primary data for the topic is conducted through the following steps:

Building a survey questionnaire: Developed from an analytical framework with a 5-level Likerk scale to evaluate the impact of factors on the quality of accounting information systems of tourism businesses in the Da Nang city. (1) Strongly disagree, (2) Disagree, (3) No opinion, (4) Agree, (5) Completely agree. Distance value = (Maximum - Minimum)/n = (5 - 1)/5 = 0.8.

Select interview sample: Select 210 tourism businesses in Da Nang city. The interview technique is direct questioning using pre-prepared structured questions based on the research objectives and research model.

Number of samples: Previous studies have shown that there are many ways to choose the total number of samples for investigation, such as the case of using the linear structural analysis method of Hair *et al.* (1995), if the estimation method is Maximum Likelihood, the minimum sample size is 100 - 150. According to Hoelter, the minimum sample size is 200 interviewees. Meanwhile, Bollen believes that the sample size is 5 observations for 1 parameter to be estimated. Therefore, research uses exploratory factor analysis method, the research sample size is often determined based on the minimum size and number of measured variables included in the analysis, the ratio of observations to measured variables is 5: 1 means that 1 measured variable requires at least 5 observed variables (Hoang Trong & Chu Nguyen Mong Ngoc, 2018). Because the exploratory factor analysis model was built with a minimum of 36 observed variables, the minimum sample size of the project is 36 x 5 = 180. Thus, it is necessary to interview at least 180 local tourism businesses. Da Nang city desk. In fact, 210 tourism businesses were interviewed. After collecting and checking, 7 samples were eliminated due to inappropriateness. Finally, 203 questionnaires were used for processing and analysis. This has ensured the sample size for the research method.

3.2 Processing and analyzing data

Descriptive statistics method: This is a method used that involves collecting data, summarizing, presenting, calculating and describing various characteristics to reflect an overall General accounting software users.

Cronbach's Alpha reliability coefficient method: To test the reliability of the scale. Analyze reliability through commenting on Cronbach's Alpha coefficient to eliminate inappropriate variables and limit garbage variables during the research process. Numbers with item-total correlation less than 0.3 will be eliminated. A scale with a Cronbach's

Alpha coefficient of 0.6 or higher can be used in cases where the concept being researched is new. However, it should also be noted that if Cronbach's Alpha is too high (> 0.95), there is a possibility of redundant observed variables appearing in the scale. A redundant observed variable is a variable that measures a concept that is almost identical to another measured variable, similar to the case of collinearity in regression, in which case the redundant variable should be rejected.

Exploratory factor analysis (EFA) method: Exploratory factor analysis is a statistical analysis method used to reduce a set of many interdependent observed variables into a set of variables (called factors) less so that they are more meaningful but still contain most of the information content of the original set of variables (Hair *et al*., 1995). This method aims to identify observed variables as well as test the scale based on the extraction coefficients of the variables. If any variable has a coefficient less than 0.5, it will be eliminated. In factor analysis, we are also interested in the KMO index (Kaiser - Meyer - Olkin) and Sig. to consider the appropriateness of the factor analysis model. If the KMO index is between 0.5 and 1 and Sig. less than or equal to 0.05, the use of factor analysis method is appropriate for the research data.

4. Research results
4.1 Analyzing results of Cronbach's Alpha reliability
Model testing results show that the Cronbach Alpha coefficients of the scales have good reliability, all 6 observed variables have the lowest Cronbach Alpha value of

0.8139 - proving that the measurement scale is good. Coefficients (Cronbach Alpha if variables are removed) Cronbach Alpha if Item Deleted are all greater than 0.3; At the same time, the Corrected Item-Total Correlation coefficient is greater than 0.6. Therefore, the observed variables are qualified and used in the next research steps.

Table 2: Assessing the reliability of the scales using the Cronbach Alpha coefficient

Ingredient	Cronbach's Alpha
Administrator's knowledge (K)	0,902
Qualification of accountant (Q)	0,942
Support from senior administrators (S)	0,884
Level of information provision (I)	0,909
External experts (E)	0,813
Quality of accounting information system (QAIS)	0,905

4.2 EFA exploratory factor analysis
After factor analysis, we explore the observed variables of the independent variables to test the discrimination and convergence of these variables in the scales to eliminate observed variables that do not meet the conditions (factor loading < 0.5). The KMO test result is 0.777 (satisfying the condition 0.5 < KMO < 1), so the factor analysis method applied is appropriate and the value Sig. Barletts test is 0.000 < 0.05, showing that these observed variables are correlated in the population with each other and this data set is suitable for performing exploratory factor analysis.

Table 3: EFA exploratory factor analysis of independent variables

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	1,949	9,747	70,559	1,949	9,747	70,559	1,949	9,747	70,559
2	3,019	15,097	47,935	3,019	15,097	47,935	3,019	15,097	47,935
3	6,568	32,839	32,839	6,568	32,839	32,839	6,568	32,839	32,839
4	2,575	12,876	60,811	2,575	12,876	60,811	2,575	12,876	60,811
5	1,502	7,512	78,071	1,502	7,512	78,071	1,502	7,512	78,071
6	0,848	4,238	82,309						

The results in Table 3 show that the value of Total variance extracted = 78.071% > 50%: Satisfactory, then it can be said that this one factor explains 78.071% of the variation of the data. At the same time, the author used the Varimax Procedure method to rotate the factors, the results showed that among the 20 independent observed variables, the variables were all arranged according to the original prescribed groups, and did not remove any observed variables. any. These results will be used for further studies of the study.

Table 4: EFA exploratory factor analysis of dependent variable

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,124	78,111	78,111	3,124	78,111	78,111
2	0,418	10,440	88,551			

For the dependent variable "Quality of accounting information system" of tourism businesses in Da Nang city, there are 4 factors (QAIS1, QAIS2, QAIS3, QAIS4) grouped into a single factor with the system KMO number = 0.784>0.5, proving that the data is appropriate. Bartlett's Test has statistical significance sig.=0.000 (Sig. < 0.05), so the observed variables are correlated with each other in the whole. At the same time, the results of Table 4 show that the total variance extracted reached 78.111% > 50%, this shows that the original observed variable satisfies the

condition. Therefore, the scale still used for subsequent analyzes includes 5 independent variables: Support from senior administrators (S), qualification of accountant (Q), Level of information provision (I), Administrator's knowledge (K), External experts (E); and the dependent variable Accounting information system quality (QAIS).

4.3 Results of regression analysis
After EFA analysis, all 5 factors met the conditions and were used in the next study, linear regression analysis.

Table 5: Results of regression analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,814ᵃ	0,663	0,649	0,59268816	2,177

The analysis results in Table 5 show that: The model has a correlation coefficient R = 0.814, showing that the relationship between variables is very close. With the adjusted coefficient of determination R2 = 0.649, it means that 64.9% of the variation of the dependent factor is explained by the 5 independent factors in the model. This shows that this linear regression model fits the sample data set at 64.9%, meaning the independent variables explain 64.9% of the variation in the dependent variable. On the other hand, the Durbin-Watson coefficient is 2.117, which is between 1 and 3, so the model is not correlated (or the independent variables are not correlated with each other).

The results of ANOVA analysis to test the hypothesis about the overall fit of the model show: F value = 47.907 and significance level Sig. < 0.05, proving that the R-squared of the population is different from 0. Therefore, the independent variables have an impact on the dependent variable, which means that the built linear regression model is suitable for the population. Thus, the results of the collected data are explained quite well for the model.

Table 6: ANOVA analysis in regression

ANOVAᵃ					
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	84,144	5	16,829	47,907	0,000ᵇ
1 Residual	42,856	122			
Total	127,000	127			

Next, the authors used the Enter method to check the regression results, conducted with 5 independent factors including: (1) Support from senior managers, (2) Qualification of accounting staff, (3) Level of information technology and hardware equipment in the system, (4) Administrator knowledge, (5) Outside experts.

Table 7: Regression results using the Enter method

Model	Unstandardized Coefficients		Standardize d Coefficients	t	Sig.	Collinearity Statistics	
	B	Std.Error	Beta			Tolerance	VIF
(Constant)	-3,747E-017	0,052		0,000	1,000		
F- K	0,072	0,053	0,072	1,360	0,176	1,000	1,000
F_Q	0,172	0,053	0,172	3,268	0,001	1,000	1,000
1 F_S	0,291	0,053	0,291	5,534	0,000	1,000	1,000
F_I	0,146	0,053	0,146	2,776	0,006	1,000	1,000
F_E	0,722	0,053	0,722	13,736	0,000	1,000	1,000

The results in Table 7 show that the variance inflation factor (VIF) is all 0.05, there is one variable that does not qualify, which is K_ administrator's Knowledge- with coefficient Sig.=0.176 (>0.05).), so this independent variable was eliminated from the initial research model. Thus, the research model has 4 factors arranged in descending order as follows: "E-External Expert" has the greatest impact, with a standardized Beta coefficient of 0.722. The impact ranked second is "S - Support from senior administrators" with a Beta coefficient of 0.291; Next is the third factor "Q-Qualification of accountant" with a standardized Beta coefficient of 0.172. And the last impact factor is "I - Level of information provision" with a standardized Beta coefficient of 0.146.

The multivariate regression equation has the form: QAIS= 0.722*E + 0.291*S + 0.172*Q + 0.146*I.

5. Conclusion and recommendations

Research results show that the quality of information systems at tourism businesses in Da Nang city is directly influenced by 4 groups of factors: External experts, Support from senior administrators, qualification of accountant and Level of information provision. To maintain, strengthen and improve the quality of information systems at tourism businesses in Da Nang city, tourism businesses need to implement the following solutions:

- Tourism businesses need to maintain relationships with external experts such as state management agencies in accounting, analysis experts, system designers, information technology, and accounting experts. audit... for support and advice in the process of operating the accounting system at the unit, ensuring the quality of the accounting information system at the unit is improved day by day.

- Administrators need to organize the accounting information system more scientifically and rationally, so that the accounting information system can become a reliable and important information providing tool for administrators and managers. meaningful for business decision making. It is necessary to improve the management organization mechanism based on the scale, conditions, financial management mechanism and operational characteristics of the enterprise. Clearly define the relationship between departments related to the accounting department at the enterprise, linking the responsibilities of administrators with the performance of the departments. At the same time, regularly check and review accounting data to ensure accurate and complete accounting and provide timely information to administrators. Administrators need to develop ERP software systems and use this software more effectively, thereby providing more reliable and more timely information to administrators.

- Travel companies need to focus on training a team of professional and skilled accountants, knowledgeable about accounting software, the company's specific accounting operations, taxes and accounting laws... At the same time, we focus on regulating the appropriate powers and responsibilities of accountants as well as strict sanctions for violations of regulations related to accounting and professional ethics. It is necessary to continuously update accounting knowledge, policies, regimes and standards, focusing on training and guiding accounting staff to use accounting software and office information technology software. Training and fostering

accounting staff to have knowledge of related majors such as accounting, auditing, financial management... with skills in preparing and presenting specific reports.

- With the current strong development in science and technology, most tourism businesses have been equipping themselves with professional accounting software such as MISA, SAP, LinkQ, Fast Acousting... However, Businesses need to choose accounting software that has been tested for quality, carefully research the information and reputation of the accounting software provider to be able to provide the best support, effectively, and save time. Time and cost for businesses regarding financial reporting and detailed reporting according to current regulations of corporate accounting.

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