

# Accounting Software Applications in the Public Non-Business Unit of Vietnam

Le Thi Huong Tram<sup>1,\*</sup>, Doan Thi Quynh Anh<sup>2</sup>, Le Thi Xuan Huong<sup>2</sup> and Nguyen Nguyen Zen<sup>2</sup>

<sup>1</sup>Department, University of Labour and Social Affairs, Vietnam.

<sup>2</sup>University of Labour and Social Affairs, Vietnam.

**Abstract:** Using quantitative research methods, we have generalized the theoretical basis of Public non-business unit, the roles and requirements of accounting organizations. Evaluate existing points and limitations in accounting activities and the benefits of accounting software when applied at Public non-business unit. Next, we built the research process, determined the research sample and survey sample size. Identify 5 factors affecting the application of accounting software: (1) Perceived usefulness, (2) Perceived ease of use, (3) Trust, (4) Cost, (5) Leadership style. With this toolkit of 5 elements, we build scales, models and hypotheses for the research. With the quantitative research method used for a scale of 19 observed variables, 186 valid survey forms, and SPSS statistical software, we have clarified the research objectives. Data analysis results show that the independent variables have a positive impact on the dependent variable, which is the accounting software application. The results also show the strong and weak influence of each factor. In addition to the Cost factor that does not affect the application of accounting software, Trust is the factor with the strongest impact with Beta = 0.523, second is the Perceived usefulness factor with Beta = 0.285, third is the Leadership style factor with Beta = 0.109 and finally Perceived ease of use. During the research process, we also discovered some limitations such as the sampling method not being highly representative or there may be hidden factors that have not been researched that can impact the application of accounting software. accounting such as staff qualifications or technological developments. However, the research also achieved the desired results, completing and clarifying the set goals.

**Keywords:** Accounting, Accounting Software, Public non-business unit, Vietnam.

**JEL Classification Codes:** M410, O310, C120, G300.

## 1. INTRODUCTION

Public non-business units are established according to the law to serve the needs and common interests of society. Its activities help ensure fairness in the distribution of basic services to the people. Therefore, an effectively operating public service unit will support state management activities, promote fairness and develop social services. Accounting is an important part of Public non-business unit. Accounting holds many roles. It helps units manage, use and allocate funding effectively. It is the basis and support for unit leaders to make appropriate and accurate decisions. In addition, it also plays the role of inspecting and controlling the situation of revenue and expenditure, monitoring the distribution of funds and many other important roles. Although it is considered an important part, up to now accounting still has many limitations, affecting the operations of Public non-business units. Existing many errors, ineffective asset management, or accounting information that does not meet decision making and slows down the development of the unit are its limitations. To resolve errors due to human objectivity and

subjectivity in the accounting process, accounting software is built to support the unit's accounting activities. Using accounting software helps provide timely accounting information, asset management, depreciation and amortization automatically and accurately. Many Public non-business unit have applied accounting software such as higher education institutions in Vietnam and brought positive results. However, up to now there are still many Public non-business unit that have not applied accounting software in their units. Our research goal is to learn about Public non-business unit, and the roles and requirements of accounting organizations in Public non-business unit. What factors affect the application of accounting software in Public non-business unit? What is the level of impact of the factors included in the study on the application of accounting software at Public non-business unit?

## 2. LITERATURE REVIEW

### 2.1. Public Non-Business Unit

According to the provisions of the Law on Public Employees, "A public service unit is an organization established by a competent State agency or a socio-political organization in accordance with the law, has legal status, and provides services" Public service and state management service" (Law

\*Address correspondence to this author at the Department, University of Labour and Social Affairs, Vietnam; Tel: +84978500250; E-mail: huongtramle@gmail.com

on Public Employees No.: 52/2019/QH14). In the Circular guiding the amendments and supplements to the Administrative Accounting Regime, a public service unit is "a unit established by the State to perform administrative management tasks and ensure national security." prevention and socio-economic development. These units are funded by the State and operate on the principle of no direct compensation" (Circular No. 185/2010/TT-BTC). According to the Decree on Regulations on the autonomy mechanism of Public non-business unit, "Public non-business unit are established by competent State agencies in accordance with the provisions of law, have legal status, provide providing public services to serve state management" (Decree No. 16/2015/ND-CP). From the concepts specified in current Vietnamese documents, Public non-business unit are established by competent State agencies. These units have legal status, seals and separate accounts. Activities of Public non-business unit aim to serve the State's management and administration or provide public products and services in industries and fields according to the provisions of law to serve the needs and interests of the State essential common interests, basic rights and obligations of individuals and organizations, ensuring fairness in distribution and equal access among all citizens, especially basic services.

## 2.2. The Role of Accounting Organizations in Public Non-Business Unit

According to author Loi (2008), "Organizing the accounting apparatus includes the ability to choose an organizational model, assign tasks to accounting staff in the apparatus and develop internal rules and working regulations for parts of the accounting apparatus"(p.245). It can be seen that the organization of accounting work is important in Public non-business unit, especially Public non-business unit with financial revenue sources. An effective accounting organization must provide data and advise managers when making decisions. The organization of accounting work needs to record and reflect accurately, promptly, completely and systematically the situation of circulation and use of assets, materials and capital sources; The process of budget formation and use of funding sources, situation and performance results of the unit. The accounting organization also has the role of inspecting and controlling the implementation of revenue and expenditure estimates, implementation of economic and financial targets and the State's standards and norms. Inspect the management and use of assets and materials and comply with budget collection and remittance discipline. Monitor and control the distribution of funds to lower-level budgeting units, and the implementation of revenue and expenditure estimates and settlement of lower-level units. Organize accounting work to prepare and submit financial reports on time to superior management agencies and financial agencies according to regulations. Provide information and documents to serve the development of estimates and spending norms; Analyze and evaluate the effectiveness of using funding sources at the unit.

## 2.3. Requirements of Accounting Organizations in Public Non-Business Unit

**Control:** The organization of accounting work in Public non-business unit must provide accounting information honestly,

reasonably and reliably. Ensure the safety of assets and accounting information. The organization of accounting work must ensure compliance with the requirements and regulations of the internal control system in the unit. When providing sample forms, accounting books, accounting reports, accounting reports, accounting processes, accounting methods or assigning tasks in the accounting department, system control must be ensured.

**Efficiency:** Organizing accounting work in Public non-business unit needs to take into account the efficiency of accounting work. It is necessary to comprehensively analyze the time and costs consumed when organizing accounting work and compare it with the benefits of the unit, to meet the reasonable time to organize the accounting system, low operating costs but bring benefits. higher benefits.

**Suitability:** The organization of accounting work in Public non-business unit must meet the requirements of providing information for internal management and the Financial Reporting and Finalization Report system in accordance with regulations.

**Flexibility:** The organization of accounting work in Public non-business unit must ensure that the information provided by accountants is flexible to meet current and future conditions. When a unit changes its scale of operations, scale of production and business or changes the form of capital ownership, the content of the accounting system does not have to change its basic content and components.

## 2.4. Current Status of Accounting Organization at Public Non-business Unit

Financial sources for the operations of Public non-business unit include: funds provided by the state budget; sources of foreign aid and loans; Retained deductible fee sources, and other sources according to regulations. From the perspective of financial autonomy, there are Public non-business unit that ensure their own regular and investment expenditures. For these units, the state does not have to provide funding, all expenses are covered. from revenue at the unit; There are Public non-business unit that ensure their own regular expenses. For these units, the state budget only funds capital construction investment activities, all regular activities are covered from revenue sources arising at the unit; There are Public non-business unit that self-guarantee part of their regular expenses. In these units, the revenue source can only ensure a part of the regular revenue because public service prices and fees are not fully structured. The state budget provides part of the funding for regular activities and all of the funding for basic construction activities. There are also Public non-business unit whose regular expenses are guaranteed by the state. Because these units have no revenue or low revenue, most of the activities in these units are mainly covered by public funds. provided by the state budget. Properly and effectively managing and using the unit's funding sources will help industrial service units complete their career development goals, and is the key for these units to develop sustainably. Accounting work at Vietnamese Public non-business unit ensures compliance with regulations and current accounting standards. However, through interviews with managers and accounting staff, this activity still has five basic limitations. The organization of the accounting appa-

ratus at Public non-business unit does not pay attention to the activities of management accounting. The current accounting apparatus has difficulty providing information to serve managers' decision making. Late submission of final settlement reports according to current regulations because many of the surveyed accounting units do not do their accounting continuously, often accumulating operations to be recorded at the end of each quarter. At the end of the accounting period, the general accountant does not promptly prepare a general report to send to superior agencies. Public non-business unit mainly do accounting using manual methods. Accounting often has some errors, either accidentally or intentionally, leading to data discrepancies in quantity and value. Depreciation and amortization values are calculated and accounted for and are not completely accurate. The applied accounting apparatus organization model is a centralized model that is only suitable for units with a small scale of economic and financial activities, without any affiliated units. Documents serving accounting work still have many errors such as missing information on documents and inconsistent forms used among Public non-business unit. These shortcomings make it difficult to check and evaluate the effectiveness of accounting work.

### 2.5. Benefits of Using Accounting Software

Technology application is a mandatory factor to improve performance and efficiency in economic activities. Technology application is also a condition for Vietnam's socio-economic development to catch up with the world. Public non-business unit are units under state management. These units, on behalf of the state, carry out public service activities to support economic and social development. Therefore, improving efficiency through the application of software is the right development direction. Accurate accounting will help save costs and manage assets effectively. The accounting department with the accounting information provided is an important part of facilitating operations at Public non-business unit. In addition to providing tools for accounting for basic operations such as treasury operations, cash operations, deposits, fixed assets, salaries, and generalization, accounting software also addresses limitations. In accounting at Public non-business unit. Measures to help limit existing problems are essential for better accounting operations of the unit. Accounting software application is a solution to the existing problems mentioned in the above section of the article. First, many accounting software today have integrated information service parts of management accounting. Second, accounting software can be shared with superior service units and affiliated units. Third, when using accounting software, we are supported in providing forms in accordance with current law. In addition, when using accounting software to import data, there will be no missing information on documents because the system always requires complete information when operating.

### 2.6. Factors Affecting the Application of Accounting Software at PUBLIC Non-business Unit

According to Zhang (2015), research by Davis, Davis et al. in 1989 on the Technology Acceptance Model [TAM] based on Fred Davis's 1986 theoretical development of the technology acceptance model for empirical testing of user infor-

mation systems (pp.99-106). Accordingly, Davis (1989) built TAM as an extension of the Theory of reasoned action model of Ajzen and Fishbein. Davis et al. (1989) also identified that the complexity of technology and the existence of uncertainty in users' minds will affect their behavior and attitudes when they try to use it. Thus, before they make an effort to use it, their intentions and behavior have not yet been formed. Technology acceptance is not directly influenced by attitudes and intentions (pp.982–1003). The TAM model evaluates technology usage behavior based on two factors: Perceived usefulness and Perceived ease of use. Perceived usefulness is the level of users' assessment of the benefits that using technology brings them. Perceived ease of use is the level of the user's assessment of the ease of using technology. The higher the user's evaluation, the more likely they are to use that technology (Davis, 1989, pp.982-1003). According to Venkatesh (2000), Davis's TAM model is the most used model in studies of user acceptance and use of technology (pp.342–365). The study by Adams et al. also shows that many researchers have applied TAM in research and provided empirical evidence on the effects of Perceived usefulness and Perceived ease of use on intention to use technology (pp.227-247). The study by Hendrickson et al. (1993) also agreed on the effectiveness of using Davis's (1989) TAM model in predicting customers' intention to use technology (pp.227-230). Thus, many authors have obtained positive results when evaluating technology acceptance based on Davis's TAM model. Therefore, in this study we will apply two factors: Perceived usefulness and Perceived ease of use to build a scale and survey table to serve the purpose of evaluating the application of accounting software in units. public career in Vietnam.

In addition to appreciating the two factors in Davis's TAM model in 1986, Venkatesh (2000) also commented that two more factors should be added: background knowledge and technology reliability to the model (pp.342-365). The content of the "Prior Knowledge" factor is the user's level of understanding about the technology before they use it. The factor "Technology Credibility" is the degree to which users trust and rely on technology (Venkatesh, 2000, pp.342-365). In our opinion, the two factors were added and formed TAM2, the Trust factor is considered to have a strong relationship and influence on users' use of technology. This review was authored by Zen et al. (2021) demonstrated in their research on factors affecting the application of human resource software in Vietnamese enterprises (p.813). Therefore, in our research and evaluation of accounting software applications in Public non-business unit in Vietnam, we use the third factor which is Trust.

Although the theory of TAM, TAM2 of Davis (1989) and Venkatesh (2000) are widely used around the world, many researchers have denied this result. Specifically, authors Benbasat & Barki (2007) argue that TAM has diverted researchers' attention from other important issues (pp.211–218). Author Lunceford (2009) believes that TAM and TAM 2 ignore many other factors such as the cost of using technology and the constraints on users using that technology (pp.29–47). Because of the above assessments, in this study, in addition to applying the three factors proven above, we add two new factors to increase efficiency in evaluating the application of accounting software in business Public non-

business unit in Vietnam. The two factors proposed by the authors are "Leadership style" and "Cost".

From the above arguments, we have 5 factors affecting the application of accounting software in Public non-business unit that are included in the evaluation and the scale is (1) Perceived usefulness, (2) Perceived ease of use, (3) Trust, (4) Cost, (5) Leadership style. These 5 influencing factors are also 5 independent variables that impact accounting software application as the dependent variable.

### 3. METHODS

#### 3.1. Qualitative Research

Qualitative research is one of the types of scientific research commonly used in economic and social research. In this study, we rely on qualitative research methods to build the research process, model and research hypotheses.

##### *Build Research Process*

The research process is built with the steps that need to be taken to clarify the research objectives. This research process needs to be designed to collect data and documents related to the research problem. Synthesize the theoretical basis to

serve as a basis for analysis of the article. Learn information related to accounting software for Public non-business unit. Activities Organizing accounting at Public non-business unit. What factors are used to evaluate the application of accounting software in Public non-business unit?

Direct interviews with managers at Public non-business unit to accurately assess the shortcomings in accounting activities and the effectiveness of accounting information at these organizations. Through this hand-to-hand interview activity, the authors also identified important content to build a survey.

##### *Build a Measuring Scale*

From the content that needs to be included in the survey, we proceed to build a scale and survey table. The scale is built based on the 5 impact factors identified in the evaluation section above. The survey was pilot evaluated with 10 accountants in the survey subjects to review the suitability of the questionnaire. The adjusted scale includes 19 observed variables, using a 5-point Likert format with (1) Completely disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Completely agree. Totally agree. The content and symbols of the measurement scale and observed variables are presented specifically in Table 1.

**Table 1. Scale of factors affecting the application of accounting software in Public non-business unit in Vietnam.**

The Scale	Symbol	Content of Observed Variables
Perceived usefulness	PU	
	PU1	Accounting software helps Public non-business unit manage all accounting operations
	PU2	Accounting software helps Public non-business unit organize accounting with maximum efficiency
Perceived ease of use	PU3	Using accounting software helps reduce errors in accounting activities of Public non-business unit
	PEU	
	PEU1	Accountants can refer to how to use accounting software easily
Trust	PEU2	The modules (operations) on the accounting software are clear and easy to understand
	PEU3	Accountants can use accounting software as soon as they see others using it
	PEU4	Accounting personnel can quickly master the operations of accounting software
	TRUST	
Cost	TRUST1	Accounting software is a software with good security, no need to worry about data leakage of Public non-business unit
	TRUST2	Using accounting software brings better operational efficiency to the accounting department of Public non-business unit
	TRUST3	Accounting software helps Public non-business unit develop sustainably
Leadership style	COST	
	COST1	Public non-business unit focus on investing in accounting activities
	COST2	Public non-business unit always prioritize funding to deploy accounting software
Leadership style	COST3	Funds for information technology development at Public non-business unit ensure these activities
	LDS	
	LDS1	Leaders and management levels of Public non-business unit are determined to improve the quality of accounting information

	LDS2	Leaders of Public non-business unit always consider and apply appropriate technology for the organization's activities.
	LDS3	Leaders of Public non-business unit have research and awareness about accounting software
Application	ALCT	
	ALCT1	Accounting software meets the requirements in managing and providing accounting information for Public non-business unit
	ALCT2	Leaders of Public non-business unit make necessary and appropriate changes to improve operational performance
	ALCT3	The development plan and vision of the public service unit is suitable for applying accounting software

Source: Proposal of the research team.

### **Research Model and Hypothesis**

The research model is built from a toolkit of 5 elements identified in section 2. Accordingly, the two elements inherited from Davis's (1989) research are Perceived usefulness and Perceived ease of use. The third factor, Trust, was inherited by the research team from the research of Venkatesh (2000). The remaining two impact factors were proposed by the research team with the purpose of supplementing the shortcomings of the TAM model as identified by Lunceford (2009). These two factors are Cost and Leadership style. Research hypothesis:

H1. Perceived usefulness has a positive impact on accounting software applications at Public non-business unit in Vietnam. When Perceived usefulness is evaluated to increase or decrease, the application of accounting software also increases or decreases.

H2. Perceived ease of use has a positive impact on accounting software applications at Public non-business unit in Vietnam. When Perceived ease of use is evaluated to increase or decrease, the application of accounting software also increases or decreases.

H3. Trust has a positive impact on accounting software applications at Public non-business unit in Vietnam. When Trust is assessed to increase or decrease, the application of accounting software also increases or decreases.

H4. Cost has a positive impact on accounting software applications at Public non-business unit in Vietnam. When Cost is evaluated to increase or decrease, the application of accounting software also increases or decreases.

H5. Leadership style has a positive impact on accounting software applications at Public non-business unit in Vietnam. When Leadership style is evaluated to increase or decrease, the application of accounting software also increases or decreases.

### **3.2. Quantitative Research**

#### **Research Sample and Sample Size**

Research sample with interview method for software user groups including leaders and managers of accounting departments of Public non-business unit. Through this group of subjects, we want to learn about the limitations and errors that exist in the accounting work at the unit. For software providers, we approach and interview the product supply and

marketing departments to learn more about the functions, operations, costs and benefits of accounting software for the company. Accounting planning at Public non-business unit. Using the questionnaire survey method, we selected a sample of participants who are accounting department managers and accounting staff at Public non-business unit.

We conduct quantitative research, the sample size used to collect primary data must be calculated appropriately and ensure the minimum size for the analyses used in the article. Among reliability coefficient analysis, exploratory factor analysis and multivariate regression, exploratory factor analysis requires the largest sample size. According to author Tho (2014), the sample size should be based on the number of observed variables with a ratio of 10:1 or more (meaning that for every observed variable, there are 10 samples) (p.415). In this study, we build a scale with 19 observed variables, the minimum sample size needed for testing and analysis is  $19 \times 10 = 190$  samples or more.

#### **Sampling and Data Collection Methods**

The research sample was selected using the purposive sampling method. However, the purposive sampling method may cause the data to not be highly representative. The reason for choosing this sampling method is that the number of Public non-business unit in Vietnam is very large. Our team's research time and budget are not guaranteed to be able to be carried out across all of these units. Therefore, we selected the sample according to the field of operation of the public service unit. The fields of operation of the public service unit include the field of Education - Training; Health sector, social security; Information and Culture field; Field of Fitness and Sports; Agriculture, Forestry and Fisheries, Irrigation; Other economic career fields.

#### **Data Collection**

Secondary data was collected at the accounting department of the public service unit. Primary data was collected through interviews and questionnaire surveys. Through hand-to-hand interviews with managers of Public non-business unit and managers of the Accounting department, we collected information about the size of the accounting department, personnel qualifications, and arc calculation. Provide accounting information, accounting methods currently applied at the unit and shortcomings in accounting activities at the unit. With data collected directly through questionnaires. The information of the surveyors, who are

accountants at Public non-business unit, is committed not to be disclosed. All survey results are aggregated and used for the next data analysis step.

### Analytical Method

From data collected through the survey, we use statistical analysis software to process and analyze. The analyses were performed in accordance with quantitative research including: Testing the reliability of the scales with the Cronbach Alpha coefficient. This test is intended to detect unreliable indicators during the research process. Exploratory factor analysis aims to extract and arrange indicators to measure concepts and detect latent variables; Multivariate linear regression analysis and ANOVA test to evaluate the role of each component in the model. All these testing and analysis processes aim to evaluate the influence of Perceived usefulness, Perceived ease of use, Trust, Cost and Leadership style on the factor of accounting software application at Public non-business unit established in Vietnam.

## 4. RESULTS

From the 198 collected survey questionnaires, we evaluated and eliminated invalid questionnaires such as those with incomplete responses. The remaining valid votes are 186, qualified to be included in quantitative analysis.

### 4.1. Analyze the Reliability of the Scale

To eliminate factors that are not reliable enough in the multivariate scale, we sequentially perform reliability analysis with variables belonging to 5 independent factors. The anal-

ysis results show that the highest Cronbach's Alpha coefficient belongs to the PEU factor at 0.906. The smallest Cronbach's Alpha belonging to the COST factor is 0.785. According to author Tho (2014), the reliability coefficient test results in this study are very good because they range from 0.75 to 0.95 (p.364). Next, we see that Corrected Item-Total Correlation in Table 2 is greater than 0.5. According to authors Nunnally & Bernstein (1994), the Corrected Item-Total Correlation result is guaranteed to be greater than 0.3 for new studies and should be greater than 0.5 for other studies (cited from Tho, 2014). , p.365). Research on factors affecting technology application is not a new research group, so we require the Corrected Item-Total Correlation index to be 0.5 or higher to qualify included in subsequent analyses. The results of Cronbach's Alpha if Item Deleted of all variables included in the analysis are smaller than the Cronbach's Alpha coefficient of the total variable. From the analysis results of Cronbach's Alpha coefficient, Corrected Item-Total Correlation index and Cronbach's Alpha if Item Deleted, we see that the observed variable ensures reliability. A meaningful observed variable that explains well the dependent factor is accounting software application. All 16 observed variables are eligible to be retained in subsequent analyses.

### 4.2. Exploratory factor Analysis of the Scale

We use exploratory factor analysis in this study for the purpose of detecting latent variables. Exploratory factor analysis in quantitative research includes two steps. Step 1, all independent variables of the scale that have ensured reliability in

**Table 2. Results of Reliability Analysis of the Scale.**

Survey Variables	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Independent variables				
Cronbach's Alpha of PU = 0.830				
PU1	7.08	2.956	.712	.741
PU2	7.10	3.039	.705	.748
PU3	7.13	3.032	.649	.804
Cronbach's Alpha of PEU = 0.906				
PEU1	11.19	7.894	.776	.882
PEU2	11.16	7.239	.795	.877
PEU3	11.17	8.046	.770	.884
PEU4	11.22	7.740	.815	.868
Cronbach's Alpha of TRUST = 0.827				
TRUST1	7.64	2.470	.637	.806
TRUST2	7.62	2.301	.696	.748
TRUST3	7.58	2.256	.719	.725

Cronbach's Alpha of COST = 0.785				
COST1	6.63	3.197	.655	.674
COST2	6.60	3.399	.623	.709
COST3	6.61	3.255	.594	.741
Cronbach's Alpha of LDS = 0.819				
LDS1	6.89	3.015	.667	.757
LDS2	7.05	2.998	.681	.742
LDS3	6.87	3.014	.669	.755
Dependent variable				
Cronbach's Alpha of ALCT = 0.884				
ALCT1	7.69	2.527	.780	.831
ALCT2	7.54	2.325	.745	.869
ALCT3	7.65	2.544	.808	.809

Source: Data processing results of the research team.

**Table 3. Results of Exploratory Factor Analysis of Independent Variables**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.							.865					
Bartlett's Test of Sphericity							Approx. Chi-Square			1590.013		
							df			120		
							Sig.			.000		
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	6.545	40.909	40.909	6.545	40.909	40.909	3.155	19.719	19.719			
2	1.814	11.338	52.247	1.814	11.338	52.247	2.270	14.190	33.908			
3	1.387	8.671	60.918	1.387	8.671	60.918	2.227	13.918	47.827			
4	1.174	7.338	68.256	1.174	7.338	68.256	2.207	13.792	61.618			
5	1.108	6.923	75.179	1.108	6.923	75.179	2.170	13.561	75.179			
6	.659	4.119	79.298									
....	....	....	....									
16	.193	1.203	100.000									

Source: Data processing results of the research team.

Cronbach's Alpha analysis will be included in the exploratory factor analysis for the independent variable. Step 2, Perform exploratory factor analysis for the dependent factor of accounting software application at Public non-business unit. In this study, we use the extraction method Principal Component Analysis and the rotation method Varimax with Kaiser Normalization. This analysis method is considered appropriate when it ensures the following four conditions: Kaiser - Meyer - Olkin coefficient [KMO]  $\geq 0.5$  (Tho, 2014, p.414); The Bartlett test is statistically significant (Sig < 0.05) ( Trong & Ngoc, 2008, p.30); Factor - Loading coefficient  $\geq 0.5$  (due to sample size > 100) and Percentage of variance > 50% (In & Ngoc, 2008, p.31); Eigenvalues coeffi-

cient has a value greater than 1 (Gerbing & Anderson, 1988, pp.186-192).

**Exploratory Factor Analysis for Independent Variables**

The results of exploratory factor analysis in Table 3 show that the coefficient KMO = 0.865, ensuring the condition  $0.5 \leq KMO \leq 1$ , sig = 0.000 < 0.05, Factor - Loading coefficient of all 16 independent variables. are all  $\geq 0.5$  and Percentage of variance is 75.179% > 50%. In addition, the Eigenvalues Coefficient is also greater than 1. Because the analysis results meet the conditions, all of these independent variables are retained and continue to be used in the following analyses.

Checking the results of the Rotated Component Matrix table shows that the 16 independent variables do not form a new factor. The variables all converge to 5 factors according to the scale built in the qualitative research step. Converging factors include Perceived ease of use (X1), Leadership style (X2), Perceived usefulness (X3), Trust (X4), Cost (X5). The constructed scale was kept the same when performing the final analysis in this study, which is a multiple regression analysis.

**Table 4. Rotated Component Matrix results.**

Nhân tố	Component			
X1	PEU3	PEU2	PEU4	PEU1
Factor - Loading	0.85	0.827	0.821	0.8
X2	LDS3	LDS2	LDS1	
Factor - Loading	0.828	0.819	0.797	
X3	PU1	PU3	PU2	
Factor - Loading	0.816	0.809	0.755	
X4	TRUST3	TRUST1	TRUST2	
Factor - Loading	0.79	0.768	0.764	
X5	COST2	COST1	COST3	
Factor - Loading	0.808	0.789	0.771	

Source: Data processing results of the research team.

#### Exploratory Factor Analysis for the Dependent Variable

The conditions for exploratory factor analysis for the dependent variable also comply with the four conditions set for the independent variable. The results of exploratory factor analysis for the dependent variable "accounting software applications in Public non-business unit" are presented in Table 5. KMO coefficient =  $.739 \geq 0.5$ , sig =  $0.000 < 0.05$ , the Factor - Loading coefficient of the 3 dependent variables are all  $\geq 0.5$  and the Percentage of variance is  $81.543\% > 50\%$ . In addition, Eigenvalues Coefficient =  $2.446 > 1$ . The results of exploratory factor analysis of the dependent variable all meet the conditions, so 3 dependent variables are re-

**Table 5. Results of Exploratory Factor Analysis for the Dependent Variable.**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				.739		
Bartlett's Test of Sphericity				Approx. Chi-Square		312.432
				df		3
				Sig.		.000
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.446	81.543	81.543	2.446	81.543	81.543
2	.326	10.860	92.403			
3	.228	7.597	100.000			

Source: Data processing results of the research team.

tained and used in the following analyses.

#### 4.3. Linear Regression Analysis

We test the hypotheses set out in the research methods section using the Multiple Linear Regression model. This test will evaluate the relationship between many variables, including a dependent variable and many independent variables.

Basic multiple regression equation:  $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \dots + \beta_nX_n + e$

However, in this study, we base our assessment on information from the research sample set. Thus, estimates and tests of population information are conducted on the information of the sample set. Therefore, the term error will not be mentioned but only about the residual. We perform linear regression analysis with corresponding parameters from the sample set and then extrapolate to the population. The linear regression equation on the sample is written as follows:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \varepsilon$$

In there:

Y: dependent variable Application of accounting software at Public non-business unit

X1, X2, X3, X4, X5: independent variables are Perceived ease of use, Leadership style, Perceived usefulness, Trust, Cost respectively.

$\beta_0$ : regression constant

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ : regression coefficients

$\varepsilon$ : residual

With the nature of this research being confirmation, that's why we chose the Enter method - Entering the variable at the same time. The results of linear regression analysis are shown in Table 6,7,8.

#### Linear Regression

Adjusted R square coefficient =  $.726 (>0.5)$  shows that 5 factors Perceived ease of use, Leadership style, Perceived usefulness, Trust, Cost have an impact on Accounting software application at Public non-business unit. In addition, this



**Table 6. Linear Regression Results.**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.856 <sup>a</sup>	0.733	0.726	0.39961	1.931

a. Predictors: (Constant), LDS, PU, COST, PEU, TRUST.

b. Dependent Variable: ALCT.

Source: Data processing results of the research team.

**Table 7. ANOVA<sup>a</sup> Test.**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	79.017	5	15.803	98.964	.000 <sup>b</sup>
	Residual	28.744	180	.160		
	Total	107.761	185			

a. Dependent Variable: ALCT.

b. Predictors: (Constant), LDS, PU, COST, PEU, TRUST.

Source: Data processing results of the research team.

**Table 8. Multivariate Regression Results.**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	-.013	.178		-.070	.944		
	PU	.261	.044	.285	5.940	.000	.645	1.550
	PEU	.088	.041	.105	2.151	.033	.617	1.621
	TRUST	.544	.052	.523	10.468	.000	.594	1.685
	COST	.046	.040	.052	1.151	.251	.715	1.398
	LDS	.100	.041	.109	2.447	.015	.744	1.343

a. Dependent Variable: ALCT.

Source: Data processing results of the research team.

result shows that the model's suitability level is relatively high because 5 independent factors explain 72.6% of the influence on software applications. However, this fit is calculated on the sample data set. To test whether the results can be extrapolated to the whole population, we continue to test the model's suitability.

**Hypothesize**

Hx: Perceived ease of use, Leadership style, Perceived usefulness, Trust, Cost and the factor of Accounting software application at Public non-business unit have no relationship with each other.

Hy: Perceived ease of use, Leadership style, Perceived usefulness, Trust, Cost and the factor of Accounting software application at Public non-business unit are related to each other.

Choose significance level alpha = 0.05 corresponding to a 95% confidence level

The ANOVA table gives us the test result F = 98.964 and the F test sig value is 0.000 < 0.05, so the regression model is appropriate. The results of the ANOVA table show that Sig < 0.05: Reject the hypothesis Hx, meaning R Square = 0.733

≠ 0, in a statistically significant way, the regression model in this study is appropriate and can be generalized. for overall. Perceived ease of use, Leadership style, Perceived usefulness, Trust, Cost and the factor of Accounting software application at Public non-business unit are related to each other.

**Results of Multivariate Regression Analysis**

In the multivariate regression results table, we have two regression coefficients: unstandardized regression (called B) and standardized (Beta). Because the constant in the unstandardized regression coefficient column is sig = 0.944 (>0.05), we use the result in the standardized regression column Beta. The regression coefficient of the COST factor has sig = 0.251 (>0.05), so this factor is not meaningful in the regression model, the COST factor has no impact on the dependent variable ALCT. The remaining factors including PU, PEU, TRUST, LDS all have sig < 0.05, so these factors are all statistically significant. In other words, these factors all impact the dependent variable ALCT. The regression coefficients of the four factors all have positive signs, which means they have a positive impact on the application of ac-

counting software at Public non-business unit and the model's hypothesis is accepted. Along with that, the variance magnification factor VIF in the regression model is <2, meeting the best conditions (Tho, 2014). This proves that the study did not have multicollinearity. The regression equation for the standardized Beta coefficients is presented as follows:

$$ALCT = 0.523TRUST + 0.285PU + 0.109LDS + 0.105PEU + \varepsilon$$

From the linear regression results and standardized regression equation, we can see the level of impact of each factor on the dependent factor. The level of impact is assessed based on the absolute value of the Beta coefficient. The larger the absolute value of Beta, the stronger the independent variable's impact on the dependent variable. Accordingly, the strongest impact is the TRUST factor with Beta = 0.523, second is the PU factor with Beta = 0.285, third is the LDS factor with Beta = 0.109 and last is PEU with Beta = 0.105.

## 5. DISCUSS RESEARCH RESULTS

The research has accomplished the goals set out in the problem statement. We have proposed factors affecting the application of accounting software in Public non-business unit, built models and put forward research hypotheses. Evaluate limitations in accounting activities at Public non-business unit. Determine the impact method and impact coefficient of four independent factors Leadership style, Perceived usefulness, Trust on the application of accounting software at Public non-business unit. However, the study also has some limitations:

First, because the total research population is very large business units, we are required to use the purposive sampling method. The purposive sampling method is one of the non-probability sampling methods, its representativeness is still low, and its generalization ability to the whole population is not high. Future research should select samples using a stratified method (one of the probability sampling methods), which will generalize and achieve more statistical efficiency.

Second, the research was conducted with all three groups of Public non-business unit with different funding sources: the group using entirely the state budget, the group with financial autonomy and the group with mixed funding sources. This can affect the degree to which factors influence the application of accounting software. The reason is that Public non-business unit with financial autonomy and partial financial autonomy can choose their own accounting firm. These units often find ways to make accounting activities more effective and provide the best financial accounting information and information for management accountants. Units that depend on the state budget need many processes to be approved for funding to use accounting software. Thus, to conduct in-depth research and provide more accurate assessments, we find it necessary to conduct separate research for each target group.

Third, the study only evaluated the scale using Cronbach's Alpha coefficient method and EFA exploratory factor analysis method and tested the theoretical model using linear regression analysis. To better measure the scale and test the theoretical model, modern analytical methods need to be used such as applying the linear structural model SEM.

Fourth, building a research model with 5 factors: Perceived ease of use, Leadership style, Perceived usefulness, Trust, and Cost can only explain 72.6% of the influence on software application in Public non-business unit, public industry. In addition to the factors selected to build the research model, external influencing factors such as regional economic conditions, professional qualifications of accounting personnel, changes in development policies of the Water and technological change are also likely to have a strong impact on the adoption of accounting software. Therefore, in future studies we can develop and incorporate the above factors into the model.

## ACKNOWLEDGEMENT

We give our gratitude to the Public non-business units for supporting this research.

## CONFLICT OF INTEREST

The authors reported no potential conflict of interest.

## REFERENCES

- Adams, D.A; Nelson, R.R.; Todd, P. A. (1992). Perceived usefulness, ease of use, and usage of information technology: A replication. *MIS Quarterly*, 16 (2): 227–247, doi:10.2307/249577, JSTOR 249577, S2CID 12996460
- Benbasat, I.; Barki, H. (2007). Quo vadis, TAM? (PDF), *Journal of the Association for Information Systems*, 8 (4): 211–218, doi:10.17705/1jais.00126
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13 (3): 319–340, doi:10.2307/249008, JSTOR 249008, S2CID 12476939
- Davis, F. D.; Bagozzi, R. P. & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models, *Management Science*, 35 (8): 982–1003, doi:10.1287/mnsc.35.8.982, S2CID 14580473
- Davis, F.D. (1986). A Technology Acceptance Model for Empirically Testing New End-User Information Systems: Theory and Results. *Sloan School of Management*, Massachusetts Institute of Technology.
- Decree on Regulations on the autonomy mechanism of Public non-business unit No. 16/2015/ND-CP dated April 6, 2015 of the Government. Political Publishing House
- Gerbing & Anderson (1988). An updated Paradigm for Scale Growth Incorporating Unidimensionality and Its Assessments. *Journal of Marketing Research*, pp.186 - 192.
- Hendrickson, A. R.; Massey, P. D. & Cronan, T. P. (1993). On the test-retest reliability of perceived usefulness and perceived ease of use scales. *MIS Quarterly*, 17 (2): 227–230, doi:10.2307/249803, JSTOR 249803
- Trong, H., & Ngoc, C.N.M. (2008). *Analyze research data with SPSS (2nd ed)*. Ho Chi Minh University of Economics. Publisher: Hong Duc.
- Law amending and supplementing a number of articles of the law on cadres, civil servants and public employees law No. 52/2019/QH14. National Political Publishing House, Vietnam
- Loi, N. V. (2008). *Accounting Principles Textbook*, Finance Publishing House, Hanoi.
- Lunceford, B. (2009). Reconsidering Technology Adoption and Resistance: Observations of a Semi-Luddite. *Explorations in Media Ecology*. 8 (1): 29–47. doi:10.1386/eme.8.1.29\_1. S2CID 256491768.
- Ministry of Finance (2010). Circular No. 185/2010/TT-BTC guiding amendments and supplements to the Public Administration Accounting Regime issued together with Decision No. 19/2006/QD-BTC dated March 30/ 2006.
- Tho, N.D. (2014). *Textbook of Scientific Research Methods in Business (2th ed)*. Hanoi Vietnam. Publisher: Finance.
- Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information Systems Research*, vol. 11, pp. 342–365

Zen, N. N.; Hong, H.B.; Huong, L. T. X.; Tram, L. T. H. & Tu, P. M. (2021). Factors affecting the application of human resource management (hrm) software in Vietnamese insurance enterprises. 13th Neu-Kku *International Conference Socio-economic and environmental issues in development*, pp.813-822.

Zhang, Y., Wan, G., Huang, L. & Yao, Q. (2015) Study on the Impact of Perceived Network Externalities on Consumers' New Product Purchase Intention. *Journal of Service Science and Management*, 8, 99-106. doi: 10.4236/jssm.2015.81012.

---

Received: September 20, 2023

Revised: September 22, 2023

Accepted: September 27, 2023

Copyright © 2023– All Rights Reserved

This is an open-access article.