



## International Journal of Economic Research

ISSN : 0972-9380

available at <http://www.serialsjournals.com>

© Serials Publications Pvt. Ltd.

Volume 14 • Number 16 (Part 3) • 2017

# Factors Affecting Selection of Accounting Software for Small and Medium Enterprises: An Experimental Survey of the City of Da Nang in Vietnam

Le Anh Tuan<sup>1</sup>

<sup>1</sup>Faculty of Accounting, Duy Tan University, Viet Nam. Email: [latuan0507@gmail.com](mailto:latuan0507@gmail.com)

## ABSTRACT

The purpose of this study was to determine the factors that affect selection of accounting software by small and medium enterprises (SMEs) in Da Nang city. Through a mixed-method study on the basis of the survey of more than 300 SMEs in a variety of fields, the hypothetical model has five factors that influence selection of software by enterprises: user requirements, features of accounting software, the cost of using accounting software, reputation of the software vendor and service support conditions. Quantitative statistics show that the two most influential factors for decision making are user requirements and the cost of using accounting software. In addition to these factors, there are other factors as well that have significant impact on the outcome of the choice of accounting software. The paper also outlines a number of policy implications for managers at local SMEs to make better informed decisions about accounting software for their operations.

**Keywords:** Accounting software selection, Accounting systems, SME, Da Nang.

## 1. INTRODUCTION

Vietnam's economy is increasingly improving under globalization, which is also impacting on the characteristics and functioning of small and medium enterprises (SMEs) in the country. This requires SMEs to update their accounting systems and harmonize them with international trends and facilitate their operations. An efficient accounting system leads to better business operations and improved quality of service to consumers, which, in turn, may lead to enhanced business opportunities. What are the factors that affect the choice of software by SMEs in Vietnam to update their accounting systems have not been fully studied in the past. The present study was designed to gain an in-depth insight of the factors that affect the choice of accounting software by SMEs in Da Nang city.

## **2. THEORY**

Because accounting software is an information technology product, and the subject of research is the decision making process to choose accounting software, the authors have followed two theories in their research : the theory of behavioral intent and the theory of consolidation to acquire and use technology as the basis for analyzing the factors influencing the choice of accounting software (intention to purchase accounting software), because this intention will lead to real behaviour in decision making.

### **2.1. Theory of Planned Behavior (TPB)**

Ajzen's (1991) planned behavior theory (TPB), developed from the Theory of Reasoned Action (TRA), is the pioneering theory in the field of psychosocial research. The TRA model shows behavior that is determined by the intention to do that behavior. The two main factors influencing intention are subjective attitudes and standards. From the rational action theory, the authors have developed and improved to produce a theory of behavior that comes from the limitations of the human beings, who have little control over determining factors. Apart from the two factors that affect individual behavior according to the theory of action, the third factor is the cognitive behavioral control factor. This factor reflects how easy or difficult it is to perform the behavior and whether the behavior is controlled or restricted.

Independent variables: User requirements, software features, and software vendors in the authors' proposed model will be explained through behavioral variation in the TPB model. When an accounting software and its features meet the requirements of the user, and is backed by good service support or prestige of the software vendor, the manager/user will have good attitude towards the product. Attitude towards an accounting software affects the intention to choose to buy and use accounting software.

Behavioral modification in the TPB model contributes to explain the supportive variables in the research model proposed by the authors. Cognitive behavioral control reflects the ease or difficulty of performing behavior, depending on the availability of resources and the opportunities for behavior. The main support condition is the availability of the resources to the business to be able to choose and use accounting software. If the business support conditions for the use of accounting software are met, the higher the level of behavioral control decision making decisions are made.

The standard deviation in the TPB model contributes to explain the social variable in the model of the authors' research. Favorable or unfavorable opinions of the people around the decision maker affect his/her perception of the product. Thus, the opinions of the people around (especially the opinions of experts) will influence the intention to choose an accounting software for the enterprise.

### **2.2. Unified Theory of Acceptance and Use of Technology (UTAUT)**

Venkatesh et. al., (2003) unified the theoretical models of user acceptance of technology and incorporated them into the theoretical framework. The four factors that are the direct determinants of acceptance and behavior are the expected effects, expected usability, social impact, and supportive conditions. Venkatesh et. al., (2012) constructed an additional approach to the original UTAUT2 model, which integrates the motivational factors, value, and habits into the original UTAUT model.

Variable cost of software usage is explained through the price value variable in the UTAUT2 model. When the benefits of using an accounting software that is appropriate or greater than the cost of doing so

will have a positive impact on the choice of accounting software. In addition, if the cost of an accounting software matches the price that the company is willing to pay, then the intention to choose the accounting software of that company will be high.

Assisting conditional variables in the proposed model of the authors are explained corresponding to the conditional variable in the UTAUT2 model. Support conditions are the extent to which an individual believes that an existing organization and technical infrastructure support the use of the accounting system (Venkatesh et. al., 2003, p. 453). When accounting software suits the available resources of enterprises, the intention is to choose the accounting software of the company is high.

### 3. SUBJECTS AND SCOPE OF STUDY

The subjects of study are small and medium enterprises operating in different fields in Da Nang city. To diversify the subjects, the authors randomly sampled them based on the nature of business, education level, age, and sex. Scope of time: The study was conducted in 4 months from August 2017 to December 2017.

### 4. RESEARCH METHODOLOGY

In order to provide the reader with a thorough look, the article uses a mixed method or a research method that combines both qualitative and quantitative research. Qualitative research is conducted at an early stage in order to identify patterns and variables that are relevant to the research context. Quantitative research is based on the information obtained from the questionnaire survey to address the objectives of the research. The five-level Likert scale is used to measure the value of variables. Since this is a quantitative study, sampling is a non-probability sampling design with convenient sampling. The questionnaire is used as the data collection tool needed for the quantitative analysis mentioned above. The Cronbach's alpha coefficient model (Cronbach's Alpha) and the EFA exploratory factor analysis (CFA) model are used to evaluate the reliability and validity of the scale, validating the model through the Pearson correlation coefficient. Interpretation of data through a number of descriptive statistical tools is made possible using the statistical data processing software SPSS 20.0.

### 5. RESEARCH MODEL

The authors have synthesized and selected five factors, which according to them, have influenced the choice of accounting software for SMEs in Vietnam. These factors are user requirements, software features, software usage fees, reputation of the software vendor and service support conditions.

#### Research Hypotheses of the Model

**H1:** User requirements affect the choice of accounting software for SMEs.

The requirement of accounting software users is a condition that must be met by the accounting software of choice. When an accounting software meets most of the requirements of the user, the enterprise will give priority to the choice of this software. This was the criterion Nguyen Phuoc Bao An and associates (2012) gave to enterprises to evaluate while selecting accounting software for their use. Research by Ahmad A. & Abu-Musa (2005) also addressed the current and future needs of users that influence the choice of

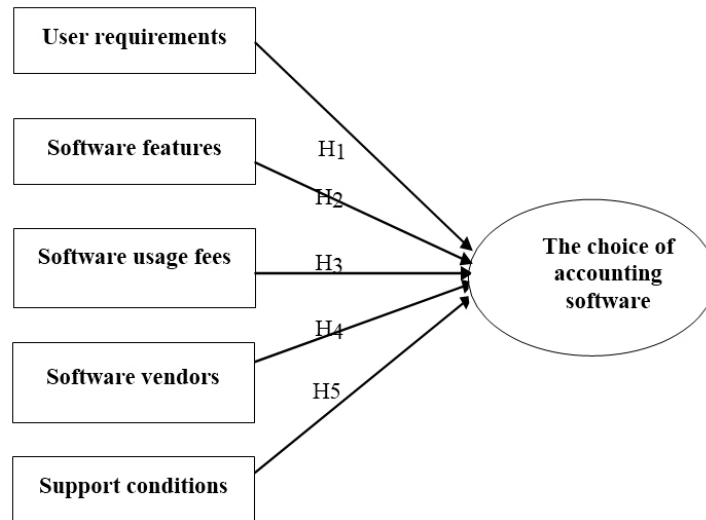


Figure 1: Research model

an accounting software. In Vietnam, research by Thai Ngoc Truc Phuong (2013) and Huynh Thi Huong (2015) also showed that user requirements are the factors that influence the choice of an accounting software of SMEs.

**H2:** Features of software affect the choice of accounting software for SMEs.

Features of an accounting software are the characteristics and functions of the software. An accounting software must ensure features such as confidentiality and data security, flexibility, speed of data processing and ease of operation. These are the features that businesses give priority when choosing an accounting software. According to Elikai et. al., (2007) and Huynh Thi Huong (2015), software features are considered as the most important factor in selecting an accounting software. The influence of these factors was also mentioned in the studies by Anil S. Jadhav & Rajendra M. Sonar (2009), Thai Ngoc Truc Phuong (2013), and Nguyen Van Diep (2014).

**H3:** The cost of using software affects the selection of accounting software by SMEs.

The cost of using software is the total cost that businesses spend on using an accounting software. This cost includes: royalty fees, maintenance and upgrading costs, installation costs, training costs, etc. SMEs are often financially constrained. Therefore, they will choose the accounting software that has the lowest cost but can meet their basic needs. Some studies related to this factor are Elikai et. al., (2007), Anil S. Jadhav & Rajendra M. Sonar (2009), Thai Ngoc Truc Phuong (2013), Huynh Thi Huong (2015) and Pham Thi Tuyet Huong (2016).

**H4:** Credibility of software vendors influences the choice of accounting software for SMEs.

Software vendor factors are vendor-related criteria for evaluating and selecting accounting software and include quality and promptness of vendor support services and vendor credibility. SMEs have limited financial and human resources and cannot develop their own accounting software. Therefore, they are dependant on software suppliers, who meet their requirements at a reasonable cost and are reliable. In addition, if the software vendor has a good reputation and its accounting software is used by many businesses in the same industry or scale, it will affect the choice of accounting software for joint ventures. Software

vendor support is considered to be a significant influence in the study by Vo Van Nhi et. al., (2014). This factor is also mentioned in the study by Ahmad A. & Abu-Musa (2005), Anil S. Jadhav & Rajendra M. Sonar (2009) and Huynh Thi Huong (2015).

**H5:** The condition of support affects the choice of accounting software for SMEs.

Support conditions at the vendor level are the conditions of the technical infrastructure that enterprises currently have to support the use of accounting software. Due to financial constraints, SMEs will choose accounting software that is compatible with the existing technical infrastructure with them so that the enterprise does not have to spend extra on machinery and equipment for the use of the software. This factor is considered to affect the choice of accounting software according to the study by Ahmad A. & Abu-Musa (2005) and Anil S. Jadhav & Rajendra M. Sonar (2009). In Vietnam, the study by Thai Ngoc Truc Phuong (2013), through a survey of SMEs, also showed that the factor of mechanical equipment (support conditions) influenced the choice of accounting software.

## 6. RESEARCH RESULTS

### Overview of Research Sample

In this study, the authors selected the samples in a convenient way, they directly interviewed the individuals who held positions in SMEs in Da Nang city. Prior to the quantitative survey, the authors conducted a group discussion of about 10 experts in the field of accounting related content prepared in advance.

After the preliminary quantitative survey, the authors conducted a formal survey. The sampling period was from 10/09/2017 to 10/11/2017 at various companies at random.

There were 350 questionnaires (including 100 preliminary questionnaires), collected 340 votes (97.14%), and eliminated 10 invalid votes. So, the final sample size was 340.

### Verification of Scale Quality by Cronbach's Alpha Reliability

Based on the Cronbach's Alpha coefficient analysis, six components of the job satisfaction and dependency scale of reliability are greater than 0.6 and are reliable for use. This shows that the scale is statistically significant and the reliability coefficient is required. It should be included in the EFA discovery factor analysis.

**Table 1**  
**Results of reliability analysis of variable groups by Cronbach's alpha coefficient**

<i>S.No.</i>	<i>Variables</i>	<i>Number of observation variables</i>	<i>Cronbach's Alpha coefficient</i>
1	User requirements (UR)	6	0.892
2	Software features (SF)	4	0.867
3	Software usage fees (SUF)	3	0.660
4	Software vendors (SV)	6	0.895
5	Support conditions (SC)	2	0.789
6	The choice of accounting software (CAS)	6	0.836

*Source:* Composer.

Factors determining the choice of accounting software are Cronbach's Alpha coefficients of 0.836 > 0.6. This can ensure reliability of the scale. The correlation coefficient of the observed variable is greater than 0.3.

Based on the Cronbach's Alpha coefficient analysis, there are five components of factor estimation that affect the choice of accounting software and the dependent factor have a reliability greater than 0.6.. Other CUF2 variables should be eliminated because their reliability is less than 0.6. This shows that the scale is statistically significant and the reliability coefficient is required. It should be included in the EFA discovery factor analysis.

### Analysis of the EFA Factor of Independent Variables

First, to check if the independent factors are relevant for inclusion in the EFA discovery factor analysis, we conducted Bartlett's test and the KMO coefficient.

**Table 3**  
**KMO Coefficients and Bartlett's Test of Independent Factors**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.743
Bartlett's Test of Sphericity	Approx. Chi-Square	3126.480
	Df	171
	Sig.	.000

Based on Table 2, the KMO value is 0.743 > 0.5 and the Bartlett's Sig value of 0.000 < 0.05 indicates that the variables are correlated, so the model is suitable for inclusion in the exploratory factor analysis.

The extraction method in factor analysis requires that extracts of Eigen value be greater than 1 to be retained in the analytical model. The extracted factors have an Eigen value greater than 1 and a stop when extracts at factor five have an Eigen value of 1.060 > 1. The total deviation of the five factors equals 67.403% > 50% of this. The ability to use these five factors explains the 67,403% variability of the observed variables. Based on the factor rotation paradigm when running EFA, the remaining 19 variables were categorized into 5 factors and no variables were excluded.

### Analyzing Factor Determines the Choice of EFA Factor

The results of the EFA discovery factor analysis with KMO are 0.810 > 0.5 and Bartlett's test has a significant value of 0.000 < 0.05, so it is possible to confirm the appropriate data for factor analysis. (Table 3)

**Table 3**  
**KMO Coefficients and Bartlett's Test of Choice Factor**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.810
Bartlett's Test of Sphericity	Approx. Chi-Square	941.220
	Df	15
	Sig.	.000

The analysis was divided from the six adaptation variables into a single factor with an Eigen value of 3.225 and a total variance of 64.497% > 50% (Table 4).



**Table 4**  
**Total variance of the factor of choice**

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.429	57.143	57.143	3.429	57.143	57.143
2	.888	14.801	71.944			
3	.676	11.260	83.203			
4	.469	7.824	91.027			
5	.367	6.109	97.136			
6	.172	2.864	100.000			

### Analysis of Regression Models

After extracting the elements from the exploratory factor analysis, we conducted a regression analysis to determine the factors influencing the choice of the software. Regression analysis was conducted with five independent factors: user requirements, software features, cost of accounting software, accounting software provider, and support conditions.

The value of each factor used to run the regression was the mean of the observed variables of that factor.

The multivariable linear regression of this study has the form:

Regulated normalization will be:

$$CAS = 0.066SV + 0.157SF + 0.688UR + 0.017SC + 0.031SUF$$

## 7. DISCUSSION

Based on the results of the study, the authors propose a number of steps that correspond to each of the factors that influences the selection of accounting software for SMEs so that enterprises can choose the appropriate accounting software. We also make some recommendations for the software vendors as follows:

### Firstly, for user Requirements

Before selecting an accounting software, the enterprise must take into account its organization of production and business activities and the requirements of general management and specific departments to choose suitable accounting software. Enterprises should select accounting software which is suitable for the characteristics and size of enterprises, in general, as well as characteristics of the accounting organization in particular. Businesses can refer to other enterprises of the same size and areas of business and business lines to find out the kind of accounting software they use and utilize this information to effectively select the appropriate accounting software. The selected accounting software must be user friendly, easy to use, easy to check, and easy to access information. Therefore, software vendors need to design software products to meet the above requirements.

For accounting staff or professionals, a user-friendly, easy-to-use accounting software will make it easier for them to carry out their work. When a business orders software for accounting, the accounting

department should interact with the software development unit to optimize its features that are appropriate for the department.

### **Second, for Feature Elements of Software**

**For businesses:** The important features of accounting software that businesses care are its flexibility, security and safety of data, high reliability and accuracy, and fast, stable processing capability. Among the aforementioned four features of the accounting software, security and safety of data and reliability and high accuracy are the two features that are considered most important. Securing accounting information and accounting data is always a top priority for businesses. Therefore, enterprises should choose the software that has high security as well as ensures data security. These are the basis for enterprises to select appropriate accounting software to ensure security and confidentiality of accounting information. In addition, businesses need to choose accounting software which ensures reliability and accuracy with fast and stable processing speed. In today's digital age, time is always considered a matter of survival, so timely information provision with reliable, accurate data will support good decision-making. Further, businesses should choose flexible accounting software to be able to update the changes such as changes in accounting regime or the changes required by the user.

**For software vendors:** In order to ensure the above necessary features of accounting software, software vendors need to improve and have solutions to improve their accounting software products. The objectives of the vendors should be as follows:

- Improve the speed of data processing, ensuring the ability to work well when many people use the software at the same time.
- Enhanced software flexibility but still stay within the limits of data security and security.
- Minimize mistakes to provide reliable information and high accuracy.
- Minimize failure incidents in accounting software to ensure that accounting data is safe and secure.

### **Third, for the Software Vendor Factor**

The research results show that the “software vendor” factor influences the choice of accounting software by the businesses. Specifically, there are two factors: the support and the credibility of the software vendor. Businesses need to select reputable software vendor that have good support services for businesses. Therefore, when choosing an accounting software, enterprises should gather information on software vendors to identify the reputed ones. The businesses should evaluate quality and promptness of support services of the vendors through parameters such as their ability to support training of software users, troubleshooting ability, and support in software maintenance and upgrades, etc. This evaluation may be through reference to information from those who have used the targeted software earlier, and policy of software vendor on support services for businesses, when using their accounting software.

Software vendors need to improve the quality of support services for businesses using their software and enhance their credibility. When new businesses start using their software, they need to provide good guidance to users through user's guides/manuals and organise on-hand training courses for staff of business enterprises. In the process of using, if enterprises have problems or data errors, the software vendors



must assist the enterprises to handle them promptly and promptly. Periodically, vendors should send their professionals for software maintenance to the businesses. To become the best support service provider, the vendors need to build a team of professional staff with high professional qualifications to be able to support the customers well. As such, software vendors must regularly organize training courses, work skills training, communication skills, and in-depth skills training for their staff. When businesses are satisfied with the support services as well as the quality of accounting software products, the prestige of software vendors is also enhanced.

Fourth, for cost of software: The cost of software licenses as well as the costs incurred in the use of accounting software such as maintenance fees and software upgrades are important factors for consideration by the businesses. When choosing accounting software, businesses should calculate and compare the costs of different software packages to be able to choose the accounting software suitable for the cost that the business is willing to spend. Software vendors, with fierce competition of the market, need to create products that are both fully responsive and competitive in the market to increase their affordability and acceptability.

Fifth, for support conditions: enterprises should select the software that is compatible with existing hardware and network technology and with other software that are in use in businesses. Enterprises should ensure the support conditions necessary to put the accounting software into use. On the other hand, software vendors need to design software that integrates with other software so businesses can use it flexibly.

### References

- Abu-Musa, Ahmad A. (2005). *The Role of IT Governance in Improving Corporate Governance: A Proposed Model from Managerial Accounting Context*, The Journal of Trade & Finance, The Scientific Journal of the Faculty of Commerce, Tanta University, Egypt, summer, Vol. 25. Number 2, pp. 55-118.
- Ahmad A & Abu-Musa (2005). *The Determinates Of Selecting Accounting Software: A Proposed Model*. The Review of Business Information Systems – Summer 2005, Volume 9, Number 3: 85-110.
- Ajay Adhikari et. al., (2004). *Firm characteristics and selection of international accounting software*. Journal of International Accounting, Auditing and Taxation. Volume 13. Number 1: 53-69.
- Ajzen, I. (1991). *The theory of Planned Behaviour*, Organization Behaviour and Human Decision Processes, No 50, pp. 179–211.
- Anil S. Jadhav & Rajendra M. Sonar (2009). *Evaluating and selecting software packages: A review*. Information and software Technology, Volume 51. Issue 3: 555-563.
- Anil S. Jadhav, Rajendra M. Sonar (2011). *Framework for evaluation and selection of the software packages: A hybrid knowledge based system approach*, The Journal of Systems and Software.
- Elikai et. al., (2007). *Accounting Software Selection and User Satisfaction Relevant Factors for Decision Makers*. The CPA Journal.
- Venkatesh et. al., (2003). *User Acceptance of Information Technology: Toward a Unified View*. MIS Quarterly Vol. 27, No. 3, pp. 425-478.
- Huyền Thị Thu Hương (2015), *Các nhân tố ảnh hưởng đến việc lựa chọn phần mềm kế toán tại các doanh nghiệp nhỏ và vừa tại TP. Hồ Chí Minh*, Luận văn thạc sĩ, ĐH kinh tế TP.HCM.
- Thái Ngọc Trúc Phương (2013), *Các tiêu chí lựa chọn phần mềm kế toán áp dụng phù hợp cho doanh nghiệp nhỏ và vừa – Nghiên cứu trên địa bàn Quận Tân Phú TP. Hồ Chí Minh*, Luận văn thạc sĩ, TP.HCM.

