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Application of Technology Acceptance Model to Assess Intention to Use Online Accounting Software in Vietnamese Enterprises

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Abstract

With the strong development of information technology, cloud computing has brought useful applications to handle work via the internet, including the accounting field. Applying cloud computing technology in accounting work in Vietnamese businesses is still in the early stages of implementation. The study collected data from 220

individuals who are accountants and managers in businesses in Vietnam to evaluate the intention to use online accounting software. Using the technology acceptance model (TAM), the study indicates that perceived usefulness and perceived ease of use of online accounting software shall have a positive impact on businesses' choice to use.

Keywords: Online Accounting Software, Cloud Computing, TAM, Perceived Usefulness, Perceived Ease of Use, Intention to Use

1. Introduction

The rapid development of information technology has attracted a steadily increasing number of internet users, providing encouragement and opportunities for using the internet in providing goods and services globally (Ardiansah *et al*, 2020). In Vietnam, the rapid development of the Internet has turned Vietnam into a country with developed Internet in the world and a potential market when exploiting and providing products and services via the Internet (Ha *et al*, 2020). Cloud computing applications are considered a major advancement in information technology because they provide an open environment that enables online collaboration and data sharing between users who are far away from each other. According to a report by Gartner (2012), the amount of money spent on cloud computing applications worldwide was estimated about 76 billion USD in 2011 and is expected to reach 35.5 billion USD in 2016. In Vietnam, Cloud computing technology is still new and develops slowly compared to the rest of the world. The pioneer was IBM Vietnam when it opened its first cloud computing center in September 2008. Many fields apply cloud computing technology such as office management, human resources, customer relations, accounting...

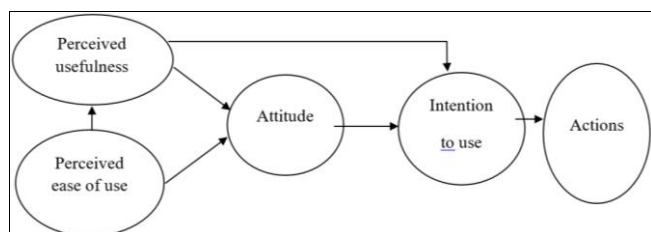
Cloud-based accounting software (online accounting software) is accounting software that individuals can use to update information and view online anytime, anywhere, with any device connected to the Internet. Therefore, cloud-based accounting software differs from traditional software because it does not require: installation on a computer; Connect to the server and operate on the internal network. This software helps accountants and business administrators work professionally and conveniently, reducing the pressure of investing in facilities and human resources because there is no need to invest in servers or server administration staff. ...Administrators and accountants can view information anytime, anywhere, on any device that can connect to the internet such as phones, tablets... Outstanding advantages of online accounting software compared to traditional accounting software is about timely updates and continuous backup.

Currently, Vietnam has more than 100 businesses providing accounting software. Misa Joint Stock Company, Fast Software Company are some of the domestic enterprises that introduced and provided the first online accounting software in 2013, followed by other software companies such as Lac Viet Informatics Joint Stock Company, ASIA Software Development Joint Stock Company - AsiaSoft... In June 2016, Fast Accounting Online online accounting software had about 800 customers who are small and medium enterprises, accounting for 22% of the total number of customers of the same period. The number of customers choosing online accounting software is increasing, from 8% in 2013 to 32% in the first 6 months of 2016 ^[1]. In January 2020, the number of customers using this software in Vietnam reached nearly 6,000 customers.

Although there has been much development following the general trend of the world, in general, the application of online accounting software by Vietnamese businesses is still in the early stages. Users are still afraid of the confidentiality and security of information when using it as well as the usefulness and ease of use compared to traditional accounting software. Therefore, the goal of the study is to understand the factors that affect the intention to use online accounting software of accountants and business managers in enterprises in Vietnam.

2. Research model

The Technology Acceptance Model (TAM) is a model based on the concepts of perceived ease and usefulness of use to explain factors that influence individuals' intentions and behavior. Factors in the use and acceptance of technology were first researched and introduced by Davis (1986). After that, the TAM model was widely used in assessing users' acceptance of information, explaining user behavior through assessing the impact of information on users from the perspective of trust, attitudes and intentions. Attitudes toward use can be positive or negative toward information. The latest studies according to the TAM model show that "perceived usefulness" and "perceived ease to use" have a direct influence on behavioral intention, thus eliminating the need to build attitudes (Arora & Sahney, 2018; Lai, 2017; Mallya & Lakshminarayanan, 2017). Therefore, using the TAM model can make assessments and predictions about the intention to use technology based on the factors "Perceived usefulness" and "Perceived ease of use" for individuals' user. The TAM model is widely used because it explains cases where individuals may not like but still use information because of perceived usefulness (bringing better results).



Source: Davis, 1989^[2]

Fig 1: Technology Acceptance Model (TAM)

According to the TAM model (Fig 1), perceived usefulness is understood as the degree to which an individual believes that accepting the use of information technology will increase work efficiency. Work efficiency is also shown by the fact that individuals may not particularly like information technology, but they feel that using it will help them increase their salary and position at work (Davis, 1989)^[2].

Perceived ease of use is defined as an individual's perception that using information technology will require no real effort. Or users of new technology will be able to do so quite easily when comparing the effort expended and the perceived benefits gained (Davis, 1989^[2]; Li, 2010).

The TAM model also suggests that actual use of a technology increases performance because perceived usefulness is a direct determinant of behavioral intention. The TAM model also points out that any factors not mentioned in the TAM model ultimately affect the

usefulness and ease of use, influencing the intention and behavior of using information technology.

3. Research methods

We conduct surveys through questionnaires sent to accountants and business managers. The questionnaire is divided into 2 main contents: respondent information and intention to use cloud-based accounting software on a 5-step Likert scale (from 1-Strongly disagree to 5-Strongly agree). The model's variables inherit the scale of previous studies by Davis *et al.* (1989)^[2], Venkatesh *et al.* (2003)^[9], including:

Perception of usefulness: Includes 4 observed variables: usefulness at work, increased work productivity, improved results and tools to make working easier with online accounting software at work.

Perception of ease of use: To evaluate the ease of use of this software, including 3 variables: ease of interaction, ease of learning to use, and flexibility of use as desired.

Intention to use software: Built with 7 observed variables including intention to use in the future, will use regularly, use because it is useful, convenient, easy to use.

Table 1: Variable description

Factors	Cod	Variables
Usefulness (U)	U1	1. I find Online accounting software useful for work
	U2	2. Using Online accounting software will increase work productivity
	U3	3. Using Online accounting software helps me improve my work results
	U4	4. Online accounting software is a tool that helps me work more easily
Ease of use (E)	E1	1. I find the interaction with the Online accounting software clear and easy to understand
	E2	2. Learning how to use online accounting software is easy for me
	E3	3. I find it quite easy to use Online accounting software as desired
Intention to use (I)	I1	1. I plan to use Online accounting software in the future
	I2	2. I think Online accounting software is complicated to use
	I3	3. I plan to use Online accounting software regularly
	I4	4. Online accounting software is very useful, I will recommend my business to use it
	I5	5. Online accounting software is very easy to use, I will recommend my business to use it.
	I6	6. Online accounting software is very easy to use with connected devices, I will recommend my business to use it.
	I7	7. Due to concern of data insecurity, I hesitate to use online accounting software at work

The implementation stages are described as follows:

Step 1: Create a tested survey on Google Docs and send it to 10 experts, including researchers and accountants, to evaluate the validity and understandability of the questions. Edit the questions according to comments received to complete the survey.

Step 2: Send the official survey to up to 220 businesses to accountants and managers via email. The study used convenience sampling by sending survey respondents to friends, relatives, partners.

Step 3: Collect, process and analyze data on SPSS 20 software. The total number of valid ballots collected is 112. Details of survey respondents are shown in Table 2.

Table 2: Profile of the individuals

Characteristics		No = 112	Percentage (%)
Gender	Female	89	79.46
	Male	23	20.54
Age	< 30	50	44.64
	30 - 40	50	44.64
	> 40	12	10.71
Job position	Director	5	4.46
	Unit manager	17	15.18
	Accountant	88	78.57
	Assisstant	2	1.79
Working experience	< 1 year	6	5.36
	1- 5 years	59	52.68
	>=5 years	47	41.96
Educational level	Post graduate	30	26.79
	Bachelor	82	73.21
Total		112	100

Table 3: Profile of the companies

Characteristics		No = 112	Percentage (%)
Age of enterprise	< 5 years	37	33.0
	5-10 years	44	39.3
	>10 years	31	27.7
Business location	North	106	94.6
	Central	0	0
	South	6	5.4
Business sector	Trade & service	83	74.1
	Industry	15	13.4
	Other	14	12.5
Number of employees	<300 people	90	80.4
	>= 300 people	22	19.6
Total		112	100%

Regarding businesses responding to the survey, businesses established between the groups of less than 5 years, from 5-10 years and over 10 years are quite similar, the most is from 5-10 years (44; 39.3%), the least over 10 years (31; 27.7%). Regarding geographical location, the majority of enterprises are in the North (106; 94.6%), the South has only 6 enterprises (5.4%), and there are no enterprises in the Central region. Regarding business sector, the highest number of enterprises in the trade and service industry is (83; 74.1%), followed by industry (15; 13.4%), and the rest are in some other fields. Regarding the number of employees, small and medium-sized enterprises (under 300 people) are more (90; 80.4%) than large-scale enterprises. The above sample parameters reflect relatively consistent with the overall Vietnamese enterprises in general, mainly small and medium sized, business fields are trade and services.

4. Results and discussion

To evaluate the coherence of observed variables in each group, the study performed a reliability analysis of the scales. The results showed that all groups had Cronbach's Alpha coefficient greater than 0.7, proving that all observed

variables were sufficiently reliable in terms of cohesion within the group (Kline, 1998). Summary of reliability analysis is shown in Table 4.

Table 4: Reliability Statistics

Groups	Cronbach's Alpha	N of Items
1. Intention to use	0.944	5
2. Perceived Usefulness	0.957	4
3. Perceived Ease of Use	0.864	3

5. Conclusion

The study aimed to identify factors that affect the intention to use cloud-based accounting software. The results show that perceived usefulness and perceived ease of use both have a positive impact on the intention to use online accounting software in Vietnam.

The survey results also aim to provide reliable information for cloud-based accounting software providers in Vietnam in making business decisions. The theoretical basis also contributes systematically to research on information technology application behavior according to the TAM model.

However, the research results are still limited due to the non-random convenience sampling process with a small number, not representative of Vietnamese businesses. The application of cloud computing technology is not yet widely popular in the field of accounting in Vietnam, especially in the field of accounting. Large-scale studies with larger and more representative samples ensure generalizable results are recommended for further research.

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