

# Applying Excel Accounting Software to Small and Medium-sized Enterprises in Vietnam

Dang Van Sang<sup>a\*</sup>, Nguyen Thi Thuy Hong<sup>b</sup>, <sup>a</sup>Ho Chi Minh City Polytechnic College, Vietnam, <sup>b</sup>Hanoi Open University, Vietnam, Email: <sup>a\*</sup>[anhsang7176@gmail.com](mailto:anhsang7176@gmail.com), <sup>b</sup>[hong12@hou.edu.vn](mailto:hong12@hou.edu.vn)

Excel accounting software has numerous uses. Enterprises can design, make, as well as operate, maintain, update and upgrade the software. At the same time they can use accounting information extracted from the software. Excel accounting software has brought certain utilities and efficiencies to enterprises. Therefore, it is increasingly popular among small and medium-sized enterprises (SMEs), especially microenterprises in Vietnam. This study was conducted to evaluate and measure its attributes. Data was collected from SMEs in Ho Chi Minh City in 2019. Based on data used for analysis of 399 observations, the authors used descriptive statistics, Cronbach's Alpha scale analysis, and ANOVA analysis to measure the properties of Excel accounting software. The study results show it has seven (7) attributes including: (i) Organising and managing data; (ii) Complying with the accounting standards of the software; (iii) Software flexibility; (iv) Information safety and data security; (v) Quality in accounting books and reports; (vi) Convenience and (vii) Practicality. Based on the research results, the authors propose a number of recommendations to support SMEs and micro-enterprises, based on selecting Excel accounting software to computerise accounting work.

**Key words:** *Accounting, informatics, Excel accounting software, SMEs.*

**JEL Codes:** M40, M41, L70

## Introduction

Since the 2000s, Sang et al. have researched, designed, built and applied Excel software in accounting work. They have done so for a few businesses which they worked at as accountants, and achieved high results. Since then, Sang et al. have built a short-term training program for accountants to apply Excel in accounting work in businesses. In 2004, the book was compiled

and published nationwide, as "The practice of making accounting books - financial statements & VAT statements on Excel" (Sang et al., 2004). Many universities, colleges and secondary schools adopted it as an official reference, as a compulsory module in the training for economics students; especially in finance, accounting, and auditing.

Currently, many Vietnamese enterprises apply Excel accounting software. It has brought a certain utility and efficacy, through its direct deployment for microenterprises and SMEs in Ho Chi Minh City in many years for example. There has been different feedback from software users. However, no official research has surveyed, collected ideas, analysed or evaluate its application to accounting work.

Excel is unlike packaged accounting software provided and sold by software manufacturers, in which users only play the role of using, or operating the software. Instead, Excel accounting software users become designers, builders and operators. They also maintain, update, upgrade and use accounting information derived from software.

SMEs wish to use accounting software with the lowest cost but still meet job requirements, in accordance with the needs of business performance. Researchers have sought to support SMEs, with a basis for determining the reliability and applicability of Excel accounting software, as to whether to apply it in accounting work. Therefore, they conducted surveys, to measure the attributes of the software, for the purpose of evaluating its applicability to SMEs in Vietnam. Thus, the attributes of Excel accounting software include: Organising and managing data; Complying with accounting standards; Flexibility; Safety information; Quality of accounting books and reports; Design capability, Convenient use and practicality.

SMEs include microenterprises, small enterprises and medium enterprises (Vietnam Government, 2018). SMEs comprise the majority of enterprises, and are the main force in the economic development of Vietnam. Microenterprises are the smallest component of the SME sector, accounting for over 75% of all businesses. Developing businesses is an important task, especially for SMEs (Quang & Yen, 2019). However, SMEs still face other barriers such as: Management (including computerisation of management, including computerisation of accounting), recruitment of personnel, supervision of administrative procedures, informal charges, loan access, loan procedures and conditions, land accessing hindrances, etc.

Given the above reasons, studying the attributes of Excel accounting software is very necessary and meaningful, both in theory and experiment, especially for micro-enterprises.

## Research Overview

Elikai et al. (2007) evaluated survey data and compared the opinions of eight users, in selecting accounting software for enterprises, with opinions from software vendors. The results show that the function of the software is important in selecting the software for users, followed by cost and compatibility. In particular, the main function is the flexibility of the accounting software. Flexibility relates to real time processing, user friendliness, security, and the ability to upgrade. As to cost, initial costs and annual operating costs are more important than installation and training costs. Finally, the compatibility of an operating system is more meaningful than that of other aspects of hardware or software.

Jadhav & Sonar (2009) summarised and classified software evaluation criteria as follows: (i) The group of criteria related to characteristics includes: Software features, main objectives, completeness, flexibility for specific-type companies, upgrading capabilities for further internal and external development, integration with other tools and applications, security level of software (support policies, security, data safety ...), the number of concurrent users of an accounting software system. (ii) The group of criteria relates to suppliers, costs and benefits, hardware and software, output products including: Customised versions of a software package; Ability to customise software display; Ability to customise report forms; Interface type of software package; Ability to customise the model in the programming language; Integration with middleware supported by software packages (CORBA, DCOM, ...); Ability to integrate with database management systems; Ability to exchange data between organisations; Ability to run on many browsers; Number of modules in total and installed independently; Number of clients; Ability to split software packages into the servers; Ability to upgrade; Easy-to-understand interface; Support policies for beginners; Ability to present data effectively; Reporting as data is corrupted; Ability to use software in many different fields to solve different problems; Easy to use; Ability to run the program continuously, without interruption; Backup and restore; Fast processing. In addition, the results of this study help businesses evaluate and select accounting software.

Parry et al. (2010) studied customer values and relationships between software SMEs. Thus, According to the authors, the attribute of customer "value" of software SMEs in B2B environment includes 12 elements: Price; Software functions; The geographical location of the software company; Software quality; Communication; Ability to understand customers; Bilingual capabilities of the software; Relationship; Service; Profession; Trust; Expertise of staff. This study enables software suppliers to enhance the value of their customers, and thereby enhance the competitiveness of software vendors.

Griffith et al. (1999) assert that up to two thirds of all business projects of software package have failed. The source of these failures is the difference between businesses and the desire to

find a suitable business solution of pre-packaged software that tends to create a common application product on the market.

Thong (2009) surveyed SMEs and large enterprises. According to the survey result, 90% of businesses are interested in software that matches business characteristics and size, 78% are interested in consulting services, 65% are interested in price, 50% are interested in easy-to-use software. At the same time, the author has given factors that businesses are interested in, when selecting accounting software, including: Business size, business sector, carefully researched use of modules, after-sales support, finance-balancing resources, consulting experts and colleagues, easy-to-use software, suitability for the accounting workforce, compatibility with the business' technology system. Based on the research results, the author has proposed a number of solutions to organise the accounting system in terms of computerisation. However, because the sample includes both SMEs and large enterprises, the solutions offered by the author were quite general, not suitable for each business, etc. For SMEs, packaged accounting software is considered a suitable solution for IT application in accounting works. However, it is not easy to set up a packaged accounting software and not same to buying a favourite software product on the market (Hung, 2010).

Phuong (2013) argued that currently popular software is packaged and designed by software vendors. In addition, self-designed accounting software on Microsoft Excel is also used by businesses when they did not have conditions to apply software, due to investment funding and employee qualifications. The study also showed that 35 surveyed enterprises used packaging software (accounting for 70%), followed by self-designed software of enterprises using most of the Microsoft Excel platform (22%); 6% of enterprises used cracking software as well as without paying royalties, and outsourced software accounts for the lowest rate of 2% (Phuong, 2013).

Nhi et al. (2014) identified important criteria when selecting accounting software that SMEs should use, by measuring SMEs' satisfaction when applying the software. The scope is limited to the relevant criteria, including the quality of software and service providers in the process of software application. The technique of multiple regression analysis was used. The results showed that two main factors affect the satisfaction of SMEs in using accounting software, including: The ability to support enterprises by accounting software vendors, and the availability of accounting software. Service support when using accounting software, and the ability to create good relationships between accounting software suppliers and users, have a stronger impact on satisfaction level than the factor related to the quality of accounting software. This is an interesting discovery in Vietnam's accounting software market.

To organise accounting work in SMEs to suit the small scale of capital, employees and the moderate requirement of management, Dung (2017) referred to the integration of the general

ledger diary in Excel 2010, and said that accounting work became simple and suitable for SMEs. This contributed to "untying the knot" in transforming the operating model from household to enterprises.

Excel accounting software is the financial accounting management system on computers, for SMEs in Vietnam. The design and use of Excel accounting software is relatively easy. The information is correctly processed and quickly and reported in a timely manner. The book forms and accounting reports are designed simply. The design and usage costs are much lower than for other accounting software; its flexibility in particular is better than other software. Excel accounting software for SMEs has been used by many SMEs, especially micro enterprises in Vietnam (Sang, 2018).

The previous studies showed that most enterprises have used accounting software to support accounting work, contribute to timely information, and provide suitable information for users. However, there is no comprehensive study of Excel accounting software applied in SMEs. In this study, based on previous studies and expert interview results, the authors propose the attributes of Excel accounting software, to help SMEs build and complete their own accounting software that is consistent with their size and capital, to improve business performance, as follows:

Code	Scale
EAS1	Organising and managing data
EAS2	Complying with accounting standards
EAS3	Flexibility
EAS4	Security of information and Safety of data
EAS5	Quality of accounting books and reports
EAS6	Convenient use
EAS7	Practicality

## Research Method

The methodology of this study is based on a quantitative approach. A questionnaire collected primary data to build and test a scientific theory. The study also used qualitative, deductive methods. Direct interview techniques tested participants' perceptions, as well as some issues not included in the questionnaire. Collected data was analysed using SPSS 22.0 software. We set a sampling error rate of 5% (equivalent to 0.05 deducing  $e^2 = 0.0025$ ).

The object of survey is the set of accountants using Excel accounting software at SMEs and micro enterprises in Ho Chi Minh City, Vietnam. Their accounting work includes: recording (inputting), classifying, systematising, calculating, processing, summarising, inspecting,

controlling and providing information about the whole business performance of enterprises. Accountants were trained to use Excel accounting software which they currently apply in business. Their qualifications ranged from elementary and intermediate, to college and university levels. They are working in enterprises of different sizes and fields of production and business activities, with different positions in the accounting department (Staff accountants, general accountants, chief accountants, chief financial officer).

We distributed 450 questionnaires by direct and online method via email, to 450 enterprises. After five months, we collected and cleaned 399 votes. The research sample is consistent with that of Hair et al. (1998). After being cleaned, the survey results were put into SPSS 22.0 software for processing. We tested a reliability scale with descriptive statistics and Cronbach's Alpha coefficient. Any observational variables with a total correlation coefficient greater than 0.3 and Cronbach's Alpha coefficient greater than 0.6, would ensure reliability of the scale.

## Research Results

**Table 1:** The statistics of objects, work position, size of business, sector of production and business

Description	Size of Enterprise			Total	Percentage (%)
	Micro	Small	Medium		
<b>Position</b>					
Chief Finance Officer	-	-	2	<b>2</b>	0.5
Chief Accountant	8	4	-	<b>12</b>	3.01
General Accountant	14	11	2	<b>27</b>	6.77
Staff Accountant	201	125	32	<b>358</b>	89.72
<b>Main sector</b>					
Trade-service	151	61	13	<b>225</b>	56.39
Manufacturing	-	-	-	-	-
Outsourcing	67	45	10	<b>122</b>	30.58
Construction-Installation	1	26	10	<b>37</b>	9.27
Other	4	8	3	<b>15</b>	3.76
<b>Total</b>	<b>223</b>	<b>140</b>	<b>36</b>	<b>399</b>	100
<b>Percentage (%)</b>	<b>55.89</b>	<b>35.09</b>	<b>9.02</b>	<b>100</b>	

Table 1 shows that: Among 339 surveyed objects, 2 respondents were Chief Finance Officers (accounting for 0.5%); 12 respondents were Chief Accountants (3.01%); and 27 respondents were General Accountants (6.77%). The remainder are Staff Accountants (89.72%). Also, among 339 respondents, 225 worked at Trade-Service enterprises (56.39%); 122 worked in Manufacturing-Processing enterprises (30.58%), and 37 worked in Construction- Installation enterprises (9.27%). The remainder are other businesses (accounting for 3.76%). In terms of

the size of enterprises, the respondents working at micro enterprises are 223 (55.89%). The respondents working in small enterprises are 140 (35.09%). The remainder working in medium enterprises account for 9.02%.

Accountants in different positions will have different tasks, requirements and characteristics. Thus, there will be different assessments of Excel accounting software. Accountants' evaluations will help authors find out the pros and cons of Excel accounting software.

The characteristics of accounting work at enterprises with different sizes and sectors of production and business activities, will be different. The accounting work of small-sized enterprises will be simpler than that of larger ones. Manufacturing enterprises focus on accounting for production costs and calculations of product costs, while Trade-Service enterprises focus on revenue accounting. Evaluation of respondents from many different enterprises will help the authors to find the pros and cons of Excel accounting software.

**Table 2:** The statistical results of the qualifications of accountants working in SMEs in Ho Chi Minh City.

<b>Frequency Distribution of Respondents of Indicated by Educational Qualification</b>						
<b>Qualification Level</b>	<b>Sectors</b>				<b>Total</b>	<b>Proportion (%)</b>
	<b>Trade-Service</b>	<b>Production- Outsource</b>	<b>Construction- Installation</b>	<b>Other</b>		
University	16	4	0	0	<b>20</b>	5.0
College	6	2	3	0	<b>11</b>	3.0
Intermediate	194	111	32	14	<b>351</b>	88.0
Primary	9	5	2	1	<b>17</b>	4.0
<b>Total</b>	<b>225</b>	<b>122</b>	<b>37</b>	<b>15</b>	<b>399</b>	<b>100</b>

Table 2 shows 351 respondents with intermediate qualifications, accounting for 88%; college degrees were 11, accounting for 3%; university degrees were 20, accounting for 5%. The remainder, with primary qualifications, accounted for 4.0%. In SMEs, the volume of accounting work is minimal. Accounting jobs are less complicated. Accounting vouchers and professions are small, as are revenue and costs.

**Cronbach's Alpha:** Excel accounting software has been measured by Cronbach's Alpha. Results of testing Cronbach's Alpha of attributes are presented in Table 3 below.

**Table 3:** Results of Cronbach's Alpha Testing of Attributes

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Excel accounting software (EAS): Cronbach's Alpha: .790				
EAS1	25.581	6.113	.391	.770
EAS2	25.258	4.790	.657	.627
EAS3	25.404	6.935	.319	.787
EAS4	25.281	5.479	.569	.689
EAS5	25.419	6.400	.370	.751
EAS6	25.514	5.497	.525	.741
EAS7	25.273	6.254	.423	.745

The results also show that attributes of the dependent variables have Cronbach's Alpha coefficients greater than 0.6, and the correlation coefficients of all attributes are greater than 0.3. So, all the attributes of the dependent variables are statistically significant (Hoang & Chu, 2008; Hair et al., 2009).

***Comparing the Evaluation Results of the Attributes of Accounting Software among the Respondents Working in Different-Size Enterprises (Medium Enterprises, Small Enterprises, Micro Enterprises)***

**Table 4:** Assessment of the attributes of accounting software among respondents working in enterprises of different sizes

Size of companies	Micro Enterprise		Small Enterprise		Medium Enterprise		Total		F-Value P-Value
	Average value	Means	Average value	Means	Average value	Means	Average value	Means	
EAS1. Organise and manage of data	4.33	VG	4.25	VG	4.06	G	4.28	VG	19.376 0.000
EAS2. Compliance with accounting standards	4.52	VG	4.35	VG	4.17	G	4.43	VG	20.629 0.000
EAS3. Flexibility	4.65	VG	4.65	VG	4.67	VG	4.65	VG	0.149 0.862
EAS4. Information security	4.68	VG	4.15	G	4.15	G	4.44	VG	69.350 0.000

EAS5. Quality and accounting book design	4.61	VG	4.45	VG	4.41	VG	4.53	VG	22.127 0.000
EAS6. Usability	4.50	VG	4.35	VG	4.32	VG	4.43	VG	9.693 0.000
EAS7. Practicality	4.75	VG	4.66	VG	4.44	VG	4.69	VG	17.341 0.000
Average	4.58	VG	4.41	VG	4.32	VG	4.49	VG	48.506 0.000

Significance level = 5%, Inspection  $F=48.506$ ,  $Sig=0.000$

Meaning: VG: Very good; G: Good; F: Normal; P: Poor; VP: Very poor

Source: Compiled from survey results in 2018

With the significance level of 5%, the above test results showed a difference in evaluating the attributes of Excel accounting software, by company size. Particularly, the EAS3-Flexibility attribute has no difference in the evaluation of respondents working in different-scale enterprises. In addition, the average evaluation value (good and very good) shows that Excel accounting software has high applicability to SMEs. The evaluation results of enterprises (micro-enterprises are 4.58-VG, small enterprises are 4.41-VG and medium-sized enterprises are 4.32-VG) show that the smaller the enterprises are, the higher the evaluation score, proving that the applicability of this software is good.

### *Comparing Evaluation Results about the Attributes of Accounting Software among Respondents Working in Enterprises with Different Sectors*

**Table 5:** Assessment of the attributes of accounting software among respondents working in enterprises with different sectors

Main sectors	Trade-Service		Production-Outsource		Construction-Installation		Other		Total		F-Value P-Value
	Means	Average value	Means	Average value	Means	Average value	Means	Average value	Means	Average value	
EAS1. Organise and manage of data	4.29	VG	4.34	VG	4.00	G	4.32	VG	4.28	VG	17.783 0.000

EAS2. Compliance with accounting standards	4.58	VG	4.34	VG	3.71	G	4.67	VG	4.43	VG	113.91 0.000
EAS3. Flexibility	4.67	VG	4.61	VG	4.62	VG	4.83	VG	4.65	VG	6.125 0.000
EAS4. Information security :	4.58	VG	4.23	VG	4.36	VG	4.35	VG	4.44	VG	13.906 0.000
EAS5. Quality and accounting book design	4.60	VG	4.44	VG	4.44	VG	4.62	VG	4.53	VG	12.217 0.000
EAS6. Usability	4.48	VG	4.32	VG	4.44	VG	4.51	VG	4.43	VG	6.550 0.000
EAS7. Practicality	4.75	VG	4.61	VG	4.58	VG	4.78	VG	4.69	VG	6.642 0.000
Average	4.56	VG	4.41	VG	4.31	VG	4.58	VG	4.49	VG	27.590 0.000

Significance level = 5%, Inspection  $F=27.590$ ,  $Sig=0.000$

Meaning: VG: Very good; G: Good; F: Normal; P: Poor; VP: Very poor

**Source:** Compiled from survey results in 2018

With the significance level of 5%, the results in Table 5 show that there is a difference in the evaluation of component attributes of accounting software. In addition, the average evaluation value of the attributes (good and very good) shows that Excel accounting software is highly available to microenterprises, SMSs, in all sectors. The average value results show that enterprises of other types are most appreciated (4.58-VG), proving the best applicability of the Excel accounting model to this type of enterprise. This is followed by enterprises in the fields of Trade & Services (4.56-VG), Manufacturing and Processing (4.41-VG), and lastly Construction and Installation (4.31-VG).

***Comparing the Evaluation Results on the Attributes of Accounting Software among the Respondents with Different Job Positions (Chief Financial Officer, Chief Accountant, General Accountant, Staff Accountant)***

**Table 6:** Assessment of the attributes of accounting software among respondents with different job positions

Job positions	Chief Finance Officer (n=2)		Staff Accountant (n=299)		General Accountant (n=63)		Chieft Accountan (n=35)		General Average (n=399)		F-Value P-Value
	Average value	Mean	Average value	Mean	Average value	Mean	Average value	Mean	Average value	Mean	
EAS1. Organisation and Management of data	4.40	VG	4.27	VG	4.34	VG	4.29	VG	4.28	VG	0.66 0.577
EAS2. Compliance with Accounting standards	4.59	VG	4.42	VG	4.51	VG	4.42	VG	4.43	VG	0.513 0.674
EAS3. Flexibility	4.50	VG	4.65	VG	4.67	VG	4.65	VG	4.65	VG	0.375 0.771
EAS4. Information security	4.75	VG	4.44	VG	4.50	VG	4.31	VG	4.44	VG	0.597 0.617
EAS5. Quality and Accounting book design	4.73	VG	4.53	VG	4.55	VG	4.58	VG	4.53	VG	0.526 0.665
EAS6. Usability	4.20	VG	4.43	VG	4.47	VG	4.53	VG	4.43	VG	0.832 0.477
EAS7. Practicality	4.63	VG	4.69	VG	4.72	VG	4.69	VG	4.69	VG	0.115 0.951
Average	4.54	VG	4.49	VG	4.54	VG	4.50	VG	4.49	VG	0.403 0.751

Significance level = 5%, Inspection F=0.403, Sig=0.751

Meaning: VG: Very good; G: Good; F: Normal; P: Poor; VP: Very poor

Source: Compiled from survey results in 2018

With a significance level of 5%, the results in Table 6 show that there are not differences in evaluating the attributes of Excel accounting software on the basis of the job position of respondents. In general, the attributes are highly appreciated by the objects. This proves that the use of this software to computerise accounting work has many advantages, being suitable for all positions of accountants.

### **Discussion and Administrative Implications**

When building the attributes of Excel accounting software, we relied on Vietnamese Accounting Standards; the current accounting regime and regulations for SMEs in Vietnam; the guidance of standards and conditions of accounting software in the Circular 103/2005/TT-BTC dated November 24, 2005 of the Ministry of Finance of Vietnam (Ministry of Finance, 2005). We relied on previous studies, and experts in the field of accounting and accounting software. In particular, the study is based on practical results in using Excel accounting software, when applied to past accounting work in SMEs, and other relevant research results from the authors. We expected that Excel accounting software would be applied to SMEs in Ho Chi Minh City in accordance with the qualifications of accountants, the size, business sectors and other conditions of SMEs, as suitable with the utilities and capabilities of the Microsoft Excel program.

Unlike the use of packaged accounting software, as applying Excel accounting software, enterprises play the role of designers and builders; the operators, fixers, maintainers, upgraders and users of the accounting information extracted from the software. Therefore, software attributes proposed by the study must ensure the evaluation of requirements including: the ability to design, organise and manage the initial database; the ability to design and build software; the ability to operate, fix errors, maintain and upgrade software; the ability of the accounting reports extracted from the software meeting the minimum requirements of the Accounting Regime and of each enterprise; the ability to meet other conditions of staff professionalism, initial costs, operating costs, etc. of software for SMEs, especially micro enterprises. Currently, for small and micro enterprises, it is difficult to design, build and operate software effectively with the lowest cost but still meet the requirements of accounting work.

Results through the following factors: Evaluating the applicability of Excel accounting software for SMEs and microenterprises in Vietnam through the factors shows this software has many advantages such as: Simply organising and managing data; The ability to comply with the provisions of good accounting; High flexibility; High information security and data safety; High quality of accounting books and reports extracted from a model and meet the requirements of the Accounting System; High interaction with users and forms that are easy to design, formulate and use. The study also found many disadvantages and proposed solutions

to improve and upgrade the model, to better suit the diverse demand of business. Advantages and disadvantages are detected through each of the following factors:

### ***The Factor of Organizing and Managing Data***

Through the evaluation results, in general, SMEs designed, organised and managed accounting databases and built model easily. All these met the requirements of the accounting regime and of the business. However, the larger the enterprise, or the more complicated the performance of production and business, the more difficult they get, compared with smaller businesses or simpler business activities. Elements related to organising and managing data need to have improved and completed solutions, to better suit the specific characteristics of enterprises.

Other opinions as to businesses, on organising and managing data: Besides evaluating the applicability of the model through organising and managing data, enterprises also have additional ideas to improve the applicability of the software to accounting.

Difficult to open detailed account: 22 comments

Only making receipts/payments, manually making for other documents: 13 comments

Accounting vouchers made manually: 13 comments

These are the ideas discovered by businesses during the application of this software. The opinions of businesses would be studied, so as to improve them in future.

### ***The Factor of Complying with Accounting Standards***

Through the evaluation results, in general, the accounting books and financial statements meet the strict requirements of the accounting regime and other enterprise requirements. Thereby, we see the applicability of the Excel accounting software. However, the ability to comply with software accounting standards in larger construction and installation enterprises is lower than for other enterprises. Enterprises often encounter difficulties such as: Account encryption to ensure the consistency of compliance with regulations, in accordance with the enterprise requirements of operation and management; Accounting books full of principal contents as prescribed, and easy to supplement with other criteria-based management requirements of the enterprises; and, requirements as to financial statements (with the correct form and in time).

### ***The Factor of Flexibility***

The results show that SMEs and micro enterprises as well as enterprises in different sectors of production and business all evaluate the criteria of flexibility very well. This proves that the software meets the needs of self-repair, change, troubleshoot, update and upgrade. In fact, Microsoft Excel software is friendly and easy-to-use. Moreover, the software users and

operators are also the designers and builders. Thus, if any errors or changes in accounting regime are made, they can be updated and repaired immediately.

### ***The Factor of Information Safety and Data Security***

Enterprises highly appreciate information safety and data security. The above shows that the software meets the requirements of information safety and data security in accounting work. However, the level of information safety and data security tends to decrease for larger enterprises, and enterprises in the sectors of Manufacturing - Processing, Construction – Installation. The reason is they often use more accountants than other businesses, so the division of work is difficult.

### ***The Factor of Quality of Accounting Books and Reports***

Through the evaluation of enterprises, it can be seen that the accounting books and accounting reports extracted from the model are fully formed, accurate, and meet the requirements of the current accounting regime and of the business. However, medium-sized enterprises and Manufacturing-Processing, Construction-Installation enterprises have more difficulties in accounting, when using this software. In particular, Manufacturing-Processing, Construction-Installation enterprises have too many detailed accounting books, and the typical cost of books of production and business, exceed those required for compliance with accounting regulations. Therefore, designing and printing requirements present more difficulties than in other businesses.

### ***The Factor of Usability***

Generally, enterprises have many advantages when designing, building and operating software. However, the larger the size of enterprises or the more diverse the activities of production and business, the more difficult the design, construction and use of software. The accounting work shows that the larger the enterprise, the more diverse the activities of production and business, as well as management being more dispersed. Accounting work is more complicated than that for small scale and operating-focusally enterprises.

### ***The Factor of Practicality***

The costs of training, designing, operating, maintaining and transforming software, are lower than the use of professional accounting software. Therefore, SMEs in different fields are capable of applying this Excel accounting software to computerise accounting work at their enterprises. In fact, the Trade-Service enterprises are much more but the accounting work is

simpler, so the access to software is better than Manufacturing-Processing, Construction-Installation enterprises.

### ***Main Results***

There is a difference in assessing the factor of organising and managing data of SMEs by size, or field of production and business. The average data shows that most enterprises highly appreciated the efficiency of Excel accounting software, through the factor of its organising and managing data. However, a few criteria do not fully meet the requirements of the enterprises compared to other criteria.

In future, to improve the applicability of Excel accounting software, the criteria of organising and managing data needs to be improved, in a way that is easier to set up for businesses.

Enterprises in the fields of Trade, Services, Manufacturing, Processing, Construction, and Installation, in all scales, highly appreciated the effectiveness of Excel accounting software when complying with accounting standards. However, the software still has some limitations in the evaluation of criteria for medium-sized enterprises and Construction – Installation enterprises. Because Vietnam's accounting regime is usually supplemented and amended, SMEs suffer from certain influences upon accounting. Thus, if the software is not updated and upgraded in time, it will be outdated and disrupt accounting work. If when using this software, enterprises can completely update and upgrade it themselves, the software will not be obsolete and the accounting features will work continuously. SMEs and micro enterprises highly appreciate the effectiveness of Excel accounting software, in its flexibility.

As to computers connecting to the global internet, data safety and information security are of great concern to enterprises. This factor helps the software operate stably. Meanwhile, information is not stolen and data is not lost. The analysis result shows that the smaller the enterprises are, the more they appreciate information security and data safety.

In fact, recently, despite having been more concerned, the handling of network security and data safety in SMEs has still been not really effective. It is still limited due to the lower qualifications of staff. Information security and data safety have not been implemented synchronously by businesses. There is a clear difference in assessing information security and data safety among micro enterprises, SMEs and enterprises in other sectors of production and business. In particular, large-scale businesses are underestimated more than small-scale businesses; Manufacturing - Processing and Construction - Installation enterprises are underestimated more than others. This shows that the efficiency of Excel accounting software through the factor of information security and data safety of the model is limited.

There are particular periods in accounting. At the end of an accounting period (month-quarter-year), enterprises must transfer and close their books, and print out relevant accounting books and reports in each accounting period. Accounting books and reports are the final results of an accounting period. Based on the information in accounting books and reports, managers make economic and executive decisions and so do State agencies, business partners, and investors. The quality of accounting books and reports from the decision software take over the effectiveness of the software.

The average value shows that enterprises in different sectors (Trade-Service, Manufacturing-Outsourcing, Construction-Installation and others) and of all sizes (micro, small and medium) highly appreciate the effectiveness of the Excel accounting model, through the quality of accounting books and reports. However, there is a difference in evaluating the model effectiveness of enterprises operating in different sectors and sizes, as to the ability to easily design and use it. The average value shows that enterprises evaluate very well the effectiveness of Excel accounting software through this factor. However, the larger the enterprise, the more dispersed and diversified production and business activities are, the lower the average score of enterprises in comparison with other businesses.

The fact shows that the larger enterprises are with the larger scales, more complex production and business and more dispersed management, the more complex accounting work is, comparing with enterprises that have small scale and concentrated production and business activities. In order for the software to be more effective, in future, the authors will continue to improve the software in the direction of more specific characteristics for each scale and operation of the enterprises.

Most accountants working in SMEs now have lower professional qualifications than accountants in large enterprises. To effectively set up and apply the software, accountants of SMEs need to participate in training courses on setting up and building an Excel accounting model. Factors on training costs, software setup, computers and peripheral equipment, model maintenance and operation are rated lowly by enterprises, in accordance with their financial capability and these matters presently appear east for businesses to operate.

## **Conclusion**

Today, most enterprises and organisations in all fields have applied information technology to management, due to its high efficiency. Such an application to management in general and accounting specifically is a trend, one that is inevitable for businesses. Organising accounting work in the context of computerisation is one of the important jobs for enterprises in general and SMEs in particular. Due to limited financial and human resources, micro enterprises and



SMEs still select an appropriate support tool that is suitable for their financial capacity and low level of human resources, to achieve productivity and efficiency.

The application of Excel accounting software in SMEs, especially micro enterprises in recent years, has benefitted tremendously both the accounting system and the quality of accounting information in businesses. Excel accounting software helps businesses proactively provide information quickly and effectively, to help them compete better as to information. It is necessary to determine the applicability of Excel accounting software for SMEs today.

The survey results in this study analyse and evaluate the applicability of Excel accounting software. This study has found a significant difference in the feasibility of the software when comparing the evaluation results of answers, in the terms of business size, and accountant position. The study surveyed and assessed the status of applicability of Excel accounting software in micro enterprises, SMEs, thereby finding software strengths, weaknesses, opportunities and challenges for Excel accounting, regarding SMEs, as a basis for recommendations and solutions for complete software.

## References

- Dung, D. X. (2017). Organizing accounting work in SMEs. *Journal of Accounting and Auditing (Vietnam)*, 9(1), 28-30.
- Elikai, F., Ivancevich, D. M., & Ivancevich, S. H. (2007). Accounting software selection and user satisfaction. *The CPA Journal*, 77(5), 26-35.
- Government (2018). The Government's Decree No.39/2018/ND-CP of March 11, 2018, detailing a number of articles of the Law on SMEs Support.
- Griffith, T. L., Zammuto, R. F., Aiman-Smith, L. (1999). Why new technologies fail. *Industrial Management*, 41(3), 29-34.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate data analysis (7th ed.)*. Upper Saddle River, NJ: Prentice Hall International.
- Hair, J.F., Joseph, F.Jr., Anderson, Rolph E., Tatham, Ronald L. and Black, Wiliam C., (1998). *Multivariate data analysis. 5<sup>th</sup> edition*, Prentice Hall, Upper Saddle River, NJ.
- Hoang, T., & Chu, N.M.N (2008). *Analysis of research data with SPSS*. Hong Duc Publishing House.
- Hung, B. Q. (2010). The impact between the appropriateness of packaged accounting software and the response of users on the success of the use process. *Journal of Economic Development (Vietnam)*, 239(1), 14-21.
- Jadhav, A. S. & Sonar, R. M. (2009). Evaluating and selecting software packages: A review. *Information and Software Technology*, 51 (2009), 555–563.
- Ministry of Finance of Vietnam. (2005). Circular No.103/2005/TT-BTC dated November 24, 2005.
- Nhi, V. V., Lien, N. B., & Lam, P. T. (2014). Orientation to choose suitable accounting software for SMEs in Vietnam. *Journal of Economics Development (Vietnam)*, 285(1), 2-23.
- Parry, S., Jones, R., Rowley, J., & Kupiec-Teahan, B. (2010). Understanding customers and relationships in software technology SMEs. *Bangor Business School Working Paper*, United Kingdom.
- Phuong, T. N. T (2013): The criteria for selecting suitable accounting software for small and medium-sized enterprises: The case of TanPhu District, Ho Chi Minh City. *Master thesis*, University of Economics Ho Chi Minh.



- Quang, T. V., & Yen, T.H. (2019). Micro enterprises: Issues and policies to support development in the future. *Asia Pacific Economics (Vietnam)*, 534(1), 80-82.
- Sang, D. V. (2018). Evaluating factors influencing on the applicability of the Excel accounting model for microenterprises and SMEs. *Asia-Pacific Economic Review (Vietnam)*, 6(1), 73-78.
- Sang, D. V., Nhi, V. V., & Duong, B. V. (2004). Practice accounting books, Financial Reports and VAT reports on Excel (11th edition). The Statistical Publishing House.
- Thong, N. V. (2009). Organizing corporate accounting system in the condition of computerization. *Master thesis*, University of Economics Ho Chi Minh.