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Assessing the Status of Information Technology Applications to Accounting Work by SMEs in Hanoi: Implications for E-accounting

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Abstract

Small and medium enterprises (SMEs), which make up over 90% of the total number of enterprises in Vietnam, play important roles in economic development not only in Hanoi but also in the whole country. As an effective tool in business management, accounting supplies important information for making decisions. Recently, information technology in business, especially in accounting work or e-accounting, has increased, and along with many advantages in terms of job productivity, has also been considered as the source of changing the roles of accountants in business. In order to show evidence of these changes as being the background for issuing solutions to improve information technology applications in accounting areas of enterprises, this study conducted a survey of 186 small and medium-sized enterprises in Hanoi. The research results showed that the lack of knowledge of current accounting staff is one of the two biggest obstacles to improving the application of information technology or developing e-accounting in accounting areas of small and medium-sized enterprises. Almost all the enterprises accepted the positive features of information technology for accounting work, however they still strongly considered the dynamics as well as the satisfaction of specific information technology products in their accounting work, especially in dealing with new business transactions.

Keywords

Information Technology for Accounting, E-Accounting, SMEs in Hanoi, IT application

Introduction

Following VCCI (2005), information technology (IT), has fundamentally changed competition in the market and has led to changes in business management and operations. According to Ha

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Thi Huong Lan (2020), IT has not only improved data extraction and the supply of information in time for making decisions but has also created many chances for enterprises to take part in the global and regional value chains. In the accounting sector, research by Ly Lan Yen & Nguyen Thu Huyen (2020) and ICEAW (2017) concluded that IT has strongly contributed to changing how methods are implemented, reduced the working load, and improved the accuracy and timeline of accounting information.

In the context of industry 4.0, the trend of applying IT in business, especially in accounting work, has increased to take as many advantages as possible when running a business (VCCI, 2005). However, for small and medium-sized enterprises (SMEs), which are a major part of the economy and often lack significant business conditions, the big question is how to apply IT for accounting work effectively.

The volume of SMEs increases continually every year, always reaching over 90% of the total number of enterprises in Vietnam (MPI, 2021), and therefore, the number of SMEs applying IT in accounting work should also tend to grow. But the government's digital transformation project (2019) shows that the SME sector has not actively approached technology, has not implemented digital transformations, and has not upgraded their corresponding infrastructure system (Ministry of Information and Communications, 2019). In the field of accounting, IT applications are limited to: (i) using MS Excel software; (ii) using packaged or custom software; and (iii) using ERP (enterprise resource planning) software (Vu Thi Tuyet Mai & Nguyen Thi Thu Ngan, 2016). This shows that the ambitions of companies to develop and enhance their influence in the market of SMEs are still facing many difficulties because the improvement in providing accounting information is still limited. SMEs need to make appropriate applications of IT in their enterprise's accounting system, which can be the basis for making effective business decisions (Linda & Edita , 2015).

As an effective tool in business management, accounting is a process whose purpose and functions in an organization are the collection and recording of data and information regarding business resources, and this financial information can then be utilized by stockholders when making decisions. It is difficult to use an accounting system effectively, and if the IT is developed quickly, organizations may not be able to identify the instrumentation that allows the accounting procedures to properly reflect the business's status. Paradoxically, accounting procedures can change at any time and may need to be adjusted to best handle information that exists only in electronic form. IT has changed the roles of accountants in business from information collection, preparation, and analysis to having functions of control, interpretation, assessment, and decision-making. IT in data collection and processing has not only changed the roles of accountants in business but has also broken the limitation of space and geographical distance to supply accounting information (Nguyen Hoang Nam, 2021).

Hanoi is one of two provinces in Vietnam with a large number of SMEs, all of which have diverse types and fields of operation. Annually, this business group contributes significantly to provincial economic development and makes up more than 97% of the total number of enterprises in Hanoi. Unfortunately, almost all the SMEs (70%) in Hanoi operate under the conditions of having equipment, machinery, and technology that are outdated and expired (Nguyen Tuan Anh, 2019). Therefore, this study was conducted in order to find out solutions in improving this status of SMEs. The study concentrated on assessing IT applications to accounting work as one way to collect recommendations to develop successful SMEs in Hanoi. Furthermore, the research results supply evidence to support properly enhancing e-accounting, as a new issue in the technology revolution, in SMEs of Vietnam.

Materials and Methods

Information technology for accounting work and e-accounting

According to Lucas (2009), information technology (IT) refers to all forms of technology applied to processing, storing, and transmitting

information in electronic form. It is the term commonly used as a synonym for computers and computer networks, wherein technology operates with information, whether in the automation of an industrial process, in an information system, in the communication between computers of two organizations, or even in the personal use of computational resources. Normally, it is used to designate practices by computers and telecommunications, such as social media, e-commerce, and computer games (Søraker & Brey, 2015). In the Technology Revolution, companies began using IT as a new source of energy for processing and accessing information. This technology has helped organizations collect, store, retrieve, and apply knowledge to solve problems, and IT can then convert the raw material of information into usable knowledge. The Technology Revolution, like the Industrial Revolution, has changed the economy, creating new industries and ways of doing business.

Following Thottoli & Ahmed (2021), IT allows SMEs to record, process, and keep their accounting functions efficiently, accurately, and timely. IT costs are related mainly to the price of accounting software, implementation costs, software customization costs, and redesigning of accounting software costs.

Accounting software automates records as a function of traditional paper ledgers and accounting books. These software packages also cover a variety of specialized features or a generic program can be customized to fit different business conditions. SMEs usually choose accounting programs based on their size and the number of users accessing the system. SMEs also may choose whole software packages for running their business, such as an enterprise resource planning system (ERP) or business intelligence (BI) system that supports accounting work, which can not only save time but also improve the overall efficiency and accuracy of the information. E-accounting is a new emerging concept in the field of accounting (Toshniwal, 2016), in which accounting work is done by digital technology. The performance of e-accounting is based on source documents and accounting records in digital form. The business accounting function is operated through online and internet technologies. This means accounting work is done through accounting software and computers (Esmeray & Esmeray, 2020). Accounting transactions are recorded, stored, and analyzed in electronic versions instead of on paper (Toshniwal, 2016). The research of Ghaffar *et al.* (2019) shows that e-accounting uses a computer (software and hardware) to prepare financial reports or documents necessary for tax purposes, provide information to make business decisions, or complete any other specific functional applications of enterprise as willing. The benefits of e-accounting for both accountants and employers are the low cost and minimal software defaults or failures. In e-accounting, with online storage servers and databases, accounting transactions do not need to be recorded manually. This also means saving large expenditures on manual books and accounting software. Following Fatima (2016), e-accounting can also be called online-accounting, wherein the effective process of accounting gets significant features including: (i) universal access; (ii) multiple site access; (iii) zero system administration for end-users; (iv) large scale business records; (v) frugality because the services are offered to a large number of customers; (vi) a shared database(s); (vii) enhancements and fixes are continuously developed and installed by the service provider; and (viii) quick record keeping with advanced technology. For enterprises, online accounting allows managers to see the company's financial position in "real-time" and make adjustments to the business strategy as needed. The financial information in a computerized accounting system is supplied faster than manual accounting by data entry, and source documents such as invoices, purchase orders, and payroll can be collated and printed quickly and accurately.

The research of Thottoli & Ahmed (2021) found that there is a significant relationship between IT and e-accounting. E-accounting is a new accounting system that has adopted, customized, or generalized accounting software. The IT costs, IT risks, employee IT skills, and employee theoretical knowledge directly affect e-accounting practices. In which, e-accounting enriches SMEs to do their accounting more

efficiently than the traditional way of bookkeeping. When IT components are applied properly and are implemented with accounting standards, the practice of e-accounting will be improved. Consequently, business accounting practices will improve and enhance the aggregate financial information system in the long run. The relationship between IT and e-accounting is described in **Figure 1**.

Review of empirical studies on IT for accounting work of SMEs

As mentioned in the previous section, IT does not only contribute positively to the management activities of enterprises but also significantly influences accounting work. The topic of IT has attracted accounting sectors in many different aspects, specifically:

Vu Quoc Thong (2012) studied the influence of IT on modern accounting information systems. His research showed that the advantages of IT and computer science have affected management information systems including accounting. With the processing tool being a computer, manual accounting has been changed through the form of processing and storing accounting data, and opening up many advantages for the output and exchange of accounting information.

Research studying the factors affecting the decision to choose accounting software for SMEs by Huynh Thi Huong (2015) showed that the quality of services provided by sellers or providers after the business supplied relevant information to accounting software strongly affected the purchasing decisions of SMEs in Ho Chi Minh.

According to the research of Vu Thi Tuyet Mai & Nguyen Thi Thu Ngan (2016), IT applications in management as well as in accounting work in Da Nang SMEs have been increasing and have become more popular in recent years. Depending on the characteristics of each enterprise, the level of IT application in accounting work is different. In which, using MS Excel software for accounting work is also considered a partial IT application.

A study on solutions to promote IT applications for the tax industry in Vietnam by Nguyen Minh Ngoc (2011) showed that there were significant limitations along with weaknesses, opportunities, and challenges in IT applications in the tax sector, wherein the lack of IT facilities and limitation of fund investments were the most common obstacles of SMEs.

The findings of Nguyen Hoang Nam (2021) indicated the factors affecting IT applications in the field of accounting and auditing through an

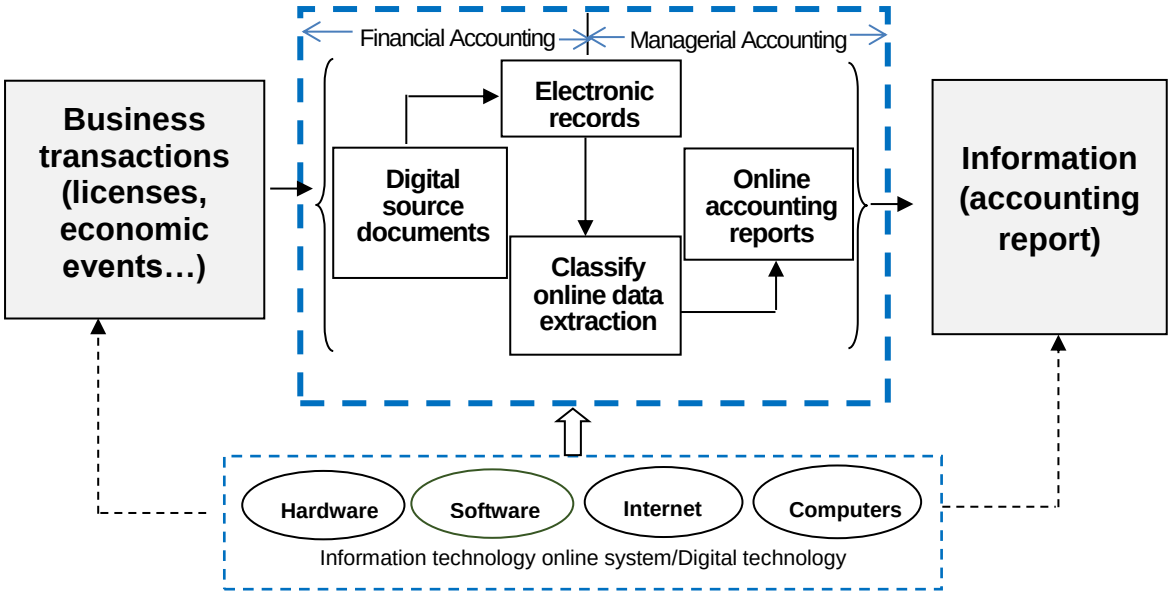

Figure 1. Relationship between information technology and e-accounting

experiment survey sample of 200 employees and managers in Vietnam. The research results showed that the "favorable conditions" factor had a stronger impact than the "effort expectation" factor on the IT applications of enterprises.

According to Ghasemi *et al*. (2017), the ability of companies to develop and use computer systems have impacted their abilities to track and record financial transactions. Normally, IT has shortened the time required for accountants to prepare and present their information. Moreover, these authors also pointed out the advantages and disadvantages of IT applications in accounting systems.

According to Lina & Edita (2015), the role of IT needs to be set to fit between the accounting system and the business environment. An effective accounting system depends on the conditions of the organization's external environment and its responses to the internal environment. Their findings highlight the difference between using an accounting system in a dynamic external environment and a simple internal organization. Moreover, the research results provided relatively comprehensive reviews to look at how IT affects the outputs of an accounting system, which are a starting point for making successful business decisions.

On the side of proposing accounting software in business, Abu-Musa (2005) introduced a proposed mathematical model of the factors that determine the choice of using specific accounting software based on investigation, analyticities, and evaluation of input factors that were strongly considered by enterprises. The proposed model can help SMEs to select the most appropriate accounting software to meet their current and future needs for financial and non-financial information and reporting in existing business conditions.

Data collection

The majority of fieldwork was carried out during the period of May-August 2021. Secondary data regarding IT, e-accounting, SMEs, and acceptance or behavior theories were gathered from different sources including the library and internet online banking data as well as the authors' network relations. Data on basic information, IT performance, and accounting facilities of the SMEs in Hanoi were collected and then combined to identify the difficulties of computerized or online accounting implementation.

The key information collected about IT applications in SMEs were: type of digital technology, motivation or benefits of IT application, knowledgeability of the SMEs' staff about accounting software, and accounting types of facilities in the accounting sector. The total number of SMEs in Hanoi was over 165 thousand enterprises (in 2021), but the survey number was limited by time and criteria of selection. Thus, a random survey of the Hanoi enterprises was conducted totalling 186 accountants and direct managers who came from SMEs with the condition of using at least one computer or other internet accessible equipment in running their business. Using a questionnaire made up of 21 questions focusing on 102 specific criteria, each respondent spent about 15 to 30 minutes answering the survey through online interviews. Almost all the interviewers were involved in the creation of the questionnaire about the IT accounting performance, the obstacles/difficulties in doing accounting, as well as the interviewee's evaluation of the impacts of IT on issuing accounting information.

Research frameworks

After performing desk-research and collecting prior research, the study determined the content of IT and e-accounting as fundamental knowledge for building the research framework. From the components of IT and e-accounting, namely computers, digital resources, and IT or e-accounting knowledge of the staff, the criteria observations were set up following three groups: (i) target or area of IT application; (ii) types of IT or digital resources; and (iii) frequency and professional levels of IT application.

In which, the criteria of the target and area of IT application group were the purpose or expectations that SMEs want to receive when applying IT for accounting works. The available number of computers and kinds of the internet or

digital facilities indicated the types of IT usage by the SMEs. The digital level as well as the type of accounting software reflected the frequency and professional level of the SMEs in using IT applications for accounting sectors. Using both 3 and 5 point Likert scales to assess the status of IT applications by SMEs, research conclusions and recommendations were issued based on the practical groundwork of existing IT usage.

Results and Discusion

Descriptive statistics

Among the 186 available responses from the SMEs survey in Hanoi, most interviewees (57.53%) came from small enterprises with a total number of employees ranging from 10 to 50 labourers. The majority of interviewees (61.83%) were from super-small entities with a capital size of less than 10 billion VND, and in terms of the fields of business, the number of enterprises in trade and commerce made up the majority at 37.78% of the total sample **(Table 1)**.

Among the SMEs in surveyed **(Table 2)**, the forms of limited and joint stock companies were 58.52% and 34.07%, respectively. Private companies made up 7.41% of the SMEs surveyed. The interviewees were mainly working as the director or CEO (11.85%) or functional manager (chief accountant or accountant; 79.26%) of their entities. The number of interviewees who had working experience over 10 years reached only 2.22%, whereas experience from 2 to under 10 years reached the very high percentage of 70.37%.

Status of information technology application to accounting work

Targets and areas of IT application

Almost all the SMEs interviewees assessed the ease of data collection as being an important

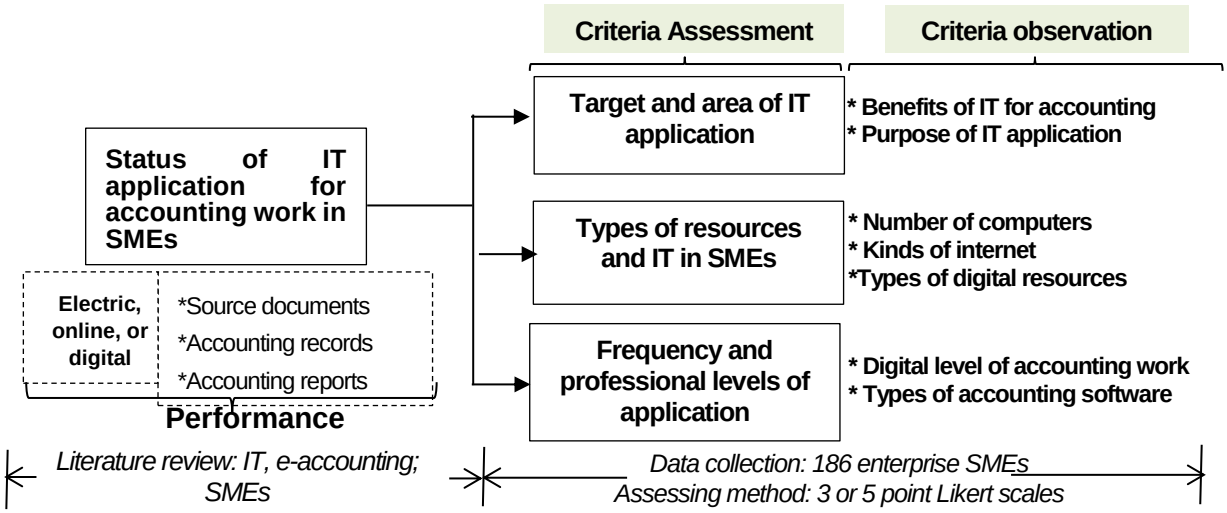

Figure 2. Research framework of assessing IT application for accounting work in SMEs

Table 1. Sample description

Size of capital (billion VND)			Number of employees (persons)			Field of business		
Items	Frequency	Percent	Items	Frequency	Percent	Items	Frequency	Percent
< 10	115	61.83	< 10	28	15.05	Manufacturing	48	25.93
10-20	44	23.66	10-50	107	57.53	Trade and commerce	70	37.78
20-50	16	8.60	50-100	40	21.51	Service	41	22.22
50-100	11	5.91	100-200	11	5.91	Other (Multi-fields)	26	14.07
Total	186	100	Total	186	100	Total	186	100

Source: Survey data (2021).

part of the accounting work when applying IT. Currently, there are many different kinds of IT applications in accounting such as Excel, accounting software, accounting software integrated with resource management (ERP), intelligent management devices - artificial intelligence (BI), and combinations of these applications. Most of them are effective for providing information, reporting the financial status of the unit, and improving the working efficiency of accountants (including easy data collection, quick data processing, and timely provision of information to management).

The survey data showed that SMEs use different kinds of IT such as Microsoft Office, email, accounting software, dispatch management software - storage, or enterprise resource management software (ERP: enterprise resource planning - accounting software integrated with resource management, BI: business intelligence - intelligent management equipment, artificial intelligence). Microsoft Office and email were used the most while enterprise resource management software was used the least. Over 50% of the enterprises did not apply or applied IT at a simple level in accounting work, while over 34% applied specialized accounting software, and nearly 9% of the businesses used resource management software that integrated accounting work. Only 5.73% of the enterprises used some type of intelligent management device for accounting work (such as barcode recognition, blockchain in data processing and analysis, and block data connection, etc.).

Types of equipment and IT

The data in **Table 3** reveals that most of the SMEs had 1-5 main computers, a company website, and only one Wi-Fi network. For the SMEs with more than 10 computers, these were mainly personal computers combined with desktop computers and had been equipped since the Covid-19 period in 2020. Thus, the infrastructure of SMEs was shown to still be very modest in its ability to apply IT in all accounting activities including both financial accounting and management accounting. In finding the types of internet usage, the majority of SMEs had ADSL connections (51.61%), and the number of SMEs that had both ADSL and private line connections accounted for a very low percentage.

Of the total SMEs surveyed, the number of staff members who were professional practitioners in IT applications for accounting work (financial accounting reports and management accounting reports) was limited. The level of the majority of the SMEs' staff in their ability to use IT applications for accounting work was average for most skills and knowledge (**Table 4**).

There were about 70-80% of the SMEs staffs who could handle simple computer problems, manage computer folders and files, and use email to read information at a good or very good level, while 50-60% of the SMEs staffs had good or very good experience in using Word and Excel software or accounting software. Unfortunately, only about 34% of staff could use ERP, BI, or other software in their accounting work.

Table 2. Sample characteristics under the business formation, interviewee's position, and interviewee's experience

Business formation			Interviewee's position			Interviewee's experience (years)		
Items	Frequency	Percent	Items	Frequency	Percent	Items	Frequency	Percent
Cooperation/ joint stock Co.	63	34.07	Director or CEO	22	11.85	1-3	51	27.41
Limited Co.	109	58.52	Deputy director	17	8.89	Over 4-5	69	37.04
Partnership	14	7.41	Chief accountant	76	40.74	Over 6-10	62	33.33
			Accountant	72	38.52	Over 10	4	2.22
Total	186	100	Total	186	100	Total	186	100

Source: Survey data (2021).

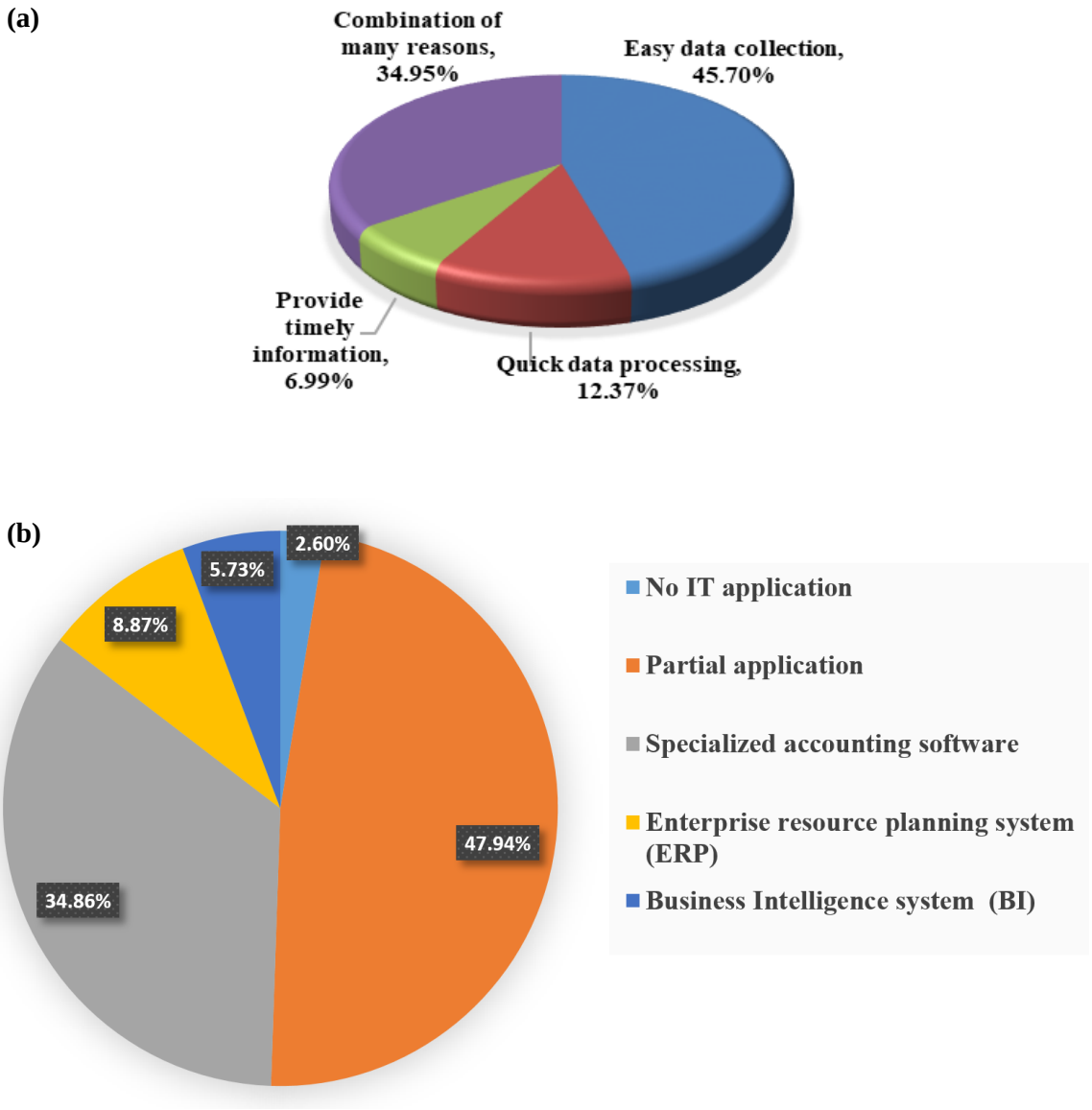

Figure 3. (a) Benefits of applying IT for accounting work; (b) Different types of IT applications for accounting work in SMEs

Source: Survey data (2021).

Frequency and professionalism

Relevant to the frequency of usage, the collective data of the 186 SMEs showed that there were a variety of accounting fields that applied IT at different levels. The partial application (combined with Excel) or using specialized accounting software was popular with the highest proportion, around 30-50%, among the different accounting fields (making vouchers, performing accounting procedures, bookkeeping, making financial accounting reports, and making specific or managerial accounting reports). Notably, IT in so-called specialized accounting software used by many SMEs was digital software, which only uses the internal accounting department of enterprises. There was a small number of SMEs **(Table 5)** that applied professional general software, such as ERP and BI, in their accounting sectors. As an explanation for this small number, the study found that, in the view of these SMEs, the ERP or BI software applications required a high cost of payment at the beginning but the savings cost of the accounting staff, time of recording over many years, quickness in issuing accounting

reports, and ability to supply accounting information at any time as well as reliability outweighed the initial costs in the long run. Most SMEs tended to apply IT for the purpose of preparing reports (including financial and managerial reports) or recording book records rather than making vouchers, completing accounting procedures, or analysing accounting reports.

Using the 5 point Likert **(Table 6)** scale to assess IT applications in accounting fields, the data reflected a similar trend across the Hanoi SMEs. Bookkeeping and preparation of accounting reports were still the main purposes of IT applications at 3.2 points, while the analysis of accounting reports (at 2.02 points) was not important enough to become an attractive reason to apply IT in SMEs.

Table 3. Characteristics of IT application infrastructure in accounting in the surveyed sample

Number of computers			Internet		
Items	Frequency	Percent	Items	Frequency	Percent
1-5	101	54.3	Wi-Fi	94	50.54
Over 5-10	61	32.8	LAN	78	41.94
Over 10-15	24	12.9	Wi-Fi & LAN	11	5.91
Total	186	100	Other (extranet, etc.)	3	1.61
Internet connection form			Total	186	100
Items	Frequency	Percent	e-Website		
ADSL connection	96	51.61	Items	Frequency	Percent
Private line connection	75	40.32	No	23	12.37
ADSL & private line connections	15	8.06	Yes	163	87.63
Total	186	100	Total	186	100

Source: Survey data (2021).

Table 4. Status of the SMEs staffs' knowledge in IT applications for accounting work

Level's assessment	Solve simple computer problems		Manage folders and files of computer		Use email: read, send…	
	Frequency (n = 186)	Percent	Frequency (n = 186)	Percent	Frequency (n = 186)	Percent
Below average	34	18.28	49	26.34	53	28.49
Average	127	68.28	111	59.68	101	54.30
Above average	25	13.44	26	13.98	32	17.20
Level's assessment	Use software: Word and Excel		Use accounting software		Use other software (ERP, BI)	
	Frequency (n = 186)	Percent	Frequency (n = 186)	Percent	Frequency (n = 186)	Percent
Below average	66	35.48	86	46.24	123	66.13
Average	99	53.23	81	43.55	52	27.96
Above average	21	11.29	19	10.22	11	5.91

Note: Below average = empty knowledge or a lack of skills; Average = know how but not able to do well or do productively; Above average = know how and able to do well or do productively.

Source: Survey data (2021).

Table 5. Accounting areas applying IT in SMEs

Level's assessment	Accounting vouchers		Source documents (accounting procedures)		Accounting records (general, specific books)	
	Frequency (n = 186)	Percent	Frequency (n = 186)	Percent	Frequency (n = 186)	Percent
No IT application	6	3.23	4	2.15	4	2.15
Partial application	85	45.70	85	45.70	87	46.77
Specialized accounting software	67	36.02	66	35.48	58	31.18
Enterprise resource planning system (ERP)	18	9.68	20	10.75	22	11.83
Business Intelligence system (BI)	10	5.38	11	5.91	15	8.06
Level's assessment	Financial statements		Management accounting information/tables		Managerial accounting reports	
	Frequency (n = 186)	Percent	Frequency (n = 186)	Percent	Frequency (n = 186)	Percent
No IT application	1	0.54	7	3.76	7	3.76
Partial application	92	49.46	91	48.92	95	51.08
Specialized accounting software	68	36.56	67	36.02	63	33.87
Enterprise resource planning system (ERP)	15	8.06	12	6.45	12	6.45
Business Intelligence system (BI)	10	5.38	9	4.84	9	4.84

Source: Survey data (2021).

Table 6. Targets of IT applications in the accounting sector in SMEs

	N	Mean	Minimum	Maximum
Bookkeeping and preparing financial reports	186	3.2312	1.00	5.00
Extracting relevant information to prepare reports	186	3.2957	1.00	5.00
Providing materials for managerial reports	186	3.1882	1.00	5.00
Analysing accounting reports	186	2.0215	1.00	5.00

Source: Survey data (2021).

Discussion

Motivation of application

Figure 4 shows, in the sample of 186 SMEs, that 63.98% of the interviewees agreed that their business did not need specific IT applications in any accounting field because of their small or micro-small size. As for these SMEs' explanation, the small size meant that their business did not have many business transactions to be recorded day by day. Therefore, only simple software such as Microsoft Excel can meet their requirements. Moreover, approximately 32.80% of the SMEs issued the opinion that the capital investment to apply a specific IT (such as accounting software, BI, or ERP software) is often a big or high valuation, which is only fit for large-scale enterprises and large-scale business operations. A small number of responses (0.54%) argued that their business would not receive any benefits or gains in applying IT. The remaining 2.69% of the SMEs gave other reasons such as having no idea about IT applications for accounting work, having no IT staff, running the business well without IT, etc.

Except for the SMEs who were already applying specific accounting software, ERP, or BI at the time of the survey (2021), almost all of

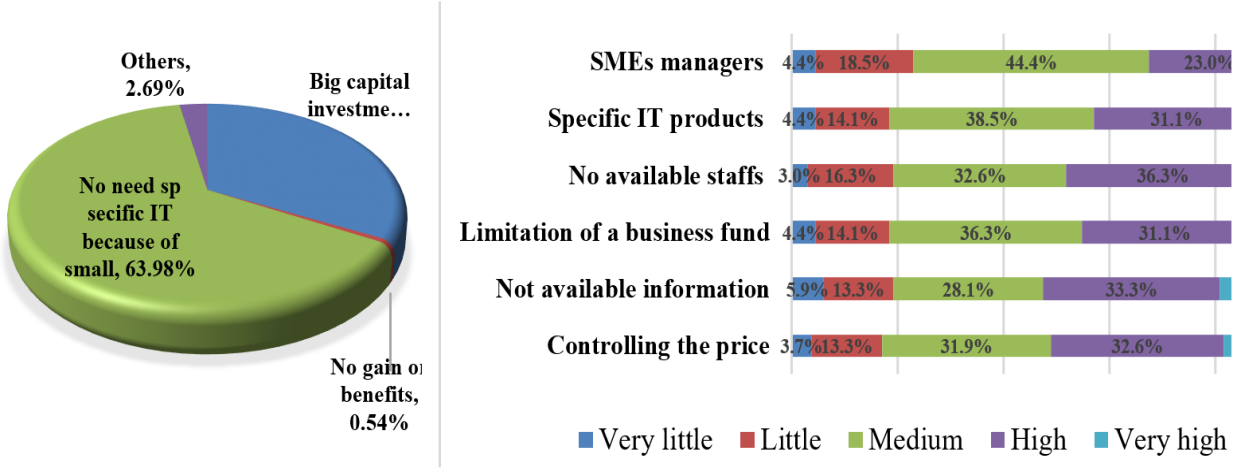

Figure 4. Motivation and obstacles of SMEs to apply IT in accounting work

Source: Survey data (2021).

the SMEs of the sample accepted the benefits of IT for accounting work but their motivation to improve their status of IT applications was not so high. They did not want to change their existing digital or internet facilities or upgrade their computers to a higher level in order to get useful accounting information for making decisions or running their business properly. In their view, the status of their current accounting system still made them satisfied and they did not need to change and spend their funds in other business fields.

Obstacles of IT application

To find out more information about the status of SMEs in using IT applications for accounting work, the study conducted detailed questions and a 5-point Likert scale to measure their obstacles. The research data collected revealed many concerns and worries of the respondents, including: (i) SMEs managers still did not strongly support IT applications in the accounting sector; (ii) there were many disadvantages of specific IT products for accounting following the new conditions of business transactions or accounting procedures; (iii) there were no available staffs or accountants who had good IT practices; (iv) businesses had limited funds or capital investments; (v) information about the IT product features were not available, especially features for accounting purposes; and (vi) it was difficult controlling both the price of the IT products and their quality.

Through deep and direct discussions with some of the SMEs managers in the sample, the study received many answers from SMEs managers that they did accounting work only in order to meet the tax office requirements. Therefore, they did not use their accounting information to make business decisions. Additionally, the specific IT products for accounting, such as accounting software, often have one or several functions blocked for one situation of the accounting process. Thus, in order to take advantage of IT in accounting, whenever a new situation of accounting procedures arises, the SMEs would be required to purchase new software or features, or find alternative solutions. This also often means more financial investments from the SMEs. Unfortunately, the SMEs' financial positions are often restricted by business size. Moreover, most SMEs have no IT staff position and lack staff with IT and accounting training, thus, it is difficult for the SMEs to know what kinds of IT products are suitable for them in terms of quality and price or expenditure. Without IT information to fit the SMEs conditions, other big obstacles for SMEs involve applying IT or developing e-accounting.

Implications and Recommendations

IT knowledge improvement for staff and managers

As mentioned in previous sections, not only accountants but also managers and staffs in SMEs have limited knowledge about IT and digital technology even though digital transformations have occurred in most fields of economy. Consequently, e-accounting or IT applications for accounting in SMEs in general and in Hanoi SMEs in particular have been far from successful because they perceive that using IT for accounting fields is not important. They can run a business without accounting information and it is better to prioritize spending their investments on other business fields (including marketing, promotion, manufacturing, or contribution channels, etc.) instead of the accounting field. Because of low knowledge about IT, they also do not see many advantages of IT or digital facilities. Therefore, the existing area of accounting fields applying IT in most Hanoi SMEs was not full, many of them are only bookkeeping or preparing reports for tax compliance using Microsoft Excel software. To improve the current situation and success in e-accounting development, it is necessary to first provide a full, honest, and prompt education for staff and managers in IT or digital technology for accounting.

IT security systems and e-accounting development

Under the light of Industrial 4.0, e-accounting has been estimated as a new trend in modern accounting systems. However, besides difficult conditions on the side of SMEs, the internal and external security systems in businesses have strong consideration by SMEs managers. Accounting information, as the foundation of business financial information, is normally maintained in private while e-accounting with many IT facilities engages online or through internet transformations. This means the leakage of financial or accounting information issued by an e-accounting system is possible, especially in cases where no barriers exist to keep the information safe. Moreover, crime in IT, known as "white collar" or financial crimes, has been increasing recently (Phi Thi Diem Hong *et al*., 2022). This means the security systems of IT facilities or accounting software, including e-accounting, need to be up to date to deal with any new security issues. Unfortunately, IT security does not depend only on SMEs but also on other partners, the government, officers, and other kinds of enterprises, etc. This requires a legal setting system for the whole economy, wherein each security system of SMEs is a core part of success in general.

Conclusions

Many prior research papers have concluded that the application of IT for accounting work can bring many advantages for enterprises in terms of not only saving time in handling transaction records but also in supplying accounting information. This research, however, mentioned that e-accounting is still limited. This study focused on clarifying the theoretical basis of IT in accounting work, e-accounting, and the relationship between IT and e-accounting. A survey of 186 SMEs in Hanoi was utilized to collect evidence for describing the picture of IT applications in accounting work by SMEs. The findings showed that a variety of accounting fields apply information technology at different levels, wherein partial application (combined with Excel) or using specialized accounting software was popular. Unfortunately, there are still significant difficulties to developing e-accounting or improving IT facilities in the accounting work of SMEs. To further develop e-accounting and upgrade IT successfully, the following solutions should be considered: (1) improve the financial resources of the unit; (2) improve the qualifications of SME staff to suit the application of IT in accounting; and (3) utilize the support of IT application providers and the support of state management agencies. Notably, all of these solutions need to be used together to have the highest success as possible by SMEs.

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