

Knowledge and use of accounting software: evidence from Oman

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Abstract

Purpose – The aim of this paper is to determine the influence of knowledge and use of accounting software among small and medium entrepreneurs (SMEs) in Oman.

Design/methodology/approach – This study has used qualitative approach. Further, the paper elucidated the significance of knowledge of accounting software and evaluated the relationship between knowledge and its adoption or use of accounting software among SMEs in Oman. Purposive sampling method was used to choose the target interviewees required for the survey (semi-structured interview). This method has been applied by selected accountants who work in SMEs in Oman. Based on practical experience and basic knowledge in the field of accounting, a total of six members are selected as the sample size for the study.

Findings – The findings revealed that the knowledge of accounting software has a significant effect on the use of accounting software, meaning that there is significant and positive relationship among the knowledge of generalized accounting software and the use of such generalized or customized accounting software by SMEs in Oman. In addition, this research shows the empirical evidence of knowledge of accounting software effects on the adoption or use of accounting software among SMEs in Oman

Practical implications – The study has brought about a new discussion on the importance of information communication technology (ICT) knowledge and use or adoption of accounting software by SMEs for accounting literature. Further, this study emphasizes the usage and benefits of accounting software by accountants in various SMEs. Further, it would be useful to suggest that SMEs and such other types of organizations adopt customized or generalized accounting software that will enhance the practice among accounting professionals.

Originality/value – This paper contributes both theoretical and practical knowledge of accounting in accountants using generalized or customized accounting software and its relationship with accountant in various SMEs or such other organizations; it is an approach that is not widely discussed in the previous studies. Besides, conducting such study in the field of SMEs gives novelty in the literature between SMEs and developing economies. This has discussed the weakness of accountant in implementing accounting software in the organization.

Keywords Small and medium entrepreneurs (SMEs), Generalized accounting software, Customized accounting software, Accounting professionals

Paper type Research paper

1. Introduction

Current professional accountants use a wide range of computer applications to perform their day-to-day operational work (Do *et al.*, 2020; Blankley *et al.*, 2019; Boulianne, 2014). Information communication technology (ICT) has been considered as a major aspect of effective and efficient accounting system and which can leads to increase organizational performance drastically. Information communication technology (ICT) has been used to enhance organizational performance and the reliability of accounting information (Ganyam and Ivungu, 2019; Ogundana *et al.*, 2017; Sami, 2011). Accounting information systems



include both computer software and hardware which help in recording accounting information (Knapp, 2019; Taiwo, 2016; Wessels, 2005). Rapid movement in adoption of information technology (IT) by organizations helps to acquire and implement daily accounting operations using computerized accounting software. Most of the accounting software are user-friendly for accountants, which resulted in functioning of accounting tasks on a daily basis, in a timely manner and accurately (Xu, 2020; Fowzia and Nasrin, 2011; Musa and Abu, 2005). Most of the organizations now replaced their traditional method (manual accounting system) with computerized accounting systems (Phyu and Vongurai, 2020; Dalci and Tanis, 2004). It is encouraged that continuous effort is required to equip future accountants with necessary IT knowledge and skill as the interconnectedness among IT and accounting functional areas in an organization is invariably important (Turner *et al.*, 2020; Lin *et al.*, 2005; Allen, 1999). Over the years, scholars have also found some of the major difficulties faced by small and medium enterprises (SMEs) are incomplete records, lack of finance, staff inexperience, poor power supply, among others (Căpușneanu *et al.*, 2020; Chhabra and Pattanayak, 2014). Prior to the 21st century, most organizations preferred traditional method of recording accounting transactions, which, of course, is very time-consuming and involves too much paperwork (Kumar, 2020). Some of the records prepared by their accountants were incomplete due to not being able to reach proper decisions by the management. These and many more difficulties are encountered while using the traditional method of recording of accounting transactions, which has given birth to ICT (Turner *et al.*, 2020; Nyathi *et al.*, 2018). The enhanced use of accounting software has changed the accounting process, which involves transactional entry, data storage and preparation of financial statements and related information, and has an impact on the decisions of stakeholders who use financial statements for various purpose. This is also useful for internal control systems employed by the entity (Turner *et al.*, 2020; Senft *et al.*, 2016). The professional accountant should have sufficient knowledge of various accounting software (Mustafa, 2020) to identify and post various items in ledgers, which comes under financial statements, and to ensure fairness of financial statement. The accountant should acquire additional knowledge of accounting software and generalized enterprise resource plan (ERP) (Draijer, 2020) in order to ensure the companies accounts are recorded as per applicable accounting standards or International Financial Reporting Standards (IFRS). Accountants have now been using generalized accounting software to do all the accounting tasks instead of using the traditional ways of accounting (Kumar, 2020), such as manual recording of accounting transactions and finalization of financial statements (Turner *et al.*, 2020). Omani students learn theoretical knowledge of basics of accounting. Therefore, there is a need to learn how to use specialized accounting software (Shaffer *et al.*, 2020) and gain a broad understanding of the finance, accounting and commercial segments, even within an international context. Professional accountant should also have adequate practical experience to use generalized accounting software such as Tally, Peachtree and QuickBooks. IT helps overcome the challenges of an accounting profession (Rindaşu, 2017). Replacing traditional accounting paper records with computer-based records brings many advantages, especially for SMEs. The advantages include increased reliable and accurate financial reports and faster access of financial data, and it ensures fairly improved generation of accounting information through financial statements (Gökten and Özdoğan, 2020; Ghasemi *et al.*, 2011). Accounting software is a major instrument in accounting information systems (AISs), offering timely, accurate and reliable information. Undoubtedly, it is no secret that technology has evolved to the extent that no current business enterprise can operate without it (Huy and Phuc, 2020; Thottoli, 2020; Situmorang, 2020; Ramazani *et al.*, 2012). When compared to small-scale organizations, large-scale organizations set more weightage on the development of accounting information. However, SMEs in China face many problems as a result of no implementation of accounting policies. This was one of the barriers of economic growth of China. Hence, improving the level of accounting policies and

other related information of SEMS is essential (Yu *et al.*, 2020; Wen, 2020; Zhou, 2010). Lack of use and knowledge of accounting software leads to continued manual accounting that may be very hard for business owners, especially SMEs, to monitor financial health of their businesses. This leads SMEs not meeting their business goals (Alhatabat, 2020). As there are no specific studies that examine the knowledge and use of accounting software among SMEs in Oman, there is no clarity regarding the accounting practices that accountants follow in an ICT-enabled or accounting software environment. Thus, the objectives of this study are to examine the knowledge and use of accounting software among SMEs in Oman.

SME: Since there is no standard definition for SMEs, this research has taken on the following meanings of SMEs. The SMEs are categorized according to the number of employees employed. Organization with less than 10 employees is considered as a micro organization or enterprise. Organization with employees between 10 and 50 is considered as small organization or enterprise. An organization employing between 50 and 250 employees is considered as medium-sized organization or firms. This criterion is supported by studies of Ocampo *et al.* (2017) and Kapurubandara and Lawson (2006), and was used to analyze and investigate to qualify SMEs for the purpose of the current study.

2. Literature review

There are number of literature studies identified that highlighted the importance of the use of ICT or accounting software in SMEs. Baporikar (2020), Idota *et al.* (2020) and Ashrafi and Murtaza (2013) in their study mentioned that it has been widely accepted that SMEs generally play a crucial role in a country's economy, and their role is the key to a country's economic stability to achieve targeted gross domestic product (GDP). Hernandez (2020) and Amidu *et al.* (2011) opined that accounting function contributes an important role in the success or failure of any SME or modern business organization. Ibrahim *et al.* (2020) and Jinga *et al.* (2010) mentioned that AISs are helpful for recording accounting transactions, analyzing, monitoring and analyzing financial statements of any company. AISs also help to prepare documents necessary for taxation purpose and generate information that support many other organizational tasks. Bashorun *et al.* (2020) highlighted that prior to the emergence of personal computers, companies used only manual approaches for recording accounting transactions which result in lack of fair financial data. Araya-Leandro *et al.* (2020) and Azih (2018) noted that manual accounting systems consist of accounting ledgers prepared using paper, typewriters and calculators. Thottoli *et al.* (2019a, b, c) found in their study that ICT has a significant impact on the auditing practices. It means that there is a significant and positive relationship between the ICT and the auditing practices of accounting professionals. Another view of Tychalas and Karatza (2020) and Arcega *et al.* (2015) was that by using computerized accounting system, the respondents tend to complete their jobs successfully, and it also enhances their quantity and quality of work. Meanwhile, in employing the manual or traditional way of accounting system, the interviewees claimed that although they are able to complete their job accurately, launching a computerized accounting system is more convenient (Xu, 2020). Alternatively, Ibrahim *et al.* (2020) and Amanamah *et al.* (2016) have claimed that the usage of computerized accounting system by SMEs has much improved their performance. Negative effects of the usage of accounting software are increased cost, lack of education on the benefits of the usage and lack of knowledgeable personnel. Ibrahim *et al.* (2020) and Pulakanam and Suraweera (2010) analyzed and found that small businesses, while implementing small business accounting software, face many barriers, such as non-user-friendly and non-availability of software vendors' support and guidance (Bakr, 2020). Ashrafi and Murtaza (2008) in their study provided that only a very a smaller number of SMEs in Oman are aware of the available accounting software and its adoption. Further, most SMEs outsource majority of their accounting services. Most of the SMEs lack internal

capabilities, are unable to bear high implementation cost of IT in business and lack information about appropriate IT solutions and implementation, which were some of the main restrictions in adopting IT. [Damak-Ayadi et al. \(2020\)](#), [Alabdullah et al. \(2019\)](#) and [Rudzani and Manda \(2016\)](#) identified in their study that SMEs are required to use IFRS and many of these organizations are finding it hard to adopt or incorporate IFRS for numerous reasons, including lack of available expertise. The latest updates should be incorporated in the accounting software as and when required. [Bui et al. \(2020\)](#) and [Everaert et al. \(2006\)](#) found that some SMEs are facing issues managing their accounting tasks. The reason for such issues is lack of expertise knowledge in basic accounting, lack of knowledge in generally accepted accounting principles and lack of applicable tax regulation. It is also essential that one should know the benefits of the application of rules in a given business environment. [Mishina et al. \(2020\)](#) and [Maseko and Manyani \(2011\)](#) say that because of lack in accounting knowledge, and as a consequence, there is inefficient use and entry of accounting transactions that will affect fairness of financial statements and its performance measurement. Most of the SMEs are not maintaining complete accounting records. [Jimoh et al. \(2020\)](#) and [Amahalu et al. \(2017\)](#) expressed their view that the usage of computerized accounting system has shown a marginal increase in profitability of banks compared with when banks were using manual system of accounting. [Hassan \(2020\)](#), [Ahmed et al. \(2020\)](#) and [Rahman et al. \(2015\)](#) emphasized that by using accounting software technology, SMEs can reduce their operating cost drastically and increase profitability marginally, thereby achieving competitive advantages. They suggested that the knowledge of Excel should be included in university accounting programs, since Excel is the most frequently utilized software / tool by majority SMEs. [Anderson et al. \(2020\)](#), [Thottoli \(2020\)](#) and [Lee et al. \(2018\)](#) found that the use of Excel in accounting areas such as audit, tax, advisory and corporate is considered as important by majority of small organizations. In addition, accounting / ERP software, Adobe Acrobat, PowerPoint and the FASB Codification were recognized as often employed across various accounting areas and practical knowledge levels. [Andiola, Masters and Norman \(2020\)](#) noted that accounting and auditing practitioners in their practicing areas require experience, analytic skills and data visualization skills. These are important, but data analytic skills are more important than data visualization skills. [Ibrahim et al. \(2020\)](#) and [Amoako \(2013\)](#) in their study found that the majority of SMEs fail to keep complete accounting records. Small business owners think that keeping accounting records are not required and gives less need or important to expose their financial position. They also suggested that training programs must be organized to alert managers to understand the importance of maintaining proper books of accounts using computer.

3. Methodology

This study explores the effect of knowledge of accounting software which leads to adoption of accounting software among SMEs in Oman. To choose the required respondents for the survey, this study has used a purposive sampling method to make ease of estimation procedure ([Teddlie and Tashakkori, 2009](#)). The sampling method is used by selecting accountants who works in SMEs in Oman. A total of six accountants in various SMEs were selected as the target respondents as sample size. The rationale for selecting the respondents was their experience and basic knowledge in accounting and accounting software and their practical knowledge and its applications within the selected SMEs in Oman. This means, the study has established a good professional experience with the interviewees to develop the quality of the interview questions and thus improve the analysis, and considered follow-up questions and explanations where required. Interviewees were able to express their views in detail and discussed numerous issues which they were assured would remain confidential. The purpose of using the interview technique in this research is to investigate whether

knowledge of accounting software has an influence on the adoption or use of accounting software in SMEs in Oman.

4. Discussion

4.1 *The impact of knowledge of accounting software leads to adoption or use of accounting software among SMEs in Oman*

Recent studies in the field of accounting and management (e.g. [Cadez and Guilding, 2008](#); [Jalaludin et al., 2011](#)) are in agreement with the results of the approach analysis; in the third phase of the discussion with interviewees, the participants were requested to comment on the results regarding the effect of knowledge of accounting software on various accountants who work in SMEs in Oman. Most of the respondents (three out of six) agreed that the aspects, namely, theoretical and practical knowledge of accounting software and knowledge of using accounting software such as Tally/ Quick Books/ Peachtree/ ERP/ Generalized accounting software/ Excel/ and so forth among accounting professionals of SMEs in Oman were considered as vital contributors which lead to practical use of accounting software among SMEs in Oman. The respondents indicated that these determining aspects, which have been stated, have played a very serious role in determining selection and use of accounting software structure for accounting in various SMEs in Oman, thus enhancing the accounting practices. Some of the interviewees, who had sole proprietorship and partnership, based on their experience suggested adopting ERP systems in their organization for recording large and complex transactions.

Alternatively, other three of the respondents alleged and evidently claimed that there was direct relationship between the theoretical and practical knowledge which is required to adopt software for recording accounting transactions. On this point, the interviewee respondent exemplified that *“Currently we use a special notebook to record transactions. Lack of knowledge of how to use advanced software. Do not find a program that suits the level of a commercial project. [. . .]”* Another interviewee mentioned that they did not use any programs in their accounting because business was small. The process of recording accounting transactions requires both theoretical and practical knowledge of accounting principles and accounting software. We still have a vast majority of SMEs in Oman using only books for recording their day-to-day accounting transactions. Only a small number of SMEs in Oman know the benefits of available accounting software and ICT adoption. SMEs face lack of ICT skilled employees for adopting accounting software for recording accounting transactions. So, this is consistent with the study of [Nikolić et al. \(2020\)](#), [Ibrahim et al. \(2020\)](#) and [Ashrafi and Murtaza \(2013\)](#), which found that the knowledge of accounting principles and accounting software leads to the adoption of accounting software in SMEs. One prominent professional auditor had strong reservations about the *“[. . .] customize the new international standard of accounting require us to update the ERP and sometime that is not available which require us to change the ERP.”* Updating recent changes in accounting standards or IFRS in ERP software requires assistance from software vendors. This is supported by [Hernandez \(2020\)](#) and [Ha and Ahn \(2014\)](#) who pointed that factors such as competent internal ERP team, supportive top management, employees’ technical training, collaboration between interdepartment and communication, continuous improvement and continuous systems process integration/ extension influence adoption of accounting software in SMEs. Another interviewee noted that, *“[. . .] easy to generate report and track the account and analyze the data”* this is supported by [Birt et al. \(2020\)](#) and [Arcega et al. \(2015\)](#) that computers provide accurate calculations and smart reports such as financial statements, cash flow statements and various budgets. Another prominent interviewee opined that *“[. . .] do not find a program that suits the level of a commercial project.”* The same has been mentioned by [Birt et al. \(2020\)](#) and [Wadesango \(2015\)](#) in their studies that majority of SMEs use single-entry accounting and

keep those transactions in books or MS Excel. According to [Damerji \(2020\)](#) and [Chao and Chandra \(2012\)](#), the knowledge of accounting software and its adoption are critical, and owner's knowledge of IT was found to be a significant predictor of adoption of traditional IT, as well as IT strategic alignment and Internet know-how, while controlling for differences in organizational attributes (age, size, affiliation industry and strategic attention). Accordingly, the accounting profession needs strong basic principles of accounting, especially in theoretical knowledge. The main role of accountant is to provide service for entry process financial transactions and generation of financial reports. Accountants should have certain percentage of knowledge in the realm of traditional/old financial accounting practice. In addition, accounting controllers think employing an ERP system leads to modifications in the role of accountants ([Chen et al., 2012](#)). When we asked them about the theoretical and practical knowledge about accounting software, three of the interviewees (professional accountants in SMEs) conclude that the use of computerized accounting software / ERP is easy since it reduces the work of preparing financial statements, budgets, cash flow statements and so on. R1, for example, states, *"Making daily invoices prepare the general budget of the ministry and assist in facilitating the financial operations of the government by identifying monthly revenues and expenses and sending them to the ministry."* Another interviewee (R2) reiterated the importance of knowledge of accounting software, *"Lack of knowledge of how to use advanced software are the barriers while using such accounting software."* Likewise, this result is supported by [Oduro \(2020\)](#), [Pillay \(2016\)](#), who claim that lack of practical knowledge and thus unable to experience the potential benefits of latest technology and strategies to support and boost SMEs in achieving their business operational objectives is the major barrier to ICT adoption. SMEs face various issues in implementation of ICT, such as inadequate financial resources, availability of inexperienced ICT employees, insufficient knowledge and skilled/experienced employees in the job market. A study in conducted by [Moghavvemi et al. \(2012\)](#) and [Ruivo et al. \(2012\)](#) indicated that IT notion is taken as a powerful competitive tool in the recent economy and measures ERP post-adoption benefits on SME performance. One of the interviewees expressed their concern about the use of accounting software requiring theoretical and practical knowledge of accounting standards or IFRS and accounting software in order to record day-to-day business transactions, *"Accounting software is a software designed specifically to help an accountant or entrepreneur. It manages all its accounting in purchases, sales, profits, losses and other related project."* This result is consistent with some of the previous studies ([Turner et al., 2020](#); [Janvrin et al., 2008](#); [Hostrom and Hunton, 1998](#)). Usually, the result of the semi-structured discussions with respondents was consistent with and validated the qualitative findings presented, which found that all aspects (customized accounting software) had significant impact on practices among accounting professionals in various SMEs.

5. Implications

The study reveals a number of implications. The primary finding increases the importance of ICT knowledge and use or adoption of accounting software by SMEs for accounting literature. This research would be useful to SMEs to enhance the knowledge and use of accounting software among accounting professionals, as the study findings indicated that accounting software and ERP significantly affect efficiency and effectiveness in the field of professional accounting. This provides SMEs to select the most appropriate generalized or customized accounting software package. However, it implies that when customized or generalized accounting software is properly implemented, both with theoretical and practical knowledge of accounting in SMEs, the method of recording business transactions will be improved, which, in turn, will prevent outsourcing the accounting works to third parties. Freshly graduated students must have practical knowledge acquisition about

accounting software and its usage. This suggests the best way to enrich self-confidence in work environment. Imparting knowledge of the accounting software to the employees will be reinforced so that they use computerized accounting. Thus, this improved customized accounting software or ERP in SMEs will definitely improve their proficient way of handling daily recording of business transactions, the approach of accounting practices by SMEs and consequently improve the efficiency and effectiveness of SME's accountants that will lead to generate automated fair financial statements and other related reports such as cash flow statements and budgetary report. Also, this existing study may help assist the policymakers, especially by Ministry of Oman, tax authorities in Oman, higher educational institutions and government in particular, to set right and consider policies linked to the knowledge of basics of accounting and knowledge of use of accounting software or ERP.

6. Limitations and future research

The research is restricted to few variables that have a relationship with the operational practices of selected organizations under SMEs in Oman. There could be different causative factors for adoption of accounting software by SMEs which can be examined in further studies; there is a need for additional analysis to confirm these leads to different contexts. Besides, it is suggested for impending studies to use quantitative methods, for instance, case studies specifically on moderators, and each of the independent variables to better comprehend the adoption of accounting software by SME organizations for recording day-to-day accounting transactions. In addition, the researchers can study various other challenges that current accounting professionals in SMEs face while using accounting software. Further, this study can be extended to categorize SMEs into partnership, LLP and sole proprietorship and evaluate the effectiveness and efficiency of using accounting software or ERP with traditional method of recording accounting transactions. This accounting software or ERP should support majority of local SMEs in Oman.

7. Conclusion

According to interviews and literature review, this research identifies the variables to be analyzed, the knowledge of accounting software and use or adoption of accounting software among SMEs accountants. As per the limited knowledge of the researcher, there are no previous qualitative study that used and empirically examined the relationship between knowledge and use of accounting software among accounting professionals of SMEs in Oman. This research consequently has assessed this phenomenon and analyzed literature in an effort to determine the knowledge and use of accounting software and evaluated the relationship between the accounting practices and SMEs in Oman. Likewise, this research has made an influential contribution to the literature regarding the influence of the knowledge of accounting software and the accounting professionals among various SMEs. The results have further revealed that the knowledge of customized accounting software or ERP exerts a significant impact on the use or adoption of accounting software in current accounting practices of SMEs. Thus, there is a strong relationship between the knowledge of basic accounting (including knowledge of IFRS) and use or adoption of accounting software to record day-to-day accounting transactions.

The three main parties – SMEs, higher educational institutions (HEI) and tax authorities –strategize on encompassing the use or adoption of accounting software by accounting professional in SMEs. Initially, Ministry of Higher Education in Oman should ensure that the curriculum for graduating students includes proper theoretical as well as practical training on generalized accounting software. With this training, the students should get acquainted

with the use and knowledge of organizational customized accounting software which helps them to know automated process of applicable IFRS and Oman's proposed implementation of VAT of 2021. The government and policymakers should strategize on encompassing the use or adoption of accounting software by accounting professional in SMEs by giving aid and regulating the selected features of accounting software, hence making SMEs more compliant to the accounting standards or IFRS and tax laws in Oman. Tax authorities should encourage SMEs to use accounting software for recording business transactions to tackle with corporate tax and VAT. Further, software consultants should also know current accounting and tax regulations issued by government to develop customized accounting software for Omani SMEs. Moreover, it is suggested for future studies to apply quantitative methods such as case studies, specifically moderators, and each of the independent variables to better understand the customized accounting software in SMEs. In addition, the researchers can study various other challenges current accounting professionals face in order to invent customized accounting software which can support recording of accounting transactions of SMEs and to generate budget reports and cash flow statements that could manage SME's financial operations.

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