

IT Competency in Accounting: A Conceptual Study

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ABSTRACT

Information technology (IT) has inspired new ways of doing business and changed the way data is gathered, prepared, stored and disseminated within organisations and business stakeholders. The role of accounting practitioners is also influenced by the elements of technology where IT has become an essential element of the day-to-day accounting process. Therefore, competency in using IT among accounting practitioners to perform their tasks is vital. The main purpose of this research is to review the relevant literature on the concept of IT competency and the importance of such competency for accounting practitioners. This study culminates with opportunities for future research work, particularly in IT skills and competencies development.

Keywords: Information Technology, Competency, IT Competency, Accounting Practitioner.

1. INTRODUCTION

Today, IT has made a tremendous progress, and this has significantly impacted every aspect of the business domain (Ghani, Rosli, Ismail, & Saidin, 2017). The accounting profession has no exception and accounting functions of organisations are believed to be the first to embrace IT and uses it extensively. IT is integrated into accounting where most financial and accounting transactions involve the use of IT (International Federation of Accountants [IFAC], 2017). Indirectly, technological developments have altered the profession of accounting practitioners, making technology a part of their daily activities (Association of Chartered Certified Accountants [ACCA], 2016). Therefore, accounting practitioners need to improve their skills in line with the development of technology to perform their tasks (Bahador & Haider, 2013).

Despite the growing IT integration in the accounting profession, there are concerns about the level of IT competency needed among accounting practitioners (Chang and Hwang, 2003; Gould, 2017). These concerns are based on issues such as whether accounting practitioners can incorporate technology into their day-to-day business activities and whether they are capable to generate optimum output using technology. Based on this alarming situation, several international accounting organisations/bodies have issued several competency frameworks as a guide in developing skills and competencies in the accounting profession. For example, IFAC has published international education guidelines No. 11 (IEG11), "Information Technology for Professional Accountants" in 1995. They are intended to provide accountants with guidelines to work in the IT environment (IFAC 2003). Four years later in 1999, the American Institute of Certified Public Accountants (AICPA) published a competency framework for the accounting profession.

The AICPA framework focuses on the competencies and skills needed for all accounting practitioners. It provides a basis for lifelong education since accounting practitioners develop

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their skills in the workplace (AICPA, 1999). The Institute of Management Accountants (IMA) has introduced a management accounting competency framework focusing on the skills and knowledge required by practitioners and accounting in the digital age (IMA, 2020). This framework describes abilities, skills and knowledge that accounting practitioners and financial need in order to stay relevant in the digital era. Moreover, Chartered Global Management Accountants (CGMA) also formulates a Competency Framework to help financial professionals, management accountants and employers identify the knowledge needs and evaluate the skills needed for both existing and desired roles. This competency framework was first published in April 2014 and involves five domains of knowledge, i.e. Digital Skills, People Skills, Business Skills, Technical Skills and Leadership Skills (CGMA, 2020).

This paper presents the concept of IT competency among accounting practitioners. IT competency discussed in this paper begins with an explanation of competency in general, then focus on IT competency and the relationship between IT competency and accounting. An overview of this literature is expected to provide readers with a better understanding of the importance of IT competency among accounting practitioners. This paper's discussion concludes with a conclusion.

2. LITERATURE REVIEW

This section discusses the literature on the concept of IT competency with two perspectives, organizational and individual. Further discussion on IT competency among accounting practitioners.

2.1 The Concept of Competency

The concept of competence or competency dominated the management strategy literature of the 1990s, which emphasised "core competence" as a critical organisational resource that could be exploited to gain a competitive advantage (Le Deist & Winterton, 2005). The concept of competency has been used in many different areas of research, including education, psychology, management, information systems (IS) and human resources (Mulder, Gulikers, Biemans, & Wesselink, 2009). Several researchers defined the concept of competency (Mulder, Weigel, & Collins, 2007). However, competency entails a group of knowledge, attitudes and skills that affect a significant part of a person's activity and is correlated with performance. The three elements (i.e., knowledge, attitudes and skills) combination allows an individual to excel in a particular field or task (Lucia & Lepsinger, 1999; Naqvi, 2009).

However, Boritz and Carnaghan (2003) believe that knowledge on its own is insufficient to represent competency. Therefore, Boritz and Carnaghan (2003) see competencies as the ability to "do" rather than the "know-how" to do an activity. Furthermore, competencies must contribute in some way to performance and must be outcome focused (Boritz & Carnaghan, 2003). Thus, competencies include knowledge, skills and attitudes, and have been linked to actions associated with the business strategies of an organisation. Therefore, IFAC (2003) defines competencies as the ability to perform professional roles and tasks, which demands a sufficient level of skills, knowledge, attitudes, ethics and values to develop and build those skills to the standard expected by general public and employers.

2.2 The Concept of IT Competency

In terms of IT competency definition, there is no general definition of this terminology; however, based on the prior literature, IT competency is viewed from two different perspectives, i.e., organisational and individual perspectives (Bahador & Haider, 2012b;

Bassellier, Reich, & Benbasat, 2001; Bharadwaj, 2000; Tippins & Sohi, 2003), the following sub-sections provide a more detailed discussion on both organisational and individual perspectives.

2.2.1 Organisational Perspective

Different scholars have defined organisational perspective of IT competency. For instance, Bharadwaj (2000) defined IT competency as the capacity of an organisation to gather, combine, and use IT resources to meet business requirements and realise the opportunities of business. Tippins and Sohi (2003), on the other hand, define the organisational perspective of IT competency as the extent to which a company knows about and efficiently utilises IT to administer information within the company. Therefore, based on these definitions, it can be deduced that IT competency referred to the capacity of a company to acquire and combine IT knowledge to effectively use it in achieving business objectives.

2.2.2 Individual Perspective

Some researchers have defined the individual perspective of IT competency in different ways. For example, the term "IT competency for individual" can be traced back to 2001 by Bassellier *et al.* (2001). According to Bassellier *et al.* (2001), IT competency for an individual is the group of IT-related tacit and explicit knowledge that a business manager possesses that enables him or her to display IT leadership in his or her field of business. Ni and Chen (2016) defined the individual perspective of IT competency as the IT knowledge, IT skills and personal attributes of a public manager that enables him/her to achieve IT effectiveness in fulfilling his/her public service duties. Likewise, Alkhaffaf *et al.* (2017) defined IT competency as a group of IT knowledge, IT skills, and attitudes towards IT that determined the performance level in a specific context of the work.

Although these two perspectives show some differences in terms of organisational and individual perspectives, however, both need to be closely linked in developing IT competency, especially in achieving organisational objectives in business. An individual with IT competency can help business organisations with the ideas and expertise related to the technology being used. Likewise, in the organisational level, the process of business activities within the organisation provides as much exposure and experience to individuals as it develops knowledge, skills and competencies in using technology.

2.2 Information Technology Competency for Accounting Practitioner

IT has become increasingly integral to accountancy and business therefore the accounting profession's role had expanded. Most accounting practitioners work in commerce, industry, government, public sector, or not-for-profit organisations. They have a range of professional designations, including CPAs, chartered accountants, management accountants, expert comptable, or Contador public—and can work in a wide range of functional areas within and beyond finance and accounting (IFAC,2019). According to IFAC (2003), accounting practitioners may perform various roles in the IT environment such as the accountant as a user of IT (Information analyst, tax practitioner, financial controller and financial manager), the accountant as evaluator and insurance provider (for instance, audit professional, evaluator of information systems and operational auditor or internal financial) or the accountant as information systems manager (specifically data centre manager and knowledge manager) as well as the accountant as a business systems designers (such as analyst of information, producer of financial information and external consultant). By equipping accounting practitioners with IT competency, it is believed that accounting practitioners can serve one of these roles or multiple roles at the same period or throughout his or her career (IFAC, 2003). Furthermore, important organisational decisions linked to the use of technology often involve financial implications. Knowledge and skills are needed in determining IT-related acquisitions

or investments. Thus, accounting practitioners need to enhance their capabilities to play the role in an organisation in order to maintain their influence in the organisation and also improve their position in the accounting profession (ACCA, 2013).

IT competency is considered necessary for accounting practitioners in fulfilling their duties (Wessels, 2008). This is supported by previous studies such as a study by Burnett (2003) who surveyed those employers, which recruited university accounting graduates and members of a Certified Public Accountant (CPA) to determine the skills that are critical for fresh graduates. The results revealed that, among the four most important professional skills required by an employer were written communication, oral communication, critical thinking and decision-making. Further to this, the study reported that word-processing software, windows and spreadsheets were among the top three technology skills most expected by an employer (Burnett, 2003).

Likewise, Mgaya and Kitindi (2006) studied accounting practitioners to determine their views regarding the most critical skills for an accounting graduate and revealed that knowledge of spreadsheet and accounting packages software were the most crucial IT skills whereas critical and analytical thinking was the most important vocational skills. Similarly, Awayiga, Onumah, and Tsamenyi (2010) examined the perceptions of employers and accounting graduates on accounting knowledge and skills required by accounting graduates in Ghana thus concluded that graduates and the employers both agreed on the significance of critical thinking skill. While among IT skills, both groups opined that the utilisation of spreadsheet packages was the most important skill of an accounting graduate.

In the Malaysian context and from the perspective of academics, a study has investigated multiple dimensions of information technology competencies that are needed for accounting practitioners (Bahador & Haider, 2012a). The results of the study confirmed that accounting software, spreadsheet and word processing were the most required skills needed by accounting practitioners. Regarding the soft skills, communication skills were most important, and the least important was the delegation skills. Although the academics have a significant role in determining the accountant's IT skills and competencies, they are still unfamiliar with the soft skills need to be combined in using information technology.

Moreover, Bahador and Haider (2013) conducted another study with the accounting practitioners. They found that accounting practitioners highly ranked technical skills in IT competencies such as advanced word processing, accounting packages and spreadsheet software. At the same time, decision making, negotiation and prioritisation skills appeared to be top-ranked skills among the soft skills. In the same line, Spraakman, O'Grady, Askarany, and Akroyd (2015) collected responses from employers from some of the largest firms in New Zealand on IT competency of management accounting graduates with respondents including Chief Financial Officers (CFO) and their assistants. The investigation revealed that employers confirmed the mid-level abilities of accounting staff with respect to Microsoft tools (Outlook, Word, Excel and PowerPoint) and adequate knowledge of enterprise resource planning systems and the ability of employees to structure and navigate the system procedures as important.

3. CONCLUSION

Today, accounting and IT are closely related. Accounting functions are believed to be the first within organisations that embraces IT and uses it extensively. As IT is continuously evolving, accounting practitioners should have sufficient IT knowledge and skills to execute their tasks and remain relevant in their profession. This paper discusses the concept of IT competency in two different perspectives, i.e. organisational and individual perspective. Nevertheless, both

need to be closely linked to enhancing IT competency to support business within the organisation. As this paper presents the concept of IT competency among accounting practitioners, it explains IT competency in general and also in detail while focusing on the relationship between IT competency and accounting.

REFERENCES

- Alkhaffaf, H. H. K., Idris, K. M., Abdullah, A., & Al-Aidaros, A.-H. (2017). The influence of cognitive factors on information technology competencies among accountants in civil conflict environment: The Iraqi perspective. *Journal of Information System and Technology Management*, 2(6), 13-30.
- American Institute of Certified Public Accountants (AICPA). (1999). *Core competency framework*. <https://www.aicpa.org/InterestAreas/AccountingEducation/Resources/Pages/CoreCompetency.aspx>
- Association of Chartered Certified Accountants (ACCA). (2013). *Digital Darwinism: Thriving in the face of technology change*. Retrieved from <https://www.accaglobal.com/gb/en/technical-activities/technical-resources-search/2013/october/digital-darwinism.html>
- Association of Certified and Chartered Accountants (ACCA). (2016). *Professional accountants the future: Drivers of change and future skills*. Retrieved from <http://www.accaglobal.com/content/dam/members-beta/docs/ea-patf-drivers-of-change-and-future-skills.pdf>
- Awayiga, J. Y., Onumah, J. M., & Tsamenyi, M. (2010). Knowledge and skills development of accounting graduates: The perceptions of graduates and employers in Ghana. *Accounting Education*, 19(1-2), 139-158.
- Bahador, K., & Haider, A. (2012a). Information technology competencies for Malaysian accountants—An academic's perspective. Paper presented at *the 23rd Australasian Conference on Information Systems*, Geelong, Australia.
- Bahador, K., & Haider, A. (2012b). Information technology skills and competencies—A case for professional accountants. Paper presented at *the Business Information Systems Workshops*.
- Bahador, K., & Haider, A. (2013). Information technology competencies for accounting practitioners: A TOPC framework. Paper presented at *the 24th Australasian Conference on Information Systems (ACIS)*.
- Bassellier, G., Reich, B. H., & Benbasat, I. (2001). Information technology competence of business managers: A definition and research model. *Journal of Management Information Systems*, 17(4), 159-182.
- Bharadwaj, A. S. (2000). A resource-based perspective on information technology capability and firm performance: An empirical investigation. *MIS Quarterly*, 24(1), 169-196.
- Boritz, J. E., & Carnaghan, C. A. (2003). Competency-based education and assessment for the accounting profession: A critical review. *Accounting Perspectives*, 2(1), 7-42
- Burnett, S. (2003). The future of accounting education: A regional perspective. *Journal of Education for Business*, 78(3), 129-134.
- Chang, C. J., & Hwang, N.-c. R. (2003). Accounting education, firm training and information technology: A research note. *Accounting Education*, 12(4), 441-450
- Chartered Global Management Accountant (CGMA). (2020). *CGMA Competency Framework 2019 edition*. [online] CGMA. Available at: <https://www.cgma.org/resources/tools/cgma-competency-framework.html> [Accessed 23 Jan. 2020]
- Ghani, R., Rosli, K., Ismail, N. A., & Saidin, S. Z. (2017). Application of computer-assisted audit tools and techniques (CAATs) in audit firms. *Journal of Advanced Research in Business and Management Studies*, 9(1), 67-74.
- Gould, S. (2017). *Disrupting the accountancy profession*. Retrieved from <https://www.ifac.org/global-knowledge-gateway/finance-leadership-development/discussion/disrupting-accountancy-profession>.

- Institute Management Accountants (IMA). (2020). Management Accounting Competencies. [online] Imanet.org. Available at: <https://www.imanet.org/career-resources/management-accounting-competencies?ssopc=1> [Accessed 25 Jan. 2020].
- International Federation of Accountants (IFAC). (2003). *Information technology for professional accountants. International Education Guideline 11*. Retrieved from <http://www.javeriana.edu.co/personales/hbermude/areacontable/particulares/IEG-11-Revised.pdf>
- International Federation of Accountants (IFAC). (2017). *Developing a future-ready profession: Sharing knowledge, ideas, and experience*. Retrieved from <https://www.iaasb.org/system/files/publications/files/Developing-a-Future-Ready-Profession.pdf>
- International Federation of Accountants (IFAC). (2019). *Future-fit accountants: CFO & finance function roles for the next decade*. Retrieved from <https://www.ifac.org/knowledge-gateway/preparing-future-ready-professionals/discussion/future-fit-accountants-roles-next>
- Le Deist, F. D., & Winterton, J. (2005). What is competence? *Human Resource Development International*, 8(1), 27-46.
- Lucia, A. D., & Lepsinger, R. (1999). *Art & science of competency models*. San Francisco: CA: Jossey-Bass
- Mgaya, V., & Kitindi, E. G. (2006). Essential skills for accounting graduates: The accounting practitioner's perspective.
- Mulder, M., Gulikers, J., Biemans, H., & Wesselink, R. (2009). The new competence concept in higher education: error or enrichment? *Journal of European Industrial Training*, 33(8/9), 755-770.
- Mulder, M., Weigel, T., & Collins, K. (2007). The concept of competence in the development of vocational education and training in selected EU member states: A critical analysis. *Journal of Vocational Education & Training*, 59(1), 67-88
- Naqvi, F. (2009). Competency mapping and managing talent. *IUP Journal of Management Research*, 8(1), 85.
- Ni, A. Y., & Chen, Y.-C. (2016). A Conceptual Model of Information Technology Competence for Public Managers: Designing Relevant MPA Curricula for Effective Public Service. *Journal of Public Affairs Education*, 193-212.
- Spraakman, G., O'Grady, W., Askarany, D., & Akroyd, C. (2015). Employers' Perceptions of information technology competency requirements for management accounting graduates. *Accounting Education*, 24(5), 403-422.
- Tippins, M. J., & Sohi, R. S. (2003). IT competency and firm performance: Is organizational learning a missing link? *Strategic Management Journal*, 24(8), 745-761.
- Wessels, P. (2008). The identification and discussion of strategies for implementing an IT skills framework in the education of professional accountants. *South African Journal of Accounting Research*, 22(1), 147-181