

Factors Influencing Emerging Competencies Among Professional Accountants in the Cyber Era: Malaysian Evidence

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ABSTRACT

The recent rise of big data, cloud computing, artificial intelligence, and blockchain technology is a wake-up call for the accounting profession. They face numerous challenges in adapting to the demanding cyber era. This study was conducted to examine the internal and external factors that drive the emerging competencies among professional accountants in Malaysia. A qualitative approach was employed with a semi-structured interview conducted with companies awarded Graduates' Choice Awards, Company of The Year, Best Workplace Practices Award and Corporate Social Responsibility Leadership Award in recent years. This study found that internal factors such as the company's vision, leadership change, individual achievement indicators, technology and business process are the main contributors influencing the changes in the accounting function. On the other hand, external factors such as political issues, the requirement to respond to green the environment, and the COVID-19 pandemic have caused the emergence of competencies among professional accountants. The competencies include soft skills, empathy, analytical, leadership, communication, emotional intelligence, integrity, and flexibility. This is consistent with the stakeholder theory by Freeman, which explains that different stakeholders' expectations lead to changes in how organisations operate. Indirectly forcing the accounting profession to respond accordingly.

Keywords: Factors, Competency, Cyber Era, Professional Accountant, Stakeholder

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INTRODUCTION

Accounting is rapidly evolving with the rise of intelligent technology impacting accountants' competencies and mindsets. Accountants nowadays are no longer regarded as information providers and financial analysts (Cooper & Dart, 2009). They have to adapt to the rapid market environment changes and become an organisation's strategic partner (Xydias-Lobo et al., 2004). They need the competencies and skills to meet the expectation of different stakeholders (Association of Chartered Certified Accountants, 2016).

Stakeholder expectations are strongly geared towards twinning reporting with insight to a much greater extent as they prefer to get the accounting information without time lag. With technology automation, the quality of the accounting information will be improved, and become less time-intensive as the preparation of the accounting information will be shortened, and information such as higher-level analysis and consultation will be available in real-time without delay (Al-Htaybat & von Alberti-Alhtaybat, 2017; Herbert et al., 2016; Hidayat, 2019). Digitalisation may open societies with opportunities for information and for people to mobilise and make their voices heard. The use of technology in the finance function creates a model of '*intelligence augmentation*', where technology augments human intelligence (Chartered Global Management Accountant, 2018).

Furthermore, the emergence of Industry Revolution 4.0 (IR4.0) has demanded the profession to change from its traditional accountant role into modern and sophisticated reporting such as data analytics and blockchain. The required role is to improve the capabilities associated with analysing data and decision-making based on the data with complex problem-solving, leadership skills and interpersonal skills (Setiawan et al., 2019). Accountants in the future will have the opportunity to develop more advanced skills to increasingly serve as business consultants and strategic partners, not just number crunchers (Lopez, 2020).

Professional accountants must understand what they want from their interactions with technology. The need for a balanced emotional response to interacting with machines may stem from an underlying fear of losing control in human-machine interactions (Association of Chartered Certified

Accountants, 2018). Despite many accounting tasks being automated, accounting professionals will never be replaced by technology that can match the financial acumen, critical thinking and trusted counsel that a human advisor offers (Lopez, 2020). Future professional accountants must create and understand a corresponding need for humans to retain appropriate spheres of control and influence the environment where human-machine interactions occur (Association of Chartered Certified Accountants, 2018).

This has motivated the study to examine the factors driving the emerging competencies among professional accountants in the cyber era. By applying the Stakeholder Theory (Freeman, 1984), the factors identified emerge due to the expectation of different stakeholders, namely Internal and External stakeholders, which leads to how organisations operate their business and indirectly leads to the emerging competencies among accounting professionals.

This study adopted a qualitative method by conducting online interviews via Google Meet with two companies, which were awarded the Graduates' Choice Awards, Company of The Year (Overall Excellence in COVID-19 & Community Initiatives) and Malaysia's 100 Leading Graduate Employers Awards in 2021, Best Workplace Practices Award and Corporate Social Responsibility (CSR) Leadership Award in recent years. This paper is organised as follows. First, it starts with a review of the related literature on Stakeholder Theory and competency. The following sections explain the research method, then a conclusion and recommendation for further research.

LITERATURE REVIEW

Stakeholder Theory

The Stakeholder Theory states that the better a firm manages relationships with all stakeholders, the more successful it will be over time (Freeman, 1984). According to the Theory, effective management of stakeholder relationships helps businesses survive and thrive in capitalist systems; it is also a moral endeavour because it involves questions of values, choice, and potential harms and benefits for a large group of groups and

individuals (Parmar et al., 2010). The Theory suggests that a company’s real success lies in satisfying all its stakeholders, not just shareholders. The productivity level of companies may be impacted by challenges that arise or persist due to a complex combination or omission of actions by their stakeholders.

Stakeholders can be defined as an entity with a stake or interest in the subject activity (McGrath & Whitty, 2017). They also represent stakeholders from two angles: in the broad sense, they are any identifiable group or person who can influence the achievement of an organisation’s goals or who is impacted by those goals being met, and in the more specific sense, they are any identifiable group or person who the organisation is dependent on to continue existing. It can also refer to individuals, groups, or organisations, including front-line workers, managers, and leaders. (Bryson, 2004).

The stakeholders can be divided into two types which are internal and external stakeholders (Hawn & Ioannou, 2016). Those directly involved in or affected by a management innovation are considered internal stakeholders (Beringer et al., 2012). It also refers to an individual or group that a manager can control (Harrison & St. John, 1996). It consists of investors, the board of directors, and the employees. External stakeholders are individuals or groups outside the company who can influence or are influenced by the company’s activities (Taghian et al., 2015). It includes customers, creditors, suppliers, and competitors. The relationship between external and internal stakeholders in the firm is illustrated by the Stakeholder Theory (Freeman, 1984) below:

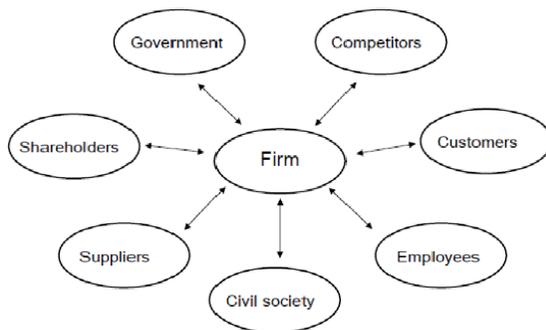


Figure 1: Stakeholder Theory
(Source: Freeman, 1984)

Various factors influence the organisation to change due to different expectations of internal and external stakeholders. Consequently, this drives the emergence of competencies among professional accountants. In this context, the employer, usually the firm, is putting pressure on accounting educators to ensure the graduates possess an increasing array of appropriate soft or generic skills above traditional technical competence. These skills include analytical, communication skills (verbal, written and presentation), critical thinking, interpersonal, judgment, leadership, listening and time management, and judgement skills (Samkin & Stainbank, 2016). Due to these expectations, graduates today are expected to adapt to the fast-paced changes around them (The Star, 2019).

Competency

In the accounting profession, the words competent and competency are applied simultaneously despite being used differently in the past in some countries (IFAC, 2003). In the working environment, competence is defined as the ability of professional accountants to perform their roles and tasks in the workplace to a defined standard. Professional accountants must have the competencies or capabilities such as knowledge, skills, professional values and attitudes to demonstrate competence (IFAC, 2003). Boyatzis (2008) defined competency as capability or ability. The Malaysian Institute of Accountants (MIA) defines professional competence as the ability to perform a role to a defined standard where the role is defined as a specific set of expectations as defined by MIA (Malaysian Institute of Accountants, 2020).

Boyatzis (2008) explained that outstanding workers have three competencies that distinguish excellent performance; expertise and experience, knowledge, and an assortment of basic cognitive competencies. The researcher further described other competencies that make an average person outstanding from others, including emotional intelligence, social intelligence, and cognitive intelligence. An emotional intelligence competency means an ability to recognise, understand and use emotional information about oneself; social intelligence competency is the ability to use emotional information about others; and finally, cognitive intelligence competency is the capability of thinking or analysing information and situations (Boyatzis, 2008). It is important to note that competency for a

professional accountant can be developed and maintained by continuously developing their skills. Thus, the employer must offer ongoing training and development opportunities and ensure a lifelong learning culture is embedded within the business (Willcox, 2020).

Norman et al. (2018) emphasised the need to identify the expected competencies of accounting graduates and understand the industry's evolving requirements in developing countries through consistent engagement with the industry players. There are sixteen competencies identified in the study; technical and functional skills, organisational and business management skills, personal skills, communication skills, problem-solving skills, teamwork skills, ability and willingness to learn, information technology (IT) skills, research skills, analytical skills, motivation, respond ability, integrity, flexibility, critical thinking, professional demeanour. Among the competencies listed, the result shows that communication skills, professional demeanour and analytical skills are below the employer's expectations.

The result shows that most accounting graduates score above expectations on information technology (IT) skills (Norman et al., 2018). The finding is consistent with Zainuddin et al. (2019), highlighting the changing demographics in the workplace, with the young generation known as Millennials encompassing almost half of the human capital. For years to come, Millennials will shape the world (Zainuddin et al., 2019). Millennials are comfortable and confident using technology (Cleyle et al., 2006).

METHODOLOGY

The research methodology adopted in this study was a qualitative approach with semi-structured interviews conducted on two Malaysian companies, Company A and Company B. Due to confidentiality reasons, the companies were identified as Company A and Company B, as defined in Table 1. Company A was awarded three categories: Graduates' Choice Awards, Company of The Year (Overall Excellence in COVID-19 & Community Initiatives) and Malaysia's 100 Leading Graduate Employers Awards in 2021, while Company B was awarded the Best Workplace Practices Award and CSR Leadership Award in recent years. The companies were chosen because they were high performing for best practices, as evidenced by the awards.

Table 1: Background of Companies

	Company A	Company B
Size	Large listed	
Philosophy and Mission	The corporate philosophy is driven by its motto, Passion for Patients. Above all, the company emphasises delivering its promises to the clients with the highest standards of excellence, as the company seeks to create a lasting legacy of doing business with a conscience. The mission is to provide quality products and superior services by professional, committed and caring employees.	The corporate philosophy is driven by its purpose "Together We Brighten Lives Through Innovative and Sustainable Solutions Towards a Better World". The mission is to be a leading provider of sustainable energy solutions in Malaysia and internationally.
Core activities	Malaysia's largest listed integrated pharmaceutical group, Company A, has blazed a trail to provide quality products and services within the healthcare industry. Listed on the Main Board of Bursa Malaysia and has established itself as a leader in the local market, the company also has a growing global presence. Its core businesses span a broad industry spectrum as part of the drive to become an integrated healthcare solutions provider. The business activities include warehousing and distribution of pharmaceutical and medical products; generic pharmaceuticals manufacturing; marketing and sales; research and development; trading and installing medical and hospital equipment. The company has also successfully harnessed the synergies of our businesses to expand into the community pharmacy segment.	Company B is the largest electricity utility in Malaysia and a leading utility company in Asia with an international presence in the United Kingdom, Kuwait, Turkey, Saudi Arabia, Pakistan, India and Indonesia. The customers are mainly commercial, industrial, and residential customers in Peninsular Malaysia, Sabah, and Labuan.

The respondents from Companies A and B were selected based on their position, working experiences, length of services and contribution to the companies as tabulated in Table 2 below:

Table 2: Profile of Respondents (R)

Company	Current Position	Years of Working Experience
Company A	R1: General Manager of Operation Finance	More than 15 years
	R2: Manager of Training and Development, Human Capital Management	12 years
Company B	R3: Protégé, Learning & Development, CoE People Development, Group Human Resources and Management	1 year
	R4: Manager, Main Account Recon, Corporate Division.	11 years
	R5: Account Executive	5 years
	R6: Account Executive	5 years
	R7: Account Executive	5 years

RESULTS AND DISCUSSION

Based on the analysis, different stakeholders’ expectations drive changes in how organisations operate, indirectly, driving the change of the accounting function in the organisation. There are two factors identified in this study, Internal and External factors. These factors influence the emergence of competencies for accounting professionals in the cyber era.

Company A stressed that external factors such as political factors and a green environment; internal factors like communication skills were the primary factors that changed the accounting function within the organisation. Meanwhile, Company B concluded that the company’s vision, leadership change, technology and business process as the internal factors. In contrast, the external factors were personal goal achievement in the company, the unprecedented pandemic of COVID-19 and political instability in the country. Both companies shared a similar view that political factors are a significant factor that changed the accounting function.

In the 21st century, Company A believes that accountants nowadays should have soft skills in empathy and try to know their colleagues’ backgrounds, including their families, to ensure an effective two-way conversation in performing the task given in the organisation. Company B described the Millennial generation as representing the challenges of social

pressure to achieve success in their work and personal lives. Other includes the use of automation in the workplace which might reduce the number of accountants needed within the organisation. According to Companies A and B, these are the challenges encountered by the accountant in the 21st century.

Hence, Companies A and B feel that accountants in the 21st century need to add value to their accounting profession. Company A wants the accountants to upgrade to the next level by acquiring additional professional qualifications such as the Association of Chartered Certified Accountants (ACCA). This is because the professional qualification syllabus parallels what current employers need nowadays (Association of Chartered Certified Accountants, 2016). The accountant must also attend continuous professional development training (CPD). CPD will ensure periodic maintenance, broadening of knowledge and development of personal qualities throughout the accountant's working life.

This includes having additional analytical skills to analyse how the current political and economic impact the business operation. In contrast, Company B pointed out that accountants need to act as a hybrid accountant as an added value by having accounting and business knowledge to increase the company's revenue. The additional skills mentioned by Company B are leadership skills, empathy, communication skills, emotional intelligence skills, integrity, flexibility, the ability to manage work pressure, and the ability to work in a team by knowing their colleagues.

The above factors, internal or external, challenges encountered by the accountant in the 21st century, the added value and additional skills required other than critical thinking, and digital skills were the suggestions given by companies A and B for the accounting profession to be still relevant in Malaysia. These factors will influence the emerging competencies of accounting professionals in the cyber era. A prior study on the drivers of change and future skills by the Association of Chartered Certified Accountants (2016) was based on a global survey in 'deep-dive' workshops across 19 countries and one-to-one in-depth interviews with senior executives who worked in or close to the profession. Our research is the first to adopt a qualitative case study method in Malaysia, and the selection of the companies was based on high performing that applying best practices across different industries. The results are summarised based on the respondents' quotes in Table 3 below.

Table 3: Respondents' Quotes

Company A	Company B
What are the internal and external factors driving the changes to the accounting function in the organisation? What are the challenges encountered by Accountants in the 21st century?	
R1 <i>"I think these factors are many; however, political factors are always there. At any point in time from then until now, political factors will take influence the organisation. The environment now focuses on the green; those are the things we are moving towards, going green and paperless. From then until now, the communication gap is still there. Difficult to breach the gap. So, if you can sharpen your communication skills should be better. An accountant needs some soft skills, empathy, and know their colleagues' background, including their family, because these will help Millennials communicate better with other staff and impact their working environment".</i>	R3 <i>"The company itself has its vision, and we ensure that the workers fulfil the company's vision. So, this has become our staff's primary value, the core factor. The external factor depends on the individual itself, their vision, their own goals, or maybe they are driven by private matters. Also, I would usually say that our values would drive us toward personal goals and what we are trying to be in the company. The challenges that accountants face regarding the working environment and personal life in the 21st century; are very stressed on meeting expectations. Because the Millennial generation is racing with each other in terms of their success, when they see someone at their age achieve something, but they still do not have that kind of achievement, they will have this kind of social pressure".</i>
	R7 <i>"The external factors like the COVID-19 pandemic change us to work from home. They need to adapt to technology when they are working from home. Another external factor is political instability that will affect the company, such as the changes in share price when the investor withdraws their investment from the company. Political instability also affects revenue collection when the government introduce new policy based on the current situation like the pandemic COVID-19. The internal factor that will affect the account function is when there is a change of leadership in the management position in the company; thus, it will affect the internal structure and account function. The changes in technology in the business operation also indirectly affect the accounting function in the organisation. The last internal factor is the streamlined process where we move to a shared-service centre. The challenge for accountants nowadays is to introduce automation in the workplace. Automation is part of artificial intelligence (AI), which might reduce the number of accountants needed in the company. However, not all accounting department tasks require the use of AI. That is why the accountants need to know both knowledge on IT and accounting skills".</i>

From your point of view, how to add value to the accounting profession?
 What are additional skills required other than Critical thinking and Digital skill?
 Will you give some suggestions for the accounting profession to be still relevant in
 Malaysia?

R1 <i>"They also need analytical skills; for example, they are exposed to the environment and learn the current issues like political issues and economic downturn and how these issues would impact the business".</i>	R3 <i>"From my suggestion, I think the additional skills required by Millennials are leadership skills. Currently, the working environment usually requires working with a team member. With this kind of working environment, I think the Millennials should have leadership skills".</i>
R2 <i>"In Human Resources Department, we want to develop our staff, especially for Finance Department. We want them to move up to another level. We encourage our employees to pursue their studies to the next level; for example, they want to have ACCA. We also get feedback from other Accountancy bodies that support our staff if they want to continue their study. We also provide scholarships for them to further their study. Some employees in Finance Department have registered with MIA. They do always attend the program conducted by MIA".</i>	R4 <i>"Leadership skills are also essential because they involve emotional intelligence, where you need to show your empathy and you need to understand your staff."</i>
	R7 <i>"We need a hybrid accountant where the accountant has accounting knowledge and business knowledge because this knowledge can help the business diversify their business to increase profit. The accountant also needs to have communication skills because accountants are directly involved with the clients. Emotional intelligence skill for other stakeholders affected by our reporting is also required. Others include integrity as an accountant, flexibility to adapt to the new environment, and coping with work pressures".</i>

The above findings are supported by the prior literature identified as Internal and External factors.

Internal Factors

In a study done by Briones et al. (2021), it was highlighted that the more preferred skills by employers are leadership, communication, and interpersonal skills. Communication is one of the essential skills employers are looking for in applicants, especially with their existing employees. Sumarna (2020) stressed that the profession needed those soft skills in critical and analytical thinking, which become benchmarks to prepare professional accountants who can compete in the cyber era. This is supported by Ismail et al. (2020) that information technology, interpersonal, and personal skills were most sought by employers where good communication and optimism appeared to be the most valued interpersonal skills.

Accountants need to be great communicators in the next decade because they will interact with people inside and outside their departments and organisations (Motyer, 2020). According to the American Institute of Certified Public Accountants (AICPA) (AICPA, 2020), several communication skills are essential for accountants' future growth. The skills include interpersonal skills that enable teamwork, writing skills to prepare reports, strategic plans and proposals, and verbal skills to convey complex information that everyone can understand. In the era when accountants are overwhelmed with data, they must communicate meaningful information for management to make business decisions and for investors to know how the business is doing financially (Shanker, 2019).

Therefore, the International Accounting Education Standards Board (IAESB) has recently revised their International Accounting Standards (IAS) to address the learning and development of information and communication technologies (ICT) skills for professional accountants (IAESB, 2019). The revision is timely and justified as market expectation increases for ICT skills with the emergence of Fintech, big data, data analytics, bitcoin and blockchain, amongst others (Birt, 2018; IAESB, 2019). In addition, a review of the accounting literature also reinforced this expectation regarding the increasing importance of technology, specifically internet-related technology, to accountants in the new millennium (Mall, 2019).

On the other hand, leadership is another important factor that resonates across multiple professions, particularly among professional accountants. In a recent convention, the International Federation of Accountants (IFAC) underlined the pivotal leadership role of professional accountants, based on their core competencies and ethical codes, in the context of sustainable business and finance (IFAC, 2021). Similar conclusions have been derived from a roundtable discussion organised by IFAC, the Institute of Chartered Accountants of Scotland (ICAS) and Chartered Professional Accountants (CPA) Canada, where professional accountants are called on more for strategic thinking, managing complex and contradictory expectations, managing uncertainty and crisis, and showing steadfast leadership and stewardship (Friedrich, 2021).

Leadership can be defined as '*the accomplishment of a goal through the direction of human assistance*'. It means that a great leader can marshal

their human collaborators to achieve ends (Prentice, 2004). Drewniak et al. (2020) discovered that regardless of leadership style, employees formed expectations of their superiors. Application of stakeholder theory to employees viewing employees as stakeholders in their own right with their motivation and emphasises the mutual exchanges and relationships between a company and its employees as human beings with human needs and expectations that go beyond the capabilities they bring to their work (Freudenreich et al., 2020).

External Factors

Based on the findings, COVID-19 and the political system are the major contributors to changing the organisation drastically. According to the Association of Chartered Certified Accountants (2016), the global economic and business landscape is changing at a speed and with unprecedented intensity. The complexity, variety and interconnectedness of the underlying factors make it impossible to anticipate precisely how these trends will evolve. External factors influence organisations when they need to change due to factors beyond their control such as COVID-19 and political issues.

Recently, COVID-19 is a disease caused by the coronavirus called SARS-CoV-2 (World Health Organization, 2021). COVID-19 has caused the population around the world to be confined at home during the pandemic with the need to have good internet connectivity, appropriate digital tools, and digital skills. Many activities related to education, shopping, socialising, and other pastimes moved from the physical to the virtual world, including the accounting profession (International Telecommunication Union Academy, 2020). The accounting profession seems to be the most vulnerable to disruption through automation and changed business models, and it has changed the accounting function in the organisation.

In addition to COVID-19, the political system has dramatically influenced the development of accounting practices in every country, including Malaysia. Prior studies have also found that political issue impacts the regulatory framework of accounting practices in Gulf countries such as Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (Abdallah, 2008) and many others (Bushman & Piotroski, 2006).

CONCLUSION AND RECOMMENDATIONS

The global economic and business landscape is changing at an unpredictable speed. Resource scarcity, climate change, the unprecedented pandemic COVID-19, geopolitical conflict, an ageing population, and many others have highly impacted the accounting profession (Association of Chartered Certified Accountants, 2016; Ruehl, 2021). Accountants in the 21st century need to develop the skills and competencies that economies and organisations demand and prepare themselves for expected and unexpected events. Additional skills and competencies are required to help organisations sustain economic growth and compete nationally and internationally (Association of Chartered Certified Accountants, 2016).

Based on the findings from the interview in the companies, it can be concluded that several factors drive the emergence of competencies. The factors are political, the organisation's vision and mission, green environment, leadership change, individual achievement, and the unprecedented pandemic of COVID-19. As a result, a set of competencies for professional accountants emerged as industry demands in the cyber era. The competencies are soft skills, empathy, analytical, leadership, communication, emotional intelligence, integrity, flexibility, and the ability to manage work pressure and work in a team by knowing their office colleagues.

In addition, the professional accountant needs to add value to their accounting profession by acquiring professional qualifications such as ACCA, updating themselves through continuous professional development (CPD) training, and being hybrid accountant. Our findings align with previous studies and thus highlight the increasing importance for future accountants to equip themselves with professionally recognised and accredited skills and knowledge essential to the accounting field, enabling them to deal with today's challenges in the modern business environment.

This study examined the factors that drive the emergence of competencies for a professional accountant in the cyber era. However, our findings are limited to the Malaysian accounting profession in the companies awarded Graduates' Choice Awards, Company of The Year (Overall Excellence in COVID-19 & Community Initiatives), Malaysia's

100 Leading Graduate Employers Awards in 2021, Best Workplace Practices Award and CSR Leadership Award in recent years. Future researchers may extend the study to other corporate entities within or across different industries or countries. In a nutshell, these are the factors, competencies, and value-adding features for the accounting profession to be relevant in Malaysia in the cyber era. This study reinforces the importance of stakeholders to the success of companies (Beringer et al., 2012; Freeman, 1984; Parmar et al., 2010; Taghian et al., 2015).

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