

Individual and Organisational Attributes on Public Accountants' Professional Scepticism: A Qualitative Examination

Mazurina Mohd Ali¹, Erlane K Ghani^{2,*}, Kamaruzzaman Muhammad³,
Azleen Ilias⁴

^{1,2,3}*Universiti Teknologi MARA, Selangor, Malaysia*

⁴*Universiti Tenaga Nasional, Pahang, Malaysia*

**Corresponding Author Email: erlanekg@uitm.edu.my*

<https://doi.org/10.58458/ipnj.v13.02.02.0093>

Received: 23 March 2023

Reviewed: 5 May 2023

Accepted: 12 October 2023

Published: 15 December 2023

Abstract

Purpose: The present study examined the impacts of individual and organisational attributes on accountants' professional scepticism levels in the Malaysian public sector. Specifically, three individual and two organisational attributes with corresponding impacts on accountants' professional scepticism in the public sector were appraised.

Design/ Methodology/ Approach: This study utilised a qualitative approach via interviews with 16 Malaysian public-sector accountants over three months.

Findings: All five individual and organisational attributes significantly impacted the accountants' professional scepticism. Individual attributes included experience, attitude, and integrity, whereas organisational attributes encompassed regulation and technology.

Research Limitations/ Implications: Professional scepticism is a crucial element significantly influenced by both individual and organisational characteristics.

Practical Implications: The findings revealed the importance of understanding accountants' individual and organisational attributes in the public sector. The understanding could guide the government in performing the necessary actions to improve the professional scepticism level among accountants.

Originality/ Value: This study initiated the examination of the impact of organisational attributes on accountants' professional scepticism in the Malaysian public sector.

Keywords: Professional scepticism, individual attributes, organisational attributes, accountants, public sector.

1.0 Introduction

The accounting profession is perceived with the highest standards of integrity among professional service sectors and the 'gatekeeper' in safeguarding the investing public (Johari, Hati & Sayed Hussin, 2022). Nonetheless, huge accounting scandals across the globe (Enron and WorldCom in 2001) have significantly impacted the accounting business, including Malaysia. The accounting scandals involving multiple Malaysian companies, such as Felda Global Ventures Holding Berhad in 2017 and Serba Dinamiks in 2021, have diminished public trust and expectations. In addition, the accounting issues encompassing financial fraud are exacerbated by the inability of public accounting companies to detect incorrect reporting. The auditors' lack of professional scepticism perceivably contributes to audit errors and inadequacies (Hamshari, Ali & Alqam, 2021). Simultaneously, accountants must possess a high level of professional scepticism, as the employment entails tasks requiring accurate judgement and decision-making, including authorising claims or payments from suppliers and subordinates. As accountants are the first line of defence in the combat against fraud (Ghani, Ilias, Muhammad & Mohd Ali, 2022), a high professional scepticism degree is required to discover fraud and subsequently employ preventative measures. In line with past investigations, the professional scepticism level varies by individual, wherein accountants' inadequate professional scepticism might jeopardise personal and organisational reputation (Alnafisah, 2019).

Accountants in the Malaysian public sector are under the purview of the Ministry of Finance (MOF). The MOF appointees operate nationwide in different divisions, departments, states, and ministries. Accountants constitute part of the management process and provide critical information for planning, assessing, controlling, and decision-making (Talha, Raja & Seetharaman, 2010). Accountants also address all financial issues and develop planning and performance management systems (Long, Hashim, Abdul Rahman & Ibrahim, 2017). Furthermore, accountants prepare financial reporting and control skills to assist management in developing and executing organisational strategy (Emsley, 2005). Accountants in the public sector are primarily responsible for managing collection and payment procedures based on governmental circulars. Public-sector accountants would create value and increase accountability and transparency to foster effective governance and safeguard public assets (Ghani et al., 2022). Public-sector accountants are also required to successfully and efficiently perform duties to fulfil governmental goals, including professional scepticism, to maintain effective and efficient work performance (Sayed Hussin, Iskandar, Saleh & Jaafar, 2017).

The issue of professional scepticism was extensively reviewed in the auditing literature. Professional scepticism is an essential trait serving as a fundamental predictor of auditors' behaviour and choices (Sun, Jia & Liu, 2021). A lack of professional scepticism was frequently cited as the primary cause for auditors' inability to discover substantial misstatements (Quadackers, Groot & Wright, 2014). Nevertheless, relevant literature demonstrated that professional scepticism was not thoroughly researched to qualitatively identify specific accountants' professional scepticism attributes. As such, this qualitative study aimed to

examine the attributes impacting accountants' professional scepticism in the public sector to determine both individual and organisational factors contributing to professional scepticism. The findings would assist the government and other stakeholders in thoroughly understanding the influencing attributes. Section 2 of the current study presents the literature review, while Section 3 elaborates on the research design. Section 4 details the findings and discussion. Section 5 concludes this study.

2.0 Literature Review

Workplace scepticism denotes a mindset of performing an impartial review of audit results, in which auditors with a high degree of professional scepticism require more persuasive evidence in terms of quality and quantity (Puthukulam Ravikumar, Sharma & Meesaala, 2021). Professional scepticism is key to high-quality auditing. A sceptic exhibits a high level of questioning, careful observation, serious thought, and the ability to suspend conventional beliefs. The terms 'professional scepticism' and 'accounting scepticism' relate to the attitudes of 'questioning', 'careful observation', 'probing contemplation', and 'suspension of belief' in accounting (Sayed Hussin & Iskandar, 2013). According to Sayed Hussin and Iskandar (2013), auditors should retain a healthy level of professional scepticism to ensure that suitable audit methodologies are applied throughout the auditing process. Similarly, accountants should possess a high level of professional scepticism (Ghani et al., 2022) to accurately identify the factors driving auditors' and accountants' professional scepticism. Most past studies utilised quantitative approaches, such as questionnaire surveys, in place of qualitative approaches, including interviews.

A plethora of auditing studies were devoted to analysing the attributes impacting auditors' degree of professional scepticism. For instance, Hurtt, Brown-Liburd, Earley and Krishnamoorthy (2013) highlighted four relevant factors, with the antecedents consisting of individual attributes (traits, experience, training, regulations, and standards), evidentiary characteristics (or the absence of evidence), client characteristics (dispositions to get along with the auditors), and environmental impacts. In addition, the auditors' sceptical judgements and behaviours were influenced by the obtained incentives, qualities, information, audit experience, and training (Nelson, 2009), which served as motivation to perform job duties within the allotted time and contributed to more sceptical behaviours (Nelson, 2009). Although professional scepticism among accountants remained highly unexplored, accountants' experiences could be one of the contributing factors. Professional experience is accumulated through numerous practices and direct feedback aside from general knowledge, which leads to successful job completion with high quality (Bedard & Chi, 1993; Asadnezhad, Hejazi, Akbari & Hadizadeh, 2017; Ibdunni, Ogunnaike & Abolaji, 2017) and perform informed judgements (Zwane, 2018). Johari, Hati and Sayed Hussin (2022) also postulated that more experienced auditors would expect non-errors in audit findings, while Ratna and Anisykurlillah (2020) stated higher professional scepticism resulted from greater auditing experience.

Vera-Munoz, Kinney Jr. and Bonner (2001) described domain experience as "encounters relating to a specific discipline that gives the chance for obtaining knowledge (information stored in memory) about that field" (p. 408). Experience in a domain renders well-developed knowledge structures with a significant influence on decision quality (Bonner, Libby & Nelson, 1996). Kaplan and Norton (1992) investigated the relationship between experience and performance and indicated that experience significantly impacted accountants'

job performance. Moreover, Vera-Munoz et al. (2001) discovered that specific accounting experiences influenced participants' choice of an appropriate issue representation in the study of accountants at CPA companies. The specific experiences would enable the learning of different knowledge types, thus enhancing accountants' information relevance. Similarly, Schmidt, Hunter and Outerbridge (1986) demonstrated that task performance would be improved with higher experience and much-acquired information. Nonetheless, several prior studies (Earley, 2002) countered that auditors who gained expertise and trust in non-errors would reflect low professional scepticism. Earley (2002) discovered that experienced auditors preferred not to probe the financial reports in detail when the first evidence fulfilled auditing expectations, particularly if the conclusion indicated non-error financial statements.

Accountants' attitudes could catalyse professional scepticism. Attitude denotes a "psychological inclination manifested by appraising a particular thing with some degree of favour or dislike" (Eagly & Chaiken, 1993, p.1). Saputra, Damayanti and Usmanit (2021) advocated auditors to develop self-efficacy and retain a sceptical attitude in relevant tasks to improve the auditor's ability to detect fraud. An auditor who exhibits a sceptical mindset would not blindly accept the client's explanation. Instead, the auditor would query the client to ascertain the cause, proof, and confirmation of the investigated item (Andreas, Zarefar & Rasuli, 2016). Contrastingly, the auditor with low professional scepticism would only identify inaccuracies generated by human mistake without detecting inaccuracies engendered by fraud when the perpetrator attempted to conceal misdemeanours (Suraida 2005). Governmental auditors might encounter significant difficulties when a strong emphasis on family, community, and other humanistic concerns exists, which would impact the auditors' professional scepticism and the quality of audit findings.

The auditing literature also identified integrity as a potential attribute for accountants' professional scepticism. Integrity is a fundamental quality distinguishing humans from animals, which is a quality or characteristic of individual or organisational behaviour representing appropriate conduct according to moral values, standards, and rules accepted by organisational and societal members (Bauman, 2013). The consistency and coherence of organisational aims, personal values and beliefs, and individual behaviours also contribute to integrity levels (Badaracco & Ellsworth, 1991; Christina & Tjaraka, 2018; Ratna & Anisykurlillah, 2020). Therefore, integrity is considered to produce a direct impact on organisational activities, decisions, or moral choices (Trevinyo-Rodriguez, 2007). Relevant members are anticipated to conduct all aspects of professional, commercial, and personal lives with honesty and integrity by adhering to the core values. Honesty, fair dealing, and truthfulness are several components of integrity, which is a necessity when serving the public interest. Thus, auditors should behave and act with integrity through various traits, including honesty, fairness, candour, bravery, intellectual honesty, and secrecy. Furthermore, ensuring that the auditor does not experience any conflicts of interest is integral to maintaining personal integrity (Andreas et al., 2016). Meanwhile, regulation could be a contributing factor to determining accountants' professional scepticism, which serves as accountants' guidelines in job performance (IFAC, 2006). Auditors are also obligated to comply with both professional standards and legal requirements when performing audits of financial accounts. Auditors are held to a high accountability level (Dimitrova & Sorova, 2016). As such, professional judgements are pivotal in maintaining suitable professional scepticism (Glover & Prawitt,

2014). Nevertheless, previous scholars did not assess the associations of regulation and integrity with accountants' professional scepticism (see Harber & Marx, 2020).

Past studies investigated the correlation between technology and professional scepticism. Contemporary technology is no longer a luxury but a necessity in the business world, with every profession required to be equipped with technologies to adapt to constant alterations (Giles, 2019). Existing technologies encompass available products in the market (Said, Ghani & Ibrahim, 2011), which advance swiftly and transform the traditional operations of conventional accounting and bookkeeping practices. Hence, auditing firms receive both pressure and opportunities to adopt alternative methodologies in the process of auditing and reporting (Huy, Rowe & Truex, 2012), which promotes the introduction of automated auditing, data analytics, risk assessment, and enhanced scepticism and judgment based on artificial intelligence (AI). The AI could identify and process information relevant to the auditor's analysis and decision-making (AICPA, 2020) while extracting valuable information from digital documents to improve auditors' decision-making capacity (Kokina & Davenport, 2017; Al-Sayyed, Al-Aroud & Zayed, 2021). The AI is also beneficial and smart, which saves auditing time and effort while improving the accuracy level and the speed of data analysis. Nonetheless, the application of technology in accounting is in the preliminary stages.

3.0 Research Design

3.1 Participants

The current study selected public-sector accountants employed in various divisions, departments, branches, states, ministries, and universities as study participants. The participants were approached and invited via phone or email, with 18 accountants consenting to participate. The sample size was considered sufficient as the 18 participants' interview responses were uniform, which suggested data saturation. This technique coincided with Ragin and Becker's (1992) proposal, wherein reiterative responses indicated sufficient participants.

3.2 Research Instrument

Qualitative interviews were conducted with accountants selected to represent the population. A questionnaire with semi-structured items was developed to probe participants' opinions on potential attributes that might impact accountants' professional scepticism in the public sector.

3.3 Data Collection and Analysis

The researchers stipulated the interview appointment details upon agreement with the study participants. The interviews were conducted at the participants' workplaces in both Bahasa Malaysia and English to avoid bias from the participants' jobs. The interviews were recorded upon obtaining the participants' consent and subsequently transcribed. The text was organised and categorised in terms of the crucial topics post-transcription and verbatim coding. Subsequently, a category system was generated to organise and direct the data assessment procedure. Responses in Bahasa Malaysia were translated and quoted verbatim to fulfil the study requirements.

4.0 Findings

The qualitatively analysed interview transcriptions revealed five major attributes, namely experience, attitude, integrity, regulation, and technology, that impacted the accountants' professional scepticism levels. The attributes of experience, attitude, and integrity represent individual attributes, whereas regulation and technology represent organisational attributes.

4.1 Experience and Accountants' Professional Scepticism

The first attribute discovered in this study was experience, wherein the participants suggested the importance of experience in positively impacting professional scepticism apart from adhering to standard procedures. Miss C delineated as follows:

“Experience is important too. Can't just follow books. Especially when working in state government, we cannot be completely guided by books. We have to give solutions.” [translated]

Miss C further explained:

“Experience and training are important. For example, when preparing financial statements, there must be questions. This year it goes up, next year it goes down. Why does it go down? We have to wonder why. We have to ask a question. I will check, and I will ask why coming to zero is okay. Whether it was written incorrectly, the transaction was incorrect, and the credit/debit was incorrect. From there, we can see. But this comes from experience.” [translated]

Miss H also expressed a similar perspective:

“I think experience is important. Even if we go for training, experience is very important. Training is important. But sometimes we will overlook certain matters. When we practise again what we were trained on in Financial Statements, we can detect all that, so it is easier. Experience is important. Training is, of course, important as well. On-the-job training and training are essential. You can ask your superior. So it is important. At our office, that's what we practice. What is not sure, we will ask, especially anything dubious.” [translated]

Mr C explicated:

“Experience is important. Various organisations will face different issues. We can try to detect any misstatement from experience or from cases that occur.” [translated]

Professional scepticism was also perceived to increase as accountants gained more experience, which indicated a higher level of professional scepticism. Miss E stated as follows:

“Experience is important. The more you experience, the more your professional scepticism may increase. We can feel that something happened. Judgment is based on experience. That should be fine if the judge went well. If entered into the wrong account, sometimes we receive payments that we don’t know from whom. So that’s a big problem. So we use JomPAY to determine where the payment is coming from. So, it settled easily.” [translated]

Miss K provided a similar opinion:

“To increase scepticism, experience is essential. Because of the kind of results, for example. The same concept applies to accounting. However, examples go to ministries, agencies, or units and apply different concepts and approaches because these organisations are different. So, job rotation is very important, it is very important, and it is to add experience. This experience adds to the nature of that doubt.” [translated]

Another participant elucidated that the most crucial factor contributing to professional scepticism was experience. Miss J expressed as follows:

“For me, the contribution is experience. Because the experience of each *Pusat Tanggungjawab* (PTJ) is not the same. The process is sometimes different. For example, the Department of Education is different. Here, everything has a payment claim: purchases. Everything is different. Experience helps. What we learn and what we practise are not the same thing. The experiences are different. We work with people. In terms of documentation, there are always many doubts, but they are not too big or small mistakes. Experience helps us have professional scepticism.” [translated]

Participants emphasised the importance of experience in accountants’ professional scepticism. Relying exclusively on books was insufficient, particularly in the state government sector, as providing solutions was critical. Experience and training were also highlighted as vital elements, which enabled accountants to ask probing questions and uncover discrepancies in financial accounts. The participants stated that experience positively contributed to professional scepticism by assisting accountants in identifying misstatements and handling unique challenges to distinct organisations, especially in improving judgement and decision-making. Furthermore, the present study demonstrated that experience was integral to establishing accountants’ professional scepticism, which was consistent with prior findings (Zwane, 2018; Ratna & Anisykurlillah, 2020). Summarily, the participants opined that experience was pivotal to accountants’ professional scepticism (Asadnezhad et al., 2017; Ibdunni et al., 2017). Kaplan and Norton (1992) also explicated that knowledge might not be sufficient to develop professional scepticism. Accountants’ belief in non-errors would be a more probable explanation for certain misdemeanours as auditors became more experienced.

4.2 Attitude and Accountants’ Professional Scepticism

The second attribute impacting accountants’ professional scepticism was attitude. The study participants highlighted the significance of attitude in elevating professional scepticism, as explicated by Miss C:

“Attitude is more important. You can't do the work casually. Our accountants have a target, and we have a time frame that we have to achieve. If we do not reach the target, it will be difficult. In terms of moving towards an excellent work culture, fulfilling the ‘always positive attitude’ is a must. In terms of integrity, ethics are necessary. Accountants should have it already. Accountability as an accountant must exist before his appointment. It has to do with attitude. Attitude is very important. I'm certain about the attitude of not working casually. If there is a casual attitude towards work, it will be difficult. It is like saying, “We are not working to go somewhere”.” [translated]

Mr B provided a similar opinion:

“Attitude is important. He gets it from the adaptation culture. This is my opinion. That is why when we recruit staff for grade W, we look at attitude, not just knowledge and skills. We want to make sure that this staff is a good one.” [translated]

Similarly, Miss I opined that:

“Sometimes we will meet an assistant accountant who really doesn't know and who will say, “I just process and don't know”. Kind of SPM level. But sometimes he will say, “The accountant will check; this is not necessary”. He's the boss who will check. This is the normal attitude. It goes back to the personality. If we work in a place where there are many operational processes and we have an account assistant like this, we will be exhausted. Sometimes, when administrative officers rely on accounting assistants like this, it is over. So, that's why, if it's an accounts assistant or an assistant accountant, there should be awareness to learn. Sometimes their attitude is like that because they feel that their grades are low and nobody listens.” [translated]

Miss G provided a further explanation for why attitude was integral to influencing professional scepticism among accountants in the public sector:

“Many people don't like me because I'm very meticulous. I will present my facts to the top management. Anything is up to them. I manage expenses. We can see the trend. Why, how? There has to be an explanation. Must have why, how, and when. They are important. ‘Why’ is scepticism. We look at how many accountants are there and ask why. Maybe it is because of my passion and because I was trained in 'why'. My attitude is that of an auditor, which makes me think like this even though I'm an accountant. So that's what I want to say. It also depends on the individual. That's important for professional scepticism.” [translated]

Nonetheless, Mr C expressed that the attitude was challenging to manage. She emphasised the importance of understanding the role of accounting and government spending:

“Attitude is difficult to control. We need to understand the purpose of accounting and spending.” [translated]

Mr D also delineated as follows:

“Some areas go back to being humans; humans are more creative. We try to control as much as we can, no matter what. Actually, this professional scepticism needs to be there so that we don't have to rely only on processes and procedures. We have to be rigid with procedures. But we give exposure to professional scepticism because these officers do a lot of work. There is filing, processing, and audit. We have to learn from that. From the staff below, we have to learn a lot. For example, if there is an audit finding, we have to learn a lot and share it with them.” [translated]

Accountants' attitudes significantly influenced the degree of professional scepticism (Saputra, Damayanti & Usmanit, 2021). Participants emphasised the need to maintain a positive and dedicated mindset when exhibiting high professional scepticism, in which the significance of integrity, ethics, and accountability was highlighted in cultivating the proper attitude among accountants. Participants also emphasised that a casual approach towards work would create a high difficulty in maintaining professional scepticism successfully, although attitude was challenging to regulate. As such, accountants should be proactive in learning, be diligent, and be open to questions and seeking explanations. A participant also highlighted the need to understand the function of accountants and government expenditures, which suggested the importance of knowledge and comprehension. Summarily, attitude is pivotal to increasing professional scepticism among public-sector accountants for critical thinking, judgement, and enhanced work practices.

4.3 Integrity and Accountants' Professional Scepticism

The third attribute significantly impacting the accountants' professional scepticism was integrity. Mr E explicated as follows:

“Integrity for professional scepticism is within yourself. Like me, I always remind the staff that when you do something, you have to remember to apply it.” [translated]

Mr A also expressed integrity was pivotal to ensuring high-quality work performance:

“Integrity is important. If we don't have integrity, it is easy for people to influence us; we will approve easily. We need to have integrity.” [translated]

Miss D opined on the importance of integrity:

“Integrity is important. Frequently, the staff below makes mistakes, but actually, they do not know. Skills and knowledge are important. If we don't know, that's when we make mistakes.” [translated]

Mr A provided a further explanation:

“In fact, he relies on integrity. Either he really lacks integrity or he really doesn't know. We make mistakes for two reasons: Either we lack integrity or we do

not know. We have integrity, but we do not know or do not realise, or maybe we don't have the knowledge. But knowledge needs to be added." [translated]

Mr D supported Mr A's perspective:

"For me, it is under the control of the individual. Like us, they had a lot of exposure. For example, we had a lot of anti-corruption courses and others. So, finally, it is back to the individual. I also always tell them to work honestly. We always remind them to go in that direction. We do have laws and procedures, but there is always a loophole. We look at our faith and our desires to control behaviour. No matter how strong the rules are, we need to find spiritual strength and positive values. Otherwise, people will still find ways to do all sorts of things." [translated]

All study participants agreed that integrity significantly impacted accountants' professional scepticism following Bauman (2013), who postulated the importance of integrity in acting according to moral values, standards, and rules accepted by organisational and societal members. Other studies also supported similar views (Badaracco & Ellsworth, 1991; Treviño-Rodríguez, 2007). Accordingly, integrity is a quality that positively influences professional scepticism among accountants. The participants emphasised the necessity of maintaining high integrity in respective jobs owing to the direct impact on professional scepticism. Integrity is integral to preserving job quality while avoiding external pressures that could impair professional discretion. Participants also underscored honesty in preventing mistakes and continual learning to improve knowledge. Furthermore, the participants expressed that integrity is a personal trait to be cultivated and maintained aside from adhering to current rules and processes, as integrating personal principles with professional behaviour is required to retain integrity. Summarily, integrity is pivotal to developing professional scepticism among accountants (Christina & Tjaraka, 2018; Ratna & Anisykurlillah, 2020).

4.4 Regulations and Accountants' Professional Scepticism

The fourth attribute influencing the accountants' professional scepticism was regulations, which would assist accountants in adhering to proper job etiquette when performing respective tasks. Mr C explicated as follows:

"We can look at the financial statements, but we need to have knowledge and align it with circulars and acts. So, it will improve our professional scepticism. Professional scepticism training and knowledge to improve professional scepticism in terms of policy compliance do exist." [translated]

Miss F further explained:

"For us, accountants, when I come, the first thing I understand is the nature of the business and apply the accounting knowledge and policies that are relevant to the operation. For me, credibility, as long as we follow the circulars and ensure that what we do is according to the circulars and accounting policy, should be okay. So, it can help improve professional scepticism. The professional scepticism will arise once we do not follow all

these standards. For example, there is a problem, so we refer to standards. So, professional scepticism, first, is that we should detect and follow the standard. So, we refer.” [translated]

Mr J and Miss N also provided the same opinion:

“To increase this level of scepticism, accountants need to keep up with the current situation and adapt to changes in existing circulars. This will help the accountants in their work and assignments (Mr J).” [translated]

“These circulars are too many and too important to carry out the task. The biggest challenge is to understand the circular (Miss N).” [translated]

Miss D delineated that accounting standards could assist in comprehending the accounting treatment of existing transactions and elevate professional scepticism:

“Now that we are implementing MPSAS, we need to know in depth about accounting standards so that they can be related to our transactions or work. For example, we check if our work is correct and follow the processes. The work should be proper and according to standards. So, from there, it can help improve professional scepticism. Basically, we have to follow the guidelines; like it or not, we have to follow them. But in my opinion, how do we know if it is doubtful or not? For example, we look at the scenario that I shared earlier. The price, like the purchase, is checked to see if it is correct. This is what helps improve professional scepticism.” [translated]

In addition, Miss J commented as follows:

“We have to follow the rules, and there are circulars. But for me, we do a review. We need to have doubts, right? It can't be that easy and simple. We need to know what is implied and hidden. Only at the department level do we check. We have many circulars. We look at assets; public money matters. We already know and understand this circular. Indirectly, it has helped us. So, scepticism and guidance already exist.” [translated]

Miss H also elucidated that:

“For a statutory body, so many rules to comply with for self-accounting. So, it is very necessary to help towards professional scepticism.” [translated]

The study revealed that regulations significantly influenced accountants' professional scepticism. The relevance of rules in guiding work and ensuring compliance with standards and policies was emphasised by the participants. Regulations were critical to increasing professional scepticism by providing a framework and reference point for decision-making and accounting treatment. Participants also discussed the importance of being updated with legislation and adapting to changes in circulars to maintain a high professional scepticism level aside from understanding accounting standards. Moreover, the participants acknowledged the difficulties in comprehending and applying several circulars, albeit

recognising the usefulness in guiding work while eliminating uncertainty. Summarily, regulations played a critical role in fostering professional scepticism among public-sector accountants. The significance of clear communication and regulatory understanding was highlighted for accountants to effectively eliminate large ambiguities while applying professional scepticism in the respective jobs. Dimitrova and Sorova (2016) demonstrated that regulators, standard-setters, and board and audit committees strived to expand the understanding and implementation of professional scepticism. Regulators and standard-setters could further reiterate the importance of professional scepticism among accountants in the public sector. Regulations and policies must also be clearly explained and conveyed to the accountants to ensure adequate understanding and remove existing uncertainties.

4.5 Technology and Accountants' Professional Scepticism

The last attribute contributing to professional scepticism was technology, which significantly impacted the level of professional scepticism among accountants in the public sector. The availability of a technology or system could improve accountants' professional scepticism degrees, as underscored by several participants regarding the impact on daily tasks. Miss M opined that:

“The need for technology is one of the things that is needed. It needs to be in line with existing changes. Accountants need to know and be able to apply for assignments. This actually helps analyse reporting better.” [translated]

Mr D posited that technology or a system would be beneficial in assisting the accountants in work performance, although complete reliance on the system could also negatively impact professional scepticism:

“I believe the system here is strong enough. Internal control is already strong. However, there is still room for manipulation. Even the system can't actually cater. We need confirmation that this company is not the same one. Even the system cannot detect. The system can't yet. It is also good if the system can help if there is any doubt.” [translated]

Miss F supported the notion that technology plays an important role in influencing the accountants' level of professional scepticism:

“Actually, a system is quite important, but it depends on the organisation. Like us, we are quite a big organisation, but our system is a bit outdated. We still need to have a system with many features.” [translated]

Nevertheless, the technology or system requires the feature of an audit trail to allow accountants to be aware of suspicious transactions, which would indirectly improve professional scepticism. Mr H expressed that:

“The audit trail is good. If a system has this feature, this can obviously help us increase our level of scepticism and not just key in transactions only.” [translated]

Technology is an integral component of both business and human life, which has significantly altered enterprises and corresponding operations. Consistent with participants' opinions, technology usage, such as AI and machine learning, could enhance accountants' work efficiency in terms of judgment and professional scepticism (Puthukulam et al., 2021). This study identified technology as a contributing factor to high professional scepticism among public-sector accountants, as acknowledged by participants regarding the significance of technologies or systems in supporting daily jobs. The importance of aligning technology with existing developments was also underscored to enable more efficient accounting analysis and reporting. Nevertheless, relying solely on technology would engender negative consequences for professional scepticism when the technology could not detect certain manipulations or questionable transactions. Participants stated a need for technology to provide elements, such as an audit trail, to improve professional scepticism for the detection of probable abnormalities. Summarily, technology significantly impacted accountants' professional scepticism levels. Employing AI could also increase the effectiveness and efficiency of task performance (Al-Sayyed, Al-Aroud & Zayed, 2021) through the potential benefits of technology in enhancing job efficiency and judgement. Understanding the limitations and the need for technological features is also crucial to enabling professional scepticism.

5.0 Conclusion

The present study qualitatively analysed the attributes contributing to professional scepticism among Malaysian public-sector accountants to identify attributes that could not be discovered through a quantitative approach. A total of 18 participants were approached and interviewed. The findings demonstrated that the level of professional scepticism was determined by two major categories, namely individual and organisational attributes, apart from audit quality (Hai, Toanc Quy, & Tung; 2020) and fraud detection (Satyawan, Triani, Kusumaningsih & Nazri; 2022). Among the individual attributes, experience, attitude, and integrity significantly influenced public-sector accountants' professional scepticism. In terms of organisational attributes, regulatory and technological attributes significantly elevated public-sector accountants' professional scepticism. The five attributes established a framework for accountants in the public sector. Nonetheless, several study limitations existed as the participation of accountants in the public sector was relatively low compared to the entire population, although the number was considered sufficient to achieve the study objectives. Furthermore, the data became saturated after 18 interviews were conducted with the participants (Ragin & Becker, 1992). Future studies could also qualitatively identify other possible attributes aside from the five attributes in the current study. Summarily, the study findings provided insights for the government and other relevant parties, both domestically and internationally, regarding the attributes contributing to public-sector accountants' professional scepticism. Comprehensive and descriptive profiles of accountants working in the Malaysian public sector were also described in the present study.

References

- AICPA. (2020). *The data-driven audit: How automation and AI are changing the audit and the role of the auditor*. Canada, CPA.
- Alnafisah, Y. A. (2019). *The practice of professional scepticism in auditing*. PhD Thesis, Alliance Manchester Business School.
- Al-Sayyed, S., Al-Aroud, S., & Zayed, L. (2021). The effect of artificial intelligence technologies on audit evidence. *Accounting*, 7(2), 281-288.
- Andres, A., Zarefar, A., & Rasuli, H. M. (2016). Analysis of factors affecting the auditors' professional scepticism and audit result quality: The case of Indonesian government auditors. *International Journal of Applied Business and Economic Research*, 14(6), 3807-3818.
- Asadnezhad, M., Hejazi, R., Akbari, M., & Hadizadeh, E. (2017). Designing the business model of herbal pharmaceutical knowledge-based companies. *Journal of Entrepreneurship, Business, and Economics*, 5(2), 47-63.
- Bauman, D. C. (2013). Leadership and the three faces of integrity. *The Leadership Quarterly*, 24(3), 414-426.
- Badaracco, J. L., & Ellsworth, R. R. (1991). Leadership, integrity and conflict. *Journal of Organizational Change Management*, 4(4), 46-55.
- Bedard, J., & Chi M. T. H. (1993). Expertise in auditing. *Auditing Journal of Practice and Theory*, 12(1), 21-45.
- Bonner, S., Libby, R., & Nelson, M. (1996). Using decision aids to improve auditors' conditional probability judgments. *Accounting Review*, 71(2), 221-240.
- Christina, L. S., & Tjaraka, H. (2018). *Factors that influence auditor's professional skepticism*. In Proceedings of the 1st International Conference on Islamic Economics, Business, and Philanthropy (ICIEBP 2017) - Transforming Islamic Economy and Societies, 326-330 ISBN: 978-989-758-315-5.
- Dimitrova, P. J., & Sorova, A. (2016). The role of professional scepticism in financial statement audit and its appropriate application. *Journal of Economics*, 1(2), 1-17.

- Earley, C. P. (2002). Redefining interactions across cultures and organisations: Moving forward with cultural intelligence. *Research in Organisational Behaviour*, 24, 271-299.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. New York: Harcourt, Brace Jovanovich College Publishers.
- Emsley, D. (2005). Restructuring the management accounting function: A note on the effect of role involvement on innovativeness. *Management Accounting Research*, 16(2), 157-177.
- Ghani, E. K., Ilias, A., Muhammad, K., & Mohd Ali, M. (2022). Exploring Hurtt's Professional Scepticism Scale for public sector accountants in Malaysia. *IPN Journal of Research and Practice in Public Sector Accounting and Management*, 12(1), 57-77. <https://doi.org/10.58458/ipnj.v12-01030076>
- Giles, K. M. (2019). *How artificial intelligence and machine learning will change the future of financial auditing: An analysis of the University of Tennessee's Accounting Graduate Curriculum*. https://trace.tennessee.edu/utk_chanhonoproj/2259
- Glover, S. M., & Prawitt, D. F. (2014). Enhancing auditor professional scepticism: The professional scepticism continuum. *Current Issues in Auditing*, 8(2), 1-10.
- Hamshari, Y. M., Ali, H. Y., & Alqam, M. A. (2021). The relationship of professional scepticism to the risks of auditing and internal control, and the discovery of fraud and core errors in the financial statements in Jordan. *Academic Journal of Interdisciplinary Studies*, 10(2), 105-117.
- Hai, P. T., Toanc, L. D., Quy, N. L. D., & Tung, N. T. (2020). Research factors affecting professional scepticism and audit quality: Evidence in Vietnam. *International Journal of Innovation, Creativity and Change*, 13(1), 830-847.
- Harber, M., & Marx, B. (2020). Auditor independence and professional scepticism in South Africa: Is regulatory reform needed?. *South African Journal of Economic and Management Sciences*, 23(1), 1-12.
- Huy, L., Rowe, F., & Truex, D. (2012). An empirical study of determinants of e-commerce adoption in SMEs in Vietnam: An economy in transition. *Journal of Global Information Management*, 20(3), 1-35.

- Hurt, R. K., Brown-Liburd, H., Earley, C., & Krishnamoorthy, G. (2013). Research on auditor professional scepticism: Literature synthesis and opportunities for future research. *Auditing A Journal of Practice & Theory*, 32(Supplement 1), 45-97.
- Ibidunni, A. S., Ogunnaike, O. O., & Abolaji, A. J. (2017). Extending the knowledge strategy concept: Linking organisational knowledge with strategic orientations. *Academy of Strategic Management Journal*, 16(3), 1-11.
- IFAC. (2006). *Code of ethics for professional accountants*. <https://www.ifac.org/system/files/publications/files/ifac-code-of-ethics-for.pdf>
- Johari, R. J., Hati, T. M., & Sayed Hussin, S. A. H. (2022). Factors influencing auditors' professional scepticism: Malaysian evidence. *Universal Journal of Accounting and Finance*, 10(1), 243-253.
- Kaplan, R., & Norton, D. (1992). The balanced scorecard-measures that drive performance. *Harvard Business Review*, 79.
- Kokina, J., & Davenport, T. H. (2017). The emergence of artificial intelligence: How automation is changing auditing. *Journal of Emerging Technologies in Accounting*, 14(1), 115-122.
- Long, Y., Hashim, U. J., Abdul Rahman, S. A., & Ibrahim, M. A. (2017). Management accounting practice in Malaysian public sector. *World Applied Sciences Journal*, 35(8), 1482-1489.
- Nelson, M. (2009). A model and literature review of professional scepticism in auditing. *Auditing A Journal of Practice & Theory*, 28(2), 1-34.
- Puthukulam, G., Ravikumar, A., Sharma, R. V. K., & Meesaala, K. M. (2021). Auditors' perception on the impact of artificial intelligence on professional scepticism and judgment in Oman. *Universal Journal of Accounting and Finance*, 9(5), 1184-1190.
- Quadackers, L., Groot, T., & Wright, A. (2014). Auditors' professional scepticism: Neutrality versus presumptive doubt. *Contemporary Accounting Research*, 31(3), 639-657.
- Ragin, C., & Becker, H. (1992). *What is a case: Exploring the foundations of social inquiry*. Cambridge: Cambridge University Press.

- Ratna, T. D., & Anisykurlillah, I. (2020). The effect of experience, independence, and gender on auditor professional scepticism with professional ethics as moderating. *Accounting Analysis Journal*, 9(2), 138-145.
- Said, J., Ghani, E. K., & Ibrahim, Z. (2011). Assessment of computerized management accounting system among small and medium size construction companies. *European Journal of Economics, Finance and Administrative Sciences*, 39(1), 32-39.
- Saputra, A. U., Damayanti, R. A., & Usman, A. (2021). The effect of self efficacy and professional scepticism on fraud detection with emotional intelligence as a moderation variable. *Quest Journals-Journal of Research in Business and Management*, 9(5), 73-83.
- Satyawan, M. D., Triani, N. N. A., Kusumaningsih, A., & Nazri, S. N. F. S. M. (2022, July). *Hurtt's professional skepticism, auditor demographics, and fraud detection in the Indonesian audit environment*. In Eighth Padang International Conference On Economics Education, Economics, Business and Management, Accounting and Entrepreneurship (PICEEBA-8 2021) (pp. 60-65). Atlantis Press.
- Sayed Hussin, S. A. H., & Iskandar, T. M. (2013). Exploratory factor analysis on Hurtt's professional scepticism scale: A Malaysian perspective. *Asian Journal of Accounting and Governance*, 4, 11-19.
- Sayed Hussin, S. A. H., Iskandar, T. M., Saleh, N. M., & Jaffar, R. (2017). Professional scepticism and auditors' assessment of misstatement risks: The moderating effect of experience and time budget pressure. *Economics & Sociology*, 10(4), 225-250.
- Suraida. (2005). Effect of ethic, competency, audit experience, and audit risk towards on professional scepticism and given appropriate opinion. *Sosiohumaniora*, 7(3), 186-202.
- Schmidt, F. L., Hunter, J. E., & Outerbridge, A. N. (1986). Impact of job experience and ability on job knowledge, work sample performance and supervisory ratings of job performance. *Journal of Applied Psychology*, 71(3), 432-439.

- Sun, Y., Jia, W., & Liu, S. (2021). Is auditors' professional scepticism a double-edged sword?. *Accounting Forum*, 46(3), 241-263 <https://www.tandfonline.com/doi/full/10.1080/01559982.2021.1944028?scroll=top&needAccess=true>
- Talha, M., Raja, J. B., & Seetharaman, A. (2010). A new look at management accounting. *Journal of Applied Business Research*, 26(4), 83-97.
- Trevinyo-Rodríguez, R. N. (2007). Integrity: A systems theory classification. *Journal of Management History*, 13(1), 74-93.
- Vera-Munoz, S. C., Kinney Jr, W. R., & Bonner, S. E. (2001). The effects of domain experience and task presentation format on accountants' information relevance assurance. *The Accounting Review*. 76(3), 405-429.
- Zwane, R. P. (2018). *Developing professional scepticism in chartered accountants*. University of Johannesburg (South Africa). [Unpublished]: University of Johannesburg. Retrieved from: https://ujcontent.uj.ac.za/vital/access/manager/Index?site_name=Research%20Output