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INTELLIGENCE (AI) ADOPTION AMONG ACCOUNTING
PERSONNEL IN MALAYSIA: A FUZZY DELPHI ANALYSISNorlela Awang Cha^{1,2*}, Zam Zuriyati Mohamad³, Zuriawati Zakaria⁴¹Teh Hong Piow Faculty of Business and Finance, Tunku Abdul Rahman Universiti, Malaysia.²Faculty of Business and Management, Qwest International University, Malaysia norlela.awangcha@lutar.edu.my
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Abstract:

Purpose. Artificial Intelligence (AI) has become increasingly important in transforming accounting practices through automation, predictive analytics, intelligent auditing systems, and cloud accounting technologies. Despite rapid technological development and government initiatives to encourage digital transformation, the adoption of AI among accounting personnel in Malaysia remains relatively low. Therefore, this study aims to identify the important strategies influencing AI adoption among accounting personnel in Malaysia. **Problem statement.** Accounting personnel remain reluctant to adopt the technology, despite many campaigns and awareness have been carried out by the companies and government. The hesitation to adopt AI because of lack of knowledge, concern about security and confidentiality, lack of trust and the strong preference for using traditional methods to complete the accounting tasks. Furthermore, the function and application of AI are very complex and costly. Small accounting businesses are unable to adopt AI due to insufficient funds and limited awareness of AI adoption. **Methodology.** This study focuses on strategies for AI adoption among accounting personnel in Malaysia using the Fuzzy Delphi method. A total of 15 accounting experts were selected as respondents, of which 5 were from academia and 10 were from industry. There are 5 aspects and 26 criteria proposed in this study. **Findings:** The results showed that only 4 aspects and 13 criteria were accepted at a threshold of 0.44 for aspects as well as

criteria. The findings revealed that support from government, vendors, and management, responsible AI development, cost effectiveness, and accelerated AI adoption were identified as the most important factors influencing AI adoption among accounting personnel in Malaysia.

Implications: The study contributes to the literature by providing expert consensus regarding strategic factors influencing AI adoption among accounting personnel. The findings also provide practical implications for policymakers, professional accounting bodies, and organizations in developing effective AI adoption strategies.

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Keywords:

Artificial Intelligence, Accounting Personnel, Digital Transformation, Malaysia, Fuzzy Delphi Method, Strategies in AI Adoption



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Introduction

Artificial Intelligence (AI) has emerged as one of the most significant technological advancements associated with the Fourth Industrial Revolution (IR 4.0). AI technologies have transformed various industries by automating repetitive tasks, improving decision-making processes, enhancing operational efficiency, and reducing human errors. In the accounting context, AI technologies such as robotic process automation, intelligent auditing systems, machine learning, and cloud accounting have significantly changed accounting practices.

In Malaysia, the government has actively encouraged digital transformation and AI adoption through initiatives such as the National Artificial Intelligence Roadmap (AI-RMAP), Malaysia Digital Economy Blueprint, and National AI Office (NAIO). These initiatives aim to strengthen digital capabilities, improve competitiveness, and accelerate AI adoption across industries.

Despite these efforts, the level of AI adoption among accounting personnel in Malaysia remains relatively moderate. Many accounting personnel still face challenges related to technological readiness, lack of expertise, implementation costs, and resistance toward technological change. According to MIA (2025) survey, 59% of the respondents stated that the slow adoption of AI is because of the lack of talent to utilize AI. Therefore, the accounting organization must implement the best strategies to invest in AI-based accounting software in order for the accounting personnel to accept the adoption of AI. Many companies still hesitate to adopt AI. A survey done in 2022 by MIA still shows low adoption of AI due to the same reason as in 2019, which is low knowledge and the benefits of AI among accounting personnel in Malaysia. Previous studies have mainly focused on technology acceptance factors influencing AI adoption. However, limited studies have examined expert consensus regarding the important strategic factors influencing AI adoption among accounting personnel in Malaysia. Therefore,

this study applies the Fuzzy Delphi Method (FDM) to identify and prioritize the important factors influencing AI adoption. The reason for choosing this method is its ability to save time and cost in handling questionnaires (Jamil et al., 2017).

The objectives of this study are:

1. To determine the strategies to adopt AI among accounting personnel.

Literature Review

Strategies on AI adoption

Many strategies have been implemented by MIA such as providing awareness of AI trends. Additionally, training has been provided for the MIA members and relevant certification has been given to the participants. In fact, the MIA has imposed the MIA Digital technology Blueprint that was launched in July 2018 as guidance and reference for the MIA members to use AI in handling accounting tasks. A survey done by MIA in 2025 showed that 97% have adopted AI, but still not more than 70% have adopted and only 3% have not started to adopt AI. As a result, it showed that awareness, policies, blueprints, and tax incentives imposed by the government and MIA have been successful in encouraging AI adoption among accounting personnel.

Moreover, the government launched the Centre of Artificial Intelligence for Future Industry (CAIFI) in March 2021 to build an AI ecosystem to help the Malaysian industry move toward Industry 4.0. In addition, the government has announced RM10 million allocation to strengthen digital infrastructure in 2025. The government announced the National AI Office (NAIO) on 28th August 2025 to encourage AI adoption, encourage innovation, and support the responsible development of AI. In line with this initiative, the government also introduced the AI Technology Action Plan for 2026-2030 to strengthen the country's competitiveness and increase foreign investor's confidence in Malaysia. These initiatives reflect the government's commitment to driving digital transformation and positioning Malaysia as a competitive and forward-looking economy in the AI era.

Artificial Intelligence (AI) in Accounting

AI refers to computer systems and technologies capable of performing tasks that normally require human intelligence, including learning, reasoning, decision-making, and problem-solving. AI technologies have increasingly transformed accounting practices through automation, intelligent auditing systems, predictive analytics, and financial forecasting.

In addition, the adoption of AI-based accounting systems has significantly affected accountants and users of financial reports, including auditors and stakeholders. In fact, AI helps reduce the burden of repetitive tasks for accountants, in fact AI enabling them to concentrate more on critical thinking and problem-solving, such as providing financial advice to clients and companies (Adnan et.al. 2024)

The accounting personnel are experiencing rapid digital transformation due to technological advancements and increasing organizational dependence on data-driven decision-making. AI technologies help accounting personnel improve efficiency, reduce operational costs, enhance auditing quality and support strategic decision-making. Moreover, Noordin et al., (2022) stated

that accounting personnel adopted AI because AI can assist them in auditing, increase their technical skills related to AI and improve work speed and quality.

Previous studies on AI adoption in accounting have several limitations. Rababah et al. (2022) only focused on barriers to AI adoption in Omani companies using a qualitative approach, which limits the findings to a specific context. Jackson and Allen (2023) studied technology adoption broadly and did not focus deeply on AI adoption in accounting. Meanwhile, a study by Al Sayyed et al. (2021) examined the effects of AI technologies on audit evidence among 582 auditors working in Information Technologies in Jordan. Lastly, a study done by Abdullah and Almaqtari (2024) examined the impact of AI and Industry 4.0 on transforming accounting and auditing practices in Saudi Arabia. Therefore, more comprehensive and empirical studies on AI adoption among accounting personnel are still needed.

Furthermore, expert consensus regarding the strategies influencing AI adoption among accounting personnel in Malaysia remains limited. FDM has been widely used to obtain expert consensus and prioritize important factors in decision-making studies. The method combines the traditional Delphi technique with fuzzy set theory to reduce uncertainty and ambiguity in expert judgments.

Research Methodology

Research Design

This study is a quantitative approach using the FDM to identify the important strategies influencing AI adoption among accounting personnel in Malaysia. The questionnaire has been distributed to 15 experts in accounting, of whom 10 are from industry and 5 are from academia. According to Adler and Zinglio (1996) the number of experts is 10 to 15 people if there is a high level of uniformity among the experts.

Selection of Experts

The study involved a panel of experts consisting of academicians, auditors, accountants, financial managers, and AI technology specialists. The experts were selected based on their experience, expertise, and knowledge related to accounting technologies and AI implementation. The respondents have more than 6 years and above of experience. As stated by (Ericsson 2003, Ericsson et. al., 2004), individuals can reach their highest professional or become an expert in less than ten years of training, especially 6 years after a couple of years of training. Therefore, the experts selected for this study has more than 6 years and above experience. A study done by Karimabadi et. al., (2022) on professional ethics in auditing in Iran chose the experts in accounting with 5 years of experience in the related field. Furthermore, a study done by Manakandan et al, (2017), on Pesticide applicators using FDM, also used respondents with 5 years of experience in the occupational health related field.

The inclusion of academic and industry experts were to make sure the AI adoption strategies were grounded in theory and practice. Academic experts added theoretical and conceptual knowledge, evidence-based recommendations as well as understanding of AI research and trends. In addition, the academic knowledge in research methodology strengthened the robustness of this study. On the other hand, industry experts brought the real-world viewpoint, specifically on how AI was implemented, the organisational and operational hurdles, what

companies expect AI technology in the industry and employee readiness on AI adoption. Therefore, the involvement of academics and industry enhances credibility and practical to the findings of this study.

These experts were contacted through phone, and the questionnaires were sent to them online via email and WhatsApp. The outcome of their evaluations and consensus notes contributed to the indicators used to determine the AI adoption strategy for accounting personnel in Malaysia. Indeed, the respondents' experience contributes to strengthen the strategy of adoption of AI among accounting personnel in Malaysia. Table 1 shows the respondents' profile.

Table 1: Respondents' Profile

Position	Qualification	Expertise	Years of experience
Accountant (Industry)	Master (MIA)	Accountancy	6 years and above
Accountant (Industry)	Bachelor (MIA)	Accountancy	6 years and above
Assistant Manager (Industry)	Masters	Accountancy	6 years and above
Accountant (Industry)	Bachelor (MIA)	Accountancy	6 years and above
Accountant (Industry)	Bachelor (MIA)	Accountancy	6 years and above
Business Analyst (Industry)	Master	Account and finance	6 years and above
Finance Manager (Industry)	Bachelor	Account and finance	6 years and above
Auditor (Industry)	Bachelor	Accountancy	6 years and above
Director / Accountant (Industry)	PHD	Accountancy	6 years and above
Accountant (Industry)	Bachelor	Accountancy	6 years and above
Senior Lecturer (Academic)	Master (MIA)	Accountancy	6 years and above
Senior Lecturer (Academic)	Bachelor (MIA)	Accountancy	6 years and above
Associate Professor (Academic)	PHD	Accountancy	6 years and above
Professor (Academic)	PHD	Accountancy	6 years and above
Senior Lecturer (Academic)	ACCA	Accountancy	6 years and above

Results and Findings

This study showed that, out of 5 aspects and 26 Criteria, 4 aspects and 13 criteria have a positive impact on the strategy to adopt AI among accounting personnel in Malaysia. According to the experts' opinion, 4 aspects and 13 criteria were accepted at thresholds of 0.44 for aspects and 0.44 for criteria. Therefore, 1 aspect and 13 criteria were rejected because the weight of the index is below the unacceptable thresholds. Hence, the accepted aspects and criteria are presented in Table 2.

Table 2: Accepted Aspects and Criteria

Aspect			Defuzzied value	Criteria		Defuzzied Value
AS1	Support from government, vendors and management	0.48	C2	Vendors provide adequate technical support during implementation	0.44	
			C4	Top management knows the benefits of adoption AI	0.56	
			C5	Top management provide support for the adoption of AI	0.44	
AS2	Cost effectiveness	0.48	C7	Cost of maintaining AI (long term cost)	0.58	
			C8	Reduce cost on repetitive task (manpower)	0.73	
			C9	Sufficient financial budget	0.45	
			C15	Employees willingness to learn and adopt AI	0.48	
AS4	Accelerating adoption of AI	0.46	C21	Dissemination of information for dataset should not be interrupted	0.44	
AS5	Normative and responsible of AI development	0.44	C22	Standard practice on ethical issues to be followed	0.46	
			C23	Data protection to be set up	0.52	
			C24	Data privacy framework to be set up	0.51	
			C25	Tightening security measure	0.52	
			C26	Establishing internal control system	0.56	

The results of weighting aspects and criteria from the academician and industry experts are presented in Table 3. In the context of the experts, the four aspects have a positive impact on the strategy to adopt AI among accounting personnel in Malaysia. The finding indicates that support from the governments, vendors and management, as well as cost effectiveness obtained the highest defuzzied value on the AI adoption among accounting personnel. This is followed by the accelerating adoption of AI and normative and responsible AI development. According to Jaskson and Allen (2024), companies adopt AI primarily to achieve cost saving and operational efficiency.

Table 3: Weight of Aspects and Criteria by Expert Group

	Aspects				Criteria		
	Academician	Industry	Overall		Academician	Industry	Overall
AS1	0.54	0.65	0.48	C2	0.66	0.48	0.44
AS2	0.66	0.53	0.48	C4	0.65	0.63	0.56
AS4	0.65	0.51	0.46	C5	0.65	0.49	0.44
AS5	0.68	0.47	0.44	C7	0.78	0.61	0.58
				C8	0.78	0.77	0.73
				C9	0.56	0.50	0.45
				C15	0.66	0.53	0.48
				C21	0.66	0.48	0.44
				C22	0.68	0.48	0.46
				C23	0.70	0.56	0.52
				C24	0.68	0.55	0.51
				C25	0.70	0.56	0.52
				C26	0.80	0.58	0.56

Figure 1 further illustrates the scores of the four aspects influencing the strategy of AI adoption among accounting personnel in Malaysia. The graph shows that all aspects positively contribute to AI adoption, with support from the government, vendors, and management recording the highest score, followed by cost effectiveness. This indicates that institutional support, financial benefits, and operational efficiency are key factors encouraging organizations to adopt AI technologies. In addition, accelerating AI adoption and normative and responsible AI development also achieved moderately high scores, highlighting the importance of digital readiness, continuous training, and ethical AI practices in the accounting. These findings suggest that successful AI adoption among accounting personnel in Malaysia depends on strong government and organizational support (Ghani et al, 2022) and cost efficiency (Jaskson & Allen, 2024).

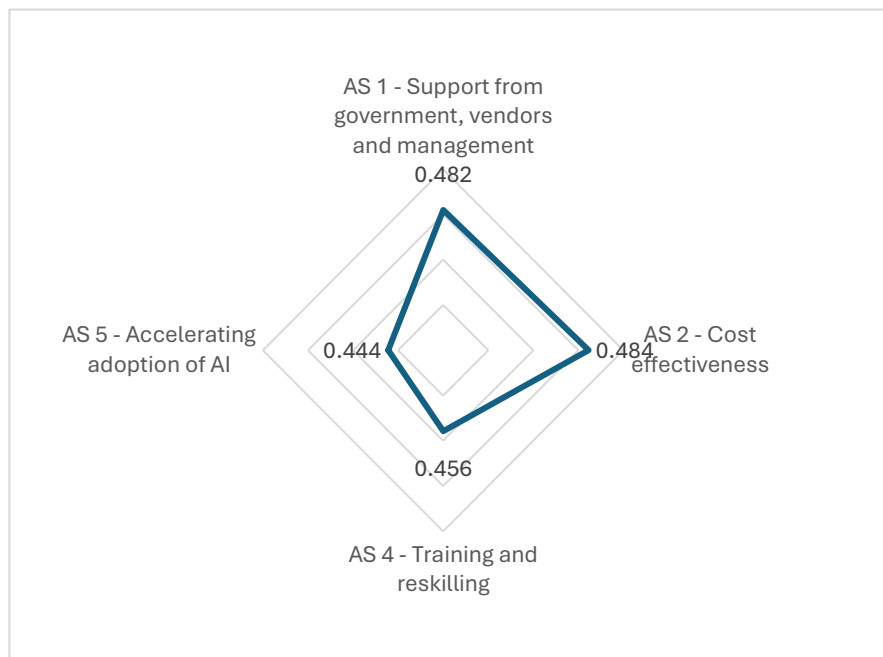


Figure 1: Scores of Four Aspects in Strategy of AI Adoption Among Accounting Personnel in Malaysia.

The next analysis in Figure 2 is on the subcategories of aspects which are criteria. The results indicate five top criteria in the strategy for adopting AI, which are reduce costs on repetitive tasks, long term AI maintenance cost, establishment of strong internal control system, top management awareness of AI benefits and tightening security measures. According to Osei et al. (2023), companies prefer AI because it can perform accounting tasks that are typically handled by humans, thus reducing repetitive work and labour costs. These top ranks criteria indicate that operational efficiency, governance improvement, managerial support and cybersecurity considerations are central to the success of AI adoption.

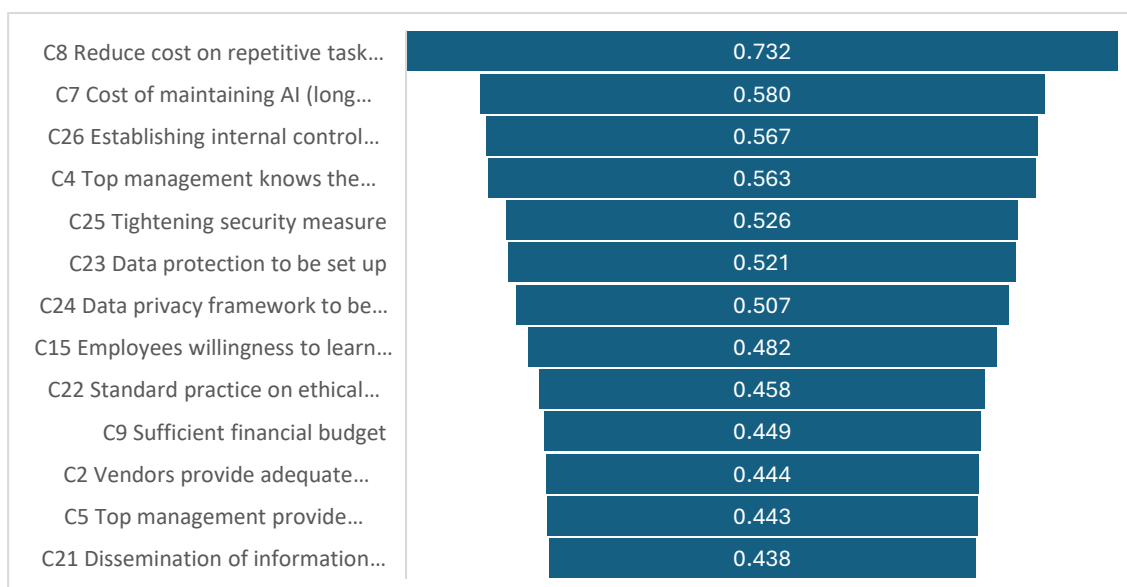


Figure 2: Scores of Thirteen Criteria that Contributed to Strategy on the Intention to Adopt AI Among Accounting Personnel in Malaysia.

Furthermore, the finding indicates that AI adoption in accounting is primarily driven by cost reduction benefits, managerial and institutional support, and strengthened governance and control mechanisms, highlighting a strong focus on efficiency and sustainability. The findings are consistent with prior literature, which emphasizes that top management support, government incentives, and financial resources significantly influence technology adoption. Additionally, AI adoption contributes to cost reduction, improved internal controls, and enhanced decision-making accuracy. Furthermore, normative and ethical considerations, including data privacy, cybersecurity, and regulatory compliance, are essential to ensure responsible AI implementation.

The findings indicate that organizational and external support play important roles in influencing AI adoption among accounting personnel in Malaysia. Government policies, financial incentives, vendor support, and management commitment are crucial in accelerating AI implementation. The findings also suggest that AI training and skill development are essential because accounting personnel require technical competencies and digital skills to adapt to technological transformation. The benefit of AI development was highlighted by the experts, and the findings are consistent with prior studies regarding data privacy and cybersecurity (Kokina et al., 2017), internal control (Askary et al., 2018) and data transparency (Osei et al., 2023). Overall, the findings are consistent in emphasizing the importance of organizational readiness, technological support, and digital transformation strategies in promoting AI adoption.

Conclusion

The findings of the study showed that government, vendors, and management support are responsible for AI development, AI training and skill development, cost effectiveness as well as the accelerated digital transformation. Overall, the results of this study contribute to the literature, mainly by offering expert consensus about the strategic factors in AI adoption among accounting personnel. Moreover, the findings provide practical implications for policymakers and the government to formulate and implement policies, rules, and regulations related to AI, while at the same time creating awareness about why AI adoption matters for accounting personnel in Malaysia.

Besides that, the findings are useful for accounting professional bodies. They should provide workshops and training programmes for accounting personnel on strategies to adopt AI. Moreover, this study also implies to technology providers, particularly in designing AI applications and software. They should provide training programmes, warranty and give support after the purchase of AI applications or software. As a conclusion, the government, policymakers, accounting professional bodies, and technology providers carry important roles in facilitating the adoption of AI.

Future studies may employ larger expert panels and integrate additional quantitative methods to further examine AI adoption in different industries and countries. In addition, future studies may extend the model by incorporating new criteria such as organizational readiness, digital competency, and ethical risk to enhance the comprehensiveness of the framework

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