

# Public Interest and Audit Innovation: Investigating Technology Use among Internal Auditors in Malaysia

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## ABSTRACT

This study investigates how internal auditors' attributes influence technology adoption among internal auditors in Malaysia. Specifically, it examines the role of perceived benefits, technological challenges, and ease of use in shaping adoption behaviors, using the Technology Acceptance Model (TAM) as the theoretical foundation. A quantitative survey was conducted involving 87 internal auditors from listed companies in Malaysia. Descriptive statistics were used to assess the levels of technology adoption and the independent variables. Correlation analysis identified relationships among variables, while multiple regression analysis evaluated the effects of perceived benefits, technological challenges, and ease of use on technology adoption. The results indicate that perceived benefits and ease of use significantly influence technology adoption among internal auditors. However, technological challenges did not show a significant relationship. These findings highlight the importance of user perceptions and system usability in promoting successful technology adoption. The study's findings are limited by the sample size and response rate, as not all registered internal auditors in Malaysia were included due to time constraints and non-responses. This limits the generalizability of the results. Organizations should emphasize the practical benefits and user-friendliness of technologies to increase adoption among internal auditors. Tailored training and support may further reduce resistance and enhance implementation success. This study contributes to the limited body of research on internal auditors and technology adoption in Malaysia. It provides a practical framework for understanding the key factors influencing technology acceptance within the internal audit profession.

**Keywords:** Technology Adoption, Internal Auditors, Technology Acceptance Model (TAM), Perceived Benefits, Ease of Use, and Technological Challenges

## INTRODUCTION

The rapid evolution of technology presents both opportunities and challenges for organizations seeking to maintain competitiveness and compliance. Emerging technologies bring shorter product life cycles, complex implementation, and increased risks such as cybersecurity threats and regulatory compliance issues (Brynjolfsson et al., 2017; Lacity et al., 2014). Industry 4.0 has further complicated adoption processes due to the integration of interconnected technologies, requiring significant adjustments to organizational processes and workforce skills (Lewis et al., 2018; Molino et al., 2020). In the field of auditing, these advancements have made traditional methods increasingly inadequate. As organizations integrate sophisticated accounting systems and IT tools, internal auditors must also adopt audit technologies to perform effective assessments. However, evidence suggests that many auditors underutilize such tools due to complexity, lack of training, and organizational resistance (AuditNet, 2012; EY, 2014; PWC, 2012; KPMG, 2015).

Malaysian internal auditors face similar challenges. While audit technologies can enhance efficiency and risk management, factors such as limited understanding, skill gaps, and resource constraints hinder adoption (Chan et al., 2018; Sarens et al., 2006). The lack of alignment between IT initiatives and organizational objectives

further impedes successful implementation (Syed Ibrahim et al., 2023). Moreover, cybersecurity risks such as data breaches and hacking underscore the need for robust IT governance and skilled personnel (Ibrahim et al., 2021; Uddin, 2020). The COVID-19 pandemic has accelerated digital transformation across sectors, pushing audit practices toward remote work and real-time IT-driven techniques (Mitchell, 2023; Singh et al., 2023). Continuous auditing, risk monitoring, and data analytics have become essential, demanding that internal auditors develop specialized IT and analytical competencies (Pathak & Lind, 2010; Jollay, 2023). Yet, concerns remain over the cost-benefit balance of adopting such technologies and the difficulty of attracting tech-savvy professionals to the auditing field (Eulerich, 2023; Fettry et al., 2019). Despite growing interest, limited research has examined the specific factors influencing internal auditors' technology adoption in Malaysia. Existing studies highlight gaps in understanding the impact of perceived benefits, technological challenges, and ease of use on adoption behavior (Fadzil, 2018; Rosli, 2012).

Guided by the Technology Acceptance Model (TAM), this study aims to address this gap by examining three key factors that may influence technology adoption among internal auditors in Malaysia. Specifically, the study seeks:

- **RO1:** To examine the influence of perceived benefits on technology adoption toward internal auditors in Malaysia.
- **RO2:** To examine the influence of technological challenges on technology adoption toward internal auditors in Malaysia.
- **RO3:** To examine the influence of ease of use on technology adoption toward internal auditors in Malaysia.

By addressing these objectives, this study contributes to a better understanding of how internal auditors perceive and adopt technology, offering valuable insights for organizations seeking to strengthen their audit functions in an increasingly digital environment.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### Perceived Benefits and Technology Adoption

According to Thottoli et al. (2022), perceived benefits have values respectively which the result indicates that perceived benefits have no influence on auditing practice and that evidently, there is no lack of knowledge regarding the perceived benefits of the use of emerging technology tools for auditing practice among auditing professionals. The ease, usefulness and perceived benefits are thought to be the main reasons to use technology (Lee, 2009). In the meantime, individual costs, preferences, and advantages influence how much energy people consume. Reasonable consumers make decisions based on all the information at their disposal (Loock et al., 2013).

Numerous studies have also demonstrated that perceived benefits have an influence on the adoption of technology devices and proposed that perceived benefits have a positive effect in technology adoption (Lee, 2009; Pei et al., 2015; Yu, 2012). According to Bolodeoku (2022), some hypotheses predicted the perceived benefits toward the technological adoption of multiple tools. Automation and process streamlining enabled by technology adoption are often linked to higher in efficiency. Adoption of digital technologies can significantly improve the productivity and efficiency throughout organizations that lead to higher performance (Brynjolfsson & McAfee, 2014).

Other than that, internal auditors perceive technology adoption as a means to enhance efficiency through automation. Research by Bujaki and McPhail (2016) highlights that auditors recognize technology as a tool to streamline routine tasks, thereby allowing more time for strategic and value-added activities in the audit process. Technology adoption is perceived by auditors as a way to improve accuracy and precision in audits. A study by Alles et al. (2018) suggests that auditors acknowledge technology's ability to reduce errors and increase precision in data analysis, leading to more reliable audit outcomes.

Also, technology adoption is seen as a way to streamline audit processes and improve communication within audit teams. According to a study by Kuhn et al. (2018), auditors acknowledge that technology integration enhances collaboration and communication, leading to more efficient and coordinated audit workflows. Perceived benefits of technology adoption include increased adaptability and flexibility in addressing dynamic audit requirements (Agoglia et al., 2017). It is suggested that auditors view technology as a tool that allows for agility in responding to changing audit needs and environments.

In brief, internal auditors who perceive significant benefits from technology adoption tend to embrace advanced technological tools more readily. These perceived benefits include increased efficiency, improved accuracy, advanced analysis capabilities, streamlined processes, and enhanced adaptability, all of which contribute to more effective and value-added audit outcomes within organizations. Also, the results showed that only the perceived benefits variable had a positive and significant effect on IT adoption (Koesanto et al., 2021). Thus, in regards to the perceived benefits towards technology adoption, the hypothesis is developed as below:

H1 - There is a positive relationship between perceived benefits and technology adoption.

### **Technological Challenges and Technology Adoption**

According to Thottoli et al. (2019), the results of the value of technology indicates that technological challenges have a positive impact on auditing practice, especially as it is evident that a high level of technological challenges influences the adoption of technology tools by practicing auditors. Khan et al. (2014) states that adoption of proper technology tools in the framework is the most important factor to maximize the efficiency and the service related by the public and private companies as they faced many challenges and obstacles while implementing the technological tools in their supply chain. Internal auditors who successfully tackle technological challenges showcase greater adaptability. Research by Chen et al. (2020) indicates auditors that are skilled at handling technological challenges tend to quickly adapt to new tools and methodologies, enhancing their proficiency in leveraging technology for auditing purposes.

Other than that, overcoming technological challenges can significantly improve audit efficiency. According to a study by Hassani and Jafari (2018), internal auditors proficient in addressing technological hurdles tend to conduct audits more efficiently, utilizing technology-driven methods to streamline processes and improve effectiveness. Internal auditors overcoming technological challenges add greater value to their organizations. Research by DeZoort and Harrison (2016) suggests that auditors who effectively adopt technology contribute more significantly to strategic decision-making processes, adding value beyond traditional audit functions.

Moreover, addressing technological challenges enhances auditors' abilities to manage risks associated with technology. A study by Van Belle et al. (2019) highlights that auditors skilled in technology adoption are better equipped to identify and mitigate technological risks, ensuring compliance with regulations and industry standards. Therefore, internal auditors who effectively navigate technological challenges exhibit greater adaptability, enhanced audit efficiency, increased value addition, better risk management, and a propensity for continuous improvement. These factors contribute to their ability to leverage technology effectively, thereby improving audit outcomes and contributing significantly to organizational success.

The hypothesis positing a relationship between technological challenges and technology adoption is grounded in a robust body of literature and empirical evidence. Studies such as TAM by Davis (1989) and the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003) establish foundational frameworks that emphasize the pivotal role of perceived ease of use, perceived usefulness, and external factors in the adoption process. Additionally, insights from surveys, as demonstrated by Markus and Tanis (2000), reveal that organizations experiencing higher levels of technological challenges often face greater difficulty in achieving successful technology adoption. The work of Bélanger and Carter (2008) provides further support, illustrating the negative consequences of challenges, such as resistance and lack of technical expertise, on the overall adoption process. Collectively, these studies contribute to the growing body of evidence affirming the hypothesis that technological challenges significantly influence the trajectory of technology adoption. While numerous studies support the hypothesis positing a positive relationship between technological challenges and

technology adoption, it is essential to acknowledge the existence of dissenting perspectives within the literature. Notably, research by Moore and Benbasat (1991) suggests that perceived challenges may not necessarily impede technology adoption. Their study proposes the idea that individuals or organizations may perceive certain challenges as manageable or even desirable in the long run, leading to a more favorable outlook on technology adoption. This perspective introduces a nuanced view that challenges, when framed differently, might not necessarily hinder the adoption process and, in some instances, could serve as catalysts for innovation. Thus, the literature reflects a range of opinions on the role of challenges in technology adoption, underscoring the need for a nuanced and context-specific understanding of the relationship.

Furthermore, Rogers (2003) highlighted on how technological challenges can encourage the adoption of new technologies in this groundbreaking work on diffusion theory. It is emphasized that when individuals or organizations encounter problems that existing technologies could not adequately address, they are more likely to seek out and adopt innovative solutions. Therefore, this process of encountering the challenges and seeking the solutions often drives the adoption of new technologies that contribute to their diffusion throughout society. Thus, this study hypothesizes that:

H2 - There is a positive relationship between technological challenges and technology adoption.

### **Ease of Use and Technology Adoption**

Ease of use may well also compel many audit firms to bring emerging technology tools to the audit firm. The results of the value of ease of use respectively indicate that ease of use has a positive impact on auditing practice, and it is evident that the factors of ease of use have a positive effect on audit practice (Thottoli et al., 2022). User-friendly technology leads to improved productivity among auditors. A study highlighted that when technology is perceived as easy to use, auditors tend to achieve higher task performance, resulting in increased efficiency in conducting audits (Venkatesh and Davis, 2000). Besides, technology that is easy to use reduces resistance to adopting new tools. According to Rogers (2003) on the diffusion of innovations theory, internal auditors are more likely to embrace technology if it is perceived as easy to use, thereby lowering resistance to change within the auditing.

Moreover, ease of use expedites the adaptation and integration of technology into audit workflows. Gefen et al. (2003) state that internal auditors perceive user-friendly technology as easier to integrate into their existing practices, leading to quicker adoption and utilization. Also, the ease of use can increase the understanding of technology adoption, according to Barhoumi (2016). The researcher claims that technology adoption is positively influenced by ease of use.

In summary, internal auditors who perceive technology as easy to use are more likely to adopt and utilize advanced technological tools in their audit processes. The ease of use leads to reduced learning curves, increased productivity, lower resistance to change, improved user satisfaction, and faster adaptation and integration, ultimately contributing to more effective and efficient audits within organizations. Thus, this study hypothesizes that:

H3 - There is a positive relationship between ease of use and technology adoption.

## **RESEARCH METHODOLOGY**

### **Research Design**

This study employed a quantitative, cross-sectional design using a structured survey to examine the influence of perceived benefits, technological challenges, and ease of use on technology adoption among internal auditors in Malaysia. The Technology Acceptance Model (TAM) served as the theoretical foundation. A self-administered questionnaire was used to collect standardized data to test the proposed hypotheses.

### **Population and Sampling**

The population consisted of internal auditors working in public listed companies in Malaysia. A probability

sampling technique was adopted, targeting certified internal auditors registered with professional bodies. A total of 87 valid responses were collected. The sample size met the minimum requirement based on Green's (1991) formula for regression analysis:  $N \geq 50 + 8(m)$ , where  $m$  = number of predictors.

### Instrumentation

The survey instrument was adapted from Thottoli et al. (2022) and consisted of five sections:

- **Section A:** Demographic profile (e.g., gender, age, experience, qualifications)
- **Section B:** Technology adoption (dependent variable)
- **Sections C, D, E:** Perceived benefits, technological challenges, and ease of use (independent variables)

All items were measured using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire was distributed electronically via email and WhatsApp, using Google Forms for efficient data collection and processing.

### Pilot Test

A pilot test was conducted with five experienced internal auditors to ensure clarity and content validity. Participants included professionals from various sectors and organizations. Feedback was used to refine the questionnaire before full-scale distribution.

### Data Collection

Data were collected over a two-month period using an online survey. This approach enabled convenient and cost-effective access to participants across different regions. A total of 115 questionnaires were distributed, with 87 complete responses returned, yielding a response rate of 27.6%.

### Data Analysis

Data were analyzed using SPSS Version 27. Descriptive statistics (mean, standard deviation) were used to summarize demographic and variable data. Inferential analyses included Pearson correlation and multiple regression to examine relationships between variables.

- **Reliability Test:** Cronbach's alpha was used to assess internal consistency. A threshold of 0.70 was used to confirm acceptable reliability.
- **Normality Test:** Skewness and kurtosis were analyzed to evaluate data distribution.
- **Correlation Analysis:** Pearson's correlation coefficient was used to determine the strength and direction of relationships.
- **Multiple Regression Analysis:** Used to assess the impact of independent variables (perceived benefits, technological challenges, ease of use) on the dependent variable (technology adoption).

### Findings

This study aimed to examine the factors influencing technology adoption among internal auditors in Malaysia. The analysis focused on three key variables: perceived benefits, technological challenges, and ease of use.

### Descriptive Statistics

Table 1 presents the mean and standard deviation for each variable. Respondents rated technology adoption ( $M = 3.85$ ) and ease of use ( $M = 3.93$ ) relatively high, indicating general agreement. Perceived benefits also showed strong agreement ( $M = 4.01$ ), while technological challenges had a slightly lower mean ( $M = 3.75$ ).

Variables	Mean	Std. Deviation
Technology Adoption	3.85	0.669
Perceived Benefits	4.01	0.596
Technological Challenges	3.75	0.602
Ease of Use	3.93	0.636

### Correlation Analysis

Pearson correlation was used to examine the relationships between variables. The results in Table 2 show that all three independent variables are positively correlated with technology adoption, with ease of use having the strongest correlation ( $r = 0.619$ ), followed by perceived benefits ( $r = 0.528$ ), and technological challenges ( $r = 0.400$ ). All correlations are statistically significant at the 0.01 level.

Variables	Technology Adoption	Perceived Benefits	Technological Challenges	Ease of Use
Technology Adoption	1			
Perceived Benefits	0.528**	1		
Technological Challenges	0.400**	0.435**	1	
Ease of Use	0.619**	0.534**	0.530**	1

Note: \*\* Correlation is significant at the 0.01 level (2-tailed)

### Multiple Regression Analysis

Multiple regression analysis was conducted to determine the predictive power of the three independent variables on technology adoption. As shown in Table 3, the model is statistically significant ( $F = 26.289$ ,  $p < 0.000$ ), and explains 49.8% of the variance in technology adoption (Adjusted  $R^2 = 0.498$ ).

Table 3: Model Summary

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error
1	0.723	0.523	0.498	0.472

Table 4: ANOVA Summary

Model	Sum of Squares	df	Mean Square	F	Sig.
1	17.546	3	5.849	26.289	0.000

Table 5: Coefficients

Variables	Unstd. Coeff. (B)	Std. Error	Beta	t	Sig.
Perceived Benefits	0.274	0.111	0.235	2.464	0.016

Technological Challenges	0.091	0.095	0.087	0.961	0.339
Ease of Use	0.451	0.106	0.413	4.270	0.000

**Summary**

Perceived benefits and ease of use are strong predictors of technology adoption. Ease of use is the most influential factor. Technological challenges, although correlated, are not significant predictors in the regression model.

**CONCLUSION**

The summary of this study has found that perceived benefits, technological challenges and ease of use has significant influence on technology adoption among internal auditors in Malaysia. The way financial statements are prepared and audited has undergone significant change thanks to information and communication technology (ICT). While using emerging technology tools to enable transactions carries a high risk of material misstatements, it also opens up new possibilities for internal auditors. Technology development has demonstrated how outmoded the conventional auditing method is growing. Internal auditors can complete audits more quickly, effectively, and efficiently with the help of audit software that is enabled by emerging technology tools. Emerging technology tools-enabled auditing can be used not only to assist practicing internal auditors in gathering relevant and sufficient audit evidence through vouching, tracing, verification, recalculation, re-performance, and electronic confirmation, but also to analyze procedures through the use of audit software (Thottoli et al., 2022).

The main objective of this study is to examine technology adoption toward internal auditors in Malaysia. Three factors were chosen, namely perceived benefits, technological challenges, and ease of use. The Technology Acceptance Model (TAM) was employed as the relevant perspective in supporting the view of independent variables in technology adoption. A total of 115 questionnaires were distributed to internal auditors in Malaysia for this study, and 87 questionnaires were returned. Most of the internal auditors work in many different industries, such as government, private, multinational companies (MNC), healthcare, education, and medium companies. Out of the total, 87 questionnaires were returned and completed, resulting in a response rate of 27.6%. According to Roscoe (1975), there are a set of guidelines for determining a sample size that has been a common choice in the last several decades. It is also suggested that a sample size greater than 30 and less than 500 is the most suitable for most behavioral studies. A larger R-squared value indicates a better fit for the regression model in this study. Therefore, the selected factors are relevant and appropriate for this research endeavor. The findings for the first objective of this study strongly support the relationship between the perceived benefits of technology adoption toward internal auditors in Malaysia. The relationship between technological challenges and ease of use in terms of technology adoption by internal auditors in Malaysia is also strongly supported by the following objectives.

Perceived benefits of technology adoption among internal auditors play a crucial role in influencing their attitude and willingness to embrace and utilize advanced technological tools in their audit practices. These perceived benefits encompass various advantages that technology offers, impacting the effectiveness and efficiency of audit processes within organizations. This is supported by Venkatesh et al. (2012) and McKinsey Global Institute (2017), both of which highlight how technology enables auditors to automate routine tasks, optimize workflows, and accomplish audits more efficiently, thereby increasing their productivity levels significantly. Internal auditors perceive technology adoption to access advanced analysis tools, enabling them to derive meaningful insights from vast volumes of data. Hall et al. (2019) and Zhu et al. (2019) demonstrate how technology empowers auditors to perform complex analyses, leading to deeper insights and more informed decision-making processes. Perceived benefits also include the contribution of technology adoption to achieving organizational objectives. DeZoort and Harrison (2016) discussed how technology-savvy auditors add strategic value by leveraging technology to support decision-making, risk management, and compliance, aligning audit functions with broader organizational goals.

Next, the rapid advancement and increasing complexity of technology present significant challenges for

auditors, as they must continually update their skills and knowledge to keep pace with these changes. This is because internal auditors emphasize in mastering complex technological tools and require training and skill development for effective use in audit processes (Hall et al., 2019). According to the literature, an organization's financial systems audit cannot be successfully completed without an understanding of the transaction process through the use of computerized accounting. This could be due to a variety of factors, including the view held by qualified young auditors that technology-enabled auditing is understandable to anyone with a basic understanding of computers and that technology-enabled audit software is affordable for small-scale audit firms and increases firm profitability. According to Widuri et al. (2019), in order for practicing auditors to overcome the difficulties of having to audit financial statements, internal auditors must implement audit software. It is also revealed in the findings that in the second factor, technology adoption and technological challenges have positive but not significant relationship.

The findings for the third factor, which is ease of use, revealed that technology adoption and ease of use have a favorable and significant relationship. According to Damerji and Salimi (2021), technology readiness and perceived ease of use have a positive effect on technology adoption. It is also discovered that new technologies make it simple to identify transaction data duplication, thereby removing doubts about the validity of the transactional data set. Furthermore, the researcher claims that because of the automation process that includes pairing, extraction, and formatting, less time is spent transforming data, and a thorough audit gives access to all (100%) of the data populations, which may lead to superior results (Stevens, 2016). Accepting the use of technology is important for auditors because it encourages them to use new technologies and, as a result, take on more work productivity.

Moreover, user-friendly technology enhances user satisfaction and engagement. Huang et al. (2020) demonstrate that when auditors find technology easy to use, they exhibit higher satisfaction levels and greater engagement with the tools, leading to more effective utilization in audit processes. Also, a growing number of businesses have demonstrated how internal audit can become a technology-enabled department that helps the entire company identify, manage, and even profit from new risks and opportunities by integrating data analytics and utilizing cutting-edge approaches like cognitive analytics. Additionally, an internal audit has the power to hasten the company's digital transformation with the help of technology innovators and reliable partners.

Table 5.2.1 Summary of findings

Hypotheses	Results
H1: There is positive relationship between perceived benefits and technology adoption.	Accepted
H2: There is positive relationship between technological challenges and technology adoption.	Rejected
H3: There is positive relationship between ease of use and technology adoption.	Accepted

As an overall conclusion, the findings of this study support the relationship between perceived benefits, technological challenges and ease of use on technology adoption among internal auditors in Malaysia. The results indicate that two independent variables, namely perceived benefits and ease of use, have a significant and positive relationship on technology adoption whereas one independent variable, which is technological challenges, has a positive but not statistically significant relationship. Based on previous studies, technological challenges show a positive impact as it is evident that a high level of technological challenges influence the adoption of technology tools. However, based on this study, the results show a positive but statistically insignificant relationship. Therefore, this result is rejected.

These findings suggest that internal auditors in Malaysia understand the impact of perceived benefits, technological challenges and ease of use on technology adoption. The study's outcomes provide crucial evidence, demonstrating that internal auditors prioritize efficiency and productivity in their audit processes. Studies by Alles et al. (2018) and Hall et al. (2019) emphasize how technology enables automation, optimization of workflows, and real-time documentation, leading to increased productivity levels. Adoption of

technology provides internal auditors with access to advanced analysis tools, allowing for deeper insights from data. Hall et al. (2019) and Zhu et al. (2019) demonstrate how technology empowers auditors to perform complex analyses, leading to more profound insights and informed decision-making processes. By emphasizing these factors and implementing appropriate measures, internal auditors can enhance efficiency, improved accuracy, advanced analysis capabilities, streamlined processes, adaptability, and value addition to organizational objectives.

### **Implication of Study**

This study will be able to help practitioners better understand the importance of technology adoption for internal auditors. It will also help practitioners examine the results of this study and implement them to enhance the effectiveness of internal audits.

This study offers valuable insights and practical implications, particularly for internal auditors in Malaysia from various sectors. It provides useful information that can guide on enhanced technological skills and training which internal auditors must acquire and develop to effectively use advanced tools and systems. Training programs tailored to the needs of auditors can help bridge the skill gap and ensure they can leverage technology effectively in their audit processes. By bridging the skill gap through targeted training and embracing new technology, Malaysian internal auditors can enhance the efficiency and effectiveness of their work, solidify their value within the organization, and contribute more meaningfully to achieving organizational goals.

Moreover, given the rapid evolution of technology, internal auditors need to engage in continuous learning and stay updated with technological advancements. This ongoing learning process ensures auditors remain equipped to navigate new tools and systems effectively. The ongoing learning imperative for internal auditors due to rapid technological change necessitates a proactive approach from organizations. By embracing continuous learning and mitigating potential challenges, organizations can cultivate a future-proof internal audit function that delivers significant value and drives organizational success.

In brief, the implications of studies on technology adoption for internal auditors emphasize the need for skill development, cultural adaptation, resource allocation, continuous learning, alignment with organizational objectives, risk management, and effective collaboration. In order to successfully use technology to improve audit procedures and support organizational success, internal auditors must take these factors into consideration.

In summary, internal audit functions that embrace technology adoption while acknowledging the key considerations outlined in the statement are more likely to achieve significant improvements in their effectiveness, efficiency, and overall value proposition within the organization.

### **Limitation of Study**

In today's rapidly evolving technological landscape, continuous learning is not a luxury but a necessity for internal auditors. By actively engaging in learning and developing their skillsets, internal auditors can ensure they remain relevant, effective, and well-positioned to contribute significantly to their organizations in the face of ongoing technological change.

Like any research endeavor, this study is not exempted from limitations. There were specific limitations associated with the execution of this study. The limitation in this study was the sample did not encompass the entire population of internal auditors in Malaysia, as the feedback was unexpected. Due to time constraints, the samples were distributed to the internal auditors working in public listed companies in Malaysia via their email addresses one by one.

Additionally, the limited distribution of questionnaires resulted in a relatively low number of respondents in this study. Specifically, the study relied on data from only 87 respondents. A small sample size might not adequately represent the diversity within the population of internal auditors, leading to limitations in the

generalizability of findings. Therefore, it is important to note that internal auditors acknowledge the adoption of technology in their organization. Moreover, the directory of the internal auditors may not provide up-to-date information on the companies, as many of them may have invalid, inactive, or unrecognized email addresses.

Thirdly, the distribution of questionnaires through email, WhatsApp, and other online platforms presented challenges in tracking the respondents. Some respondents may have encountered difficulties in answering the questions, as they may have received the email as spam. Additionally, factors such as respondents' busy schedules and concerns about confidentiality may have led to a refusal to respond to the questionnaire. As a result, the study may lack the inclusion of important factors that could have been more suitable for its scope. However, it is important to note that the limitations in this study do not undermine the validity of the findings. Instead, they are acknowledged to emphasize potential avenues for future research.

Finally, the possible existence of various forms of biasedness, subjectivity and interpretation that are inherent in the questionnaire may also limit the generalizability. Fixed-choice questionnaires generally assume an unstated general knowledge of the topic investigated, and also require the respondents to complete the questionnaire that they might be ignorant of or have a different of understanding based on personal perception. The outcome might be slightly biased at best or plainly misleading.

### **Suggestion for Future Study**

Despite the limitations, this study suggested future avenues to consider a larger sample size and different groups of samples as according to Olsen (2014). The larger the sample size and representative, the greater the certainty that their responses reflect the views of the whole population. Therefore, this study suggests expanding the sample size which covers various sectors of internal auditors to represent the whole population in Malaysia.

In order to generate more concrete analyses and findings, more respondents are required for the study. In addition, it is encouraged to focus on the opinion from internal auditors of other sectors such as healthcare, manufacturing and production, hospitality and tourism, telecommunications and also retails and consumer goods sectors as different parties may have different perspectives on the research issues.

In addition, research in the future may also examine how internal audit procedures, methods, and the role of auditors are being altered by emerging technologies. It could assess the adoption rates, challenges, and benefits of implementing these technologies in internal audit functions. Additionally, it might investigate the skill sets required for auditors to effectively utilize these advanced technologies and their influence on audit quality and organizational decision-making processes. Furthermore, the research could be extended to use qualitative methods. This should be added that other technological areas, such as Information and Communications Technology (ICT) competency, ICT confidence, and training in technology tools, could well influence accounting or auditing professionals' decision to adopt technology-enabled tools in the future.

Future researchers are also encouraged to explore different predictors than those in the current study. Instead, future researchers should turn their attention to examine the nature of the decision-making process (Edwards, 2008). As overall conclusion, a culture of continuous learning among internal auditors fosters a more effective and future-proof internal audit function that can effectively contribute to achieving organizational goals in a rapidly changing technological landscape.

### **REFERENCES**

1. AuditNet. (2012). Questionnaire of More Than 1,500 Auditors Concludes That Audit Professionals Are Not Maximizing Use of Available Audit Technology. <http://www.auditnet.org/publications/auditnet-news-november-2012/auditnet-2012-state-of-technology-use-by-auditors-questionnaire-of-more-than-1500-auditorsconcludes-that-audit-professionals-are-not-maximizing-use-of-available-audit-technology>
2. Bélanger, F., & Carter, L. (2008). Trust and risk in e-government adoption. *The journal of strategic information systems*, 17(2), 165-176.
3. Brynjolfsson, E., & McAfee, A. (2017). *Machine, platform, crowd: Harnessing our digital future*. WW

- New York: Norton & Company.
4. Brynjolfsson, E., & McAfee, A. (2014). *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. W. W. Norton & Company.
  5. Bolodeoku, P. B., Igbinoaba, E., Salau, P. O., Chukwudi, C. K., & Idia, S. E. (2022). Perceived usefulness of technology and multiple salient outcomes: The improbable case of oil and gas workers. *Heliyon*, 8(9), e09322. <https://doi.org/10.1016/j.heliyon.2022.e09322>
  6. Chan, D. Y., Mo, P. L., & Tang, M. C. (2018). Exploring the Influence of Technology Adoption on Internal Audit Efficiency. *Journal of Finance and Accounting*, 6(3), 103-110.
  7. DeZoort, F. T., & Harrison, P. D. (2016). Understanding auditors' sense of responsibility for detecting fraud within organizations. *Journal of business ethics*, 149(4), 857-874.
  8. Eulerich, M., Masli, A., Pickerd, J., & Wood, D. A. (2023). The Impact of Audit Technology on Audit Task Outcomes: Evidence for Technology-Based Audit Techniques. *Contemporary Accounting Research*, 40(2), 981-1012. <https://doi.org/10.1111/1911-3846.12847>
  9. EY. (2014). Big Risks Require Big Data Thinking - Global Forensic Data Analytics Questionnaire(2014).[http://www.ey.com/Publication/vwLUAssets/EY-GlobalForensic-Data-Analytics-Questionnaire-2014/\\$FILE/EY-Global-Forensic-Data-Analytics-Questionnaire-2014.pdf](http://www.ey.com/Publication/vwLUAssets/EY-GlobalForensic-Data-Analytics-Questionnaire-2014/$FILE/EY-Global-Forensic-Data-Analytics-Questionnaire-2014.pdf)
  10. Fettry, S., Anindita, T., Wikansari, R., & Sunaryo, K. (2019). The future of accountancy profession in the digital era. In Abdullah, A. G., Widiaty, I., & Abdullah, C. U. (Eds.), *Global Competitiveness: Business Transformation in the Digital Era* (pp. 8-14). Routledge.
  11. Fadzil, F., Ahmad, A., & Nasir, M. (2018). Examining the Influence of Perceived Benefits on Technology Adoption: The Case of Internal Auditors in Malaysia. *Journal of Accounting and Finance in Emerging Economies*, 4(2), 32-45.
  12. Green, S. B. (1991). How many subjects does it take to do a regression analysis. *Multivariate behavioral research*, 26(3), 499-510.
  13. Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107-123.
  14. Ibrahim, S. N. S., Shamsudin, A., Abdullah, S., Ibrahim, M. T., Jaaffar, M. Y., & Bani, H. (2021). Content Analysis of Voluntary Disclosures on Cybersecurity in Malaysia. *International Journal of Academic Research in Accounting Finance and Management Sciences*, 11(4), 10–28. <https://doi.org/10.6007/ijarafms/v11-i4/11346>
  15. Jollay, A. (2023). *New Skills in Auditing: Embracing Emerging Technology in the Audit Profession* (Doctoral dissertation, University Honors College, Middle Tennessee State University).
  16. Khan, Nawsher, Yaqoob, Ibrar, Hashem, Ibrahim Abaker Targio, Inayat, Zakira, Mahmoud Ali, Waleed Kamaleldin, Alam, Muhammad, Shiraz, Muhammad, Gani, Abdullah, Big Data: Survey, Technologies, Opportunities, and Challenges, *The Scientific World Journal*, 2014, 712826, 18 pages, 2014. <https://doi.org/10.1155/2014/712826>
  17. KPMG. (2015). Questionnaire - Data and Analytics-enabled Internal Audit. <http://www.kpmg.com/ZA/en/IssuesAndInsights/ArticlesPublications/RiskCompliance/Documents/DA%20Enabled%20Internal%20Audit%20Questionnaire.pdf>
  18. Information Technology Adoption By Internal Auditors In Public Sector: Antecedents And Consequences, SMAA Koesanto, F Husnatarina, Rahmaddian, F Madya *Jurnal Organisasi dan Manajemen* 17 (2), 217-233.
  19. Loock, C., Staake, T., & Thiesse, F. (2013). Motivating Energy-Efficient Behavior with Green IS: An Investigation of Goal Setting and the Role of Defaults. *MIS Quarterly*, 37(4), 1313–1332.
  20. Lee, M. (2017). *Internal Audit Practices in Malaysia*, Kuala Lumpur, Malaysia: Pearson/Prentice Hall.
  21. Markus, M. L., & Tanis, C. (2000). The enterprise systems experience-from adoption to success. *Framing the domains of IT research: Glimpsing the future through the past*, 173(2000), 207-173.
  22. Mitchell, A. (2023). Collaboration technology affordances from virtual collaboration in the time of COVID-19 and post-pandemic strategies. *Information Technology & People*, 36(5), 1982-2008.
  23. Moore, G. C., & Benbasat, I. (1991). Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information systems research*, 2(3), 192-222.
  24. PWC. (2012). *Data Analytics How Data Analytics Can Help Internal Audit Better Understand Risk*. [https://www.pwc.com/en\\_US/us/industry/utilities/publications/assets/pwc-utility-company-](https://www.pwc.com/en_US/us/industry/utilities/publications/assets/pwc-utility-company-)

internal-audit-data-analytics.pdf

25. Pathak, J. and Lind, M. (2010), “An e-business audit service model in the B2B context”. *Information Systems Management*, Vol. 27 No. 2, pp. 146-155
26. Perić, M. a. (2015). Understanding the delivery of experience: conceptualising business modelsandsportstourism,assessingtwo casestudiesinIstria,Croatia. *LocalEconomy*, Vol.30 No. 8, pp. 1000-1016.
27. Rosli, K., Yeow, P. H., & Siew, E. G. (2012). Factors influencing audit technology acceptance by audit firms: A new I-TOE adoption framework. *Journal of Accounting and Auditing*, 2012, 1.
28. Sarens, G., & De Beelde, I. (2006). Internal auditors’ perceptions about their changing role: The impact of ERP systems. *International Journal of Auditing*, 10(1), 59-79.
29. Syed Ibrahim, S. N., Khaidzi, N. A., & Arshad, Y. (2023). Information Technology Governance Mechanisms and Audit Technology Performance in Malaysia. *European Proceedings of Finance and Economics*.
30. Singh, K., & Best, P. (2023). Auditing during a pandemic—can continuous controls monitoring (CCM) address challenges facing internal audit departments?. *Pacific Accounting Review*, 35(5), 727-745.
31. Thottoli M. M., Essia Ries Ahmed; Information technology and E-accounting: some determinants among SMEs. *Journal of Money and Business* 31 May 2022; 2 (1): 1–15. <https://doi.org/10.1108/JMB-05-2021-0018>