

# The Role of External Auditor in the Adoption of Computer-Assisted Audit Techniques (CAATS) with Unified Theory of Acceptance and Use of Technology: An Empirical Study in Public Audit Firms in Jakarta

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**Abstract** - This research aimed to analyze the factors that influence the acceptance of Computer Assisted Audit Techniques (CAATs) among external auditors in Public Audit Firms in Jakarta. The Unified Theory of Acceptance and Use of Technology (UTAUT) approach was used for this analysis. Technological advancements had an effect on auditors' ability to adopt audit software. However, it had been found that there was no preparation or openness from auditors, leading to suboptimal utilization of audit implementation software and affected the presentation of audit information. This investigation adopted a quantitative method by distributing close-ended questionnaires to external auditors in audit firms in Jakarta. The data were analyzed using Partial Least Square with SmartPLS Ver 3. The results showed that social influence affected behavioral intention of external auditors in Jakarta in adopting and using CAATs. Expectancy performance, effort expectancy, and facilitating conditions did not affect behavioral intention of external auditors in adopting and using CAATs. This research generated contributions that could be further directed toward the development of auditors' competencies in optimizing technology in audit.

**Keywords:** CAATs, public audit firms, UTAUT, audit software

## I. INTRODUCTION

Technological advancements in the industrial revolution 4.0 era have generated changes that modified management strategies in the industrial world (Gupta, Motlagh, & Rhyner, 2020). Furthermore, the data transformation driven by the growth of Artificial Intelligence, Big Data, Robots, etc. has significantly reshaped the industrial world. According to the International Data Corporation (IDC), the implementation of intelligent automation systems can boost a company's performance by 88% (Muscolino et al., 2020). This progress has led to a high level of IT spending in Asia Pacific at 89% (Muscolino et al., 2020). Furthermore, the rise of leadership awareness to speed up operations has an impact on several non-IT sectors, specifically financial reporting.

According to Zadorozhnyi et al. (2021), the competitive level of technology implementation has changed the financial information system by presenting a new taxonomy that is wary of cyberattacks. In addition, Kroon, do Céu Alves, and Martins (2021) found that academic experts have conducted many investigations related to the accounting information system. Sutton et al. (2016) also stated that the systems of financial report record-keeping underwent continuous advancements. This can create a gap between humans and the system, which has a disruptive impact (Autor, 2015; Kumaraswamy et al., 2018).

According to Rezaee and Wang (2019), it is necessary to increase knowledge and experience to overcome this gap. This will facilitate competitiveness, specifically for auditors dealing with fraud perpetrators who are also adapted to technology.

Continuous changes in the financial statement presentation system also require auditors to be able to improve audit quality, which is further facilitated by technology (Raguseo, 2018). According to Kokina and Davenport (2017), and Munoko, Brown-Liburd, and Vasarhelyi (2020), auditors can take advantage of various modern systems to help verify large amounts of data to provide audit information that helps inform users in decision-making. However, it often creates an audit performance expectation gap with report users due to inconsistencies in auditor-generated information (Astolfi, 2021; Deepal & Jayamaha, 2022). The information can be generated in a relevant way as long as auditors can optimize the technology by obtaining hidden data (Calderon & Gao, 2021). Alles (2015) showed the data growth faced by auditors was six times higher than other technologies, which required some technical skills.

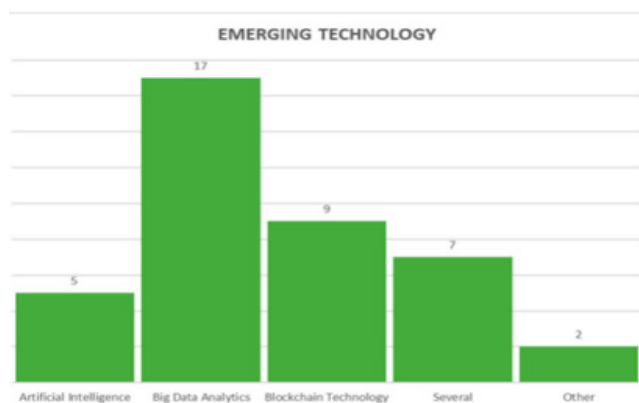


Figure 1 The rise of technology in audit (Kroon et al., 2021)

Auditors have started using advanced software to increase the success of audit strategies. Previous research analyzed auditors' competencies in accepting audit technology using various frameworks (Al-Hiyari, Al Said, & Hattab, 2019; Gepp et al., 2018; Sirois, Marmousez, & Simunic, 2016) and data exploration to gain auditors' perspective on the update (Slapničar et al., 2022; Widuri, O'Connell, & Yapa, 2016). Additionally, the COVID-19 pandemic has led auditors to implement remote audit that is more flexible and easier to collect data (Slapničar et al., 2022).

One of the advanced softwares that help to support auditors' performance is Computer Assisted Audit Techniques (CAATs). Shamsuddin et al. (2015) stated that CAATs is a technology used by internal and external auditors to conduct the audit process of a company's information systems. CAATs support the effectiveness and efficiency of audit work by

automatizing manual audit activities consisting of several tools and techniques to extract, analyze, and evaluate the result of data processing. Furthermore, CAATs reduce audit expenses, improve quality, productivity, and timely efficiency (Gepp et al., 2018). External auditors need to understand the techniques for accessing and analyzing client electronic data by using CAATs. Therefore, external auditors can reduce the time between the event of client accounting occurrences and the services, as well as change the audit process from archiving activities into a continuing process (Chatterjee et al., 2021). This research focused on CAATs, where some examples of CAATs software are ACL, IDEA, Ms. Excel, Ms. Access, Lotus-123, Ms. Query, and Oracle.

Technological advancements will have an effect on the gap between report users and auditors due to the lack of guarantees that increase public trust (Behzadian & Nia, 2017). According to Alles (2015) and Rosati, Gogolin, and Lynn (2019), professional bodies such as the International Auditing and Assurance Standards Board (IAASB), American Institute of Certified Public Accountants (AICPA), Public Company Accounting Oversight Board (PCAOB), and others have adapted auditing standards to keep up with the changes. Furthermore, Arens, Elder, and Beasley (2014) updated audit education by integrating with IAASB Canada, which supported GITC (General IT Control) to ensure client internal controls were executed following the appropriate procedures through auditors that have been adapted with changes. According to the International Audit Standard (ISA) 315 (Revised 2019), the use of automated tools and techniques can aid in the identification and compilation of audit risks. These tools enhance the accuracy and speed of data processing, making the process more reliable.

In Indonesia, CAATs are regulated by various auditing standards. The Standard Auditing (SA) 240 addresses the responsibility of auditors in detecting fraud in financial statements. SA 300 pertains to the planning of financial statements, SA 315 focuses on the identification and assessment of the misappropriation in the financial statement. Furthermore, SA 330 deals with auditors' responses to risks, and SA 550, also known as 'Related Parties' emphasizes how CAATs improve the effectiveness and efficiency of external auditors in conducting the financial statement audit.

Deepal and Jayamaha (2022) stated that auditors' lack of ability to practice the system has an impact on increasing the expectation gap, as mentioned in Audit Expectation-Performance Gap (AEG) theory. Therefore, CAATs are very helpful for external auditors and important when conducting the audit of the companies' bookkeeping which accounting systems are computer-based (Al-Hiyari et al., 2019). It concluded that user acceptance is a very important factor in determining the success of the development of IT.

This research used the Unified Theory of Acceptance and Use of Technology (UTAUT) methodology. Several research utilized various

frameworks, including TOE, DeLone, Mclean IS Success Model, and others to analyse technology implementation success at the organizational level (Al-Okaily et al., 2020; Prasetyo et al., 2021; Widuri et al., 2016). In addition, the UTAUT model provides better explanation capabilities in illustrating behavioral intention to use the system than using other methods (Al-Hiyari et al., 2019).

Behavioural analysis plays an important role in addressing the recurring problems that arise due to variations in individual acceptance levels. To contribute to Audit Firms and scholars in designing suitable audit frameworks and strategies, a deeper exploration of this topic is necessary (Al-Matari et al., 2021; Najafabadi et al., 2015; Rosati et al., 2019).

Previous research examined the acceptance of CAATs by external auditors. Al-Hiyari et al. (2019) conducted a research on the acceptance of CAATs by external auditors in Jordan. The results showed that performance expectancy and facilitating conditions significantly influenced the intention of external auditors to adopt CAATs. Mohammad, Kamil, and Bin Mohd Noor (2017) conducted a research in Jordan and identified performance expectancy, effort expectancy, and social influence as significant factors that affected the intention of external auditors to adopt CAATs, but facilitating conditions had no effect. Mohamed, Muhammad, and Rozzani (2019) also conducted a research on the external auditors' intention in using CAATs in Malaysia. The results found that performance expectancy, effort expectancy, and facilitating conditions significantly influenced the intention to use CAATs, while social influence did not have an effect. According to Shamsuddin et al. (2015), on external auditors in Malaysia, all factors such as performance expectancy, effort expectancy, social influence, and facilitating conditions influenced the intention to use CAATs. External auditors believe that the use of CAATs can quickly solve audit work, improve quality, and productivity.

Handoko, Ariyanto, and Warganegara (2018) stated that performance expectancy affected behavioral intention while effort expectancy and social influence had no effect. Enabling conditions and behavioral intention have an influence on usage behaviour by external auditors in the use of CAATs. In Indonesia, the acceptance and use of CAATs are still relatively new (Widuri et al., 2016). By conducting this, it is expected to provide a thorough understanding of factors that promote or inhibit the acceptance and use of CAATs by external auditors in the Jakarta area.

Based on the previous literature described, this research stimulated Venkatesh et al. (2003), which declared America as a research site for the banking, communication, entertainment, and public administration industries that use information systems. Meanwhile, the expert decided to choose Indonesia, specifically Jakarta as a research site with external auditors as the respondents.

This research aims to contribute by analyzing auditors' acceptance to adopt technology to support

audit performance. The findings will improve the decision-making process for report users, thereby minimizing the gap in auditors' capacity with technological advancements and the expectation gap between report users and the auditing profession. Lastly, the results can be a basis for standard setters to adapt developments in auditing standards in response to evolving changes.

### **The Relationship Between Performance Expectancy and Behavioral Intention**

Mahzan and Lymer (2014), Shihab et al. (2017), and Al-Hiyari et al. (2019) claimed technological advancements in auditing improved auditors' performance, which became faster and superior, specifically when minimizing costs and time. According to Calderon and Gao (2021), auditors are gaining more knowledge in conducting risk assessments that have an impact on a more advanced and open audit testing process.

Krahel and Titera (2015), and Raguseo (2018) explained how the existence of technology, in addition to having a great impact on earnings for auditors, also required a consideration related to experience. This consideration can be a risk of opinion error when it is unable to optimize technology. Furthermore, Handoko et al. (2018) established how the level of auditors' success in practicing technology can be seen from the preparation, which supported performance.

H<sub>1</sub>: Performance expectancy has a positive impact on Behavioral intention.

### **The Relationship Between Effort Expectancy and Behavioral Intention**

Venkatesh et al. (2003) developed the UTAUT Model on the expectation of effort to analyze individual acceptance in the practice of technology. According to Shihab et al. (2017), there is a positive effect of effort expectation on behavioral intention. In this case, the training routine of auditors increased the acceptance power to implement the technology.

A similar point of view is also expressed by Siew, Rosli, and Yeow (2020) on how implementing CAATs with knowledge of its features and functions promoted editors to quickly meet their needs. Furthermore, Alles (2015) explained that there was an increase in audit services based on technology.

H<sub>2</sub>: Effort expectancy has a positive impact on Behavioral intention.

### **The Relationship Between Social Influence and Behavioral Intention**

Several research showed that the greatest influence on auditors to transform was the existence of favourable environmental conditions (Gepp et al., 2018; Al-Hiyari et al., 2019; Calderon & Gao, 2021). According to Sirois et al. (2016), the risks of applying technology to audit can be minimized with the proper support from the team to optimally practice the



technology. Siew et al. (2020) showed a more effective implementation of CAATs in an adequate working environment.

H<sub>3</sub>: Social influence has a positive impact on Behavioral intention.

### The Relationship Between Facilitating Condition and Behavioral Intention

One of the main elements that support the successful implementation of technology in resources is the encouragement of leaders who facilitate innovations for employees (Siew et al., 2020). According to Mahzan and Lymer (2014), and Shihab et al. (2017), there was an effect between the facilitating conditions and behavioral intention, where the support of the company leaders improved auditors' performance.

H<sub>4</sub>: Facilitating Condition has a positive impact on Behavioral intention.

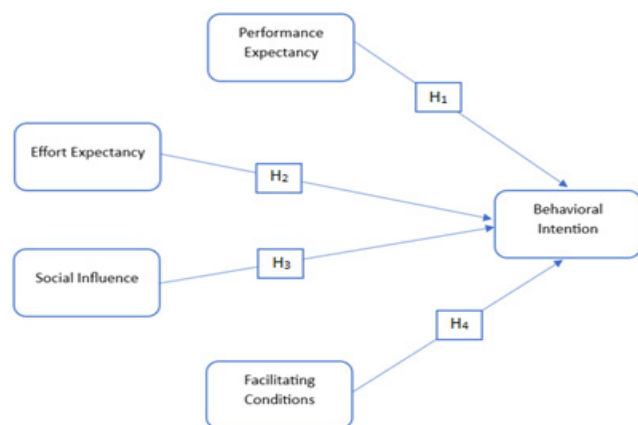


Figure 2 Research Framework

## II. METHODS

This research used explanatory quantitative methods through descriptive analysis. According to Sekaran and Bougie (2016), quantitative method is an approach that is based on the philosophy of positivism and used to study a specific population or sample. This method involved data collection using research instruments and quantitative or statistical data analysis, with the aim of testing predetermined hypotheses.

The research type was associative, where according to Sugiyono (2015) aimed to identify the relationship between more than two variables. Meanwhile, hypothetical testing describes the nature of a particular relationship or ascertains the differences between groups or independence or more factors in a situation.

The selection of research samples used the non-probability sampling techniques. According to Weyant (2022), non-probability sampling is one of the approaches used to collect samples that do not allow for every member of the population to have an equal

chance of being selected. In this research, the samples were obtained using purposive sampling. Furthermore, auditor-assisted snowball sampling was employed to reach other auditors in the data distribution process, which proved effective (Sekaran & Bougie, 2016).

The data collection process was carried out by distributing closed-ended questionnaires to auditors of the Jakarta public accounting office through social media (Mohamed et al., 2019). The primary data collection method used a cross-sectional approach (Weyant, 2022). As for the secondary data, a systematic literature review was carried out to analyse previous journals, research books, and valid websites. This was conducted to increase the data accuracy and provide the support that guarantees the research quality (Bowen, 2009). It should be noted that the number of external auditors in audit firms in Jakarta was not exactly determined, where the research referenced Chin (1998) as mentioned in Marliana (2020) as follows:

1. The minimum sample size on PLS-SEM is equal to or greater than ten times the largest number of formative indicators used to measure latent variables.
2. Ten times the largest number of structural paths are directly connected to a particular construct in the structural model.

In the research, four paths were identified in the structural pathways directly connected to a specific construct in a structural model. These paths were determined based on criteria at point 2. Various approaches can be used such as the Roscoe method which was developed in 1975. However, the research adopted Chin (1998) because it focused on auditors who are not distinguished by their position or experience. Roscoe adoption research targeted respondents with certain criteria, such as focusing only on top management (Hair et al., 2019), whereas this research aimed to include all auditors in Public Accounting Firms in Jakarta. Therefore, the minimum sample of Partial Least Square (PLS) in the research was 40 samples.

This research consisted of four independent variables, namely performance expectancy, effort expectancy, social influence, and facilitating conditions, and one dependent variable, namely behavioral intention. The variables were measured using questionnaire instruments in the form of several questions to determine the extent of responses from respondents using a Likert Scale of 1 to 5 points, namely 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree (Joshi et al., 2015).

The data were analyzed using the Structural Equation Model (SEM) model with the Partial Least Square (PLS) approach and SmartPLS support software version 3.3.2. The Structural Equation Model (SEM) is a multivariate analysis method with a combination of factor and correlation analysis, which

Table 1 Operational Variable

Variable	Indicators
Performance expectancy	<ul style="list-style-type: none"> <li>• <b>Perception of Extrinsic Advantages and Motivations</b> I found CAATs useful in my audit work. Using CAATs enables me to promptly complete tasks.</li> <li>• <b>Suitability with Work and Relative Benefits</b> Using CAATs increases my productivity. If I use CAATs, I will increase my chances of getting a raise.</li> <li>• <b>Results Expectations</b> Using CAATs will reduce the time I spend on unproductive activities. Using CAATs improves audit quality.</li> </ul>
Effort expectancy	<ul style="list-style-type: none"> <li>• <b>Perception of Ease of Use</b> My interaction with CAATs will be clear and understandable. It would be easy for me to be skilled in using CAATs.</li> <li>• <b>Ease of Use</b> I shall find CAATs easy to use. Learning to operate CAATs was easy for me.</li> <li>• <b>Complexity</b> Using CAATs may require a lot of my mental effort.</li> </ul>
Social influence	<ul style="list-style-type: none"> <li>• <b>Subjective Norms</b> Regulators, Shareholders, and Stakeholders who influenced my audit process, thought that I should use CAATs. The audit team and the people around me thought that I should use CAATs.</li> <li>• <b>Social Factors</b> The audit team and the people in this audit firm have cooperatively assisted me in the use of CAATs. In general, the audit firm has supported the use of CAATs.</li> <li>• <b>Image</b> The people in my audit firm who use CAATs have more advantages than those who do not use it.</li> </ul>
Facilitating conditions	<ul style="list-style-type: none"> <li>• <b>Controlling Behaviour</b> I have the necessary resources to use CAATs. I have the necessary knowledge to use CAATs.</li> <li>• <b>Conformity</b> This system is not compatible with the CAATs I use.</li> <li>• <b>Conditions That Make It Easier</b> When I am having trouble using CAATs, there are always people or groups that support me. I think that the use of CAATs fits perfectly with the audit approach applied in my audit firm.</li> </ul>
Behavioral intention	<ul style="list-style-type: none"> <li>• <b>Social Prediction Attitudes and Behaviours</b> I intend to use CAATs in the audit process on a regular basis. I predict I shall use CAATs in the future. I plan to use CAATs in the near future.</li> </ul>

measures the relationship between variables in a model. Furthermore, testing was conducted using the SmartPLS version 3.3.2. There are also Outer Model Test, Inner Model Test, and Hypothesis Test.

### III. RESULTS AND DISCUSSIONS

From the questionnaires distributed online to external auditors working at audit firms in Jakarta, 63 responses were obtained and 62 were considered valid. Furthermore, the data were processed using the SmartPLS version 3.3.2. Table 2 shows the characteristics of the respondents and is interpreted as relevant information.

Outer loadings test was conducted to measure the validity and reliability of the research models with convergent and discriminant validity, and composite

reliability. An indicator that satisfies reliability is when it has a loading factor value greater than 0.7 (Sekaran & Bougie, 2016). However, when the loading factor value is between 0.4 to 0.7, the indicator will be removed. The result is 4 indicators did not meet the criteria and had been removed earlier for further analysis (Hair et al., 2019).

The Cronbach alpha (CA) and composite reliability (CR) values of each latent variable have to reach >0.7 to meet internal consistency reliability requirements. All variables in the research model have a greater composite reliability value of 0.7. Therefore, it can be implied that the reliability of internal consistency was met, and it can improve the accuracy of the presented information (Hair et al., 2019).

Convergent validity analysis was carried out by evaluating the value of each latent variable average variance extracted (AVE). The result showed

that all latent variables had an AVE greater than 0.5. Furthermore, all the data were valid and can be further tested.

To evaluate discriminant validity, this research evaluated both cross-loading values and AVE roots to determine the magnitude of each value in each indicator that has a different level of aspects from other indicators (Hair et al., 2019). The result also showed all the indicators had a loading factor greater than the associated variables compared to others, which met the requirements of >0.70 (Hair et al., 2019). The square root of the AVE value of each variable was greater than the correlation to other latent variables in the research model. Therefore, the proposed model met the evaluation of discriminant validity (Hair et al., 2019).

The evaluation of the structural model (Inner Model) consists of the coefficient of determination (R2) and predictive relevance (Q2) (Hair et al., 2019).

In this research, the value of R2 was 0.561 or 56.1% which showed the independent variables explained the construct of dependent variables by 56.1% while the remaining value was explained by other variables (Hair et al., 2019).

Furthermore, Q2 testing obtained a result of 0.376 which means behavioral intention variables have predictive relation. The magnitude of the value of each relationship was tested, leading to the hypothesis test that can be performed based on the existing variables (Sekaran & Bougie, 2016; Hair et al., 2019).

The hypothesis testing was carried out with a t-test. When the test result has p-value  $\leq 0.05$  (alpha 5%) and t-statistics  $> 1.96$ , it can be concluded that the results are significant. According to Sekaran and Bougie (2016), and Hair et al. (2019), when a hypothesis has a positive impact, it significantly indicates a parallel increase of the relationship variables without passing one over the other.

Table 2 Respondent Characteristics Description

Characteristics	Details	Frequency	Percentage
Ages	<=25 y.o	41	66%
	25 – 35 y.o	18	29%
	36 – 45 y.o	2	3%
	> 46 y.o	1	2%
Gender	Male	40	65%
	Female	22	35%
Education Level	Diploma - Diploma	0	0%
	S1 - Undergraduate	56	90%
	S2 – Post Graduate	6	10%
	S3 - Doctoral	0	0%
Working Experiences	<3 years	49	79%
	3 – 5 years	7	11%
	> 5 years	6	10%
Rank/ Position	Junior Auditor	48	77%
	Senior Auditor	11	18%
	Manager	2	3%
	Partner	1	2%
Certification	Yes	10	16%
	No	52	84%
Voluntary in Using CAATs	Yes	42	68%
	No	20	32%
Firm Size	Big 4	15	24%
	Non-Big 4	47	76%
Software used	ACL	10	9%
	IDEA	10	10%
	Ms. Excel	57	55%
	Ms. Access	4	4%
	Oracle	7	7%
	Others	15	15%

Table 3 CA, CR, and AVE Value

Variable Name	Cronbach's Alpha (CA)	Composite reliability (CR)	Average Variance Extracted (AVE)
Performance expectancy	0,710	0,822	0,541
Effort expectancy	0,797	0,863	0,613
Social influence	0,842	0,889	0,619
Facilitating conditions	0,713	0,824	0,542
Behavioral intention	0,830	0,898	0,747

The result of Hypothesis 1 concluded that performance expectancy had a positive but insignificant effect on behavioral intention of external auditors working at audit firms in Jakarta to adopt CAATs. Several research (Mahzan & Lymer, 2014; Sirois et al., 2016; Al-Hiyari et al., 2019) indicated how auditors need technology to improve performance, specifically in the presentation of relevant finding information. Furthermore, Widuri et al. (2016) explored auditors in Indonesia through the TOE Framework.

The results showed that technological applications in the form of Generalized Audit Software (GAS), Audit Command Language (ACL), and CAATs provided convenience and superiority for auditors in performing data tests with a high validity level. These results are supported by Sutanto, Ghozali, and Handayani (2018) and Gonzalez et al. (2012) that performance expectancy did not affect behavioral intention. Sutanto et al. (2018) claimed this was due to the awards that do not worth the tasks and roles to be performed. Moreover, CAATs have been unable to expedite the completion of audit work or enhance its effectiveness and efficiency.

This also needs to be enhanced by supportive facilities and infrastructure (Raguseo, 2018). Audit firms, which seek to increase the use of CAATs, should invest more in training programs to educate external auditors about the benefits of using the tool and help them stay up to date with technological advancements (Bierstaker, Janvrin, & Lowe, 2014).

Shihab et al. (2017) showed auditors' lack of experience and knowledge in auditing software practice

had an impact on diminishing their performance. This led to a decreased interest of auditors in applying the technology. Also, Krahel and Titera (2015), and Gepp et al. (2018) explained that in addition to the superiority of auditors, they face threats that run the risk of discrepancies in the presentation of opinions due to lack of detection to obtain findings.

The results of Hypothesis 2 showed that effort expectancy had a positive but insignificant effect on behavioral intention of external auditors in Jakarta to adopt CAATs. The results support Al-Hiyari et al. (2019) and Mohammad et al. (2017) that auditors apply technology according to experience and needs to produce audit performance. When presenting an opinion, auditors need to minimize audit risk in order to avoid incorrect decisions (Krahel & Titera, 2015).

The advancement of information systems requires auditors' capability as a guarantor of transparency and accountability for the presentation of financial statements (Calderon & Gao, 2021; Salijeni et al., 2019). It can also be seen that the average age of respondents was below 25 years and have a Bachelor's (undergraduate) degree. This can indirectly affect the ease of auditors in adapting CAATs.

The results are supported by Al-Hiyari et al. (2019) and Handoko et al. (2018), which showed that effort expectancy does not affect behavioral intention. Furthermore, Al-Hiyari et al. (2019) stated that the reason why effort expectancy did not affected behavioral intention was because most of the external auditors in the sample were young and had a high proficiency in information technology.

External auditors can easily perceive the significant level of convenience associated with the utilization of CAATs (Shihab et al. 2017). Another reason why effort expectancy does not affect behavioral intention is that in the context of audit, the effectiveness of audit procedures is given high priority by external auditors. This is done when they make decisions on the use of technology and not about personal preferences regarding efforts required to use technology (Bierstaker et al., 2014).

The results of Hypothesis 3 showed social influence has a positive and significant effect on behavioral intention of external auditors in Jakarta to adopt or use CAATs. This suggests that auditors are influenced by their social environment, including colleagues who use CAATs in the audit process. This is evident in the respondents' agreement with social influence indicators, indicating that auditors

Table 4 Hypothesis Test Result

Hypothesis	Path	Path Coefficient	Standard Deviation	T-value	P-Value	Conclusion
H <sub>1</sub>	PE → BI	0,198	0,129	1,534	0,126	Positive and insignificant
H <sub>2</sub>	EE → BI	0,060	0,114	0,525	0,600	Positive and insignificant
H <sub>3</sub>	SI → BI	0,398	0,121	3,304	0,001	Positive and significant
H <sub>4</sub>	FC → BI	0,208	0,167	1,247	0,213	Positive and insignificant



are influenced by those around them. According to Mahzan & Lymer (2014), environmental conditions affect how auditors perform audit activities. According to Sirois et al. (2016) and Calderon and Gao (2021), auditors are influenced by the client size and the extent to which they have adopted the technology. These factors will support auditors in updating their skills. However, several research showed a lack of openness in the work environment because outdated standards or differences in specialization led to a behaviour that was less adaptable to change (Calderon & Gao, 2021; Islam et al., 2018; Zadorozhnyi et al., 2021).

These results were supported by Mohammad et al. (2017) and Shamsuddin et al. (2015), which showed social influence affected behavioral intention. According to Shamsuddin et al. (2015), social influence impacted behavioral intention because it was caused by the influence of colleagues and senior management, as well as current developments in new technologies by the organization.

Hypothesis 4 stated that facilitating conditions have a positive but insignificant effect on behavioral intention of external auditors to adopt or use CAATs. It can be concluded that auditors believed the support facilities do not have a significant influence on their decision to adopt CAATs.

These results are in accordance with Mohammad et al. (2017) and Sutanto et al. (2018) which showed facilitating conditions do not affect behavioral intention of external auditors in the use of CAATs. Furthermore, Mohamed et al. (2019) stated that an important factor that improved behavioral intention to adopt and use CAATs was independence with the availability of resources, adequate information, and assistance in the usage.

Al-Hiyari et al. (2019) stated that audit firms should invest enough money in advanced information technology infrastructure to minimize the barriers in receiving and utilizing CAATs. The firms should increase CAATs usage by developing new policies regarding the recruitment and promotion of external auditors. The majority of external auditors in this research still use Microsoft Excel as a supportive software to conduct the audit process. Therefore, the firms should provide supportive software and training to increase the interest of auditors in adopting CAATs.

Kolbjørnsrud, Amico, and Thomas (2017) found that 44% of leaders perceived technological advancements as a threat that generated a lack of facilities in the company. This affected performance in the achievement of set goals.

#### IV. CONCLUSIONS

In conclusion, this research aimed to analyze the factors that influence behavioral intention to adopt and use CAATs. Four independent variables, namely performance expectancy, effort expectancy, social influence, and facilitating conditions were tested against the dependent variable, namely behavioral

intention. Furthermore, this research was conducted on external auditors working at audit firms in Jakarta using questionnaires made with Google Forms and disseminated using social media. A Partial Least Square (PLS) method was used to determine the influence of the independent variables on the dependent. The analysis was carried out using the SmartPLS program version 3.3.2.

Performance expectancy had a positive but insignificant effect on behavioral intention of external auditors in adopting and using CAATs. This suggested that despite the potential for performance improvement and the perceived effectiveness of technology, these factors have been unable to significantly influence auditors' intention to adopt and use CAATs.

Effort expectancy had a positive but insignificant effect on behavioral intention. Therefore, it was concluded that the perceived ease associated with technology was not a significant factor to influence auditors' intention to adopt and use CAATs. This was similar to the results of Mahzan and Lymer (2014), Shibab et al. (2017).

Social influence had a positive and significant effect on behavioral intention of adopting and using CAATs. This suggested that the social environment where auditors operate and the support they receive from people play a crucial role in shaping the intention to adopt CAATs.

Facilitating conditions had a positive but insignificant influence on behavioral intention. It was concluded that supporting facilities such as resources (Internet, cloud, or other advance technologies), adequate information, and assistance in the use of CAATs cannot affect the intention/desire to adopt CAATs (Autor, 2015; Kolbjørnsrud et al., 2017).

This research generated input for future academic paper and audit firms in designing a strategic model that can prepare auditors to adopt an audit system. To achieve a successful technology implementation, leadership support alone is not enough. It also necessitated the awareness of individuals who recognized the potential of audit technology to lead auditors towards new opportunities. This awareness can be fostered by promoting ideas for updated auditing standards that align with technological advancements (Alles, 2015; Calderon & Gao, 2021; Rosati et al., 2019).

This research has several limitations. Firstly, the respondents' data were obtained from a single location and the amount of data was adjusted according to the variables based on the provisions of Chin (1998). In addition, this type of software is only targeted at CAATs, excluding other softwares used by different auditors. This research aimed to analyze the renewal of auditors' acceptance, which can change at any time.

Future studies are recommended to explore the gaps in this research through interview-based surveys. This will provide insight into the acceptance of audit software implementation to improve auditors' performance. Experts can also review the acceptance risk analysis of the software used to better understand



its impact on users of financial statements based on the experience of auditors who have adopted the system.

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