EXPLORING THE KEY DRIVERS BEHIND THE ADOPTION OF COMPUTER-ASSISTED AUDIT TECHNIQUES IN HIGHER EDUCATION

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ABSTRACT

The utilization of computers in organizations for information processing grows, and it becomes increasingly essential for auditors to adopt computerized auditing techniques. This study investigates students' views on the factors that affect their behavioral intentions regarding Computer-Assisted Audit Techniques (CAAT) in the academic sector. The quantitative research relies on primary data collected via questionnaires distributed to the research subjects, specifically active students in Accounting and Finance programs currently enrolled in Auditing courses at various universities in Indonesia. A total of 228 participants from 35 universities took part in this research. The selection of participants was conducted using a simple random sampling method. This research uses the PLS Algorithm and Bootstrapping method to examine the relationships between various variables. The independent variables in this research include Effort Expectations, Social Influence, Performance Expectations, Facilitating Conditions, and Trust. While, Satisfaction serves as the mediating variable, and Behavioral Intention is identified as the dependent variable. The proposed model in this research consists of nine hypotheses, of which six have been validated while three remain unvalidated. Previous studies indicate that only some universities incorporate audit software into their courses due to inadequate infrastructure, highlighting a gap in technological competencies in accounting and auditing education. This research contributes to the broader discourse on advancing these competencies, ultimately preparing students to meet the dynamic demands of the global audit environment and enhancing their readiness for professional work as practising auditors. The findings provide insights into student expectations regarding the Computer-Assisted Audit Techniques (CAATs) course, thereby enhancing the overall quality of effective learning within the course.

Keywords: *Computer Assisted Audit Techniques, Technology, Education, Learning, UTAUT model*

1. INTRODUCTION

In recent decades, there has been a notable increase in the integration of Information Technology (IT) in different areas of the economy [1], [2], [3]. As a result, notable progress has been achieved in the speed and effectiveness of transaction processing [3], [4]. The swift evolution of digital tools has notably altered accounting and auditing practices. Auditors employ various techniques and processes to collect and evaluate relevant information [5], [6] These tools allow auditors to perform key tasks, such as browsing, analyzing, sorting, summarizing, stratifying, sampling, performing calculations, converting data, and engaging in various data extraction and analysis activities [5], [6], [7]. Among these developments, Computer-Assisted Audit Techniques (CAATs) include numerous tools, from essential electronic working papers to advanced statistical analysis software and artificial intelligence applications, which predict financial distress or detect fraudulent financial reporting [8].

Computer-Assisted Audit Techniques (CAATs) enable auditors to automate tasks that previously required considerable manual effort, thereby enhancing audits' efficiency and precision. Integrating CAATs into information systems has become crucial for effectively delivering services, improving productivity, facilitating informed decision-making, and managing processes or routines [1], [9], [10]. In essence, using CAATs is essential for establishing and upholding best practices. Auditors require the information generated by CAATs to inform and forecast the organization's strategic goals [3], [7], [11]. When properly implemented and executed, CAATs can significantly enhance an organization's performance and objectives. Auditors must move from traditional manual testing methods to computer-assisted audit techniques (CAATs).

In [12] it was indicated that Computer-Assisted Audit Techniques (CAATs) are the most frequently employed auditing methods by Certified Public Accountants (CPAs). The industry and CPA firms globally have increasingly required the integration of computers into auditing methods. In Indonesia, audit software applications are still relatively recent and primarily confined to auditors in large CPA firms [13]. The demand for computers in audit techniques has increased among industries and Certified Public Accountant (CPA) firms globally. Previous studies indicate auditors require CAATs [14]. The Public Accountant Professional Standards (SPAP) Section 327 (PSA no. 57) 2011 highlights the necessity for auditors to comprehend examinations of computer-based accounting systems to ensure their opinions are accurate and that there are no discrepancies in the computerization process. Furthermore, SA Section 335 (PSA no. 57) asserts that auditors operating within a computer-based information system must possess at least a fundamental understanding of Computer Information Systems to effectively plan, direct, supervise, and review the tasks executed. Additionally, recent evidence indicates that members of the Big 4 utilize CAATs more frequently because they have more excellent expertise and audit larger clients with complex IT needs [15].

In Indonesia, there are challenges regarding the quality of audit practices, particularly in small and medium-sized Public Accounting Firms [16]. The limited resources available to these firms result in suboptimal utilization of CAATs during the audit process. Several factors contribute to this issue; previous studies indicate that only some universities currently incorporate audit software into their courses due to inadequate infrastructure, and instructors must also be well-versed in using such software [12]. According to PDDikti's data, in 2022, the Accounting Study Program had 417,882 enrolled students. According to the Ministry of Higher Education and Research and the World Bank, Indonesia produces over 35,000 accounting graduates annually, around 45% of the total in ASEAN countries. Despite the high number of accounting graduates, there exists a gap in producing graduates who are proficient in IT skills, particularly in applying Computer-Assisted Audit Techniques (CAATs). Additionally, many universities still need to provide teaching or training in specialized areas like audit information technology [12], [17]. This situation contributes to auditors' limited understanding of more comprehensive, which can negatively affect their ability to implement audit procedures that serve as a foundation for their reports.

A CPA firm or company requires an auditor with strong IT expertise, and it is essential to have someone recognized as a "champion" in employing CAATs within the organization. Consequently, pursuing training or education to improve skills in utilizing CAATs is vital. This evolution extends beyond the workplace; the significance of CAATs has permeated higher education, particularly within accounting and auditing curricula, to prepare students with abilities that are immediately applicable to their prospective careers. In [18] examined how corporate-style accounting and auditing practices are incorporated into academic institutions, enhancing financial management and accountability in educational frameworks. This shift addresses the increasing demand for enhanced transparency and provides students with practical skills aligned with industry needs.

Furthermore, a study [19] emphasized the considerable effect of technology on enhancing auditing and accounting processes, particularly as universities adopt automated data processing and analytical tools. These technologies emulate actual professional auditing practices, granting students hands-on experience with tools utilized in real-world scenarios. Including CAATs in educational programs boosts technical competencies and promotes the development of firm internal control and governance structures that students will encounter in their professional journeys. Previous research by [20] suggested that the current educational approach for audit courses should integrate Information Technology (IT). This integration can deepen students' understanding of essential auditing principles and prepare them for IT application in future job environments.

Research on the application of IT in accounting education remains limited, with only a few studies, such as those referenced in [12], [17]. The study referenced as [17] investigated the impact of user self-efficacy regarding the usefulness and ease of use of computer-aided audit techniques (CAATs). The results suggest that students' intention to utilize CAATs is affected by how valuable and straightforward they perceive them to be and their prior attitudes toward CAATs. This highlights auditors' need to undergo training and develop learning strategies to improve their proficiency in using CAATs. Therefore, this research seeks to understand students' perceptions of using CAATs.

The literature used in this study was obtained from the Scopus database using keywords such as "CAAT," "Generalized Audit Software (GAS)," "UTAUT," and "Technology in auditing." Only peer-reviewed journals were selected for inclusion in the analysis to ensure the quality of the sources. Studies that explicitly addressed factors influencing the use of CAATs and GAS in auditing were prioritized. At the same time, research that was too general or unrelated to the audit software context was excluded from the review.

Acceptance refers to the willingness of a group of users to engage with IT, and it plays a vital role in the successful implementation of IT [21]. In information systems (IS) research, there is a growing focus on post-adoption behaviors concerning IT. Understanding the factors that influence the integration of CAATs in educational settings is essential for improving their impact on student learning outcomes. The Unified Theory of Acceptance and Use of Technology (UTAUT), developed by [22] provides a theoretical foundation for examining these factors. UTAUT emphasizes four primary constructs that influence technology acceptance: performance expectancy (the belief that using the tool will improve job performance), effort expectancy (the perceived ease of using the tool), social influence (the perceived social pressure to adopt the tool), and facilitating conditions (support offered by institutions and technology). This model serves as a framework for clarifying the adoption of IT and IS and the actual usage of these systems and technologies. Consequently, this study employed the UTAUT model to assess the impact of technological factors on the adoption of CAATs.

The UTAUT model was utilized in this research, incorporating elements of trust and satisfaction. The aim is to understand users' perceptions of utilizing CAATs within the education sector and analyze their effectiveness. Examining influencing factors may differ from evaluating aspects that affect the uptake of CAATs. Therefore, this research aims to answer the following questions: (1) How can the extended UTAUT model incorporate trust and satisfaction to explore the factors that influence students at Indonesian universities regarding their intentions to use CAATs? (2) What are the strongest and weakest factors of the extended model of UTAUT that can influence students at Indonesian universities to use CAATs? By assessing the factors influencing students' intentions to use CAATs in Indonesian universities, this research provides empirical insights that can guide educators in effectively integrating audit technology into accounting curricula.These represent the key contributions of the research.

There is a lack of study exploring in depth the understanding of factors influencing behavioral intentions toward CAATs in an educational setting. Unlike previous studies that focused on student perceptions with only one type of CAAT, namely, ACL (Audit Command Language) using the TAM model [12], [17], this study adopts UTAUT. Moreover, other studies focused on the opinions of external auditors at public accounting firms in Indonesia regarding adopting CAATs [21]. This study offers a theoretical framework and tests it empirically with students in Indonesian universities to further demonstrate the important variables that impact the use of CAATs consisting of ATLAS (Audit Tools and Linked Archive System), ACL (Audit Command Language), and IDEA (Interactive Data Analysis Software). This paper presents a unique methodology to address the key drivers behind adopting CAATs using satisfaction as a mediator, which has not been documented in the literature. This research is expected to provide insights for practitioners, regulators, and management within the academic community to evaluate the implementation of CAATs in higher education. In addition, this research seeks to understand the elements that influence the acceptance of CAATs to facilitate the creation of more relevant curricula, improve the effectiveness of audit technology education, and equip graduates with skills relevant to industry needs, using student satisfaction as a mediator. In addition, understanding these determinants is critical for regulatory bodies, such as lawmakers and policymakers, as well as educators, practitioners, and researchers interested in the convergence of education and technology. Finally, this study enriches the understanding of CAAT adoption by examining it individually.

2. LITERATURE REVIEW AND HYPOTHESIS

2.1 Technology for Auditing

The ongoing technology and information revolution drives constant changes in the business landscape. In most contemporary business organizations, computer-driven tasks have largely

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replaced paper-based ones. Similarly, traditional paper auditing has been supplanted by computer-assisted auditing, referred to as CAATs. Most previous studies on the adoption of CAATS primarily concentrate on external auditors [5], [23], [24], [25], [26]. They suggest that audit firms should implement training programs to enhance auditors' expectations regarding the impact of CAATs on their job performance. Rather than relying on audit firms to develop a training program to facilitate the use of CAATs, it would be more beneficial for Indonesia to establish a comprehensive framework for CAAT education for future auditors in academic settings.

The technology utilized for auditing is known as Computer-assisted Audit Tools, or CAATs. This group encompasses conventional text and word processing applications, automated working papers, and various other types of software [2], [24], [27]. CAATs may also be defined as the methods and instruments employed to directly assess the internal reasoning of an application, as well as those used to make indirect deductions about an application's logic through the analysis of the data handled by the application. Below is a summary of the various classifications or categories of CAATs:

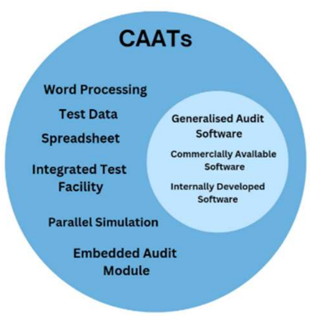

Figure 1: Description of CAATs

General-purpose audit software encompasses applications such as word processors, spreadsheet applications, and database management systems. Word processing tools enhance auditors' productivity by featuring built-in spell checks, mail-merge capabilities, and templates for writing confirmation letters. Spreadsheets enable auditors to perform complex calculations automatically, like interest and depreciation, update figures by changing a single number, and carry out analytical procedures such as ratio computations and other management tasks [28]. Database management systems offer functions for auditing, including backing up the database, managing the privileges of database users, restricting user access, detecting unauthorized transactions, and establishing access rights for developers and IT staff. A DBMS controls user access to data, aids in accumulation, organizes and stores information, and ultimately enables easy data searching and presentation in a user-friendly format [29].

The CAATs that are most commonly utilized are Generalized Audit Software (GAS), which facilitates data extraction and analysis. According to experts, GAS has emerged as the most prevalent computer-assisted audit tool (CAAT) in recent years [24]. Since most accounting transactions have transitioned to digital formats, auditing accounting data is also anticipated to become computerized. Auditors leverage GAS to analyze and assess real-time or extracted data from various applications [30]. GAS is a specialized software that allows auditors to automate various tasks, including conducting client risk assessments [31]. The primary factors contributing to the extensive use of GAS are its relative ease of use, which requires minimal specialized knowledge in information systems, and its versatility across different environments and users. Auditors' two most popular GAS packages are Audit Command Language (ACL) and Interactive Data Extraction and Analysis (IDEA), which enable auditors to scrutinize a company's data in multiple formats.

This software can manage accounts for multiple organizations in a versatile manner. It includes features such as generating trial balances, adjusting entries, performing consolidations, and executing analytical procedures. These functionalities enable auditors to create unadjusted trial balances, record adjusted journal entries, automatically produce adjusted trial balances, automate footings, reconcile to various schedules, consolidate accounts, generate financial reports, and calculate financial ratios and metrics like current ratios, working capital, inventory turnover rates, and price-to-earnings ratios. Auditors most commonly used automated work paper software is the Audit Tool and Linked Archive System (ATLAS).

2.2 Audit Tools for Learning

An audit is an essential and systematic review or assessment carried out by an independent entity on the financial statements prepared by management, alongside the accounting records and supporting documentation, to provide an opinion on the accuracy of the financial statements. The progression of information technology has triggered a transition from manual processes to electronic systems in organizations, necessitating that auditors adopt appropriate audit methodologies. In leveraging the information system, auditors employ Computer Assisted Audit Techniques, which use computer programs to facilitate the audit function and streamline the audit process [32]. Mastery of Computer Assisted Audit Techniques is vital in the examination environment that already incorporates information technology.

Improvements in information technology (IT) have contributed to the creation of various applications that aid students in better-comprehending concepts, phenomena, and theories [33], [34]. Integrating technology would enhance students' active learning in an educational setting structured to foster meaningful learning, which could ultimately lead to favorable, progressively cumulative improvements in learning outcomes [35], [36] [37]. The impact of computer-aided audit techniques on the auditing process has been acknowledged by regulatory authorities and accounting professionals [30], [38]. As a result, the auditing curriculum and instructional methods have been modified, with numerous business schools actively encouraging the incorporation of audit software into their auditing programs.

Previous research has indicated that contemporary classroom learning for audit courses should incorporate Information Technology (IT) [20]. This integration can enhance students' comprehension of fundamental auditing principles and equip them to apply IT in their future careers. In this context, the pertinent application of IT in the educational process for audit courses involves using audit software.

2.3 Prior Studies Using Technology Adoption Models

CAATS is now widely recognized by auditors [39], and this is supported by various studies [2], [3], [20], [39]. Mega utilized the Technology Acceptance Model (TAM) to assess students' acceptance of GAS. This research found that perceived usefulness and ease of use do not influence students' intention to engage with GAS. Regarding software acceptance and implementation, additional significant factors beyond those identified in TAM can affect students' willingness to adopt CAATs.

Earlier studies by [20] indicated that current audit course learning in classrooms should incorporate Information Technology (IT). This integration can enhance students' comprehension of fundamental auditing concepts and better prepare them for the use of IT in their future careers. The relevant integration of IT within the learning framework of audit courses, specifically, involves using CAATs. At present, only a few universities implement CAATs in their audit courses due to insufficient infrastructure resources, and it is also essential for faculty to be proficient in using CAATs. Research on the application of IT in accounting education has been relatively limited, with notable studies such as that conducted by [17]. To analyze the results, researchers applied the Unified Theory of Acceptance and Use of Technology (UTAUT) to evaluate the adoption of various technologies. This paper contributes to the expanding body of literature that examines CAATs within the framework of educational departments in economically developing regions.

2.4 The UTAUT Model

Numerous theoretical frameworks have been developed to enhance comprehension of the elements influencing the acceptance of information technologies [40], [41]. Among these frameworks, the Technology Acceptance Model (TAM) is one of the most impactful and robust in clarifying IT/IS adoption behaviors. The primary aim of TAM was to create a foundation for identifying how external variables influence internal beliefs, attitudes, and intentions.

TAM posits that beliefs regarding usefulness and ease of use consistently determine the adoption of information technologies within organizations. Per TAM, these two factors form the basis for attitudes toward utilizing a specific system, subsequently affecting the intention to use it, ultimately leading to actual usage behavior. Perceived usefulness is the degree to which an individual believes utilizing a system would improve their job performance. Perceived ease of use is the degree to which an individual believes that employing a system would require minimal mental effort [40]. However, the original TAM framework was designed to analyze IT/IS adoption in business contexts, and its applicability for predicting overall individual acceptance, particularly in higher education, warrants further investigation.

To integrate prior TAM-related research, a study [22] created the Unified Theory of Acceptance and Use of Technology (UTAUT) model (see Figure 1). In the UTAUT model, the constructs of performance and effort expectancy were introduced to encompass the concepts of perceived usefulness and ease of use from the original TAM study. Although the UTAUT model suggests that the Effort Expectancy construct may significantly influence user acceptance of information technology, the importance of ease of use might diminish after prolonged and consistent usage.

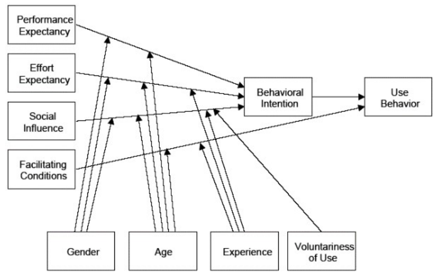

Figure 2: UTAUT framework

Utilizing the UTAUT framework, there are four main determinants and four moderators to consider. The model suggests that behavioral intention (BI) and consumption behavior are influenced by four elements: performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC) [22]. Specific moderators impact how individuals engage with technology, including gender, age, experience, and the willingness to acquire new skills, as illustrated in **Figure 2**. Previous and current literature highlights the significant relationship among the constructs of the UTAUT model. To evaluate students' perceptions regarding acceptable behavior, the researchers underscored the importance of testing the model without the presence of a moderator. While the testing conditions of the study do not showcase many potential moderators (like the age of students and the voluntariness of usage), it has included gender and students' prior educational background. This section elaborates on using the UTAUT model for cultivating behavioral intention toward technology acceptance. In [42] state that the model is effective because it establishes a foundation for trust and experience. They further propose that employing this model enhances the intention to use technology based on performance and effort expectancy, social influence, and facilitating conditions. Experience flow and trust enhance the model's predictability by combining the two factors.

The UTAUT model plays a significant role in examining technology acceptance and usage because it integrates various technology acceptance models (TAMs) [22], [43]. Consequently, this study applies the UTAUT model to evaluate the impact of technological variables on adopting Computer-Assisted Assessment Tools (CAATs).

2.5 Hypothesis Development

Various theoretical frameworks have been proposed to enhance the understanding of the factors influencing the acceptance of information technologies. User perceptions regarding acceptability play a crucial role in significantly affecting the adoption of information technology. The technology acceptance model (TAM), initially developed by Davis in 1986, is among the most extensively validated technology acceptance models. TAM posits that an individual's intention to utilize a system is influenced by two beliefs: perceived usefulness, which refers to the degree to which a person believes that using the system will improve their job performance, and perceived ease of use, which pertains to the extent to which a person feels that using the system will require minimal effort. According to TAM, external variables (such as system features, development processes, and training) impact the intention to use through their influence on perceived usefulness and ease of use. Multiple studies have pointed out the limitations of TAM in addressing the relationship between technology and its actual adoption and utilization.

Several empirical investigations have demonstrated that TAM reliably accounts for a significant portion of the variance (often around 40%) in usage intentions and behaviors. This paper contends that TAM was not designed to tackle the utilization of technology within business, university, and organizational settings but was primarily conceived for individual perceptions and objectives. Consequently, relying on TAM due to its simplistic nature may mislead young researchers and hinder their ability to apply the theoretical model in a practical organizational context.

Venkatesh et al. synthesized essential elements from eight models and theories to create their framework: IDT, TRA, TPB, TAM, a combined TAM-TPB approach, MM, SCT, and MPCU [22]. They developed the Unified Theory of Acceptance and Use of Technology (UTAUT) Model by identifying conceptual and empirical similarities among the eight models. The tests provided robust empirical evidence supporting UTAUT, which proposes three primary factors influencing the intention to use technology (performance expectancy, effort expectancy, and social influence) and two main factors affecting actual usage behavior (intention and facilitating conditions). The research confirmed significant moderating effects of experience, voluntariness, gender, and age as key aspects of UTAUT. Given that UTAUT accounts for up to 70 percent of the variance in intention, we may be nearing the practical limits of our capacity to explain individual acceptance and usage decisions within organizations.

A prior study [44] discovered that trust influences users' intentions to adopt technology. It was suggested that satisfaction is essential for elucidating the adoption of XBRL [45]. Therefore, this research will utilize the UTAUT model and enhance it by adding the elements of trust and satisfaction to examine students' behavioral intentions regarding CAATs. The modified model will subsequently undergo empirical testing. The main aim here is to demonstrate how the model can forecast the factors influencing students' behavioral intentions toward CAATs and their perceived effects on individuals. The hypotheses are explained in more detail below, and the proposed conceptual model is illustrated in Figure 3.

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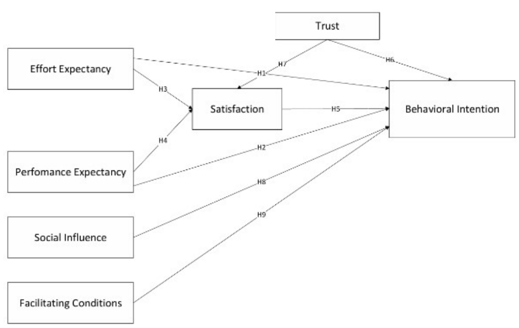

Figure 3: Conceptualized extended UTAUT model for measuring behavioral intention of CAATs

2.5.1 The impact of effort expectancy and performance expectancy

Researchers developed the UTAUT model to create a cohesive framework for understanding technology integration. This model now encompasses effort expectation, a crucial factor influencing technology acceptance. Effort expectancy pertains to how easy it is perceived to use a tool [22]. It reflects the perceived simplicity of use and the perceived complexity level involved. Effort expectancy evaluates how easy an individual believes it will be to use technology and their confidence that it will not lead to mistakes [40].

The UTAUT model also incorporates performance expectancy (PE), defined as "the extent to which an individual believes that the system enhances their work performance" [22]. Performance expectancy revolves around personal beliefs that adopting new technology will help improve job performance [22].

Previous research has indicated that students' work expectations significantly impact their willingness to engage in continuous auditing [2]. People who think new technologies would enhance their job performance tend to have high performance expectations [22]. Research [22] has shown that users' intentions to adopt technology-driven systems are heavily affected by their expectations regarding performance and effort. Therefore, this study suggests that the expectations surrounding these tools influence the intentions to accept CAAT tools. Consequently, based on the findings, the following hypotheses are proposed:

Hypothesis 1 Effort expectancy has a significant influence on the behavioral intentions of using CAAT tools.
Hypothesis 2 Performance expectancy has a significant influence on the behavioral intentions of using CAAT tools.

2.5.2 The impact of satisfaction

CAAT tools must fulfill user needs by delivering positive value. A user's satisfaction level can forecast their future behavioral intentions regarding CAAT tools. Users' willingness to adopt a particular tool may be significantly influenced by their satisfaction with technology-based systems [1]. Chao [1] indicated that the expectation of effort considerably impacts the satisfaction level. Asiati et al. [46] discovered that trust affects enjoyment, and it is predicted that user satisfaction ratings could notably shape the intention to utilize CAAT tools. As a crucial indicator of subsequent behavior, the satisfaction factor assesses the level of effort and performance expectations associated with the application or tools employed for analysis-type activities [47]. In light of this reasoning, the following hypotheses are proposed:

Hypothesis 3 Effort expectancy has a significant influence on users' satisfaction with CAAT tools.
Hypothesis 4 Performance expectancy has a significant influence on users' satisfaction with CAAT tools.
Hypothesis 5 Satisfaction has a significant influence on the behavioral intentions to use CAAT tools.

2.5.3 The impact of trust

Trust is a crucial element of users' behavioral intentions, and this research posits that trust has a significant role. A user's belief that CAAT tool providers act ethically can be referred to as trust within the context of this study [14]. Users' trust level in a technology-based system can affect their overall satisfaction with it on a personal level [46]. Therefore, user confidence in CAAT tools is influenced by their belief in these technological tools concerning accuracy, speed, and the time they save

[2], [11]. Trust is vital because the perceived quality of a tool impacts user confidence in CAAT tools. One research indicated that trust in applications affected users' conviction [48]. From this perspective, the following two hypotheses are proposed:

Hypothesis 6 Trust has a significant influence on the behavioral intentions of users of CAAT tools.
Hypothesis 7 Trust has a significant influence on the satisfaction of using CAAT tools.

2.5.4 The impact of social influence

Social influence (SI) pertains to an individual's view of how important figures (such as supervisors) perceive their use of a system [22] Social influence (SI) denotes the degree to which a person believes that key individuals (like family members and superiors) expect them to use a system [22]. Previous research has demonstrated that social influence significantly impacts students' intentions to utilize CAATs [49]. In the audit context, the authors anticipate that increased support from lecturers and encouragement from external parties to engage with CAATs will motivate students to adopt them. Thus, we predict that students will be more inclined to use CAATs if they feel their immediate lecturers advocate for this practice [23]. However, SI directly affects the intention to use the technology [25], [50] Considering this, the following hypothesis is proposed:

Hypothesis 8 Social influence has a significant influence on behavioral intention to use CAATs tools.

2.5.5 The impact of facilitating conditions

Facilitating conditions refer to how individuals perceive that the necessary organizational and technical infrastructure is in place to support system usage [22]. In the educational context, the authors anticipate that when resources such as knowledge, software, and hardware are accessible for utilizing CAATs, students' intention to use them will be enhanced. Therefore, allocating more resources to IT-related audit training is essential to assist students in employing CAATs [51]. On the other hand, the absence of required facilities for students will likely reduce their willingness to engage with CAATs. Mahzan and Lymer [52] argue that organizational conditions and lecturer support are vital to simplify the adoption of CAATs. These enabling factors are necessary for students to embrace and utilize CAATs. Students' intentions to utilize CAATs are significantly influenced by enabling conditions [8], [52].

Hypothesis 9 Facilitating conditions have a significant influence on behavioral intention to use CAATs tools.

2.5.6 The impact of behavioral intention

Behavioral intention refers to "the individual's subjective likelihood that he or she will engage in the specified behavior" [22], [53]. A person is likely to consider using a new information technology if they believe it will enhance their performance, be efficiently utilized, and have support from their environment and the resources necessary to use it effectively. According to Ajzen [54] behavioral intention is the most reliable indicator of forthcoming actions and is a precursor to actual engagement in practical scenarios. As highlighted by UTAUT, the willingness to employ and accept computer-assisted audit techniques (CAATs) depends on several elements, such as performance expectations, effort expectations, social influence, and facilitating conditions [22]. Numerous authors have explored the connection between CAATs and their surrounding environment [4], [39], [49]. Research by [22] indicates that behavioral intention affects future technology usage behavior. Previous research has emphasized the importance of behavioral intention in effectively adopting a particular technology [10], [55]. Consequently, the following hypothesis is proposed:

Hypothesis 10 Behavioral intention has a significant influence on the Use behaviour of students to use CAATs in the future.

3. RESEARCH METHODOLOGY

This section outlines the research approach, the criteria used for participant selection, the instruments for data gathering, and the methods of analysis applied in this study to establish a comprehensive framework for identifying the factors that affect students' intentions regarding computer-assisted audit tools and techniques (CAATs) at Indonesian universities.

3.1 Research Design

This is a quantitative study. The study employs a descriptive-analytical approach to address its research inquiries and achieve its objectives. This methodology allows for an in-depth exploration of the elements influencing the acceptance and

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utilization of CAATs by university students in Indonesia.

3.2 Research Population

The primary focus of this research is university students in Indonesia who have experience using Computer Assisted Audit Techniques (CAATs) in their auditing courses. This demographic was chosen due to its varied use of digital technology, making it an ideal setting to explore the factors influencing the adoption of CAATs. Within Indonesia's educational landscape, there is a pressing need for innovative approaches that can actively involve students and enhance their learning experiences. Recently, the country has undergone significant educational reforms to address long-standing disparities and ensure quality education for all.

3.3 Research Instrument

The research tool was structured into two phases for this study. The initial phase gathered fundamental demographic details. Survey questions collected information on participants' names, genders, academic years, and types of CAATs, which are analyzed and summarized in the Descriptive Analysis section. The second phase included 29 components to assess the model's eight variables (illustrated in Fig. 2). These include endogenous factors (EE, SI, PE, FC, TR, ST, and BI). Each component is evaluated through multiple items. Responses to the survey were captured on a 5-point Likert scale, where "1=strongly disagree" represents the lowest value and "5=strongly agree" represents the highest. This method was designed to collect participant data according to the UTAUT model.

A Likert scale is a rating mechanism created to gauge respondents' views on a particular issue, typically ranging from "strongly disagree" at one end to "strongly agree" at the other extreme. The information collected assesses an individual's opinion, perception, or attitude toward a specific issue [56]. Likert scale is extensively utilized to carry out various surveys, particularly in educational and social science domains, where the data evaluated tends to be more quantitative [57], [58]. Respondents are requested to indicate their level of agreement (ranging from strongly disagree to agree strongly) with the presented statements (items) using a metric scale.

The scoring approach, which involves assigned values for the Likert scale, indicates that strongly agree = 5, agree = 4, neutral = 3, disagree = 2, and strongly disagree = 1. It serves merely to differentiate higher and lower responses. As a result, the data yielded by the Likert scale is categorized as ordinal data [59]. Likert scales facilitate assessing positive or adverse reactions to specific statements, offering easily interpretable data suitable for statistical analysis.

According to Preston and Colma five-point scales are straightforward because shorter rating scales are perceived as quicker to complete [60]. Bouranta, Chitiris, and Paravantis Indicated that 5-point rating scales reduce confusion and enhance response rates [61]. It is one of the reasons that this research opted for five-point scales in data collection. Moreover, a 5-point scale lessens the cognitive load on participants, as they have fewer alternatives to evaluate. It can result in more accurate answers, particularly for those who may find more intricate scales challenging. Therefore, the 5-point scale effectively balances simplicity with the capacity to gather significant data.

Despite incorporating certain aspects of the UTAUT model, additional variables related to technology adoption and information systems were introduced, as detailed in Table 2. The study utilized Structural Equation Modelling (SEM) through Smart PLS V3, as demonstrated in the Proposed Research Model depicted in Figure 3.

3.4 Sample and Data Collection

The research involves a group of 35 university in Indonesia consist of 228 respondents, guaranteeing the accuracy and validation of the data. The individuals participating in this study are university students located in Indonesia. The selection of participants was carried out using a simple random sampling approach. In this approach, every unit in the sample has an equal opportunity to be included. This technique ensures that the sample is unbiased [62]. Additionally, this method involves selecting subjects from the population that the researcher can conveniently access, as the selected elements are found near the researcher at the time of data collection.

The sample size and power analysis calculations can often be overly complicated, making them impractical for typical programs. Some software requires a comprehensive understanding of statistics and/or programming to determine sample size or conduct power analysis, while other commercial options can be prohibitively expensive. To eliminate the necessity for in-depth knowledge of statistics and programming, we present the method of calculating sample size and power using G*Power software, which features a graphical user interface (GUI) [63]. G*Power is user-friendly for determining sample size and power across various

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statistical tests (F, t, χ2, Z, and exact tests) and is available for free download.

The sample size of this research was determined using the G*Power software. G*Power is an independent power analysis program for statistical tests frequently utilized in social and behavioral research. It offers power analyses for test statistics that follow t, F, O2, or standard normal distributions under the null hypothesis (either exact or asymptotic) and noncentral distributions of the same test families under the alternative hypothesis. G*Power accommodates various statistical methods, such as F-tests, t-tests, chi-square tests, Z-tests, and exact tests.

G*Power software offers standard effect size values of 0.2, 0.5, and 0.8, corresponding to small, medium, and large effect sizes. In this case, the researchers sought to determine the sample size using a small effect size (0.2), established the α error probability at 0.05, and set the 1-β error probability at 0.80 or 80%. Here is a summary:

Table 1: G-Power sample analysis output

Input Parameters	Value	Output Parameters	Value
Tail(s)	Two	Noncentrality parameter δ	2.8213472
Effect size d	0.20	Critical t	1.9720175
α err prob	0.05	Df	198
Power (1−β err prob)	0.80	Total sample size	199
		Actual power	0.8016910

Before initiating the survey, the researchers obtained ethical clearance, guaranteeing that all participants were notified that their identities would be kept confidential and that their responses would be solely utilized for research purposes. In addition, they were informed that participation was voluntary, and they could choose to withdraw from the study at any point. The survey was conducted in Indonesian.

Table 2: Investigation Variables

Parameter	Survey Items	Index
TR	TR1	I believe that CAATs are a trustworthy tool.
	TR2	I trust the features of CAATs.
	TR3	I do not doubt the results of using CAATs.
	TR4	I trust CAATs to do the task right.
	TR5	CAATs can fulfill their tasks.
EE	EE1	The use of CAATs is easy to understand.
	EE2	It is easy for me to learn how to use CAATs.
	EE3	I find CAATs easy to use.
	EE4	For me, learning how to use CAATs is relatively easy.
	EE5	I find it easy to use CAATs to perform audit tasks the way I want.
PE	PE1	CAATs help me in performing audit tasks.
	PE2	The use of CAATs can improve the efficiency of audit tasks.
	PE3	The use of CAATs can help me to complete audit tasks in a short time.
	PE4	The use of CAATs can help me to complete tasks more quickly.
ST	ST1	I am satisfied with the use of CAATs.
	ST2	I am delighted with the use of CAATs.
	ST3	I am satisfied with the efficiency of CAATs.
SI	SI1	My lecturer often shows me how CAATs are used in academic activities.
	SI2	My lecturer believes that the use of CAATs is important to improve my understanding of auditing.
	SI3	My friends helped and encouraged me to use CAATs in academic activities.
	SI4	The lecturer expects me to be proficient in using CAATs.
FC	FC1	I have received adequate training from the university to be able to use CAATs in academic activities.

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	FC2	Technical resources such as computers and software for using CAATs on my campus are sufficient.
	FC3	I received support from my lecturer in using CAATs.
	FC4	I intend to use CAATs in the future, and I will most likely use CAATs in the future.
	FC5	The university provided clear guidelines that helped me to use CAATs effectively.
BI	BI1	Assuming I have access to CAATs, I intend to use them.
	BI2	Since I had access to CAATs, I decided to use them.
	BI3	I plan to use CAATs in the future.

4. RESULT AND DISCUSSION

4.1 Descriptive Analysis

A total of 280 questionnaires were issued, but only 250 were returned to the researcher. The remaining questionnaires were not completed. After cleaning the data, 228 questionnaires were deemed suitable for analysis, with responses from 60 male and 168 female participants from 35 different universities in Indonesia.

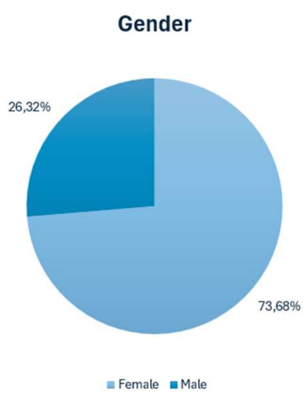

Figure 4: Gender

The percentage of students using the ACL (Audit Command Language) application was 53.07%, while 42.54% utilized ATLAS (Audit Tools and Linked Archive System), and 4.39% employed IDEA (Interactive Data Analysis Software).

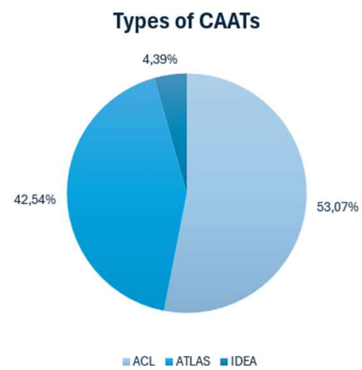

Figure 5: Types of CAATs

The majority of the respondents had varying levels of learning experience, including First Semester (0.44% of respondents), Second Semester (0.44% of respondents), Third Semester (2.19% of respondents), Fourth Semester (0.88% of respondents), Fifth Semester (22.37% of respondents), Sixth Semester (1.32% of respondents), Seventh Semester (50.00% of respondents), Eighth Semester (13.16% of respondents), and Fresh Graduates (9.21% of respondents).

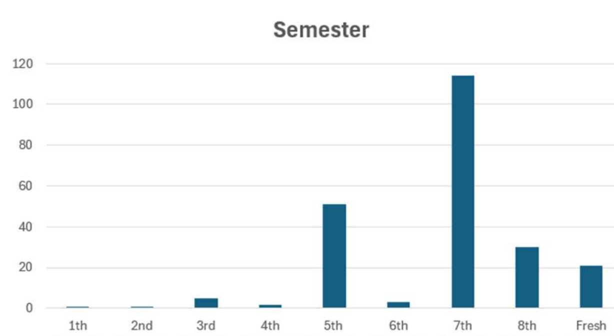

Figure. 6: Semester

4.2 Assessment of Path Model

The use of PLS-SEM analysis has gained

significant traction for exploring the relationships among variables in conceptual models, especially in educational research. In this study, SmartPLS 3.2.8 was utilized to conduct the PLS-SEM analysis, allowing for a more comprehensive examination of the relationships among the variables. Consequently, we provide visual representations that demonstrate the validation of the model and highlight the degree of significant correlation among the factors involved in this research, as illustrated in Figure 7.

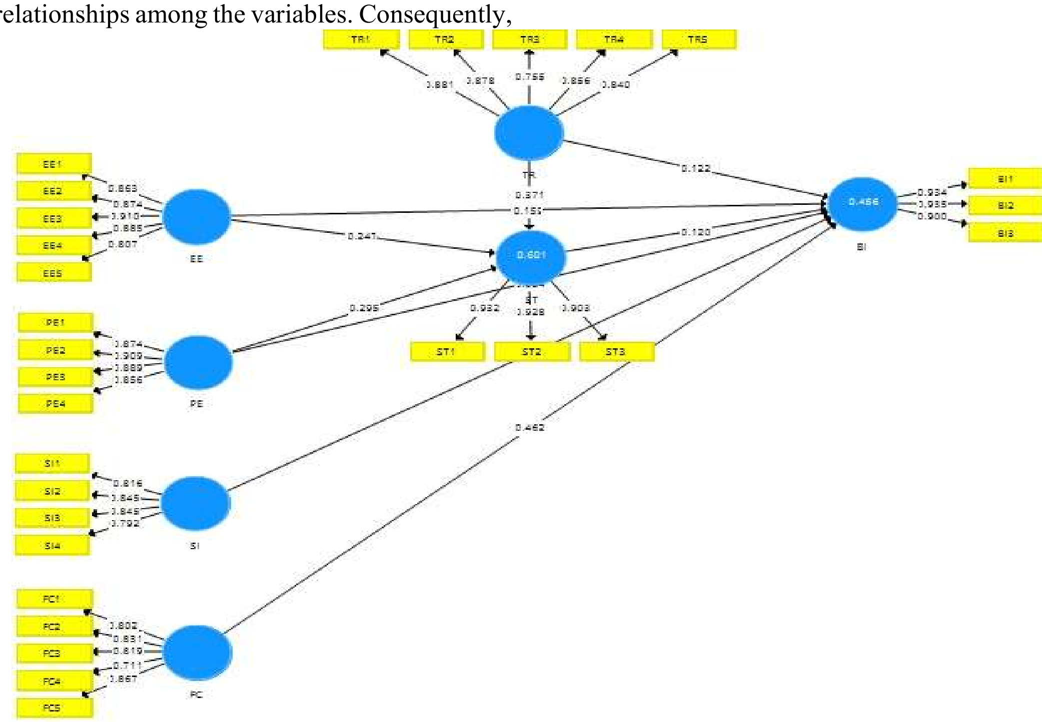

Figure 7: Result Output PLS-SEM

The initial step involves verifying that the suggested model is valid, reliable, and adheres to fit criteria. According to the computation results, the model satisfies the standards for validity (both convergent and discriminant) and reliability. This is evidenced by the factor loading values, along with Cronbach's alpha, CR, AVE, and HTMT, as necessary. Regarding the model's fit indices, the NFI value is 0.8 (which is close to 1), the SRMR value is 0.090 (indicating SRMR<0.10), and the outer loading values for each variable exceed 0.7. Based on these findings, it can be determined that all eligibility criteria are satisfied according to the feasibility test requirements. The evaluations of validity, reliability, and fit criteria for the path model are presented in Table 2 and Table 3. With a path model that demonstrates a satisfactory level of validity, reliability, and compliance with fit criteria, researchers are positioned to proceed with further analyses, specifically, hypothesis testing.

Table 3: Validity & Reliability of Instruments

Parameters	Survey Items	Reliability			Validity	
		Indicator Reliability	Internal consistency Reliability		Convergent Validity	Discriminant Validity
		Factor Loadings (FL)	Cronbach's Alpha	CR	AVE	HTMT
		FL>0.70	0≥0.70	CR>0.70	AVE>0.05	HTMT<0.90
TR	TR1	0.881				
	TR2	0.878				

	TR3	0.755	0.898	0.925	0.711	Acceptable
	TR4	0.856				
	TR5	0.840				
EE	EE1	0.863	0.918	0.939	0.754	Acceptable
	EE2	0.874				
	EE3	0.910				
	EE4	0.885				
	EE5	0.807				
PE	PE1	0.874	0.905	0.933	0.778	Acceptable
	PE2	0.909				
	PE3	0.889				
	PE4	0.856				
ST	ST1	0.932	0.910	0.944	0.848	Acceptable
	ST2	0.928				
	ST3	0.903				
SI	SI1	0.816	0.845	0.895	0.681	Acceptable
	SI2	0.845				
	SI3	0.845				
	SI4	0.792				
FC	FC1	0.802	0.875	0.903	0.652	Acceptable
	FC2	0.831				
	FC3	0.819				
	FC4	0.711				
	FC5	0.867				
BI	BI1	0.934	0.913	0.945	0.852	Acceptable
	BI2	0.935				
	BI3	0.900				

Table 4: Structural Equation Model Fit Indices

Parameters	**Fit Value SRMR<0.10**	**NFI (NFI value close to 1)**	**Decision**
TR	0.071	0.806	The model is fit
EE			
PE			
ST			
SI			
FC			
BI			

4.3 Path Coefficient Test Results

Path coefficients play a crucial role in illustrating the directional relationships between variables, indicating whether a hypothesis suggests a positive or negative association. These coefficients can range from -1 to 1. Values between 0 and 1 are interpreted as positive, while those between -1 and 0 are viewed as unfavorable. The evaluation of the outer model in the partial least square analysis is explained based on the algorithm estimation results of the research model, as shown in Table 5, using SmartPLS Version 3.2.8.

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Table 5: Path Coefficient and Significance Test

Relationship	Original Sample (o)	Sample Mean (M)	Standard Deviation (STDEV)	T-Stat	P-values	Status
EE → BI	0.189	0.193	0.084	2.243	0.025*	Significant
EE → ST	0.247	0.248	0.067	3.698	0.000*	Significant
FC → BI	0.462	0.471	0.107	4.306	0.000*	Significant
PE → BI	0.070	0.062	0.088	0.789	0.431	Insignificant
PE → ST	0.295	0.292	0.077	3.822	0.000*	Significant
SI → BI	-0.099	-0.102	0.111	0.889	0.347	Insignificant
ST → BI	0.120	0.118	0.097	1.246	0.213	Insignificant
TR → BI	0.167	0.170	0.081	2.051	0.041*	Significant
TR → ST	0.371	0.371	0.069	5.387	0.000*	Significant

**Significant at 0.05 level of significance*

From Table 5, the Effort Expectancy has a direct relationship with Behavioral Intention, and an indirect relationship (through mediation) with Satisfaction has a significant relationship for both hypotheses. The relationship between EE and BI has a positive coefficient of 0.189, with a p-value of **0.025*** and a t-value of 2.243 (t>1.96), which indicates a statistically significant relationship. This indicates that when Effort Expectancy increases, BI also tends to increase. Similarly, the relationship between EE and ST has a positive coefficient of 0.247, with a p-value of **0.000*** and a t-value of 3.698. This indicates a significant positive effect of EE on BI mediated through ST. Likewise, the direct relationship between Facilitating Conditions and Behavioral Intention shows a relatively large coefficient of 0.462, with a p-value of **0.000*** and a t-value of 4.306, which indicates a highly significant positive relationship.

However, the Performance Expectancy has two different relationships with Behavioral Intention and Satisfaction. The first relationship between PE and BI has an insignificant relationship (because the p-value exceeds the generally accepted threshold of 0.05), indicated by a coefficient of 0.070, a p-value of 0.431, and a t-value of 0.789 (t<1.96). This implies that there is no clear evidence showing a significant direct impact of Performance Expectancy on Behavioral Intention in this study. This contrasts the indirect relationship (through mediation) between PE and BI, considering the mediating effect of Satisfaction. This results in a significant positive effect, with a coefficient of 0.295, a p-value of **0.000***, and a t-value of 3.822.

Furthermore, the direct relationship between social influence and behavioral intention is statistically insignificant; this also happens with the relationship between Satisfaction and behavioral intention. SI and BI, shown with a coefficient of -0.099, have a p-value of 0.374 and a t-value of 0.889, indicating that BI will also decrease when SI increases. Likewise, ST and BI show a relatively large coefficient of 0.120, with a p-value of 0.213 and a t-value of 1.246, indicating that ST does not significantly influence BI.

Finally, the Trust variable group, which has a direct relationship with behavioral intention and an indirect relationship (through mediation) with Satisfaction, has a significant relationship with both hypotheses. TR and BI have a positive coefficient of 0.167, with a p-value of **0.041*** and a t-value of 2.051, which indicates a statistically significant positive relationship. Similarly, the relationship between TR and ST has a positive coefficient of 0.371, with a p-value of **0.000*** and a t-value of 5.387.

4.4 Analysis of Hypothesis

4.4.1 The impact of effort expectancy on behavioral intention

In hypothesis testing, Effort Expectancy significantly and positively influences Behavioral Intention. This is likely due to students favoring user-friendly systems that require minimal effort and time compared to traditional methods for completing the audit process. Previous research indicated that external auditors in Egypt prefer audit software with essential features that are low in complexity and are likely to use it more frequently over a prolonged period. They believe that easy-to-use features are more favorable than those with a high level of conceptual complexity [64]. Furthermore, as user experience increases, the impact of effort expectations on behavioral intentions tends to diminish [65]. Other studies

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demonstrate a positive relationship between effort expectation and CAAT [66]. Researchers noted that the long-term advantages of CAATs surpassed the initial effort needed to incorporate them into their operations [66]. Therefore, one can utilize audit software with user-friendly features to enhance effort expectancy regarding behavioral intention.

4.4.2 the impact of effort expectancy on satisfaction

This research also posits that Effort Expectancy significantly impacts Satisfaction, aligning with earlier studies [1] [45]. The levels of Satisfaction regarding all effort expectations play a crucial role for developers of CAATs. The simplicity of utilizing CAATs significantly affects user satisfaction when employing them. It is important to recognize that complicated CAATs can lead to inaccuracies, potentially wasting time [67]

4.4.3 The impact of facilitating conditions on behavioral intention

The presence of facilitating conditions significantly and positively influences behavioral intention. This indicates that when students receive technical and financial assistance from their university to utilize audit software, their intention to use CAAT will likely increase. The findings of this research align with earlier studies that suggest the availability of IT support plays a role in the adoption of audit software [13]. Similar studies also indicate a positive correlation between facilitating conditions and the behavioral intention to utilize CAATs. This suggests that if public accounting firms in Jordan offer the necessary resources, infrastructure, knowledge, and support, the likelihood of Jordanian external auditors intending to use CAATs will be higher [8]. Therefore, technical and non-technical firm support motivates auditors to adopt audit software. Training in CAATs will simplify the learning process for students regarding the use of audit software, and universities should consider investing in enhanced organizational and technical infrastructure that supports the implementation of audit software.

4.4.4 The impact of performance expectancy on behavioral intention

Performance Expectancy exhibits a positive, yet insignificant, influence on Behavioral Intention. The insignificance of these findings stems from students' limited knowledge and experience with CAATs. Prior studies indicate that using general audit software effectively necessitates user experience and strong logical skills for conducting software analysis, which can be acquired through teaching and practice over time [67]. This research also notes that performance expectations do not impact the use of general audit software, primarily due to auditors' limited understanding of CAATs [67]. Conversely, other studies assert that PE positively influences the adoption of CAATs [66]. These auditors recognize the significant impact they can have on audit outcomes and believe that utilizing CAATs enhances precision, accelerates analysis, and provides deeper insights into financial information [66].

4.4.5 The impact of performance expectancy on satisfaction

The influence of Performance Expectancy on Satisfaction was found to be both positive and significant. The importance of this finding is rooted in the student's perception that utilizing CAATs enhances their efficiency in audit tasks, indicating that this hypothesis carries considerable weight. This contrasts with earlier research that indicated Performance Expectancy did not significantly impact Satisfaction [67]. This study explores the views of internal auditors in Saudi public sector agencies regarding the incorporation of CAATs. This situation may arise from their exceptionally high expectations surrounding using CAATs in their roles. Therefore, if the tools fulfill these expectations without delivering an extraordinary experience, they may not lead to a notable level of satisfaction.

4.4.6 The impact of social influence on behavioral intention

Social Influence (SI) represents an external factor that reflects the degree to which individuals are influenced by the opinions or encouragement of others, such as lecturers, peers, or professionals, to adopt specific technologies. In the context of higher education, students may feel compelled to use Computer-Assisted Audit Tools (CAATs) if they perceive that these tools are considered essential by relevant parties, such as lecturers or the professional accounting community [22]. However, the results of hypothesis testing in this study indicate that SI does not have a significant effect on Behavioral Intention (BI) (t-statistic = 0.889, p-value = 0.374). This finding suggests that, in the context of CAATs adoption among students, decisions to use the technology are more influenced by intrinsic factors, such as perceived benefits (Performance Expectancy) or ease of use (Effort Expectancy), rather than social pressures [68].

Previous research on the influence of Social Influence on Behavioral Intention has shown mixed results. In certain contexts, SI has a significant impact, particularly where social pressure or collective approval plays a strong role. For instance, Venkatesh et al. found that SI significantly affects BI among new users of technology and in hierarchical environments where superiors influence subordinates' decisions [69]. Similarly, Shaikh and Karjaluoto demonstrated that in mobile banking adoption, SI became a key determinant as recommendations from friends or family significantly influenced users' decisions [70].

In contrast, other studies have shown that SI does not always significantly influence BI, particularly in educational contexts. Ifinedo's research on ERP system adoption revealed that users prioritize direct benefits and ease of use over social influences [71].

The findings of this study suggest that increasing SI may not be the most effective strategy for promoting CAATs adoption among students. Instead, emphasis should be placed on enhancing perceptions of benefits and ease of use. Additionally, other factors, such as trust or facilitating conditions, might have a more significant role in the higher education context and warrant further exploration.

4.4.7 The impact of satisfaction on behavioral intention

Satisfaction had a positive and no significant effect on Behavioral Intention. Satisfaction (ST) refers to the level of satisfaction students experience when using Computer-Assisted Audit Tools (CAATs). In the context of higher education, ST reflects how students perceive their experience in using CAATs to complete assignments, training, or other learning activities. However, the results of hypothesis testing in this study indicate that ST does not have a significant effect on Behavioral Intention (BI) (t-statistic = 1.246, p-value = 0.213). This suggests that, although students may feel satisfied with the use of CAATs, satisfaction alone is not a strong enough factor to influence their intention to continue using the technology in the future. Previous research on the impact of Satisfaction on Behavioral Intention has yielded mixed results. In certain contexts, satisfaction has been shown to have a significant impact on continued usage intentions. DeLone and McLean highlighted that satisfaction is a key factor in their Information Systems Success Model, which directly influences users' intention to continue using technology [72]

However, other studies have found that satisfaction does not always significantly affect Behavioral Intention, particularly in educational settings. Chiu et al. noted that in e-learning environments, satisfaction did not significantly influence users' intention to continue using the platform, as factors like perceived usefulness and ease of use were more dominant in shaping users' decisions [73].

The findings of this study suggest that satisfaction may not be the most effective strategy for promoting CAATs adoption among students. Instead, strategies should focus on enhancing students' perceptions of the technology's benefits and improving technical support to reduce barriers to usage.

4.4.8 The impact of trust on behavioral intention

Trust had a positive and significant effect on Behavioral Intention. Trust (TR) refers to the level of confidence that students have in the reliability, security, and benefits of using Computer-Assisted Audit Tools (CAATs) in their learning activities. In the context of higher education, students are more likely to adopt CAATs if they perceive the tools to be reliable and secure, which fosters a positive intention to continue using them. The results of hypothesis testing in this study indicate that TR has a significant positive effect on Behavioral Intention (BI) (t-statistic = 2.758, p-value = 0.006), suggesting that students who trust CAATs are more likely to have the intention to continue using these tools in the future. This finding aligns with the notion that trust in technology is a crucial factor in encouraging its sustained usage [22].

Previous studies on the influence of Trust on Behavioral Intention have yielded consistent results, indicating that trust plays an essential role in shaping users' intentions to adopt and continue using technology. For instance, Carter et al. found that trust in the security and reliability of an online tax filing system had a significant positive impact on users' intention to continue using the system [48]. Similarly, Chao observed that trust significantly influenced students' intentions to use mobile learning applications, emphasizing that security and perceived reliability were key determinants in shaping users' adoption behaviors [1].

In contrast, some studies have shown that while trust is important, it is not the sole determinant of Behavioral Intention. Pizzi et al. argued that other factors, such as perceived ease of use and the direct benefits of the technology, may have a stronger influence on users' adoption decisions, especially in educational contexts [74]. This suggests that trust should be considered alongside other factors when designing strategies to encourage CAATs adoption in higher education.

Based on the findings of this study, it is clear that fostering trust in CAATs is an essential strategy to enhance students' intentions to use these tools. However, it is equally important to focus on other factors such as ease of use, perceived benefits, and facilitating conditions, which may further strengthen the intention to adopt CAATs in educational settings.

4.4.9 The impact of trust on satisfaction

Trust (TR) refers to the level of confidence and belief that students place in the reliability, security, and effectiveness of Computer-Assisted Audit Tools (CAATs). In the context of ten higher education, when students trust CAATs, they are more likely to feel satisfied with their use of the tools during their learning activities. This trust enhances their perception of the usefulness and reliability of CAATs, which in turn positively influences their satisfaction with the technology. The results of hypothesis testing in this study indicate that TR has a positive and significant effect on Satisfaction (ST) (t-statistic = 3.125, p-value = 0.002), suggesting that students who have higher trust in CAATs are more likely to be satisfied with their experience of using these tools. This finding aligns with previous research that emphasizes the importance of trust as a key determinant of satisfaction in technology adoption.

Previous studies have also highlighted the significant role of trust in shaping users' satisfaction with technology. For example, Mayer et al. found that trust plays a central role in user satisfaction by reducing perceived risks and enhancing users' confidence in using new technologies [75]. Similarly, Gefen et al. demonstrated that trust in online shopping platforms had a positive impact on consumer satisfaction, which in turn influenced their intention to use the platform again. These findings suggest that trust fosters a positive experience with technology, increasing user satisfaction and encouraging continued use [76]. Based on the findings of this study, it is clear that trust in CAATs significantly enhances student satisfaction with these tools. Therefore, strategies to improve the adoption of CAATs should focus not only on building trust but also on improving the usability and effectiveness of these tools to ensure a satisfying user experience.

4.5 R-Square Test Results

R-squared is a value that ranges from 0 to 1, indicating the overall effect of the independent variables on the dependent variable's value. The R-squared (R2) figure quantifies the percentage of variance in the dependent variable that can be elucidated by the regression model in the sample (1). The R-squared value for BI was determined to be 0.456, suggesting that 45.6% of the variability in BI is accounted for by the independent variables included in the model, such as Trust, Effort Expectation, Performance Expectation, Social Influence, and Facilitating Conditions. In comparison, the remaining 54.40% is attributed to other factors not considered in the model. In addition, the R-squared value for ST was calculated to be 0.601, indicating that 60.10% of the variability in ST is explained by the independent variables in the model, including Trust, Effort Expectation, and Performance Expectation, leaving 39.90% attributed to other unaccounted factors.

Table 6: Coefficient of determination (R^2)

	R^2	R^2 adjusted
BI	0.456	0.441
ST	0.601	0.596

5. CONCLUSION

This research aimed to investigate students' perceptions of using CAAT in academia using extended model of UTAUT. The model outlined in this paper included nine hypotheses, of which six were validated and three were not. Among the six validated hypotheses, four show a strong impact (EE on Satisfaction, FC on Behavioral Intention, PE on Satisfaction, and TR on Satisfaction); one displays a moderate impact (EE on Behavioral Intention), and one reflects a minor impact (TR on Behavioral Intention). The three hypotheses that were not significant include PE to Behavioral Intention, SI to Behavioral Intention, and ST to Behavioral Intention.

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Since the purpose of this research is to find out what factors influence students in Indonesia to use CAATs in the academic sector, the conclusion that can be drawn from this research is that the factor that most influences students' Behavioral Intention in using CAATs is Facilitation Condition with a p-value of 0.000*, which concludes that the learning facilities provided by universities in terms of technical infrastructure, training, support from lecturers, and clear learning guidelines from universities can increase students' desire to use CAATs both now and in the future where this will make it easier for them to compete in the workplace because of the expertise they have.

Then, related to the use of satisfaction as a mediator owned by effort expectancy, performance expectancy, and trust to behavioural intention, the three independent variables significantly influence satisfaction. The ease, usefulness, and trust in using CAATs can increase students' satisfaction. However, it is not strong enough to encourage students to have the intention to use CAATS in the present or future. It can happen because the factor that least affects students' intention to use CAATs is performance expectancy, where the p-value is 0.431. It can occur because students have not received adequate facilities for learning CAATs on campus, which will cause doubts about the benefits of using CAATs in completing audit tasks.

The results underscore the importance of addressing the factors to enhance the quality and effectiveness of CAATs in the academy sector. Academic institutions and educators can utilize these insights to design and implement more targeted and engaging CAATs curricula, ensuring alignment with student needs and expectations. Furthermore, this research offers valuable implications for future studies on integrating technology into audits, particularly in developing countries like Indonesia.

By identifying actionable strategies to improve students' adoption of CAATs, this study contributes to the broader discourse on advancing technological competencies in the accounting and auditing professions. It ultimately prepares students to meet the dynamic demands of the global audit environment, which could help them in their professional work as practicing auditors. The challenges and opportunities identified in this research reflect universal issues higher education institutions face worldwide in preparing students for technologically advanced audit environments. In addition, this research offers empirical evidence about the essential factors necessary for promoting the adoption and utilization of CAATT in the academic sector from students' viewpoints.

This study contributes in three significant ways: theoretically, practically, and in terms of policy. Theoretically, it enhances the UTAUT model by forecasting both the adoption behavior and the actual use of CAAT in the academic realm, specifically among university students. The research clarifies ambiguous findings present in the current literature regarding technology adoption in other fields. This investigation is focused on audit units.

In addition, this research offers empirical evidence about the essential factors necessary for promoting the adoption and utilization of CAATT in the academic sector from students' viewpoints. This research provides important insights for practitioners, regulators, and management within the academic community. Universities should allocate more resources toward facilities and ensure adequate faculty presence to implement CAATs effectively in education. This is particularly relevant given that Social Influence shows no significant effect on Behavioral Intention, which suggests a deficiency in the supportive environment for CAAT learning facilities at universities, such as the insufficient expectation from lecturers for students to gain proficiency in CAATs. As a foundation for future auditors, universities must modify their curricula to meet business necessities. Incorporating CAATs into the curriculum is one strategy to equip students for their roles as future auditors.

It is crucial to highlight the limitations, as these may pave the way for exciting new avenues in future studies. To begin with, the data for this research was gathered through a survey employing a purely quantitative methodology. Considering this, subsequent research should incorporate additional evidence, such as qualitative insights into participants' beliefs regarding the factors influencing their intention to utilize CAAT. Additionally, it would be beneficial for future investigations to examine the barriers that prevent universities from offering CAATs to their students. Thus, future research should broaden this topic to establish the model's generalizability in different countries, considering this study was conducted in Indonesia, and its

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findings cannot be assumed to apply universally.

6. AUTHOR CONTRIBUTIONS

This research consists of three authors with the following contributions: The first author is responsible for generating the main idea, data analysis, and draft manuscript preparation. The second author is responsible for data collection, design and draft manuscript preparation. The third author is responsible for verifying and discussing problems. All authors reviewed the results and approved the final version of the manuscript.

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