# The Dynamics of CAATs Adoption in Jordan: Bridging Top Management Support with Auditor Innovativeness and IT Competency

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Abstract: - This research looks at the variables that influence Jordanian firms' use of computer-assisted audit techniques (CAATs). CAAT is a crucial tool for auditing in today's technological business age. A key focus of the study is to examine how support from top company management assists in adopting CAATs into auditing practices in the company. This study uses two mediators, auditors' IT competency and auditors' innovativeness, to mediate the relationship between top management support and CAAT adoption. The study employed a quantitative approach to understand the adoption of the CAAT issue. Internal auditors and their colleagues in companies listed on the ASE are used as respondents in this study. A notable discovery of this study is that the support of top management is recognized as a significant factor contributing to successfully implementing CAATs. However, it's surprising to learn that an auditor's IT skills and innovative thinking have no bearing on how they support the adoption of CAATs. This study offers insightful information that corporations may use to adopt CAAT for auditing practice objectives for internal auditors, decision-makers, and organizations operating in comparable environments. The research adds to the more extensive discussions on integrating technology into auditing by emphasizing the importance of leadership in organizations, particularly in developing countries.

Key-Words: - Auditor Innovativeness, IT Competency, Top Management Support, CAAT, Adoption, Jordan.

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# 1 Introduction

Ever since the beginning of the digital age, [1], [2], businesses from all over the world have been rapidly adopting new technologies. This trend has been going on virtually immediately. To achieve the goals of increasing output, maintaining competitiveness, and improving the quality of experiences provided to customers, this activity is being carried out. For the auditing process to be able to deal with the dynamic nature of corporate transactions, it has to be updated so that it takes into account the most recent technological breakthroughs as well as the present business climate.

Several concerns need to be addressed by the auditing methods that are now in use. the number in question, which is [3]. Top issues include cybersecurity, data analytics, and digital governance. Most of the time, the degree to which auditing methods have been limited has been determined by conducting a comprehensive analysis of the financial papers. These days, an increasing number of people are seeking auditing methods that are more advanced in order to assist them in addressing problems that are associated with digital operations. As a result of bringing to light the significant difficulties that need to be taken into consideration as a consequence of the introduction

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of new technology, advanced algorithms, and decentralized transactions, [4] and [5] both provide a challenge to the traditional auditing strategy. It is necessary to put the conventional auditing procedure to the test because of the intricacy of the case. When it comes to the level of difficulty associated with a ratio about itself, this collection of articles offers a comprehensive analysis of the situation.

The conventional data audit methods employed by auditors, which focus on financial statements and historical records, are being challenged by new technologies like blockchain, artificial intelligence, and machine learning. Modern technologies, such as Computer Assisted Audit Techniques, are being used by more auditors when it comes to auditing methods. They both provide data that demonstrates the significance of CAATs for both internal auditing methods and external auditing, hence highlighting the significance of these auditing methods. [6] and [7], both provide this information. The significance of CAATs is brought to light in several different locations, including numbers, [6], [7]. Improved risk assessments and control evaluations allow the CAAT to boost auditing efficiency, which in turn allows for increased efficiency. This takes place at several points during the auditing process.

In Jordan, there are still several significant challenges that need to be overcome before the implementation of new technologies in the workplace, such as the adoption of CAAT, can be considered to be successful. The fact that auditing firms often use manual methods, which are generally regarded as the most time-honored, is the primary reason for their inefficiency. inefficiencies of auditing companies may be the cause of the limited scope of an audit. Even though this resistance is causing a delay in the process of adopting new methods, it is also preventing the full implementation of data analysis methods and the full adoption of the insights that are gathered from data analysis, [8], [9], [10]. Considering the opposition that exists, it will be more difficult to accomplish these two breakthroughs. It has been shown in several studies, including, [11] and [12], that the use of CAAT in the day-to-day operations of Jordanian businesses is rather uncommon. The statistics that are shown below demonstrate that there is a significant gap between the potential advantages that these technologies may provide and the actual adoption of these technologies by other businesses. In the papers [11] and [12], there are two instances of this sort of research that may be found among the available options.

Additional research is required to completely comprehend Jordan's adoption of CAATs. It is

necessary to have a deeper understanding of how these technologies are integrated into the auditing process. This line of reasoning was taken into consideration, and the conclusion that was reached was ultimately decided upon. The importance of understanding both the complex dynamics involved in the implementation of CAAT and the significance of its adoption has been brought to light by a great number of academic investigations. After taking all of this into consideration, there is a possibility that the situation has something to do with the significance of comprehending the dynamics. Understanding the events and processes leading to the genesis of this issue in its entirety is of the utmost importance. It is impossible to overestimate the significance of this [6], [7], [13], [14], [15]. This is because it offers a deeper comprehension of auditing methods and the integration of technologies in comparable settings. That being said, this is precisely the benefit. By following this line of reasoning, one might infer its significance. It is not just for this one particular reason, but also for this exact reason that we find ourselves in the current situation

It is accepted that top management plays a significant role in serving as a catalyst for the adoption of CAAT, based on the results and suggestions generated by the research done on the implementation of CAAT. Within the parameters of the study, CAAT implementation was examined. Since the process of successfully adopting CAATs is dependent on the strategic leadership and support that they provide, they are also very significant. They become very significant as a result. They have enormous significance as a result of this. Research on the adoption of CAATs in Jordan is crucial for gaining a better knowledge of how these technologies are integrated into the auditing process. On the other hand, it is of the utmost significance to make the essential technologies accessible to the general public and to establish an atmosphere that supports the adoption of contemporary technologies for resource auditing, [16]. These are two extremely significant items to think about.

Particularly in light of the rapid shift that the digital auditing industry is now facing, the findings of the research provide useful insights into the process of adopting new technologies. Not only are the findings significant, but they also provide some information that is not just educational but also illuminating. Considering the rapidity with which these shifts are taking place, it is quite advantageous to have this comprehension. The primary focus of this study is on the many ways in which the support of top management may contribute to the effective

and efficient integration of CAATs into an organization. In addition to providing insightful recommendations for enhancing audit procedures, the research focuses on methods that have the potential to contribute to the improvement of the processes themselves. The findings of the inquiry are quite insightful and instructive when everything is taken into consideration for the investigation. of the elements Awareness that implementation would be beneficial for a variety of including policymakers, stakeholders. firms operating in Jordan and other similar contexts, internal auditors, and other significant stakeholders. To be more specific, this is because it will make it easier for them to carry out their obligations in a way that is both more efficient and effective.

### 2 Literature Review

The use of computer-assisted auditing, also known as CAAT, makes it simpler for auditors to engage in the organizing and analysis of large amounts of data. One of the various digital technologies that are deployed to accomplish this goal and are accessible to the general public is software that is designed for use on computers. Computer-Aided Auditing Teams (CAATs) provide a significant amount of value when it comes to evaluating the integrity and design of controls and operations in an environment that is strongly dependent on information technology. There are many reasons why auditing services are becoming more and more necessary, and this is one of them. There are a plethora of other factors as well. Three areas where CAAT has shown to be quite helpful are protocol compliance, application analysis, and monitoring support. The three distinct zones that will help you become more accurate are shown below. Monitoring support is one of the other sorts. With the help of the CAAT system, auditors may perform an audit of application systems, verify the accuracy and completeness of the data, and assess the effectiveness of app limits. Whether or not appropriate controls are in place, the CAAT has the obligation of ensuring the accuracy of the data and allowing testing to proceed for an extended period. Furthermore, the CAAT has the obligation to achieve this goal.

When dealing with significant volumes of data using automated methods, the results of [17], show that CAATs outperform humans. Here is an example of how this may be found. On the other hand, the study detailed in [18] focuses on the different methods of electronic payment systems, electronic data exchange (EDI), and data-driven decision support systems. The CAATs are brought

to light. An emphasis is placed throughout this article on the significance of CATS. There is also an emphasis placed on the significance of mobile application technologies, [18]. When it comes to the processing of complex business data, CAATs achieve more accuracy and precision while also functioning quickly and efficiently within time restrictions. All of this is finished in a very short amount of time. One of the most significant features of CAATs is their capacity to assist in the management of the several audit types required for a business meeting, [19]. In light of the complexity of the current business environment, CAAT is necessary to simplify audited processes. Because CAAT facilitates the completion of audits at the end of the process, CAATS must make significant modifications to their audit methods and be positively supported by management in order to successfully manage this transformation, reduce resistance, and create a culture that embraces technology, [16]. The development of technologies requires the active involvement, dedication, and sponsorship of upper management, all of which are important to show support for the endeavor. In addition, the significance of the resource support provided by CAATs throughout the deployment of audits to incorporate these technologies into audit processes is brought to light, [20]. The deployment of significant resources is required to be supported by top management throughout the process of adopting CAAT. These resources include but are not limited to, financial investments, competent information technology staff, and instructional initiatives, to name just a few examples, [21]. Auditors are motivated to adopt new methods and realize the benefits of CAATs because the top management audit has a clear purpose and direction. which is also a motivating factor, [22].

The auditing technique and the innovativeness of the auditors are two additional factors that influence the adoption of CAAT. While the term "IT competency" is most often used to refer to "audit competency", [23], it also refers to the capability of using a variety of tools and systems that are associated with information technology, such as CAATs. The adoption of CAAT is expected to result in an increasing number of significant benefits for audit companies. According to [24], one way to define the capacity to be open to anything new is the power to be sensitive to new ideas and technologies. To make the most of this opportunity, one strategy that may be used is to maintain an open mind to new experiences and methods of demonstration of how to convey the idea of adaptability is provided in the following example. The capacity to innovate and adapt to new ideas and technologies is another term that may be used to refer to innovativeness or auditing. There are situations in which these two names are used interchangeably instead of others. recognize and appreciate innovation. In comparison other auditing technologies, CAATs are considered to be more advanced by auditors due to the capabilities that they provide. This, is for the same reason as before. As an immediate result of this, people have the perception that they are more advanced than they are. The efficacy of CAAT integration may also be improved by using other strategies, [6]. These strategies include but are not limited to, the creation of a culture that supports creativity and the provision of instruction that considers the many variables at play. Furthermore, every one of these strategies is a part of the overall structure that outlines the methods of assistance. It is likely the last book in the trilogy, considering the circumstances surrounding it. This choice will be taken into account when calculating the term ratio. It is important to guarantee that a comprehensive analysis has been carried out before proceeding with the strategy's implementation. This is because the strategy offers a significant significance.

The present study achieved its research objectives by using the Technology Acceptance Model (TAM). This was achieved by providing a more thorough understanding of the elements that go into the adoption process of new technology. The study's limitations are taken into account before the completion of this task. In addition, [25] is credited with creating the Technology Acceptance Model (TAM), which was created in 1989. Regarding this notion, perceived utility (PU) and perceived effectiveness of use are the two most crucial elements. The TAM is composed of these two subunits, which are also its most crucial parts. The conceptual frameworks for the PU and PEoU are not only the TAM's centers of concentration but also the main areas of interest that the TAM is focusing on. In the same way that PU is concerned about their idea that CAATs will increase their job performance, PEoU is concerned about how easy it is for auditors to adopt auditing. Every single one of these problems is intertwined with the others. The support of top management affects PU by providing the required resources and creating a favorable climate. With more experienced auditors finding CAATs simpler to operate, auditor IT competency impacts PEoU as innovative auditors are more likely to see CAATs as advantageous and user-friendly. and audit or innovativeness impacts both PU and PEoU. Through the use of this framework, a complete view of the elements that are driving the adoption and utilization of CAATs in the Jordanian auditing sector is provided.

Refer to Figure 1 for the proposed research framework for this study.

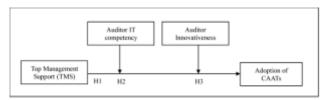


Fig. 1: Research Framework

It has been shown via research that was carried out in the past that top management support (TMS) is a key component in the manner in which organizations implement information technology. When it comes to adopting new technologies like artificial intelligence and big data analytics, support from top management is a significant factor, according to [26] and [27]. As a consequence of the adoption of new technologies, this top issue has been given more and more attention. Conditions in the Jordanian corporate sector are significant. CAATs and other technologies are used by auditors in situations when top executives in the auditing profession support technology, particularly in the auditing profession. Considering this, it would seem that TMS may have an influence on adoption in Jordan that is comparable to the one that CAATs had. It may thus be hypothesized:

H1: There is a positive relationship between TMS and intention to adopt CAATs.

Regarding the relationship between TMS and CAAT adoption, this research also considers the possibility that auditors' information technology (IT) skills, often known as auditor IT competency (ITC), may play a role. The hypothesis that auditors who have greater experience with information technology may be better suited to adopt TMS is the foundation upon which this finding is built. People who are not proficient in advanced information technology skills for individuals, people with lower IT skills could not be as impacted by top management support, partly because they lack the requisite skills. This hypothesis is supported by research [28] and [29], which demonstrate the significant impact that information technology skills play in the process of adopting new technologies such as smartphones and tablets. These studies provide evidence that further supports hypothesis. For this reason, it is suggested that:

H2: ITC has a positive moderating effect on the relationship between TMS and CAAT adoption.

The fourth and last section of the research project focuses on the relationship between auditor innovativeness (INN) and their intention to adopt CAAT. This is based on the rationale that innovative auditors will likely create environment more open to new technologies when aligned with supportive leadership. Thus, the hypothesis is that TMS will more positively influence auditors who are more innovative in their decision to adopt CAATs. This is based on previous studies such as [10], who discovered that the innovativeness of guests positively affected their intention to accept co-created new services. Similarly, [30], found that consumer innovativeness significantly increased their intention to use online banking services. Also, [9], observed that in the context of mobile learning adoption in tourism education, users' innovativeness was not as influential on their attitude-intention relationship.

H3: INN has a positive moderating effect on the relationship between TMS and CAAT adoption.

## 3 Research Methods

This study used a quantitative research method to collect numerical data via a questionnaire. The primary objective of this study was to determine trends, attitudes, and views about adopting CAATs. The study's primary respondents were internal auditors of publicly traded firms listed on the Amman Stock Exchange (ASE). As a result of the low number of internal auditors in Jordanian companies, the research also included personnel in similar fields, such as financial managers and employees from finance departments who are responsible for assisting the internal auditors.

In preparation for the study, the responses were methodically collated in Google Sheets. This project's goal was to collect responses from five internal auditors or specialists in relevant areas that work with the 172 Alternative Standards Evaluation businesses. These individuals were asked to provide their feedback. A Likert scale with five points, ranging from "Strongly Agree" to "Strongly Disagree", was used in the questionnaire, which included 24 total items. To ensure accurate measurement of the variables that were being investigated, this particular questionnaire was adapted from one that had been used in earlier research.

In Table 1, you will find a summary of the series, as well as a depiction of the sequence in which the questionnaire that was utilized for this inquiry was filled out. As part of this study, the adoption of CAAT by Jordanian firms that are listed on the

Amman Stock Exchange (ASE) is investigated. The people and internal auditors of these companies make up this group. This group is comprised of individuals who have been chosen to be included in this category. During the process of determining this ratio, the five variables that are thought to be the most significant in the present study are also taken into account. The following list of variables has been compiled for your convenience under the following category as a method of ensuring the accuracy of the data:

It was discovered that this variable was used to evaluate the respondents' preparedness to go on with the adoption process. Through the use of analysis of CAAT preparation and response planning, this objective was accomplished. A determination was made on the respondents' level of preparedness for the term. Because of this strategy, this outcome occurred. The number of items is six. Evaluation of CAAT method adoption was the primary objective of this study. As was to be expected, it was helpful to the inquiry. The objective of this variable, which was comprised of six questions, was to get a deeper comprehension of the significance of CAATs by analyzing the auditing methods that were used by the respondents. This information was intended to be communicated via the use of the questions. The significance of this action was brought to the attention of the general public. To better grasp the many reasons that are both in support of and against the proposal, this was done to increase comprehension. Following the completion of their education about the efficiency of the CAAT, every participant was required to complete questionnaire.

These auditors' technical skills and understanding of information technology, including auditing, are evaluated using this variable design. Through performance on the assessment, this objective will be accomplished. Several subfields fall under the umbrella of information technology technology. Auditor may use a variety of measures to do their tasks more efficiently. To facilitate the provision of feedback, it is necessary to complete this questionnaire and send it in by email. This is done to determine the level of information technology knowledge that the auditors possess. The objective of this was to ascertain the level of comprehension that they had. In the beginning, this was the source of inspiration that led to the development of the idea. Throughout the whole of the questionnaire, there were a total of six questions. One of the objectives of this variable, which is comprised of six different items, is to determine the degree to which auditors are willing to adopt innovative ideas and technologies, particularly CAATs. Initially, the innovativeness of auditors was the driving force behind its establishment.

The Top Management Support variable, which is comprised of six distinct items, was developed to determine the level of support that top management offered for the implementation of CAATs throughout the whole organization.

Given the presence of these variables, it is believed that it would be feasible to investigate the factors that influence the adoption of CAATs by internal auditors and workers in Jordanian businesses that are listed on the Amman Stock Exchange (ASE).

Table 1. Questionnaire Development

Variable	No. of items	Reference		
Intention to adopt CAATs	6	[7], [31]		
Perceived usefulness	6	[32], [33]		
Auditor IT competency	6	[34], [35]		
Auditor innovativeness	6	[36], [37]		
Top Management Support	6	[38]		

The data is analyzed using Smart PLS 3, a structural equation modeling (SEM) software particularly suited to examine complex relationships between underlying variables. The analysis involved several vital steps. Initially, the measurement model was evaluated to check the validity and reliability of the variables in the research model. This assessment involved examining factors like loadings, composite reliability, and average variance extracted (AVE) for each variable, which was crucial for confirming the constructs' validity and reliability. Subsequently, the structural model was analyzed to explore the relationships between these variables.

# 4 Finding

In the demographic information section, respondents who work as internal auditors and employees who relate to them were categorized by gender, age, employment type, experience, education level and sector type, as displayed in Table 2.

### 4.1 Measurement Model

On the measurement model, to assess the validity and reliability of the measures and to test the structural model of hypothesized relationships, it was found that one item, PU5, had a factor loading of 0.014. It is below the recommended cut-off point for factor loadings, [39], and PU5 was removed to ensure satisfactory levels of factor loadings. After the modification, all variables met the required

thresholds for factor loadings, Cronbach's Alpha, Composite Reliability, and Average Variance Extracted (AVE), as shown in Table 3 and Figure 2.

Secondly, the discriminant validity is used to determine how distinct each construct was from others using a threshold of 0.95, as recommended by [40]. The validity assessment was based on comparing the correlations between constructs with the square root of the AVE for each construct, [40], [41]. The results in Table 4 confirmed that no values exceeded the recommended cut-off point of 0.95, indicating satisfactory discriminant validity in the study.

Table 2. Respondent Profile

Item	Description	Freq.	%
Gender	Male	171	58.6
	Female	121	41.4
Age	30 years and below	62	21.2
	31 - 40 years.	75	25.7
	41 - 50 years.	69	23.6
	More than 50 years.	86	29.5
Employment	Internal auditor	92	31.5
type	Financial manager	67	22.9
	Finance department staff	133	45.5
Years of	5 years or less	46	15.8
Experience	6 – 10 years	131	44.9
	11 – 20 years	100	34.2
	More than 20 years.	15	5.1
Level of	Bachelor	43	14.7
Education	Master	112	38.4
	PhD	45	15.4
	Professional qualification	92	31.5
Sector Type	Technology companies	67	22.9
	Real Estate	15	5.1
	Industrial firm	27	9.2
	Service firm	139	47.6
	Others	44	15.1
The accounting	Manual, no computer is used.	19	6.5
system used in	Combination of manual	98	33.6
organization	and computer processing. Fully computerized.	175	59.9

The Heterotrait - Monotrait Ratio (HTMT) is a common statistic used to evaluate the validity of measurement instruments. This ratio shows the level of correlation that currently exists between two different constructs. The first step in determining hetero-trait correlations is to get the average of all correlations between indicators that are linked to different constructs. This is being done to keep things clear. The comparison is made using the mean of the average correlations between indicators that assess the same construct; these correlations are often known as monotrait correlations. The process

is used to ascertain the average correlations' mean, [39]. This approach sets a threshold of 0.90 to assess the degree to which several constructs are distinct from each other, [42]. The analysis's findings, which are located further on this page, are shown in Table 5.

Table 3. Convergent Validity

T4	Factor	Cronbach's	Composite	ANT
Item	Loading	Alpha	Reliability	AVE
CAAT1	0.648	0.854	0.892	0.582
CAAT2	0.732			
CAAT3	0.781			
CAAT4	0.812			
CAAT5	0.754			
CAAT6	0.833			
INN1	0.83	0.894	0.919	0.655
INN2	0.828			
INN3	0.815			
INN4	0.829			
INN5	0.761			
INN6	0.789			
ITC1	0.735	0.842	0.882	0.556
ITC2	0.747			
ITC3	0.791			
ITC4	0.776			
ITC5	0.712			
ITC6	0.709			
PU1	0.738	0.789	0.839	0.515
PU2	0.745			
PU3	0.687			
PU4	0.548			
PU6	0.838			
TMS1	0.772	0.902	0.925	0.673
TMS2	0.872			
TMS3	0.868			
TMS4	0.804			
TMS5	0.784			
TMS6	0.817			

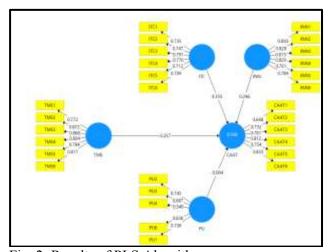


Fig. 2: Results of PLS Algorithm

Table 4. Fornell and Larcker Criterion

	CAAT	INN	ITC	PU	TMS
CAAT	0.763				
INN	0.675	0.809			
ITC	0.711	0.802	0.746		
PU	0.067	0.167	0.159	0.717	
TMS	0.661	0.672	0.745	0.145	0.82

Table 5. HTMT							
	CAAT	INN	ITC	PU	TMS		
CAAT							
INN	0.765						
ITC	0.816	0.824					
PU	0.089	0.176	0.171				
TMS	0.744	0.744	0.856	0.159			

#### 4.2 Structural Model

The procedure of assessing the theoretical aspect of the route model consists of four primary components, [39]. Latent variables and their interrelationships are included in this component of the model. The main focus of this evaluation is the structural model, also known as the inner model, about the PLS-SEM framework. During these stages, the following tasks are completed: calculating the route coefficients, determining the collinearity, estimating the effect size (f²), and determining the coefficient of determination (R²). The result of the analysis is presented in Table 6. Also, Figure 3 summarises the structural model and PLS bootstrapping results.

The collinearity is checked using Variance Inflation Factor (VIF) diagnostics with a standard cut-off value of 3.3, [43]. The result shows that there is no collinearity issue. To test the hypotheses, a bootstrapping procedure with 1000 samples, [44] is employed to determine the significance of each path relationship. The Coefficient of Determination (R<sup>2</sup>) was calculated to evaluate the model's predictive accuracy using criteria set by [39]. Additionally, the effect sizes (f<sup>2</sup>) were assessed following, [45] guidelines, with values indicating small, medium, or large effects. The results, including the t-values, R<sup>2</sup> scores, and f<sup>2</sup> values, are detailed in Table 6, confirming the structural model's robustness and the hypotheses' validity.

After examining the direct effects, this study tested the moderation on the two proposed hypotheses: H2, suggesting a positive moderating effect of ITC on the relationship between TMS and the intention to adopt CAATs (CAAT), and H3, positing a positive moderating effect of INN on the same relationship.

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H Paths		Beta Std erro	Std error	error T-value	P-values	Confidence Interval		VIF	<b>£</b> 2	$\mathbf{D}^2$
H	ratiis	Deta	Sta error	1-value	r -values	5.00%	95.00%	VIF	I-	$\mathbb{R}^2$
H1	TMS -> CAAT	0.252	0.053	4.820	0.000	0.168	0.346	2.338	0.362	0.565
H2	TMS*INN -> CAAT	0.011	0.049	0.218	0.414	-0.069	0.093	2.454	0.002	
H3	TMS*ITC -> CAAT	0.038	0.046	0.859	0.203	-0.121	0.025	1.005	0.001	

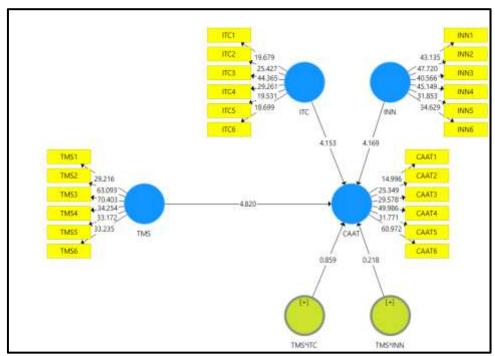


Fig. 3: Results of PLS bootstrapping

The result yields the beta values for the interactions TMS\*INN and TMS\*ITC, which were 0.859 and 0.218, respectively. Accordingly, as presented in Table 6, the interaction terms TMS\*INN and TMS\*ITC were insignificant. Consequently, it was concluded that hypotheses H2 and H3 were not supported.

# 5 Discussion and Conclusion

This research examines the impact of top management support on the adoption of CAAT in Jordan. It focuses explicitly on how auditors' IT competency and innovativeness mediate this process. The results highlight the importance of company leadership in supporting auditing technologies. Numerous studies have shown that top management resource support is crucial because it shows a commitment to allocating resources like capital investments, physical infrastructure, and a culture that promotes productivity at work. The idea that there is a strong relationship between adopting CAAT and having top-level management support is supported by this study. Several studies, [20], [21],

[23], [46], [47], [48], [49], [50] and [51] have shown how effective leadership encourages businesses to adopt new technologies via their adoption. These results align with those of previous research.

The results of this study showed that neither the innovativeness nor the information technology skills of auditors had a significant impact on the relationship between top management audit support and CAAT adoption. The data presented here makes it abundantly evident that the adoption of CAATs is more dependent on the company's leader than it is on the skill or creativity of individual auditors. The most crucial factor in promoting the auditors' positive attitudes toward technology, regardless of their degree of ingenuity or IT proficiency, is the effective audit support they get. The significance of a supportive management environment in Jordan is highlighted as a crucial element of the CAATs approach in light of this.

In comparison to the corpus of prior research that has been carried out, the findings provide a unique perspective that should be taken into consideration. The significance of human capabilities in the process is the primary focus of past research;

however, this study places a greater emphasis on the benefits that may be gained by adopting technology with the support of top management. There seems to be a significant influence from the leadership of the organizations on the adoption of CAAT in the Jordanian environment, as shown by the findings of the study. When it comes to adopting CAAT, a person's talents do not yet have a significant effect.

It is recommended that more research be conducted on the influence that artificial intelligence (AI) has on the dynamics of the relationship between CAAT adoption and management support. It is the findings of the research that serve as the foundation for this recommendation. After artificial intelligence (AI) begins to affect Jordanian work culture, it may be beneficial to do a more in-depth inquiry into this particular sector to have a better understanding of how the top management of the audit industry uses technology to improve workplace culture.

### References:

- [1] F. Mahmood, D. Han, N. Ali, R. Mubeen, and U. Shahzad, "Moderating effects of firm size and leverage on the working capital finance–profitability relationship: evidence from China," *Sustainability*, vol. 11, no. 7, pp. 20–29, 2019.
- [2] A. Samagaio and T. A. Diogo, "Effect of Computer Assisted Audit Tools on Corporate Sustainability," *Sustainability*, vol. 14, no. 2, pp. 1–10, 2022.
- [3] H. B. Hazar, "New Paradigm in Auditing: Continuous Auditing," in *Ethics and Sustainability in Accounting and Finance, Volume II*, K. T. Çalıyurt, Ed. Singapore: Springer Singapore, 2021, pp. 253–268. doi: 10.1007/978-981-15-1928-4 15.
- [4] D. Nicolò, "Blockchain and Management Accounting Systems Based on Information Sharing," in *Economic and Policy Implications of Artificial Intelligence*, D. Marino and M. A. Monaca, Eds. Cham: Springer International Publishing, 2020, pp. 23–29, doi: 10.1007/978-3-030-45340-4 3.
- [5] M. M. Thottoli and T. K.V., "Characteristics of information communication technology and audit practices: evidence from India," *VINE J. Inf. Knowl. Manag. Syst.*, vol. 1, no. 1, pp. 1–10, Jan. 2020, doi: 10.1108/VJIKMS-04-2020-0068.
- [6] S. Kamal, I. M. A. Helal, S. A. Mazen, and S. Elhennawy, "Computer-Assisted Audit Tools for IS Auditing," in *Internet of*

- Things—Applications and Future, Singapore, 2020, pp. 139-155.
- [7] I. Pedrosa, C. J. Costa, and M. Aparicio, "Determinants adoption of computer-assisted auditing tools (CAATs)," *Cogn. Technol. Work*, vol. 22, no. 3, pp. 565-583, 2020, doi: 10.1007/s10111-019-00581-4.
- [8] A. Al-Hiyari, N. Al Said, and E. Hattab, "Factors that influence the use of computer assisted audit techniques (CAATs) by internal auditors in Jordan," *Acad. Account. Financ. Stud. J.*, vol. 23, no. 3, pp. 1–15, 2019.
- [9] J. K. Fatima, P. Ghandforoush, M. Khan, and R. Di Masico, "Role of innovativeness and self-efficacy in tourism m-learning," *Tour. Rev.*, vol. 72, no. 3, pp. 344-355, Jan. 2017, doi: 10.1108/TR-02-2017-0019.
- [10] B. Sarmah, S. Kamboj, and Z. Rahman, "Cocreation in hotel service innovation using smart phone apps: an empirical study," *Int. J. Contemp. Hosp. Manag.*, vol. 29, no. 10, pp. 2647-2667, Jan. 2017, doi: 10.1108/IJCHM-12-2015-0681.
- [11] Q. A. Alawaqleh and N. A. Almasria, "The Impact of Audit Committee Performance and Composition on Financial Reporting Quality in Jordan," *Int. J. Financ. Res.*, vol. 12, no. 3, pp. 55-69, 2021.
- [12] N. A. Almasria, "The relationship between internal corporate governance mechanisms and the quality of external audit process-empirical evidence from Jordan," University of Bedfordshire, 2018.
- [13] A. Alhabsi, "Developing and Assessing the Drivers of Usage of Computer-Assisted-Audit-Techniques (CAATs) and the factors that impact Audit Quality perceptions in Government Internal Audit," Ph.D Theses, Technological University Dublin, 2017.
- [14] H. Mohamad Hsbollah, Kamil, and Idris, "Elearning adoption: the role of relative advantages, trialability and academic specialisation," *Campus-Wide Inf. Syst.*, vol. 26, no. 1, pp. 54-70, Jan. 2019, doi: 10.1108/10650740910921564.
- [15] L. Smidt, D. P. van der Nest, and D. Lubbe, "The use of sampling and CAATs within internal audit functions in the South African banking industry," in 2014 9th Iberian Conference on Information Systems and Technologies (CISTI), Barcelona, 2014, pp. 1-5.
- [16] G. W. Florkowski, "HR technologies and HR-staff technostress: an unavoidable or

- combatable effect?," *Empl. Relations Int. J.*, vol. 41, no. 5, pp. 1120-1144, Jan. 2019, doi: 10.1108/ER-08-2018-0214.
- [17] S. Alemayehu, A. Nejat, T. Ghebrab, and S. Ghosh, "A multivariate regression approach toward prioritizing BIM adoption barriers in the Ethiopian construction industry," *Eng. Constr. Archit. Manag.*, vol. 1, no. 1, pp. 1-10, Jan. 2021, doi: 10.1108/ECAM-02-2021-0165.
- [18] R. N. Johnson Wiley, Laura D., *Auditing a practical approach with data analytics*. New Jersey: Hoboken, 2021.
- "Big Data Adoption: A [19] H. Gangwar, Comparative Study of the Indian Manufacturing and Services Sectors," in Optimizing Data and New Methods for **Efficient** Knowledge Discovery Information Resources Management: Emerging Research and Opportunities, S. Swayze, Ed. Hershey, PA, USA: IGI Global, 2020, pp. 138-171. doi: 10.4018/978-1-7998-2235-6.ch007.
- [20] H.-Y. Hsu, F.-H. Liu, H.-T. Tsou, and L.-J. Chen, "Openness of technology adoption, top management support and service innovation: a social innovation perspective," *J. Bus. Ind. Mark.*, vol. 34, no. 3, pp. 575-590, 2019.
- [21] L. Frau, "The Impact of Top Management Support on the Behavioral Intention to Adopt Information Systems: A Literature Review," *SSRN*, vol. 1, no. 1, pp. 1-10, Jan. 2022.
- [22] A. Marei, L. Daoud, M. Ibrahim, and S. Aljabaly, "Moderating role of management support in electronic procurement usage of Jordanian firms," Manag. Sci. Lett., vol. 11, no. 1, pp. 1121-1132. Jan. 2021, doi: 10.5267/j.msl.2020.11.027.
- [23] E.-G. Siew, K. Rosli, and P. H. P. Yeow, "Organizational and environmental influences in the adoption of computer-assisted audit tools and techniques (CAATTs) by audit firms in Malaysia," *Int. J. Account. Inf. Syst.*, vol. 36, no. 1, pp. 1-10, 2020,
  - https://doi.org/10.1016/j.accinf.2019.100445.
- [24] T. Mahakittikun, S. Suntrayuth, and V. Bhatiasevi, "The impact of technological-organizational-environmental (TOE) factors on firm performance: merchant's perspective of mobile payment from Thailand's retail and service firms," *J. Asia Bus. Stud.*, vol. 15, no. 2, pp. 359-383, Jan. 2021, doi:

- 10.1108/JABS-01-2020-0012.
- [25] F. D. Davis, R. P. Bagozzi, and P. R. Warshaw, "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models," *Manage. Sci.*, vol. 35, no. 8, pp. 982-1003, 1989.
- [26] R. Pillai and B. Sivathanu, "Adoption of artificial intelligence (AI) for talent acquisition in IT/ITeS organizations," *Benchmarking An Int. J.*, vol. 27, no. 9, pp. 2599-2629, Jan. 2020, doi: 10.1108/BIJ-04-2020-0186.
- [27] Y. Lai, H. Sun, and J. Ren, "Understanding the determinants of big data analytics (BDA) adoption in logistics and supply chain management," *Int. J. Logist. Manag.*, vol. 29, no. 2, pp. 676-703, Jan. 2018, doi: 10.1108/IJLM-06-2017-0153.
- [28] K. Mac Callum and L. Jeffrey, "The influence of students' ICT skills and their adoption of mobile learning," *Australas. J. Educ. Technol.*, vol. 29, no. 3, pp. 1-10, 2013
- [29] M. K. Muflih and T. Y. Jawarneh, "An examination of ICT skills possession and adoption amongst faculty members at Jordan University of Science and Technology (JUST) in relation to Rogers' Diffusion of Innovation Model," *Int. J. Res. Educ.*, vol. 30, no. 1, pp. 29–56, 2016.
- [30] V. Chauhan, R. Yadav, and V. Choudhary, "Analyzing the impact of consumer innovativeness and perceived risk in internet banking adoption," *Int. J. Bank Mark.*, vol. 37, no. 1, pp. 323-339, Jan. 2019, doi: 10.1108/IJBM-02-2018-0028.
- [31] S. Rahi, M. M. Othman Mansour, M. Alghizzawi, and F. M. Alnaser, "Integration of UTAUT model in internet banking adoption context," *J. Res. Interact. Mark.*, vol. 13, no. 3, pp. 411-435, Jan. 2019, doi: 10.1108/JRIM-02-2018-0032.
- [32] S. Wang, J. Li, and D. Zhao, "Understanding the intention to use medical big data processing technique from the perspective of medical data analyst," *Inf. Discov. Deliv.*, vol. 45, no. 4, pp. 194-201, Jan. 2017, doi: 10.1108/IDD-03-2017-0017.
- [33] R. Izuagbe and S. O. Popoola, "Social influence and cognitive instrumental factors as facilitators of perceived usefulness of electronic resources among library personnel in private universities in South-west, Nigeria," *Libr. Rev.*, vol. 66, no. 8, pp. 679-694, Jan. 2017, doi: 10.1108/LR-09-2016-

E-ISSN: 2224-2899 29 Volume 22, 2025

0086.

- [34] G. A. Jarad and M. A. Shaalan, "Assessment of digital competence of employees and teaching staff at the Technical College of Management-Kufa," *Int. J. Innov. Creat. Chang.*, vol. 12, no. 12, pp. 1027-1043, 2020.
- [35] J. Conde-Jiménez, "Digital competence as an indicator of the impact of ICT educational policies: Validation of a theoretical model using PLS," *Res. Educ. Media*, vol. 10, no. 2, pp. 37-44, 2018.
- [36] E. Calik, F. Calisir, and B. Cetinguc, "A scale development for innovation capability measurement," *J. Adv. Manag. Sci.*, vol. 5, no. 2, pp. 21-35, 2017.
- [37] H. S. Ng, D. M. H. Kee, and T. Ramayah, "Examining the mediating role of innovativeness in the link between core competencies and SME performance," *J. Small Bus. Enterp. Dev.*, vol. 27, no. 1, pp. 103-129, Jan. 2020, doi: 10.1108/JSBED-12-2018-0379.
- M. F. Hassan and A. Shukri, "The Mediating [38] Effect of Top Management Support on the Relationship between Organizational Culture and Enterprise Risk Management Effectiveness among Malaysian Public Companies: Conceptual Listed A Framework," Res. J. Financ. Account., vol. 10, no. 2, pp. 103–111, 2019, doi: 10.716/RJFA/10-2-11.
- [39] J. F. Hair, G. T. M. Hult, C. Ringle, and M. Sarstedt, *A primer on partial least squares structural equations modeling (PLS-SEM)*, 2nd ed. Los Angeles: SAGE, 2017.
- [40] R. B. Kline, *Principles and practice of structural equation modeling*, 3rd ed. New York: The Guilford Press, 2016.
- [41] C. Fornell and D. F. Larcker, "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *J. Mark. Res.*, vol. 18, no. 1, pp. 39-50, 1981, doi: 10.2307/3151312.
- [42] A. H. Gold, A. Malhotra, and A. H. Segars, "Knowledge Management: An Organizational Capabilities Perspective," *J. Manag. Inf. Syst.*, vol. 18, no. 1, pp. 185-214, May 2001, doi: 10.1080/07421222.2001.11045669.
- [43] A. Diamantopoulos and J. A. Siguaw, "Formative Versus Reflective Indicators in Organizational Measure Development: A Comparison and Empirical Illustration," *Br. J. Manag.*, vol. 17, no. 4, pp. 263-282, Dec.

- 2006, doi: 10.1111/j.1467-8551.2006.00500.x.
- [44] W. W. Chin, "How to Write Up and Report PLS Analyses," in *Handbook of Partial Least Squares: Concepts, Methods and Applications*, V. Esposito Vinzi, W. W. Chin, J. Henseler, and H. Wang, Eds. Berlin, Heidelberg: Springer Berlin Heidelberg, 2010, pp. 655-690. doi: 10.1007/978-3-540-32827-8 29.
- [45] J. J. Cohen, *Statistical power analysis for the behavioral sciences*, 2nd ed. Hillsdale, N.J., N.J.: L. Erlbaum Associates, 1988.
- [46] R. Ahmed, A. Hussain, and S. P. Philbin, "Moderating effect of senior management support on the relationship between schedule delay factors and project performance," *Eng. Manag. J.*, vol. 34, no. 3, pp. 374-393, Jul. 2022, doi: 10.1080/10429247.2021.
- [47] L. Daoud, A. Marei, S. Al-Jabaly, and A. Aldaas, "Moderating the role of top management commitment in usage of computer-assisted auditing techniques," *Accounting*, vol. 7, no. 2, pp. 457-468, 2021.
- [48] A. I. Ismail, A. H. A. Majid, M. Jibrin-Bida, and M. H. R. Joarder, "Moderating effect of management support on the relationship between HR practices and employee performance in Nigeria," *Glob. Bus. Rev.*, vol. 22, no. 1, pp. 132-150, 2021.
- [49] A. H. Ngah, T. Ramayah, M. H. Ali, and M. I. Khan, "Halal transportation adoption among pharmaceuticals and comestics manufacturers," *J. Islam. Mark.*, vol. 11, no. 6, pp. 1619-1639, 2020.
- [50] S. N. Samsudeen, S. Thelijjagoda, M. B. F. Sanjeetha, S. Theijjagoda, and M. B. F. Sanjeetha, "Social media adoption: small and medium-sized enterprises' perspective in Sri Lanka," *J. Asian Financ. Econ. Bus.*, vol. 8, no. 1, pp. 759-766, 2021.
- [51] M. R. Shihab, N. Meilatinova, A. N. Hidayanto, and Herkules, "Determinants of CAATT acceptance: Insights from public accounting firms in Indonesia," *Procedia Comput. Sci.*, vol. 124, no. 1, pp. 522-529, 2017,

https://doi.org/10.1016/j.procs.2017.12.185.

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### **Conflict of Interest**

The authors have no conflicts of interest to declare.

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