

# THE MEDIATING ROLE OF ORGANIZATIONAL CULTURE ON THE RELATIONSHIP BETWEEN INFORMATION TECHNOLOGY AND INTERNAL AUDIT EFFECTIVENESS

Mithkal Hmoud Alqaraleh<sup>\*</sup>, Mohammad Odeh Salem Almari<sup>\*\*</sup>,  
Basel J. A. Ali<sup>\*\*\*</sup>, Mohammad Salem Oudat<sup>\*\*\*</sup>

<sup>\*</sup> Corresponding author, Accounting and Finance Department, Middle East University, Amman, Jordan

Contact details: Middle East University, Airport Rd., Amman, Jordan

<sup>\*\*</sup> Department of Accounting and Accounting Information System, Amman University College for Financial and Administrative Sciences, Al-Balqa Applied University, Salt, Jordan

<sup>\*\*\*</sup> Umm Al Quwain University, Umm Al Quwain, the UAE



## Abstract

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Internal audit effectiveness has become critical in helping businesses achieve their objectives. In today's business world, information technology (IT) is frequently used in internal audit activities. Internal auditing is an important part of an organization's control. Because internal audit and information technology play such important roles in each firm, this study looks at the function of organizational culture (OC) in mediating the link between the efficacy of information technology and internal audit in the Jordanian public sector. The study looks at this issue by gathering information from 153 internal auditors in Jordanian public enterprises. According to the findings of the study, information technology use and OC support are critical to increasing the efficacy of internal audits. The findings indicate that there is a considerable association between information technology and the efficacy of internal audits. Additionally, organizational culture has a key role in mediating the link between information technology and the success of internal audits. Future studies may examine managerial support and internal audit compliance.

**Keywords:** Information Technology, Internal Audit's Effectiveness, Organization Culture

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## 1. INTRODUCTION

The main goal of internal audit (IA) is to impartially affirm the effective operation of risk management, governance, and internal control processes of an organization (Yusuf & Kanji, 2020). The business environment consistently changes, and it is important that organizations could manage their

institutions and utilize their laws more effectively. Otherwise, organizations are at risk for mishaps like errors, scandals such as financial embezzlements and losses. In essence, an internal audit primarily provides an independent and objective opinion to the accounting officer, especially concerning risk management, control, and governance (Abrar, 2020). This is through the measurement and evaluation of

their effectiveness in the accomplishment of the objectives of the organizations. Further, the commitment of the management in implementation is crucial, or the findings and recommendations of the internal audit will be of no use (Nawaiseh, Abd-alkareem, Alawamleh, Abbas, & Orabi, 2021).

The evaluation of internal audit's effectiveness should concern its level of contribution to service delivery effectiveness and efficiency. This evaluation, according to Dinh, Pham, and Nguyen (2021), helps the organization in the accomplishment of its objectives because it provides a systematic and disciplined approach for increasing and evaluating the effectiveness of its control, risk management, and governance processes. It also stimulates the demand for improved internal audit service. For companies, Yusuf and Kanji (2020) additionally mentioned the need to evaluate and increase the effectiveness of risk management, control. Nawaiseh et al. (2021), Almari, Weshah, Saleh, Aldboush, and Ali (2021) added that corporate governance, in order that the business operations can be controlled directly.

The effectiveness of each auditee and the organization, in general, is highly affected by internal audits. In particular, an internal audit assures the aptness of the auditee's procedures and operations. As such, the auditee and the organization as a whole, become more effective with the internal audit. In their study, Menza, Aga, and Jerene (2019) stated the contribution of internal audit to the country's economy and that it allows fast information attainment and early discovery of issues. Paul, Waweru, and Walubuka (2020) additionally mentioned that through the internal audit, corruption, misappropriation of funds and other financial loopholes could be averted, while organization could use their resources effectively and efficiently, facilitating the accomplishment of the organization's objectives.

Appositely, the accounting information system comprises a system that is used in gathering, recording, storing, and managing data for the generation of information that is later used for decision-making purposes (Alawamleh, AlShibly, Tormalieh, Al-Qaryouti, & Ali, 2021; Yusuf & Kanji, 2020). In this regard, among the elements of the accounting information system are people, software data instructions and procedures, information technology (IT) infrastructure, in addition to internal control and security measures. In the management of information of transactions associated with its business activities, Ali, Bakar, and Omar (2016) highlighted the crucial role played by the accounting information system. Through an accounting information system, a business body could perform the tasks of transaction recording, saving, and processing the data associated with the transaction, as well as generate the financial information for management for their decision-making tasks.

Organizational culture (OC) has been affirmed as core to organizational activities that considerably affect the organization in terms of its effectiveness and the quality of its products/services. Accordingly, the mediating role of organizational culture on the relationship between information technology and the effectiveness of internal audits will be explored in this study. Further, Alqudah,

Amran, and Hassan (2019) recommended looking into other factors that may cause the performance of internal audit function (IAF) to be impeded — among these factors is organizational culture. In the context of Jordan, the present study is the first that utilizes the variable of organizational culture as a mediator between information technology and effectiveness of internal audits.

The structure of this paper is organized as follows. Section 1 is devoted to the formulation of the problem, whereas Section 2 is devoted to a review of previous research. Section 3 presents the methodology of the research. In Section 4, the analysis and discussion of the results are presented. Section 5 concludes the paper.

## 2. LITERATURE REVIEW

### 2.1. Problem statement

The factors impacting the effectiveness of internal auditors have been under scrutiny (Almari et al., 2021). In investigating the ineffectiveness of IAF, a number of studies have looked into various factors (Conteh, 2021). In Suleiman, Hamad, and Yussuf (2021), for instance, the effectiveness of internal audit was found to be negatively affected by several factors including restricted resources, poorly skilled internal auditors, short-staffed departments, and as well as lack of support from top management. Relevantly, lack of top management support and competency were the factors mentioned by Musah, Gapketor, and Anokye (2018) as the causes of deficiency of IAE, leading to various problems in organizations.

Alqudah et al. (2019) reported that in Jordan, the effectiveness of the internal auditors is positively affected by top management support and lack of internal auditors' competence and limited resources. On the other hand, in the public sector in Jordan, the authors found that the effectiveness of the internal auditors is negatively affected by task complexity. Notably, understanding the extrinsic factors of internal auditors' effectiveness in the public sector in Jordan can generate insights into many comparable countries, especially the Arab countries. Meanwhile, for the Jordanian government, related studies have proposed focusing on IAF and its effectiveness (Nawaiseh et al., 2021), in addition to allocating the internal resources of public institutions through an effective internal audit, as a way for reducing the corruption problem in the public sector.

Hence, organizational culture will be examined in this study, in terms of its mediating role in the relationship between information technology and internal audit's effectiveness in the public sector in Jordan. Accordingly, this study is guided by the following research questions:

*RQ1: What is the effect of information technology on the internal audit's effectiveness?*

*RQ2: What is the effect of information technology on organizational culture?*

*RQ3: What is the effect of organizational culture on the internal audit's effectiveness?*

*RQ4: What is the effect of organizational culture as a mediator to the relationship between information technology and internal audit's effectiveness?*

Based on the research questions presented above, this study will attempt to accomplish the following research objectives:

1. To explore the effect of information technology on the internal audit's effectiveness.
2. To explore the effect of information technology on organizational culture.
3. To explore the effect of organizational culture on the internal audit's effectiveness.
4. To explore the effect of organizational culture as a mediator to the relationship between information technology and the internal audit's effectiveness.

This section presents the literature relevant to this, particularly past empirical studies on the related topic. Several relevant constructs are elaborated accordingly, and among these constructs are internal audit's effectiveness, information technology, and organizational culture. They are all discussed in the following sub-sections.

## 2.2. The internal audit's effectiveness

The Institute of Internal Auditors (IIA) in the International Professional Practice Framework (IPPF) for IA refers to internal audit as an independent, objective guarantee and activity of consulting that can add value and enhance the operations of a given organization. Internal audit utilizes a systematic and disciplined approach in the evaluation and improvement of the effectiveness of risk management, control, and governance processes, which consequently facilitates the organization in achieving its objectives (IIA, 2016). Additionally, it solidifies management discipline, while also shaping the reliability, reality, and completeness of financial information and operations of enterprises. For this reason, internal audit greatly affects goals achievement and successful operation strategies of businesses (Abrar, 2020).

A person with the ability in facilitating management in supervising its activities will be of value to the organization (Almari et al., 2021), and this person is the internal auditor. Having the ability to furnish the information that managers need to achieve the goals of the company, internal auditors facilitate management in executing the company activities. Internal audit is vital to matters that are associated with management and risk for the survival of business (Abdullah, Ismail, & Smith, 2018).

Business entity development calls for accountable and transparent management (Almari, et al., 2021; Alawamleh et al., 2021; Shibly et al., 2021). Thus, management needs to implement an effective internal control system in order that quality financial reports can be produced, and such reports are of value to company decision-making. Supports from an effective internal control system facilitate companies in producing quality financial reports (Alawamleh et al., 2021; Yusuf & Kanji, 2020). Meanwhile, the effective internal control system can be assured through quality internal audit function (IAF).

Past related studies reported comparable findings, noting the ability of internal audit effectiveness (IAE) in accomplishing the outcomes that are in line with the established goals (Dinh et al., 2021). Internal audit effectiveness was also found to facilitate the achievement of goals of

internal audit (Yusuf & Kanji, 2020), and it is reported as the accomplished degree-including quality rather than the established targets (IIA, 2016). The notion of internal audit effectiveness was discussed in Ismael (2013) and the author stated the manifestation of internal audit effectiveness in enterprises through the capacity in monitoring and improving internal control, risk management. A similar approach was applied in Turetken, Jethefer, and Ozkan (2019). Following IIA (2016), internal audit assures the role of added value creation, improvement of operations, and support in meeting the goals of organizations, stressing the general effectiveness of the aspect of internal audit in corporate governance, risk management, and internal control as well.

## 2.3. Information technology

Information technology simplifies the tasks of employees through automation, making their tasks such as communication and other work-related activities easier to execute. For the majority of employees, the Internet is utilized for information and research (Haddud, Dugger, & Gill, 2016), and reduced workload leads to increased performance. Pinheiro, Ivandic, and Razzouk (2017) additionally mentioned that reduced performance prevents the problem of overwork among employees, allowing them to accomplish all tasks on time.

In their study, Indije and Zheng (2010) indicated the importance of implementing an information system with an understanding of how people, and the involved social practices, function. The information system is therefore a social system whereby information technology is one integral element in the integration of brain-ware and the relationship with the organization (Marjulin, 2019). In other words, an information system is not just a technical system with behavioral implications. People are an important element in information systems (Alawamleh et al., 2021; Puspitawati, 2016; Shibly et al., 2021), while the organizational structure is an essential component in business strategy, and human resources are regarded as the crux of the organization (Barnato et al., 2007). Furthermore, with support from personnel expertise, the correct application of information systems can improve the performance of both employees and the company (Alawamleh et al., 2021; Chen, Wang, Nevo, Jin, Wang, & Chow, 2014). It is important to create facilitating conditions such as those with equipment that supports information systems including software and hardware. This will allow users to use information systems based on their needs.

## 2.4. Organizational culture

It was found that employees with the ability to adapt well to the culture of the organization show effective performance, while also being able to socialize better in the workplace. As a result, the employees are happy with their work, contributing to organizational success. In general, the culture system in the organization involves personal connection and patronage, has a high power distance, aside from being bureaucratic, face-saving, and hierarchical (Erlangga, Sos, & Erlangga, 2021). In such an organization, juniors respect their seniors

at all times, making it uncommon for juniors to freely express their ideas in meetings. On the other hand, the new generation today has a greater level of self-confidence and self-assurance, and they also replace some retiring.

Kankaew and Treruttanaset (2021), in studying custom officers, relevantly found that most newly-hired customs officers embraced four major cultures, with the following descending ranking: social safety, facilitation, technology adaptation, and investigation suppression. The authors proposed the practice of continuous learning into newly hired officers and the importance of socializing these officers using face-to-face communication especially two-way communication. In the examination of Village credit institutions, Ali, Omar, and Bakar (2016) concluded a positive and significant impact of accounting information systems, organizational culture on the performance of these institutions. In other words, the increase in commitment will increase the implementation of the organizational culture, leading to increased performance of Village credit institutions.

## 2.5. Study theories

Three theories have been chosen in this study, namely, agency theory, absorptive capacity theory, and behavioral theory. Agency theory clarifies internal audit within a firm in general. As described by Jensen and Meckling (1976), in a given firm, the principal and the agent act in a rational manner, and a contract is applied for the maximization of their wealth (Ali & Oudat, 2021; Almari et al., 2021). Contracts are for decreasing and controlling moral hazard caused by the divergence between the interests of the principal and those of the agent (Blazovich, 2013).

In this study, the public sector is used to illustrate the link between principal and agent. The principal is represented by the public and the agent must regularly report to the principal on their usage and management of resources and the scope of fulfillment of the public's objectives. An internal audit activity that is effectively carried out, reduces the natural risks in the relationship with financial performance (Oudat & Ali, 2021). In this regard, the auditor, who is the third party, is expected by the principal to present an independent and objective approximation of the correctness of the agent's accounting. Alqudah et al. (2019) is also expected to report to the principal on whether or not the agent manages the resources as the principal expects. For accomplishing these tasks, Alqudah et al. (2019) stated that adequate sources are required by the internal auditors so that they could be able to effectively execute their tasks. This is particularly crucial in the public sector as it comprises a multifaceted environment.

In addition to leveraging absorptive capacity theory and shared mental models theory, a theoretical rationale is offered the previous studies in describing why the IT knowledge possessed by business auditors imparts positive impacts on the usage of an integrated approach (Roberts, Galluch, Dinger, & Grover, 2012). The absorptive capacity theory proposes the importance of business auditors in possessing the essential IT competencies so that they would have the competency in

evaluating the controls and risk of IT (Roberts et al., 2012). Additionally, the IT knowledge that underscores the absorptive capacity of internal business auditors should allow the reconfiguration of business and IT audits into an integrated audit (Roberts et al., 2012). Having the requisite IT knowledge allows business auditors IT controls while also imparting knowledge of the business process, which will allow them to assess the IT-based controls in just one integrated performance (Ali et al., 2016).

Meanwhile, the behavioral theory is grounded upon the notions of individual-based rationality and organizational procedures for decision making. This theory has been expansively applied in understanding the stimuli that underscore the behaviour, actions, and decision-making of individuals (Opote, 2017). Relevantly, the concept of bounded rationality proposed by Simon (1957) suggests that rational behavior is attuned to access to information and the real capabilities of organisms like people, and it is dictated by the environmental dynamics of the organisms.

Based upon the concept of effective behavior of bounded rationality, behavior foundation is referred to in understanding the nature and effectiveness of the internal audit nature. In this regard, the theoretical framing that links behavior to a culture that facilitates the understanding of organizational dynamics is referred to in this study (Ali et al., 2016). Within the cultural context, decision-making is essentially shaped by the values embraced by people or by the philosophy of an organization. However, the primary focuses of this study were culture (Ali et al., 2016; Mamatha & Geetanjali, 2020).

## 2.6. Hypotheses development

Four major research hypotheses are brought forth in this study.

The applications of IT can be observed in the designing, implementation, and control maintenance of business processes of an organization (Ali et al., 2016; Ali & Oudat, 2021; Klovienė & Gimzauskiene, 2015). In addition, IT contributes to data collection, processing, and storage, especially data of financial statements. As mentioned in Ali et al. (2016), accounting information system eases support for internal control and business management implementation. Utilizing an accounting information system, data are gathered, recorded, stored, and managed to generate information for decision-making purposes (Alawamleh et al., 2021; Ali et al., 2016; Ali & Oudat, 2021). Among the elements of accounting information are: people, information technology infrastructure, software data instructions and procedures, security measures, and internal control. An accounting information system is also essential in the management of information on business activities transactions (Alawamleh et al., 2021; Ali et al., 2016). The hypothesis below is thus established:

*H1: Information technology impacts the internal audit's effectiveness.*

The processes of IT and business are complex, making it necessary to change organizational structure and culture. Such necessity is factored by the fact that information technology relocates knowledge locus and its associated power inside

the organization, whereby IT transformed the time frame of decision-making and process completion. New organizational structures are thus a result of IT (Almasri, El Talla, Abu-Naser, & Al Shobaki, 2018; Ali et al., 2016). Islam, Jasimuddin, and Hasan (2015) examined the role of organizational culture and structure on knowledge-sharing processes, moderated by the effect of technology infrastructure, and they concluded a positive relationship between learning and development, top management support and centralization and knowledge sharing. Further, a positive relationship was concluded by Majlesi, Khani, Avaz Zadeh, and Pirzad (2020) between organizational structure and information technology. Relevantly, in examining global firms, Ali et al. (2016) concluded the presence of a link between organizational culture, IT capability, and performance. The hypothesis below is therefore presented:

*H2: Information technology impacts organizational culture.*

Organizational culture has long been in existence within working activities, and it functions as a motivating tool for achieving better work quality among staff members (Alina, Cerasela, & Andreea, 2013; Ali et al., 2016). In this regard, a strong habit can improve the organization's effectiveness. Organizational culture encompasses a shared system that organization members follow, and a culture of an organization distinguishes itself from others. Ertosun and Adiguzel (2018) accordingly stated that a strong organizational

culture leads to superior organizational development. In a related study, Hanna and Firnanti (2013) concluded a positive impact of organizational culture on auditor performance. Additionally, Smets, Forrest, and Sarens (2018) reported a link between organizational culture and the internal audit's effectiveness. The hypothesis below is therefore proposed:

*H3: Organization culture impacts the internal audit's effectiveness.*

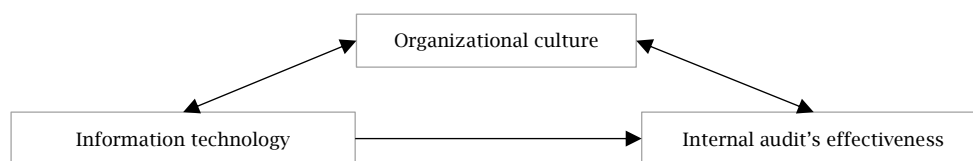
Considering the findings of Al-Gasawneh and Al-Adamat (2020), the variables presented have mediating ability. They can also ease the formation of the relationship between an independent variable and a dependent variable. The variables can also link the independent variable and the mediation. Equally, the mediation and the dependent variables can be linked by the mediation. The hypothesis below is thus proposed:

*H4: Organization culture mediates the relationship between information technology and internal audit's effectiveness.*

## 2.7. Theoretical framework

A theoretical framework is proposed in this study. The framework, as displayed in Figure 1, is specifically formulated for testing the mediating role of organizational culture on the relationship between information technology and internal audit's effectiveness.

Figure 1. Theoretical framework



## 3. RESEARCH METHODOLOGY

This descriptive study explains a phenomenon or specific condition; it depicts a present situation, which ultimately leads to a certain decision. This type of study has the purpose of affirming the hypotheses established in past studies, concerning the situations at hand. A sufficient amount of data needs to be gathered in order to enable adequate comprehension of the topic under study. As this study examined the mediating role of organizational culture on the relationship between IT and internal audit's effectiveness, employees of the internal audit department in the departments of the Jordanian Ministry of Finance were selected owing to their knowledge of the study subject. Selected employees of the internal audit department in the departments of the Jordanian Ministry of Finance were provided with a self-administered questionnaire.

There were 28 items in the questionnaire, broken down into three sections with the following details: section one comprised items covering the independent variable (information technology), section two comprised items covering the mediator variable (organizational culture), and dependent variable (internal audit's effectiveness), and section three comprised items of the participants' socio-demographic characteristics. The items in

sections one and two were equipped with a 5-point Likert scale. The use of the Likert scale was to achieve accurate results. In terms of validity and reliability of the questionnaire, they were affirmed using two methods. As the first method, the researcher sought feedbacks and opinions from academic experts, namely the university professors, on the questionnaire. Changes were then made based on the obtained feedback and opinions. The internal consistency testing was performed on the variables using Cronbach's alpha and the following results were obtained: information technology scored 0.91, electronic organization culture scored 0.77, and internal audit's effectiveness scored 0.81. The validity and reliability of the questionnaire were thus affirmed.

The sample size appears to be in agreement with the power of analysis, which encompasses the minimum number of samples in accordance with the complexity of the model. This study followed Green's (1991) table. In addition, this study employed 2 predictors from the research framework at medium effect size as proposed in Gefen, Rigdon, and Straub (2011). Hence, the minimum size of the sample for this study was 98. Furthermore, in achieving accurate results, Hair, Celsi, Ortinau, and Bush (2010) proposed using a sample size larger than 100. Hence, this study distributed a total of

250 questionnaires in order to achieve accurate results. The study variables, item numbers, and sources of adapted scales can be viewed in Table 1.

Additionally, PLS-SEM software was used in the data analysis.

**Table 1.** Scales used in research

No.	Variable	No. of items	Reference
1	Information technology	9	Hadi, Hussein, Rashed, Alseelawi, and Albehadili (2019)
2	Organizational culture	10	Ali et al. (2016)
3	Internal audit's effectiveness	9	Abrar (2020), Dinh et al. (2021)

**4. ANALYSIS AND DISCUSSION**

The structural equation in PLS has two steps: measurement model and structural model. The measurement model explains the conceptual

model's reliability and validity, whereas the structural model explains the path coefficients between and among the latent variables. This study took these two steps. Figure 2 depicts the current study's measurement model.

**Figure 2.** Measurement model

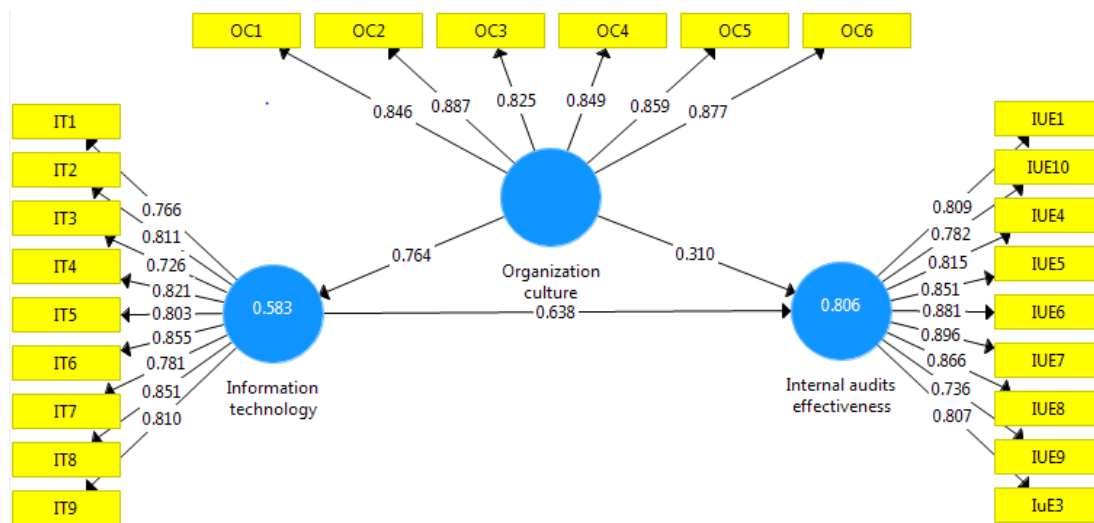


Table 2 explains the existing model's convergent validity. The outer loadings of all items are above 0.70. While some items were removed because

they were less than 0.07, others were kept (Hair, Babin, & Krey, 2017). Four (4) items of OC were deleted.

**Table 2.** Outer loading (Part 1)

	IT	IAE	OC	Questionnaire items
IT1	0.766			1. Lack of information prevents users from making decisions or giving their opinions since they do not grasp the consequences.
IT2	0.811			2. A lack of expertise in making decisions because the culture does not support the environment, as well as a lack of support from organizations to engage in decision-making.
IT3	0.726			3. Decision-making is restricted to stages that allow a user or employee to participate in decision-making.
IT4	0.821			4. The lack of chance to do the test and learn appears to be due to apprehension about the significant costs that must be incurred for such activities.
IT5	0.803			5. Data processing techniques, computer technology, and computer programming knowledge and expertise.
IT6	0.855			6. To combat fraud, the firms have qualified staff with excellent technological skills.
IT7	0.781			7. Employees are distracted by information technology, particularly social media and entertainment sites.
IT8	0.851			8. The increased use of technology has hampered workplace creativity and innovation.
IT9	0.810			9. Employees have adequate familiarity with computerized accounting information systems.
IAE 1		0.809		1. Internal control monitoring, evaluation, and consultation.
IAE 3		0.807		3. Internal auditing helps organizations enhance their operations.
IAE 4		0.815		4. Internal auditing contributes to the organization's value creation.
IAE 5		0.851		5. Internal auditing assists the business in achieving its goals.
IAE 6		0.881		6. Internal audit's tasks and activities satisfy expectations.
IAE 7		0.896		7. Internal auditing offers information on flaws in the organization's activities or control systems.
IAE 8		0.866		8. The findings of internal audits are extremely important to the organization.
IAE 9		0.736		9. Internal audit ensures that organizational resources are used in the most cost-effective, effective, and efficient manner possible.
IAE 10		0.782		10. Monitoring, assessing, and consulting on risk management processes in order to enhance them.

**Table 2.** Outer loading (Part 2)

	<i>IT</i>	<i>IAE</i>	<i>OC</i>	<i>Questionnaire items</i>
OC1			0.846	1. The company's management style is characterized by teamwork, consensus, and participation.
OC2			0.887	2. The organization places a strong emphasis on human development, high trust, openness, and engagement.
OC3			0.825	3. The company is a fast-paced, entrepreneurial environment. People are open to taking chances.
OC4			0.849	4. The company is a highly intimate environment. It's like having an extended family. People appear to reveal a lot about themselves.
OC5			0.859	5. The company's management style is distinguished by individual risk-taking, creativity, freedom, and individuality.
OC6			0.877	6. The organization places a premium on competitive behaviors and achievement. The ability to hit stretch goals and win in the marketplace is dominating.

The reliability analysis includes Cronbach's alpha, composite reliability, and average variance extracted (AVE). The numbers in Table 3 are all above the threshold levels, indicating that our study is reliable.

**Table 3.** Construct reliability and validity

<i>Variable</i>	<i>Cronbach's alpha</i>	<i>rho_A</i>	<i>Composite reliability</i>	<i>AVE</i>
Information technology	0.931	0.936	0.942	0.646
Internal audits effectiveness	0.942	0.946	0.951	0.686
Organization culture	0.928	0.930	0.943	0.736

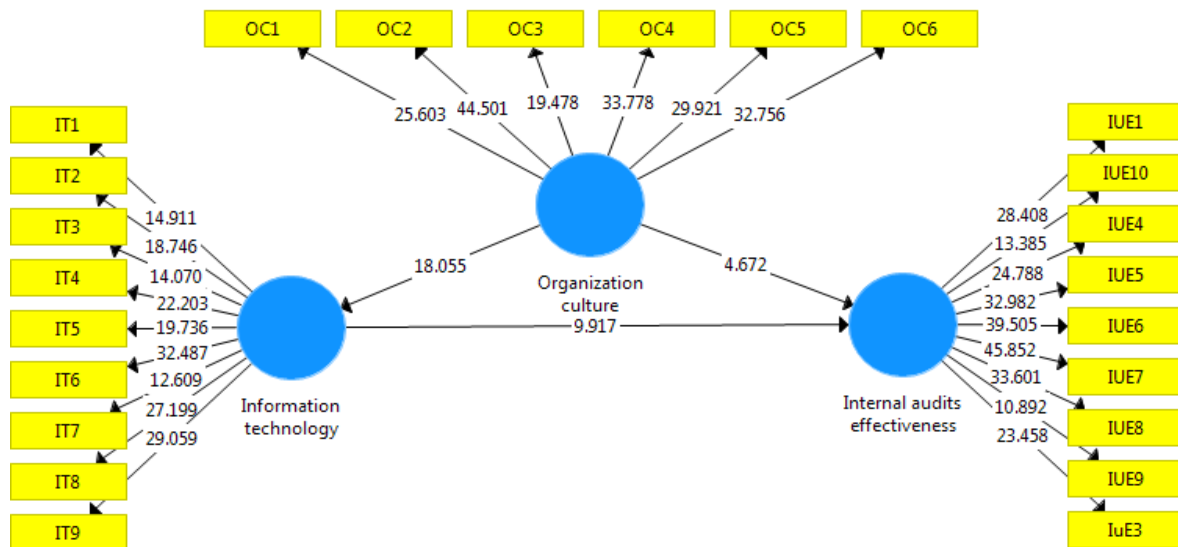
The discriminant validity of the criteria is tested, and the findings indicate that all diagonal values are considerably more than the threshold values, and all diagonal values are greater than the lower values (Tzempelikos & Gounaris, 2017).

**Table 4.** Discriminant validity

<i>Variable</i>	<i>Information technology</i>	<i>Internal audit's effectiveness</i>	<i>Organization culture</i>
Information technology	0.804		
Internal audits effectiveness	0.875	0.828	
Organization culture	0.764	0.798	0.858

Following an examination of the research's reliability and validity, the path coefficient between and among the variables employed in the current study is calculated. The current study's structural model is depicted in Figure 3. Direct and indirect relationships between and among the variables utilized in this study are examined via bootstrapping.

**Figure 3.** Measurement model



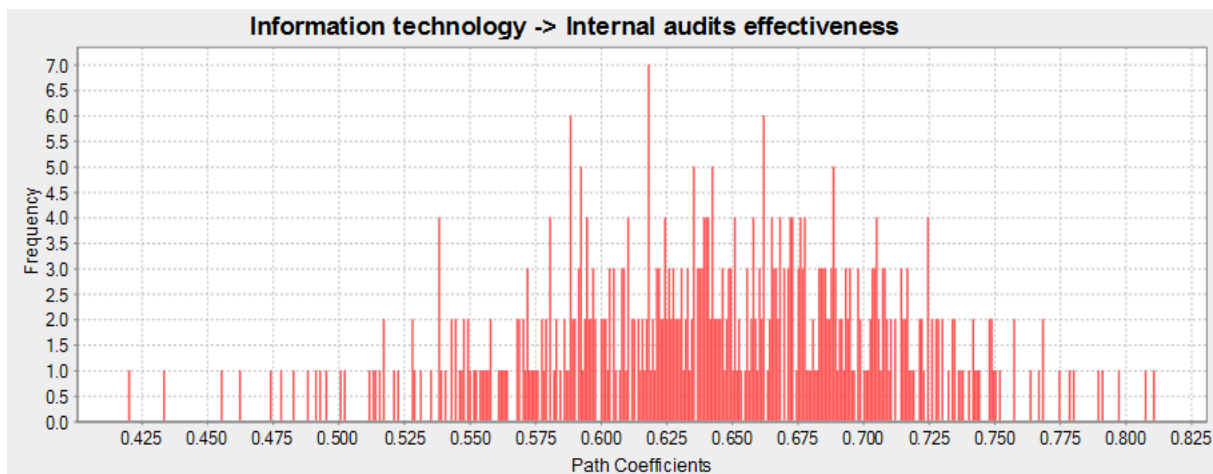
**Table 5.** Results of hypotheses testing for the IT, OC, and IAE

Relationship	Original sample (O)	Sample mean (M)	Standard deviation	T-statistics	P-value
Information technology -> Internal audit's effectiveness	0.638	0.643	0.064	9.917	0.000
Organizational culture -> Information technology	0.764	0.763	0.042	18.055	0.000
Organizational culture -> Internal audit's effectiveness	0.310	0.305	0.066	4.672	0.000

The findings of both standardized path coefficients and their significant values were used to test the hypotheses for the structural routes. As a result, we employed the PLS method and the conventional bootstrapping technique with 1000 bootstrap samples to assess the significance of the path coefficients with a one-tailed test (Hair et al., 2010). As indicated in Table 5, the outcome offers adequate support for *H1*, *H2*, *H3*, and *H4*. Overall, the results show that construct route coefficients are both strong and significant. The path coefficient (9.917) from IT to internal auditors' efficacy is positive and significant

(p-value = 0.000, t-value = 9.917), indicating that as the extent of IT grows, so does the effectiveness of internal auditors. Regarding *H2*, the results demonstrated a substantial degree of a positive association between IT and OC (p-value = -0.000, t-value = 18.055), suggesting that as the amount of OC grows, so does the IT.

Regarding *H3*, the results demonstrated a substantial degree of a positive link between OC and IAE (p-value = -0.000, t-value = 4.672), suggesting that as the amount of OC grows, so does the IAE.

**Figure 4.** Path coefficients histogram

The results of the bootstrapping are shown in Table 6, which reveal that the indirect impact of IT on IAE via OC was positive and statistically significant at the 0.05 level; t-value = 10.317,

p-value = 0.000. The findings indicated that the mediation effect was statistically significant, implying that *H4* was supported.

**Table 6.** Results of hypotheses testing for the mediation (OC) between IT and IAE

Relationship	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T-statistics (O/STDEV)	P-value
Organizational culture -> Information technology -> Internal audit's effectiveness	0.487	0.490	0.047	10.317	0.000

## 5. CONCLUSION

The purpose of this study is to ascertain the influence of IT on IAE and the mediating effect of OC on IAE in the Jordanian public sector.

The expanding demand for IA services across all companies and the quick rise of its professional organization demonstrates the importance of IA. The IAE has grown in importance and utility as a result of the growing demand for internal audit services in all enterprises and the fast expansion of its professional organizations. It assists a company in achieving its goals by establishing a systematic and disciplined method for evaluating and improving the efficacy of risk management, control, and governance systems.

On the basis of the test results for three regression models, the following conclusions were drawn: discussion and consequences of the results from the Jordanian public sector indicated that IT improves their IAE. The outcomes of this study demonstrate the beneficial influence of IT on IAE in these businesses, corroboration of other conclusions achieved by researchers working on (Alkebsi & Aziz, 2018). The findings corroborate our hypothesis that OC might act as a mediator between IT and IAE. Smets et al. (2018) established a link between OC and IAE. This study contributes to the growing body of literature on information technology by examining the influence of IT and IAE and utilizing OC as a mediator in a specific Jordanian public environment. This research equips policymakers



with the foundational knowledge necessary to develop successful policies and support systems for IAU. The report demonstrates that the IAU has widely utilized information technology. In order to address the study's limitations, additional research is needed. In the future, it's recommended that researchers look into other industries and use different methodologies. It is possible that future research will look into elements, such as managerial support and internal audit compliance. This study

does not include any of those. This study has a lot of limitations, including the fact that the findings cannot be applied to Jordan's public sector. The researchers discovered that there was a dearth of knowledge about information technology. The sample had some difficulties comprehending several aspects, which the researchers clarified for the limitations. The researchers were confronted with a scarcity of research in Jordan and the area.

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