# **Impact of E-Audit on Public Organization's Performance in Oman**

#### **Mohammed Hamed AL-Salmi**

Faculty of Technology Management & Business, Universiti Tun Hussein Onn, Johor- Malaysia mohamedhamed1979@hotmail.com

# Seow Ta Wee

Faculty of Technology Management & Business, Universiti Tun Hussein Onn, Johor- Malaysia tawee@uthm.edu.my

Fazal Akbar Department of Business Administration, University of Buner, KP Pakistan fazal.akbar22@gmail.com

#### Abstract

This article investigated the impact of e-audit on the performance of public organizations in Oman as well as the relationships between e-audit and performance. This paper also looked at computer activities, e-audit, its advantages, related research, and how well it works to improve organizational performance. Additionally, this study used questionnaires and surveys to collect data before studying and analyzing the results. To explore the relationship between independent variables (E-Audit) and dependent factors (Performance) in research that was planned and evaluated using software that was analyzed as part of a theoretical framework, structural modelling was used. To examine the suppositional correlations, these results were analyzed using several data paths using SPSS and the Smart-PLS technique. The results also showed a substantial and favorable relationship between E-Audit performance and that of Oman's public organizations.

#### Keywords

Computer Activities, E-Audit, Advantage of E-Audit, Performance, Oman

# **1. Introduction**

Recent years have seen an increase in global rivalry and economic growth in the form of rising foreign investment, innovation enterprises, industry production, improved operational efficiency, and software developers. Computer-related activities are a major factor in developing nations and in enhancing human existence and meeting human needs. By utilizing information technology, opportunities are being created for advances in a variety of fields, including management systems, financial systems, business components, and the auditing field. If financial systems and management systems rely on information technology and computer-related dangers are on the rise, electronic auditing is urgently required to lower risks in financial and management system.

Nonetheless, despite information technology advancements, fraud threats have recently escalated. The risk chance in information technology increased as information communication technology spread throughout the world. When a risk arises in an auditing environment, auditors can regulate and minimize the possibility of it happening. Additionally, the auditors anticipate that adopting computerized auditing activities will reduce the likelihood of fraud (Mubako, et

al, 2017). Modern times have also seen an upsurge in information technology fraud and crime in a variety of fields, including social media advertising, internet marketing, e-commerce, and web advertising.

As a result, the audit department protects businesses from misstatements, fraud, and corruption. Aside from business growth, audit demand is also rising. The organization can be protected against fraud and financial problems with the help of the auditor's necessary professional tools, specialists' team, technological applications, and audit IT systems. Therefore, the auditors' task must advance in line with economic advancement. In both the public and commercial sectors, audit systems are beginning to proliferate, but all governments have realized the need for audits and audit technology (Hamshari, et al, 2021).

As a result, the audit department protects businesses from misstatements, fraud, and corruption. Aside from business growth, audit demand is also rising. The organization can be protected against fraud and financial problems with the help of the auditor's necessary professional tools, specialists' team, technological applications, and audit IT systems. Therefore, the auditors' task must advance in line with economic advancement. In both the public and commercial sectors, audit systems are beginning to proliferate, but all governments have realized the need for audits and audit technology (Hamshari, et al, 2021).

As a remote audit, electronic auditing focuses on financial transaction and process systems. Processing management and financial processes systematically and reporting immediately to the audit team. Investigating and reporting to high management immediately if there is any suspicion of a financial flaw or suspicion of financial corruption. Therefore, computerized auditing aids in professional auditing and protects management and finance against financial fraud. Since economic growth occurs in a high-speed cycle, it was necessary for financial processes and auditing procedures to be quickly improved. E-Audit is one of the primary methods for streamlining the financial and managerial processes (Supriadi, et al, 2019).

Even though some earlier research noted that some concerns were dealt with through computerization, this research will examine the benefits of electronic auditing and conduct a questionnaire survey to ascertain how electronic auditing has affected Oman's public sectors. This essay examines how the performance of public organizations in Oman is impacted by e-audit. Using PLS and software analysis (SPSS) and comparing the findings to those of earlier research on the advantages of electronic audit for the economy. And based on these research issues, to investigate the connection between the performance of public organizations and electronic audit.

# 1.1 Objectives

- The objectives of this research are:
- 1) To study the challenges of E-Audit in Public Organizations.
- 2) To examine the relationships between E-Audit and public organizations performance in Oman.
- 3) To improve public organizations performance by adopting E-Audit in Oman.

# 2. Literature Review

One of the primary systems used to control the financial and managerial processes in developed nations is e-audit. Prior audit work involved manually reviewing papers, analyzing financial statements, verifying financial transactions, and reporting actions. In the past, management and finance professionals found manual auditing to be highly helpful. However, as information technology has progressed and gained ground in various fields, so too have the rates of cybercrime and financial theft committed with it. A financial and administrative control revolution that encompasses all facets of cutting-edge systems is required to go hand in hand with the technological revolution. Accordingly, in past research, the auditors discovered that the financial transaction and management systems dealt with financial audit strong and high secure system to prevent the organizations from inside finance risks as well as outside dangers (Thabit, 2019).

E-Audit systems have been successfully implemented in these nations, including Germany, Denmark, the Netherlands, and other European nations, according to previous studies. Therefore, the key concept is that electronic audit may assist both organizational goals and improved global economic growth. The performance of public organizations and their relationship to electronic audit are the main topics of this article. The time, method, and expense of the audit can all be reduced with an electronic audit. Additionally, information technology tools and systems use electronic audits

to function as automatic audits at every level of the audit process. One advantage of electronic audits is that they may automatically repeat the audit process and save audit trails in information systems. Filtering the financial process and erasing the investigation from financial questionable papers are both aspects of electronic audit. A more reliable electronic auditing system aids in maintaining and achieving audit quality in actual operations (Asadov, 2015).

Researchers in the past advised that all public and commercial enterprises include computerized auditing into their systems of internal control. The purpose of the e-audit studies has been to analyses and investigate the benefits and drawbacks of electronic auditing systems. Due to the rising demand for audit solutions utilizing information technology systems, investments in the field of audit systems have increased. Table 1 provides the results of earlier research in the field of electronic audit in various countries: -

No	Sources in previous studies	Торіс	Country	Result
1	Hiyam et al, (2020)	The impact of using on the quality of auditing in Lebanon	Lebanon	Supported
2	Ali et al (2019)	Impact of using technology in auditing on reducing the fees of auditor's offices and companies in Jordan	Jordan	Supported
3	Josheph et al, (2019)	Challenges of computer audits in Nigeria	Nigeria	Supported
4	Renaldi et al (2018)	Analysis and design of electronic audit paperwork		Supported
5	Mostefaoui et al (2016)	Contribution of the information technology audit in achieving the quality of the electronic accounting system in Algerian banks	Algerian	Supported
6	Tung-hsien (2015)	The relationships between computer auditing activities and performance		Supported
7	Omer et al, (2017) The impact of information technology on the audit profession analytical study			Supported
8	Al-Taee, S. H. H. (2021).	Effects of the remote auditing in Iraq during COVD-19.	IRAQ	Supported
9	Abduallah et al (2016)	The effects of e-audit in reducing the burden of electronic environment complexity of accounting information system on the auditors		Supported
10	Taufiq et al, (2019)	Influence of auditor's competency in using information technology on the success of e-audit system implementation	Indonesia	Supported
11	Tuit et al, 2019)	Analyse the effectiveness of the e-audit system in Indonesia	Indonesia	Supported
12	Farida et al, (2020)	Influence of Auditor Competency in Using Information Technology on the Success of E- Audit System Implementation in Indonesia	Indonesia	Supported
13	Steven et al, (2016)	Electronic audit confirmation: leveraging technology to reduce the risk of fraud		Supported
14	Mehdi et al, (2015)	Iehdi et al, (2015)The relationship between the information systems of accounting auditing		Supported
15	Thabit et al, (2016)		Supported	

Table 1 provides the results of earlier research in the field of electronic audit in various countries

The prior research on electronic audit was analyzed in the table above, but since Oman hasn't yet done a thorough study of the subject, this paper will focus on how electronic auditing affects the functioning of public organizations.

# **2.1 Computer Activities**

Computer tasks that are frequently performed in accordance with human needs include those related to auditing, finances, management, industry, and others. Therefore, information technology aids in the development of any felid's

requirement area. The computer activities covered in the audit environment are practiced in this section. Computers are utilized for financial and auditing tasks like checking accounts, checking bank transactions, and paying bills. Enhanced automatic clarification of financial activities and process-based rechecking of financial statements are necessary in audit environments. Additionally, the system is designed to handle multiple activities simultaneously, including processing input documents, filtering documents, and processing output with detailed reporting (Tung-Hsien WU, 2015).

In order to fulfil organizational goals, audit operations are computerized, provided by auditors, and filtered in accordance with the organizations' policies and procedures unique to each entity's activity. The audit is computerized to support the management environment's efforts to control the organization's goals, with an emphasis on the following areas: quality, security, control, strategic, and IT audits. To detect potential hazards to the reviewed company and to offer competent solutions to prevent errors or significant financial risks, the audit attempts to evaluate the current IT infrastructure as well as the level of information security. The practice of manually auditing computer systems is a relatively new system that is being used to safeguard organizations against fraud and other threats (Nen, M, et al, 2017).

#### 2.2 E-Audit

E-Audit is a method that aids examiners in achieving examination goals and gives auditors all the financial and management data necessary to combat fraud and financial wrongdoing. E-audit is an information technology system structure for audit job for processes assessment to test and investigate in documents. The audit software application was developed for a specific audit objective and adheres to organizational policies and procedures. The two stages of the e-audit structure include data collecting and software grouping for the first stage, and program review, code comparison, and parallel simulation for the second stage (Prabowo, et al, 2021).

#### 2.3 Advantage of E-Audit

The auditors establish and have access to e-Audit, which operates in accordance with audit standards in both the public and private sectors. Utilizing information technology and a high-quality management system, economic development successfully attained the primary objectives and improved society. The following are some advantages and financial returns of using e-audit: -

#### **1- Audit Quality**

The electronic audit system operates as requested by the auditors. In international audit roles, the auditors perform their work in accordance with standards for audit quality, including controls for procedures, risk assessment, problemsolving, and audit boards. Due to practically all the audit process being processed systematically, auditors in e- audit structures are not necessary to visit with customers in person (Prabowo, et al, 20121).

#### 2- Cost Reduction

The E-Audit assists auditors in doing examinations, practicing procedures at a lower cost, and avoiding trips to other branches to reduce travel expenses. The computerized audits regulate financial competition, which lowers financial costs and lessens the need for paper records in the businesses. There is no question that the electronic audit relies on technology, particularly helps firms save money by streamlining financial operations (Thabit, 2019).

#### 3- Time Saver

Time savings is one of the key benefits of employing an electronic auditing system over a manual one because computerized processes such as data gathering, financial statement analysis, and document review are used. Even when the officials are on official holidays, the e-audit continues to run autonomously, saving time and effort. Electronic auditing saves time when financial control reports are presented to higher-ups (top management) and when forming quick judgments about matters of financial theft and admirable corruption (Dharmawati, et al, 2019).

#### 4- Credibility Audits

Investor confidence in the internal or external economic trust is increased by the credibility that electronic audit gives to the oversight process. Additionally, electronic audit provides individuals, shareholders, the government, and citizens with facts and integrity of financial data. Additionally, it strengthens the work of the supervisory audit and restricts the sharing of interests with officials in both the public and private sectors, so limiting the private sector's interest with officers (Supriadi, et al, 2019).

# 3. Methods

This study examines the impact of E-Audit on public organizations and how it may impact their operational effectiveness. The first component in this study is e-audit, and the second category is performance. The study compared our research findings to earlier studies on e-auditing while also looking into the relationships between e-audit and organizational performance. To obtain better results, this paper used a questionnaire survey. After data collection, the questionnaire results were analyzed. We provide the internal auditors in the Oman public sector with survey questionnaires (ministries). PLS technique and the Statistical Package for the Social Sciences were both employed as software tools in this study (SPSS), the following is the research framework: - (Figure 1)

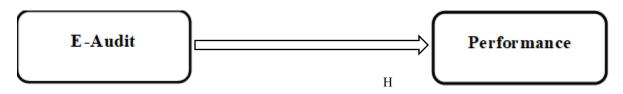


Figure 1 Research Framework

The relationships among the e-audit and performance organization were examined in this framework. The hypothesis (H) describes how electronic auditing has an impact on how well organizations perform in Oman's public sectors. Internal auditors in the public sector in Oman were given questionnaires with 5-point Likert Scale evaluation items. The analysis replies from the participants to performance audits in the public sector have been analyzed and achieved in the range rate was between (1.61 - 3.01) mean, as is shown in the above table. The highest was coded (H.P. Q2) with the lowest item coded (H.P. Q1).

# 4. Data Collection

Data collection have been collected from internal auditors in Oman public organizations (Ministries). Internal auditors in the public sector in Oman were given questionnaires with 5-point Likert Scale evaluation items. The analysis replies from the participants to performance audits in the public sector been collected and analyzed as the results giving in the range rate was between (1.61 - 3.01) mean. The highest was coded (H.P. Q2) with the lowest item coded (H.P. Q1). So, data been analyzed by software tools in SPSS and Smart-PLS.

# 5. Results and Discussion

# 5.1 Numerical Results

Internal auditors in the public sector of Oman were the research goal for this study, which considered 166 samples. We gave away to 280 auditors. 165 auditors responded to the call for information. According to the descriptive statement, the E-Audit replies had higher scores on F.E.A. Q4 and most of their items had scores between 1.68 and 2.24, which showed that the results fell within the expected range. Additionally, audit performance response displays a range rate within (1.61 - 3.01) mean, with (H.P.Q2) being the highest and (H.P.Q2) being the lowest item coded (H. P. Q1). In other measurement as Path coefficient score was (0.671), F-Square was (0.817), Cronbach score was (0.907), Collinearity statistic (VIF) between (1.103- 2.946), All factor loading achieved the target requirements as shows in this results that indicator loadings of electronic auditing items were (F.E.A.Q1, F.E.A.Q2, F.E.A.Q3, F.E.A.Q4, F.E.A.Q5, and F.E.A.Q6) the score were 0.851, 0.816, 0.862, 0.776, 0.873 and 0.851 respectively, on another side, Audit Performance is measured with six items as can be seen in Measurement, The indicator loadings for the Performance construct items of (H.P.Q1, H.P.Q2, H.P.Q3, H.P.Q4, H.P.Q5, and H.P.Q6), the score is 0.692, 0.352, 0.647, 0.732, 0.767 and 0.817 respectively. According to Cronbach's Alpha measurement reliability, the outcome for electronic auditing scored (0.907) and for performance scored (0.765), both of which met the research criteria. Consequently, convergent validity and discriminant validity have been fitted to the research model. The P-value for the link is supported by the path coefficient recommendations and the absence of any problems between the

components. In this study, the effects of e-audit on audit performance were also examined, and the findings indicate a favorable relationship between the two variables. In the end, e-audit audit's performance also supports this idea.

#### **5.2 Graphical Results**

The measurement and relationships between the items and variables in this study are as follows: -

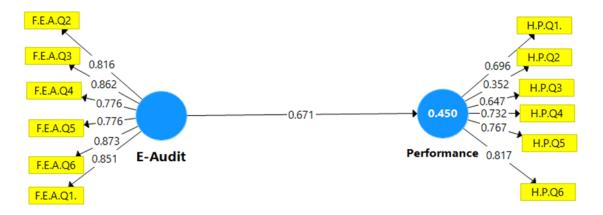


Figure 2 Research Measurement

In this measurement Figure 2 shows the results supported the relationships between the items and also variables E-Audit and Performance.

# **5.3 Proposed Improvements**

In additional results is Discriminant validity test the results shows between E-Audit – E-Audit the score is 0.827, between Performance -E-Audit sore is 0.671, and final is between Performance – Performance sore is 0.686. So, the results supported the relationships.

#### **5.4 Validation**

The hypothesis that been tested by Smart-PLS and the results shown on Table 2 follows: -

Table 2

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
E-Audit -> Performance	0.671	0.672	0.069	9.662	0.000

H: E-Audit influences the organization performance in Oman public sector as shown the relation is 0.671 so it is acceptable.

# 6. Conclusion

The results of this study's analysis of the data collection indicate that e-audits have an impact on performance in public organizations. The considerable and favorable relationship between electronic auditing and audit performance in Oman public organizations (Ministries) was also discovered by the results. According to this research's findings and other studies, electronic audits are essential for improving the economy. This means that utilizing e-audit in Oman can

make audit performance more efficient, and there are many benefits to doing so in both the public and commercial sectors. These conclusions and findings were given in the final section of the report after meeting all the requirements. Modernizing audit work sheets can help audit processes become more standardized and consistent, which could increase productivity and efficiency. This will make it easier to establish benchmarks for evaluating audit performance. Additionally, the use of automated work paper software can speed up audit information organization, decrease the time needed for audit file reviews, and enable audit work papers to be reviewed remotely. The investigation also advances public administration theory and practice. From a theoretical standpoint, it supports the relationship between organizational performance and technology utilization that has been found in earlier research. From a practical standpoint, the results imply that government internal auditors who seek to promote efficiency will profit from judicious use of information technology to combine their activities and improve execution of chosen measures. This requires addressing the restriction on the use of technology by government internal auditors. The objectives achievements in this research as on follows Table 3: -

Table 3

No	Research Objectives	Objective's achievements and Results
1	To study the challenges of E-Audit in Public Organizations.	Studied the challenges of E-Audit with internal auditors in Oman public sector and also, in previous studies in E-Audit
2	To examine the relationships between E-Audit and public organizations performance in Oman.	According to research analysis that the relationships between them is supported and strong effects.
3	To improve public organizations performance by adopting E- Audit in Oman	In data collection analyses the results respondence by internal auditors in Oman public sector supported the audit improvement by adopting E-Audit

# 6.1 Recommendations

Following the finding of this study, the following recommendations are made:

- Oman's enterprises must make sure that audit firms with extensive experience and a large staff are employed to improve the company's performance. The quantity of employees in audit firms is a significant driver of the audit quality of the audit assignment completed by the auditors.

The management of most publicly traded companies should use the services of a sizable audit firm with technology resources and knowledgeable people in each sector to improve performance and the company's reputation.
To keep their staff up to date on the latest developments in IT use, ministries should periodically train their

#### employees.

- Ministries has to elaborate more about the functions of IT and other technical developments.

#### References

Abdullah, M. Al-zoubi, Fares Saoud Al-Qadi the Effect of Electronic auditing in Reducing the Burden of Electronic Environment Complexity of Accounting Information System on the Auditor, Research Journal of Finance and Accounting Research Gate, ISSN 2222-2847 (Online)/ISSN 2222-1697 (Paper). (2016).

Asaf, A., E-Audit and minimization of risks of the tax evasion, 1(121)/2015 pp, 117-126. (2015).

Al-Taee, S. H. H. Effects of the remote auditing in Iraq during COVD-19. Economic Annals-XXI, 187. (2021).

- Ali, M. M, Impact of Using Technology in Auditing on Reducing the Fees of Auditors Offices and Companies in Jordan, Published by Canadian Center of Science and Education. International Journal of Business and Management; Vol. 14, No. 8; 2019, ISSN 1833-3850 E-ISSN 1833-8119.
- Boutheina, H. & Hiyam Sujud, The Impact of using IT on the Quality of Auditing in Lebanon, International Research Journal of Finance and Economics, ISSN 1450-2887 Issue 178 March 2020.
- Dharmawati, T., Wawo, A. B., & Rahma, M. N. Analyze, The Effectiveness of the E-Auditing System at the BPK-RI Representative of Southeast Sulawesi Province. (2019).
- Emekaponuzo, D. E., Jeremiah, O. O., & Alfred, E. J. Information technology implications of IFRS implementation in Nigeria: Challenges to auditors. Journal of Investment and Management, 6(1), 22-27. (2017).

- Hamshari, Y. M., Ali, H. Y., & Alqam, M. A. The relationship of professional skepticism to the risks of auditing and internal control, and the discovery of fraud and core errors in the financial statements in Jordan. Academic Journal of Interdisciplinary Studies, 10(2), 105-105. (2021).
- Joseph U. B. Azubike, Challenges of Computer Audits in Nigeria, IIARD International Journal of Banking and Finance Research ISSN 2406-8634 Vol. 5 No. 1 2019. (2016). www.iiardpub.org.
- Mehdi Sookhak, Abdulaha Gani, Hamid, Talebian, and Adnan, Akhunzada, Remote Data Auditing in Cloud Computing Environments: A Survey, Taxonomy, and Open Issues, ACM Comput. Surv. 47, 4, Article 65 (May 2015), 34 pages. DOI: http://dx.doi.org/10.1145/2764465.
- Mostéfaoui Sofiane, Hamimeche Nardjes, Akacem Omar, Contribution of the Information Technology Audit in Achieving the Quality of the Electronic Accounting System: Evidence from the Algerian Banking Sector, International Journal of Economics, Finance and Management Sciences, ISSN: 2326-9561. (2016).
- Mubako, Grace; O'Donnell, Ed Effect of fraud risk assessments on auditor skepticism: Unintended consequences on evidence evaluation. International Journal of Auditing, (2017). (), -. doi:10.1111/ijau.12104
- Nen, M., Popa, V., Scurtu, A., & Unc, R. L. The computer management-SEO audit. Revista de Management Comparat International, 18(3), 297-307. (2017).
- OMER ALI KAMIL, NASHAT MAJEED NASHAT The Impact of Information Technology on the Auditing Profession-Analytical Study, International Review of Management and Business Research, ISSN: 2306-9007. (2017).
- Prabowo, D., & Suhartini, D. The Effect of Independence and Integrity on Audit Quality: Is There a Moderating Role for e-Audit. Journal of Economics, Business, and Accountancy Ventura, 23, 305-319. (2021).
- Supriadi, T., Mulyani, S., Soepardi, E. M., & Farida, I. Influence of Auditor Competency in Using Information Technology on the Success of E-Audit System Implementation. EURASIA Journal of Mathematics, Science and Technology Education, 15(10). (2019).
- Supriadi, T., Mulyani, S., Soepardi, E. M., & Farida, I. Influence of Auditor Competency in Using Information Technology on the Success of E-Audit System Implementation. EURASIA Journal of Mathematics, Science and Technology Education, 15(10). (2019).
- Steven A. Solieri, Joan Hodowanitz, Electronic Audit Confirmations: Leveraging Technology to Reduce the Risk of Fraud, Journal of Forensic & Investigative Accounting Volume 8: Issue 1, January–June 2016.
- Taufiq Supriadi, S. Mulyani, Eddy Mulyadi Soepardi, Ida Farida, Influence of Auditor Competency in Using Information Technology on the Success of E-audit System implementation, Eurasia Journal of Mathematics, Science and Technology Education, 2019, 15(10), em1769, ISSN:1305-8223 (online).
- Thabit, T. The Influence of Mobile Information Technologies in Enhancing the Electronic Audit. Available at SSRN 3495738. (2019).
- Tung Hsien Wu, The Relationships between Computer Auditing Activity and Performance, International Workshop on Computer Auditing Education, pp, 1-8. (2015).

# Biography

**Mohammed Hamed Al-Salmi** is a full time PhD researcher in the Faculty of Technology Management and Entrepreneurship at Universiti Tun Hussein Onn Malaysia. He earned his Master's in Pune University in Business Management. He published papers in journals and conferences and his research interests including auditing and enterprise risk assessment, strategic management, and innovation. Currently, he focuses on E-Auditing, Information Technology, and innovation. And he works as Director of Internal Audit Department in Oman Public sector.

**Dr. Seow Ta Wee** is Associate Professor at the University Tun Hussein Onn Malaysia. He earned, Master's from the University Kebangsaan Malaysia, and PhD in Technology Management from University Kebangsaan Malaysia. He published journal and conference papers on solid waste management, innovation, and environmental education. His research interests include innovation, qualitative expertise in research, solid waste management and environmental management and community development.

**Dr. Fazal Akbar** is Assistant Professor at University of Buner, Pakistan. He published numerous papers in conferences and journals. His area of research is innovation, management, and risk-management. He published papers on Entrepreneurial Orientation, innovation, and entrepreneurship. He has a vast experience in analyzing quantitative and qualitative data. He has experience in reviewing papers for journals and conferences. He lectures in entrepreneurship and innovation management.