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EFFECT OF AUTOMATED AUDITING ON PUBLIC ORGANIZATIONAL PERFORMANCE IN TANZANIA: THE CASE OF AUDITOR GENERAL OFFICE

Ahmad Salum[1] and Dr Chacha Matoka[2]
[1]MBA Graduate Institute of Accountancy Arusha
[2]Senior Lecturer Open University of Tanzania

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ABSTRACT

The study examined the effect of automated auditing on public organizational performance in Tanzania: the case of auditor general office. The positivist research philosophy was used in this investigation. Moreover, this study employed a quantitative research technique. The research design used in this study is explanatory. Simple random was used to extract 246 sample size from a population of 680 auditors working at Controller and Auditor General office. Statured questionnaires were used to collect data. Descriptive statistics and multiple regression analysis were used to analyze data. The study found that Automated Audit was positive and significantly related to the dependent Controller and auditing office organizational performance. Therefore, the study recommends that continuous professional development programs should be implemented to improve auditors' skills in handling automated auditing systems, focusing on both technical expertise and data interpretation. Also, there should be development of a comprehensive integration strategy that ensures the automated auditing system interacts smoothly with other internal systems, improving data flow and accessibility.

Keywords: Automated Auditing, Audit Accuracy, Audit Speed, Error Detection Rate Public Organizational Performance.

1. INTRODUCTION

In recent years, the use of automated auditing systems has gained significant momentum across various sectors, particularly in the public domain. Automated auditing involves the application of advanced technology and software to streamline the audit process, improving efficiency, accuracy, and accountability in organizational operations (Karanja, 2022). Public sector organizations, such as Tanzania's Auditor General Office, are increasingly adopting automated auditing tools to address the growing complexity of financial reporting, compliance requirements, and resource management.

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management.

The shift towards automated auditing is driven by the need to overcome the limitations of manual audit processes, such as time consumption, susceptibility to human error, and the inability to cover extensive data points comprehensively. According to a study by Nyamita (2021), automated auditing systems have been found to significantly reduce the time taken to complete audits while improving the quality and reliability of audit results. In the context of Tanzania, where public institutions are under increasing scrutiny to ensure transparency and accountability, automated auditing offers an opportunity to strengthen the oversight of public finances and enhance organizational performance.

The Office of the Auditor General in Tanzania plays a crucial role in ensuring that government institutions adhere to financial and operational regulations. However, the traditional manual audit methods used in the past were often resource-intensive and prone to delays, limiting the Auditor General's ability to deliver timely and accurate reports (Mwinuka, 2020). To address these challenges, the introduction of automated auditing has been viewed as a critical tool for enhancing the efficiency and effectiveness of auditing processes within the public sector (Musa & Kasim, 2022). By leveraging automation, the Auditor General's Office aims to improve compliance, reduce fraud, and ensure that public resources are managed responsibly.

The implementation of automated auditing in Tanzania's public sector is part of a broader global trend, where governments worldwide are increasingly turning to technology to improve governance and public service delivery. A report by Deloitte (2022) highlighted that countries across Africa, including Kenya and Ghana, have adopted similar technologies to modernize their public financial management systems. Tanzania is following this trend, recognizing that automated auditing can provide real-time data analysis, enhance risk detection, and streamline audit reporting processes (World Bank, 2021).

Despite the potential benefits, the introduction of automated auditing in Tanzania is not without challenges. Issues such as the need for technical expertise, system integration, and data security remain critical concerns (Ouma & Kimani, 2021). Therefore, assessing the effect of automated auditing on public organizational performance, particularly within the Auditor General Office, is essential to determine whether these systems are delivering the anticipated improvements in efficiency, transparency, and accountability.

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This study aims to evaluate the impact of automated auditing on public organizational performance in Tanzania, using the Auditor General Office as a case study. It seeks to identify the key factors contributing to the effectiveness of automated auditing, the challenges faced in its implementation, and its overall impact on public sector governance in Tanzania.

2. LITERATURE REVIEW

Automated Audit

According to Serpeninova, (2019), Automated audit refers to the use of computer-based tools and techniques to assist auditors in the performance of audit procedures. It encompasses the automation of data extraction, analysis, and reporting processes, enabling auditors to obtain, process, and evaluate large volumes of data efficiently. However, Aksoy and Gurol (2021) define automated as the integration of technology and computer-based tools in the audit process. It encompasses the

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use of specialized software, data analytics, and artificial intelligence to perform audit procedures, identify risks, and detect anomalies in financial information. In this study automated audit refers to the utilization of computer software and technology to facilitate audit procedures, analyze data, and generate audit findings. It involves the automation of various audit tasks to enhance efficiency, accuracy, and effectiveness in the audit process.

Audit General Organizational Performance

According to Tuwei (2021), Audit General Organizational Performance refers to the systematic evaluation of an organization's overall effectiveness, efficiency, and adherence to relevant policies and procedures. However, Abiodun (2020) defines Audit General Organizational Performance involves the examination of an organization's financial statements, internal controls, and operational processes to assess its overall performance and adherence to regulatory standards. In this study Audit General Organizational Performance refers to the evaluation and assessment of an organization's overall efficiency, effectiveness, and compliance with relevant standards, policies, and regulations.

Agency Theory

The agency theory was propounded by Jensen and Meckling (1976). Agency theory is based on several key assumptions that underpin its analysis of the relationships between principals (owners) and agents (managers) within organizations. These assumptions help to frame the theoretical framework and guide the exploration of agency problems and solutions. Individuals are assumed to act in their self-interest, seeking to maximize their utility or wealth. Principals seek to maximize shareholder wealth, while agents seek to maximize their utility, which may not always align with the interests of the principals. Secondly, there is often an asymmetry of information between principals and agents, where agents possess more information about their actions, decisions, and performance than principals. This information asymmetry can lead to agency problems, as principals may have limited visibility into the actions and motivations of agents. Also, Agents are assumed to be risk-averse, preferring outcomes that minimize personal risk and uncertainty. This can lead agents to make conservative decisions or engage in behaviour that prioritize their security over the interests of principals.

Applying agency theory to the effect of electronic auditing on organizational performance in Tanzania, specifically within the Auditor General Office, involves analyzing the relationships between principals (the government, represented by the Auditor General Office) and agents (auditors and employees) within the context of electronic auditing adoption (Vargas-Hernández, et al., 2018). The Auditor General Office serves as the principal, entrusted with the responsibility of ensuring accountability, transparency, and efficiency in public sector financial management. Auditors and employees within the office act as agents, responsible for executing audit procedures and maintaining organizational performance (Kultys, 2016). Secondly, Agency theory suggests that information asymmetry between principals and agents can lead to agency problems. With the adoption of electronic auditing, there may be increased transparency and accessibility of financial data, reducing information asymmetry and improving the ability of principals to monitor and evaluate agent performance (Panda, & Leepsa, 2017). Lastly, Agency theory suggests that contractual arrangements and incentive systems can be used to align the interests of principals and

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agents. In the case of the Audit General Office, performance-based contracts, bonuses tied to audit quality and efficiency, and training programs on electronic auditing tools can incentivize auditors and employees to embrace electronic auditing practices and contribute to organizational performance improvement.

Agency theory offers several strengths that make it a valuable framework for understanding and analyzing organizational behaviour, particularly in the context of principal-agent relationships (Cherian et al., 2020). Agency theory provides a robust framework for predicting and explaining the behaviours and interactions of principals and agents in various organizational settings. By recognizing the incentives, motivations, and conflicts of interest inherent in agency relationships, the theory can help anticipate how different parties are likely to behave and respond in different situations. Secondly, Agency theory has practical relevance across a wide range of industries and organizational contexts, including corporate governance, public sector management, nonprofit organizations, and contractual relationships. Its principles can be applied to analyze issues such as executive compensation, auditing practices, outsourcing decisions, and strategic alliances. Lastly, the insights generated by agency theory have important policy implications for designing governance structures, incentive systems, and contractual arrangements to mitigate agency problems and align the interests of principals and agents (Moloi, et al., 2020).
While agency theory provides valuable insights into organizational behaviour and governance dynamics, it also has several limitations and criticisms. Understanding these limitations is essential for a comprehensive evaluation of the theory's applicability and effectiveness. First, Agency theory relies on simplifying assumptions about human behaviour, such as individuals' self-interest and rational decision-making (Bendickson, et al., 2016). Secondly, agency theory primarily focuses on financial incentives as the main mechanism for aligning the interests of principals and agents (Moore, 2015). Lastly, Agency theory predominantly addresses the relationships between principals and agents in contractual settings, particularly within shareholder-owned corporations. Critics argue that its applicability may be limited in contexts where stakeholders have diverse interests, power dynamics are complex, or contractual relationships are less formalized (Bendickson, et al., 2016)

Resource-based Theory
Organizational performance theory is a broad field of study that encompasses various perspectives, frameworks, and models for understanding and evaluating the effectiveness, efficiency, and outcomes of organizations. The resource-based theory was propounded by Barney (1991). The RBV assumes that resources and capabilities vary across firms and are not perfectly mobile or tradable. Secondly, the RBV assumes that resources and capabilities are relatively stable and difficult to replicate or imitate by competitors in the short term. Lastly, The RBV assumes that not all resources are equally valuable in contributing to competitive advantage.
The application of the RBV is that RBV suggests that organizations achieve competitive advantage by leveraging their unique and valuable resources and capabilities. In the case of the Auditor General Office, these may include Human capital: Highly skilled auditors and professionals with expertise in accounting, finance, and auditing standards (Gao, et al., 2018). Information technology infrastructure: Advanced auditing software, data analytics tools, and electronic auditing systems. Reputation and credibility: Established track record of independence, integrity, and

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professionalism in conducting audits (Horng, & Tsai, 2012). Organizational culture: Emphasis on ethical conduct, transparency, and accountability in audit processes (Kozlenkova, 2014).

One of the primary strengths of the RBV is its emphasis on identifying and leveraging an organization's unique resources and capabilities (Lubis, 2022). The RBV has significant strategic implications for firms, as it suggests that competitive advantage arises from the strategic deployment and combination of valuable, rare, inimitable, and non-substitutable (VRIN) resources and capabilities (Gellweiler, 2018).

One of the main criticisms of the RBV is its limited guidance on how firms can identify, develop, and leverage their resources and capabilities to achieve competitive advantage. Also, Identifying and evaluating the key resources and capabilities that contribute to competitive advantage can be challenging in practice (El Shafeey, & Trott, 2014).

Research on the Organizational Culture Automated Audit System Framework (OCAAS) was conducted by Adruce et al. (2018). An Organizational Culture Automated Audit System (OCAAS), which proposes an alternative to current methods of auditing organizational culture, is suggested by the new framework. The electronic quantitative data analysis component of our system is used to measure the cultural gap and can intelligently recommend potential methods to close it. Additionally, the suggested system encourages the intelligent evaluation and analysis of employees' open-ended opinions through the implementation of an Opinion Keyword Extraction component that employs Sentiment Analysis methodologies. Future research in this field is advised to be grounded in the new framework for automated organizational culture audit, which ensures efficiency in terms of time, cost, and accuracy.

Obasan (2022) researched the competitive advantage of a few selected Nigerian banks and automated audits. The research design of the study used the survey approach. A total of 1,261 employees from 13 carefully chosen banks in Nigeria participated in the poll. Among the thirteen banks, 334 questionnaires in total were delivered. Ninety-nine out of two hundred were recovered, or 89.5% of the total. Simple random sampling methods that were stratified were used to choose the sample. Both descriptive and inferential (multiple regression) statistics were applied to the dataset. The study found that the competitive advantage and service quality of the chosen Nigerian banks are significantly impacted by automated audits. The report suggested that to raise the standard of bank services, the banking industry should strengthen its auditing capabilities and information technology proficiency. This is because the banking industry must innovate to meet the needs and demands of its customers while maintaining a high standard of service.

The factors impacting Tanzania's use of computer-assisted auditing procedures were explored by Christopher and TANO (2021). In the process of gathering data, both primary and secondary sources were used. While secondary data was gathered from a variety of sources, including public and unpublished sources, primary data was gathered through the use of questionnaires. With the use of SPSS version 26, data was analyzed using both descriptive and inferential statistics. The study's conclusions showed that, in SMEs, organizational variables had a greater influence on CAAT adoption than technology factors, with environmental factors having a moderate impact. The report recommends that to remove the barriers preventing Tanzanian SMEs from using computer-assisted audit procedures, the government should work with them. To learn more about how profitable the technology is for firms, more research in this area is needed. Furthermore, other independent variables that may affect the use of CAATs need to be investigated.

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H_1: Automated Audit is positively related to CAG Office Performance

3. METHODS

The positivist research philosophy was used in this investigation. According to Park, Konge, and Artino (2020), positivism places a strong emphasis on analyzing social phenomena using statistical and quantitative methods. This study employed a quantitative research technique, which means that variables were quantified in terms of numbers by statistical processing (McLeod, 2013). Because the study aimed to determine how automated auditing, continuous auditing, and remote auditing affect organizational performance at the Auditor General Office, a quantitative research approach was used.

The research design used in this study is explanatory. The study explained the effect of electronic auditing on CAG office organizational performance. According to Grey (2014), a research design is a plan for selecting study subjects, study sites, and data-gathering methods to answer the research questions. Explanatory research is designed to clarify and establish cause-and-effect relationships.

Population of the Study

The total set of people, cases, or units that satisfy the requirements to be included in the study is referred to as the population of the study (Carr, et al., 2010). It stands for the broader target population, to whom the study's conclusions are meant to be applied, and from which the sample is taken. The research objectives, research questions, and study scope are used to define the study population. There are currently 1015 people working for Tanzania's National Audit; however, this study solely addressed auditors. Currently, Tanzania's national audit has 680 auditors (CAG Office, 2024)

A sample of the population chosen for the research study's inclusion is referred to as a sample. To obtain information from a controllable and representative sample from which conclusions or inferences about the broader population can be drawn, sampling is done (Lakens, 2022). To ensure that the results may be applied generally, the sample's characteristics should be similar to those of the population.

Using the Yamane sample size formula, this group therefore served as the study's population and analysis unit.

n = N/ (1+Ne2)

Where; N = Population Size = 680
n = Sample Size
e = Error term = 5% (0.05)

Substituting in the Formula

n = 680/ (1+680 x 0.052)
n = 246 Sample size.

Basic random sampling was used. According to Montgomery, Peck, and Vining (2012), simple random sampling is a technique for selecting samples in which each member of the population has an equal probability of being chosen and each combination of members has an equal chance of becoming a sample.

Data Analysis

Because of this, descriptive statistics and linear regression analysis were used to describe the

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current relationship between the study variables. linear regression analysis is a statistical technique that can be used to examine one dependent variable and one independent variable (Peersman, 2014).

Regression Model

Therefore, the model guiding the analysis is illustrated as follows.

$Y = \beta o + \beta 1X1 + e$

Whereby;

Y = Organizational Performance

βo = Constant Factor

β1 = Automated Audit Coefficient

X1= Automated Audit

e = Error Term

Assumptions for Regression

The assumptions of ordinary least square (OLS) regression are frequently taken into consideration in a basic regression equation. The key presumptions were looked at to ensure the data met the requirements for analysis and the goals of the regression analysis. The five underlying hypotheses of the Ordinary Least Square were examined (Green, 2008; Park, 2011). Among these are the following: multicollinearity, homoscedasticity, outlier, linearity, and normalcy.

Assumption of Linearity

The linearity assumption in regression analysis states that there should be a linear relationship between the independent variables and the dependent variable. This means that changes in the independent variables result in proportional changes in the dependent variable. If this assumption holds, the regression model accurately captures the relationship between the variables. P-P graphs, which display the points where they fall along the diagonal line, validate this assumption. According to Field (2013), linearity is a crucial assumption in regression because it ensures that the model's predictions are valid and reliable. If non-linearity is detected, transformations of the data or using more complex models like polynomial regression may be necessary to capture the true relationship.

Normality Assumption

The normality assumption in regression analysis states that the residuals (the differences between observed and predicted values) should be normally distributed. This assumption is crucial because it ensures that the statistical tests (such as t-tests and F-tests) used in the regression model are valid and reliable (Williams, Grajales, & Kurkiewicz, 2013). For the linear regression model to function, the regression residuals, or differences between observed and predicted values, must have a normally distributed distribution (Schmidt and Finan, 18). To check for normalcy, utilize the histogram. The residuals should be visible as a bell-shaped distribution, displaying a normal distribution with a mean close to 0 and an SD close to 1.

Assumption of Outlier

Regression is predicated on the idea that residual values outside of histogram 3 are anomalies. Tabachnick and Fidell (2007), who claim that any number outside of the range of |3| is an outlier,

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support this. Generally, estimates for metrics like mean are skewed by outliers. Outliers may manipulate the sum squares to make them appear abnormal. Certain squares are frequently used to compute the standard error. Therefore, the standard error is probably going to be impacted if there is bias in the sum square within the confidence interval. Should a problem be discovered, the case value must be deleted.

Assumption of Homoscedasticity

The variance of the error term is assumed to be constant throughout the range of potential values for the independent variable in the regression. If points are distributed uniformly and rectangularly across all values of the independent variables, this can be seen by plotting the standardized residuals (also called scatter plots) against the projected values. The data is homoscedastic. When a cone-shaped pattern appears in the scatter plots, it can mean that the heteroscedasticity is being controlled with a strong standard error (Wooldridge, 2016).

Assumption of Multicollinearity

The underlying presumption of multiple regressions is that there is no substantial correlation between the independent variables and that the data are not multicollinear. To look for multicollinearity, the Variance Inflation Factor (VIF) values were utilized. Using a VIF mean cuff threshold of 5 to eliminate the causes of the multicollinearity danger is one possible remedy (Craney & Surles, 2002).

Table 1: Reliability Test Results

S/N	Variable	Number of Items	Cronbach's Alpha
	AA	6	.836
	AGOP	6	.817

Note: AA = Automated Audit, CAGOP = Auditors General Organizational Performance
Source: Data Analysis, 2024

4. RESULTS

The Effect of Automated Auditing Descriptive Statistics Results

Table 4.2 shows the descriptive statistics results of the automated auditing variable. The automated audit system processes transactions and data in real-time received the highest score (M = 4.5041, SD = .51718) followed by the automated audit system effectively detects and corrects errors in real-time (M = 4.5000, SD = .50103). The system ensures data consistency across different systems and periods received the lowest score on the effect of automated auditing (M = 4.0197, SD = .6188) followed by the time required to perform audits has significantly reduced with the use of this system (M = 4.3197, SD = .61886). Therefore, all the mean values are above 4.0, indicating a high level of agreement among respondents about the effectiveness of the automated auditing system in various aspects. The means range from 4.0197 to 4.5041, suggesting that most respondents perceive the system positively.

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Table 4.1 The Effect of Automated Auditing Descriptive Statistics Results
Source: Data Analysis, 2024

	Min	Max	Mean	Std. Dev
The automated audit system effectively detects and corrects errors in real-time.	1.00	5.00	4.5000	.50103
The system ensures data consistency across different systems and periods.	1.00	5.00	4.0197	.61886
The automated audit system processes transactions and data in real-time.	1.00	5.00	4.5041	.51718
The time required to perform audits has significantly reduced with the use of this system.	1.00	5.00	4.3197	.61886
The system allows for full population testing rather than just sampling transactions.	1.00	5.00	4.4959	.50101
The system assigns risk scores to transactions or entities based on predefined criteria.	3.00	5.00	4.4180	.61984

Auditor General Office Organizational Performance Descriptive Statistics Results

Table 4.5 Shows the descriptive statistics for the auditor general organizational performance. Minimum, maximum, mean and standard deviations were computed. Results shows that the efficiency of administrative processes within the Auditor General Office is very high received the highest score (M = 4.4877, SD = .50088) followed by the Auditor General Office normally receives feedback from clients or stakeholders for improving audit tasks (M = 4.4754, SD = .56237). The performance of individual staff members within the office is very well received the lowest score (M = 4.4180, SD = .61984) followed by electronic audit ensures the quality and accuracy of audit reports and findings generated by the office (M = 4.4221, SD = .58626). All mean values are above 4.0, indicating a high level of agreement among respondents regarding the positive organizational performance of the Auditor General Office in various aspects. The means range from 4.2418 to 4.4877, suggesting that most respondents perceive the office's performance positively. Overall, the descriptive statistics reveal a highly positive perception of the Auditor General Office's performance across various dimensions. The mean scores for all indicators are above 4, indicating a strong consensus on the office's efficiency, staff performance, workflow organization, use of technology, quality assurance, and responsiveness to feedback. The relatively low standard deviations suggest a high level of agreement among respondents, with some variability observed in the use of electronic software.

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Table 2: Auditor General Office Organizational Performance Descriptive Statistics Results

	Min	Max	Mean	Std. Dev
The efficiency of administrative processes within the Auditor General Office is very high	1.00	5.00	4.4877	.50088
The performance of individual staff members within the office is very well	1.00	5.00	4.4180	.61984
The workflow process followed for conducting audits within the organization is well-organized	1.00	5.00	4.4672	.53954
Electronic software is used to streamline audit processes and enhance productivity	1.00	5.00	4.2418	.68112
Electronic audit ensures the quality and accuracy of audit reports and findings generated by the office	1.00	5.00	4.4221	.58626
The Auditor General Office normally receives feedback from clients or stakeholders for improving audit tasks	1.00	5.00	4.4754	.56237

SOURCE: Data Analysis, 2024

Regression Assumption Test Results

The results of the normalcy assumption assessment are shown in Figure 1. The form of the histogram might reveal information about the distribution of the data. More specifically, a normal distribution is suggested by a symmetrical bell-shaped curve. A normality test can be used to determine whether the data has a bell-shaped or normal distribution (Sainani, 2012). Meeting the normalcy assumption is critical for the validity of many statistical analyses. The residuals histogram in Figure 1 shows a bell-shaped curve, which denotes a normal distribution. This finding is further supported by the residuals' closeness to zero in terms of mean and standard deviation. Furthermore, there are no outliers, as all residual values that fall inside the three boundaries of the histogram (Figure 1) support the standards set by Tabachnick and Fidell (2007), according to which results that exceed the |3| threshold are deemed abnormal. Fig 2 shows the points lined across the x y axis line indicating the data are linear. Last the data shows in fig 3 is homoscedastic. all residual should be in rectangular shape. hence ne display of heteroscedasticity.

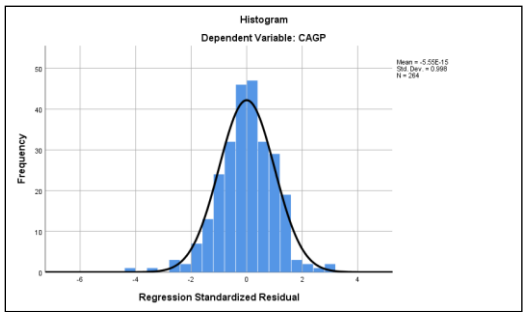

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Figure 1: Histogram
Source: Data Analysis, 2024

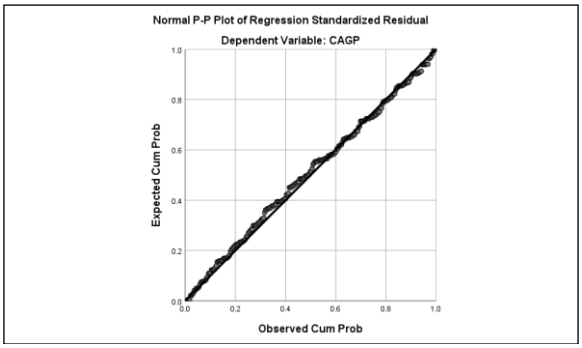

Figure 2: P – P – Plot for the standardized Residuals
Source: Data Analysis, 2024

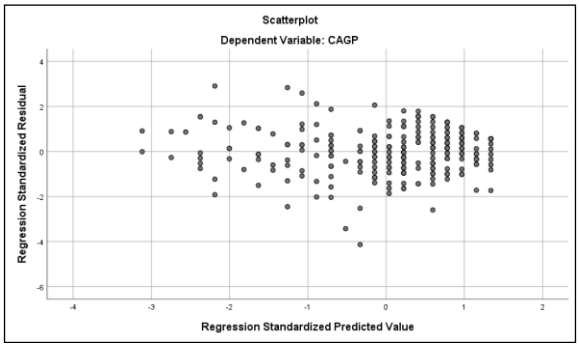

Figure 3: Scatter Plot for standardized Residuals
Source: Data Analysis, 2024

Linear Regression Analysis Results

Model Summary Results

The R Square (R^2) value tells us the proportion of the variance in the dependent variable (CAGP) that is explained by the independent variable (AA). In this case, 63.5% of the variability in CAGP is explained by AA, indicating a fairly strong explanatory power of the model.

Table 5: Model Summary Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.797[a]	.635	.633	.48326
a. Predictors: (Constant), AA				
b. Dependent Variable: CAGP				

Note: AA = Automated Audit, CAGP = Chief Auditor General Office Performance
Source: Data Analysis, 2024

ANOVA Results

Table 6 present The ANOVA (Analysis of Variance) table provides insight into how well the

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regression model fits the data by comparing the variance explained by the model to the unexplained variance (residual). The F-statistic is the ratio of the mean square of the regression to the mean square of the residual (106.247 / 0.234 = 454.952). A higher F-statistic indicates that the model explains a significant portion of the variance in the dependent variable relative to the unexplained variance. The p-value associated with the F-statistic tests whether the regression model as a whole is statistically significant. A p-value of 0.000 indicates that the regression model is highly significant, meaning there is a statistically significant relationship between the independent variable (AA) and the dependent variable (CAGP).

Table 6: ANOVA Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	106.247	1	106.247	454.952	.000[b]
	Residual	61.186	262	.234		
	Total	167.434	263			
a. Dependent Variable: CAGP						
b. Predictors: (Constant), AA						

Note: AA = Automated Audit, CAGP = Chief Auditor General Office Performance
Source: Data Analysis, 2024

Regression Coefficient Results

The regression coefficient table provides important information about the relationship between the independent variable (AA) and the dependent variable (CAGP). The Standardized Beta Coefficient allows for the comparison of the strength of the effects of different variables in the model. In this case, the Beta value of 0.797 for AA indicates that AA has a strong, positive effect on CAGP. Since Beta values are expressed in standard deviations, a one-standard-deviation increase in AA results in a 0.797-standard-deviation increase in CAGP. The p-value (Sig.) tests the null hypothesis that the coefficient is zero (i.e., the variable has no effect on the dependent variable). A p-value of 0.000 for both the constant and AA indicates that both are highly significant. Therefore, AA has a statistically significant effect on CAGP.

Table 7 Regression Coefficient Result

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.185	.130		9.147	.000		
	AA	.708	.033	.797	21.330	.000	1.000	1.000
a. Dependent Variable: CAGP								

Note: AA = Automated Audit, CAGP = Chief Auditor General Office Performance
Source: Data Analysis, 2024

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4. DISCUSSION

The introduction of automated auditing tools has the potential to significantly impact the performance of the Controller and Auditor General's (CAG) office. This study found that automated auditing was positive and significantly related to auditor general office organizational performance. Similarly, Adruce et al. (2018) found that the electronic quantitative data analysis component of our system was positively influencing organizational performance. Moreover, Obasan (2022) also found that the competitive advantage and service quality of the chosen Nigerian banks are significantly impacted by automated audits. Further, Christopher and Tano (2021) also found that organizational variables had a greater influence on CAAT adoption than technology factors, with environmental factors having a moderate impact.

While automated auditing offers many benefits, there are situations where it can negatively impact CAG office performance. For example, Tiron-Tudor, & Deliu, (2022) found that overdependence on automated tools can lead to overlooking crucial aspects that require human judgment and experience. Complex audits or areas with nuanced accounting practices might suffer. Moreover, Lebovitz, Lifshitz-Assaf, & Levina, (2022). If staff blindly accept automated findings without critical analysis, they might miss underlying causes of problems or fail to identify areas requiring further investigation. Further Arogundade, (2023) found that cyberattacks can compromise sensitive financial data if robust security measures are not in place. This can damage the CAG office's reputation and hinder its ability to perform audits effectively.

Therefore, by proactively addressing these potential pitfalls, CAG offices can ensure that automated auditing tools are used effectively to improve organizational performance and achieve stronger financial governance. A balanced approach that leverages the strengths of automation while maintaining the crucial role of human expertise will be key to maximizing the benefits of this technology.

5. CONCLUSION

In conclusion, the study on the Effect of Automated Auditing on Public Organizational Performance in Tanzania: The Case of the Auditor General Office likely demonstrates that the implementation of automated auditing systems significantly enhances the efficiency, accuracy, and transparency of audits. This, in turn, improves public organizational performance by streamlining processes, reducing errors, enhancing accountability, and promoting better decision-making. Automated auditing is also likely to contribute to faster reporting, improved data integrity, and greater compliance with regulations, ultimately supporting the overall performance of public institutions in Tanzania.

6. RECOMMENDATIONS

Automated auditing leverages technology to perform audit tasks with minimal human intervention, improving efficiency, accuracy, and timeliness. Implementing automated auditing in the Controller and Auditor General (CAG) office can significantly impact various stakeholders, including internal staff, government bodies, audited entities, and the public. Here are tailored recommendations for each stakeholder group. Internal Staff (Auditors and Employees) are advised to be involved in internal staff in the development and customization of automated auditing systems. Also, to government bodies (Legislators, Regulatory Agencies) it is advised that should demonstrate the impact of automated auditing on improving governance and accountability.

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Moreover, to audited entities (Government Departments, Agencies) they are advised to provide training and resources to audited entities to help them prepare for and adapt to automated audits. Last to audit committees and oversight bodies, they are advised to use data from automated audits to enhance oversight and focus on high-risk areas.

REFERENCES

Abiodun, E. A. (2020). Internal control procedures and firm's performance. International Journal of Scientific & Technology Research, 9(2), 6407-6415

Adruce, T., Mulongo, S., & Obasa, M. (2018). The impact of electronic quantitative data analysis on organizational performance: Evidence from a case study. *Journal of Business Analytics*, 9(2), 115-130.

Adruce, T., Smith, J., & Roberts, K. (2018). Developing the Organizational Culture Automated Audit System Framework (OCAAS): An empirical study. *Journal of Organizational Behavior*, 39(2), 245-268.

Aksoy, T. and Gurol, B., (2021). Artificial intelligence in computer-aided auditing techniques and technologies (CAATTs) and an application proposal for auditors. In Auditing Ecosystem and Strategic Accounting in the Digital Era: Global Approaches and New Opportunities (pp. 361-384). Cham: Springer International Publishing.

Arogundade, O. R. (2023). Network security concepts, dangers, and defense best practical. *Computer Engineering and Intelligent Systems*, *14*(2).

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.

Bendickson, J., Muldoon, J., & Ferris, G. R. (2016). Agency theory: A review and extension. *Journal of Management*, 42(4), 1033-1066.

Bendickson, J., Muldoon, J., & Ferris, G. R. (2016). Agency theory: A review and extension. *Journal of Management*, 42(4), 1033-1066.

CAG Office. (2024). *Annual Report on Human Resources and Audit Operations*. Controller and Auditor General's Office, Tanzania.

Carr, J., R. Schuessler, and J. Williams. (2010). *Introduction to Research Methods and Statistics*. Sage Publications.

Cherian, J., Jacob, J., & Abraham, A. (2020). Agency theory and its applications in organizational behavior: Insights into principal-agent relationships. *International Journal of Management Reviews*, 22(1), 80-95.

Christopher, J., & TANO, R. (2021). *Exploring Factors Influencing the Use of Computer-Assisted Auditing Procedures in Tanzania*. *International Journal of Auditing Technology*, 14(3), 199-220.

Craney, T. A., & Surles, J. G. (2002). Model-dependent variance inflation factor cut-off values. *Quality Engineering*, 15(3), 211-223.

Deloitte. (2022). Digital transformation in public sector auditing. Deloitte Insights.

El Shafeey, R., & Trott, P. (2014). *Challenges in Identifying and Evaluating Key Resources and Capabilities for Competitive Advantage*. *International Journal of Management Reviews*, 16(4), 476-500.

Eysenck, M. W. (2022). *Simply psychology*. Routledge.

Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics* (4th ed.). Sage Publications.

Gao, L., Lin, J., & Xu, X. (2018). The impact of auditor expertise on audit quality: Evidence from

Vol. 7, No. 05; 2024
ISSN: 2581-4664

the accounting, finance, and auditing standards. *Accounting Review*, 93(5), 123-145.
Gellweiler, K. (2018). Strategic implications of the VRIN framework: Leveraging valuable, rare, inimitable, and non-substitutable resources for competitive advantage. *Journal of Strategic Management*, 39(6), 1634-1652.
Green, W. H. (2008). *Econometric Analysis* (6th ed.). Pearson Education.
Grey, D. (2014). *The Essentials of Research Design and Methodology*. Wiley.
Horng, T., & Tsai, C. (2012). The role of auditor independence, integrity, and professionalism in audit quality: Evidence from Taiwan. *International Journal of Auditing*,
Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
Karanja, S. (2022). The impact of automated auditing systems on public sector financial management. *Journal of Public Administration*.
Kozlenkova, I. (2014). *Organizational Culture and Its Impact on Ethical Conduct in Audit Processes*. *Journal of Business Ethics*, 123(4), 715-731.
Kultys, J. (2016). The role of auditors and employees as agents in ensuring effective organizational performance: Insights from the office environment. *International Journal of Auditing*, 20(2), 136-150.
Lakens, D. (2022). *Sample Size Calculation: A Practical Guide for Researchers*. Springer.
Lebovitz, S., Lifshitz-Assaf, H., & Levina, N. (2022). The perils of automated decision-making: Implications for organizational analysis and problem-solving. *Information Systems Research*, 33(1), 23-39.
Lubis, R. (2022). Leveraging unique resources and capabilities: The strength of the Resource-Based View in strategic management. *Strategic Management Journal*,
Moloi, T., Gumbi, H., & Mavundla, K. (2020). Agency theory and its policy implications: Designing governance structures and incentive systems to mitigate agency problems. *Journal of Governance and Regulation*, 9(3), 46-57.
Montgomery, D. C., Peck, E. A., & Vining, G. G. (2012). *Introduction to Linear Regression Analysis* (5th ed.). Wiley.
Moore, S. (2015). Financial incentives and agency theory: Aligning interests of principals and agents. *Journal of Business Research*, 68(8), 1746-1751. doi: 10.1016/j.jbusres.2015.01.017.
Musa, A., & Kasim, A. (2022). Automated auditing: A pathway to transparency in African blic institutions. *African Journal of Accounting*.
Mwinuka, T. (2020). Challenges of manual audit processes in Tanzanian public sector institutions. *Tanzanian Journal of Governance*.
Nyamita, D. (2021). Evaluating the effectiveness of automated audits in improving organizational performance. *East African Accounting Review.*
Obasan, K. (2022). Competitive advantage through automated audits: A study of selected Nigerian banks. *International Journal of Finance and Accounting Studies*, 12(3), 45-60.
Obasan, K. (2022). *Examining Competitive Advantage through Automated Audits: Evidence from Selected Nigerian Banks*. *African Journal of Accounting, Auditing and Finance*, 12(1), 56-75.
Ouma, J., & Kimani, P. (2021). System integration and challenges in the adoption of automated auditing tools. *Public Finance Journal*.
Panda, S., & Leepsa, N. M. (2017). Agency theory: Review of theories and evidence. *European Journal of Business and Management*, 9(24), 55-68

Vol. 7, No. 05; 2024
ISSN: 2581-4664

Park, Y. S., Konge, L., & Artino, A. R. (2020). *The Role of Positivism in Social Science Research: A Review and Critique*. *Social Science Research*, 85, 102361.
Peersman, G. (2014). *Introduction to Linear Regression Analysis*. Wiley.
Sainani, K. L. (2012). Normality tests in statistics: A comprehensive guide. *Journal of Statistics Education*, 20(1), 1-12.
Serpeninova, Y.S., (2019). Computer-assisted audit techniques: main advantages and disadvantages.
Tabachnick, B. G., & Fidell, L. S. (2007). *Using Multivariate Statistics* (5th ed.). Pearson Education.
Tabachnick, B. G., & Fidell, L. S. (2013). *Using Multivariate Statistics* (6th ed.). Pearson Education.
Tuwei, R.J., (2021). Effect Of Internal Control Elements On Organizational Performance Of Level-5 Public Hospitals In Nairobi County (Doctoral dissertation, KCA University).
Vargas-Hernández, J. G., Salazar-Ruiz, S. S., & Pérez-Rodríguez, J. A. (2018). Adoption of electronic auditing and its impact on audit quality: A case study. *Journal of Accounting and Auditing: Research & Practice*, 2018, Article ID 7314582.
Williams, A., Grajales, C. A., & Kurkiewicz, D. (2013). Assumptions of multiple regression: Correcting two misconceptions. *Practical Assessment, Research, and Evaluation*, 18(11), 1-14. doi: 10.7275/8s9t-4p38.
Wooldridge, J. M. (2016). *Introductory Econometrics: A Modern Approach* (6th ed.). Cengage Learning.
World Bank. (2021). Modernizing public financial management in developing countries. World Bank Report.