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Effects of Computer Assisted Audit Techniques on Quality of Internal Audit Reports in Kenya

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Abstract:
This study explores how Computer-Assisted Audit Techniques (CAATs) affect the quality of internal audit reports in Kenyan businesses. Modern auditing now relies heavily on CAATs as a key instrument for efficiency improvement, comprehensive data collection, and confidentiality protection. This study investigates the use of technology in the audit process, emphasizing its potential to boost productivity, gather significant amounts of data, speed up the decision-making process, and protect data privacy. The theoretical framework draws from two main theories: Performance Expectancy Theory and Contingency Theory. The research reviews existing empirical studies to underscore CAATs' positive and negative influences on internal audit reports. It highlights the need for proper training and support to harness CAATs' potential effectively. Challenges, including the lack of resources, conflicts of interest, and difficulties in implementation, are identified. The study concludes that while CAATs offer numerous advantages in auditing, their successful integration requires a balance between technology, training, and human expertise. As the audit profession continues to evolve, understanding the implications of CAATs on internal audit reports is crucial for ensuring the integrity and quality of financial information in all sectors.

Keywords: CAATS, Quality Internal Audi Reports, Report writing, Data collection, Data analysis

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1. Background

Computer-assisted audit techniques help an auditor execute audit procedures through the use of technology. CAATs are the utilization of any kind of statistical gadget in the audit process to give assistance in the design and control and thus clarify the audit process (Sayana & CISA, 2003). The adoption of technology in auditing is regarded as an essential tool in assessing the efficiency of audit duties. The auditing

process is seen as tiresome and hence requires concentration on efficiency and competitiveness to increase the productivity of auditors. With the evolution of technological tools in auditing, there is a significant improvement in productivity; sufficient data can be collected, decisions can be made quickly, and client data can be kept confidential.

It plays a part in safeguarding the organization's assets in each economic unit and confirms the coherence of its figures, hence accomplishing its goals. It also uses their resources efficiently and achieves their goals effectively, which ultimately enhances the integrity of their financial statements (Romney & Steinbart, 2015). Furthermore, CAATs is the procedure that involves the use of information technologies with a view to assisting the information systems auditor. The technique presents the auditor with an adequate opportunity to carry out all procedures in relation to the audit swiftly and precisely. In the early 1930s, Derek Matthews highlighted various trends in audit practice, such as the adoption, for most audits, of formal work programs for conducting each audit. In the 1960s, observations on internal controls rather than specified transactions emerged, and in the 1970s, the development of statistical sampling

Flint (1988) further explains that the evolution of the audit function is a result of the perceived need of individuals or groups of a community searching for information or reassurance about the conduct or performance of others in which they have an authorized interest. Hence, it is viewed as a mechanism to observe behavior and productivity and to ensure responsibility. In other words, it is social control.

However, with time, massive data and complex data sets compelled the development of new software to help auditors, thereby saving time. Due to the evolution of technology, auditors around the globe use computer-assisted audit techniques in the preparation of audit reports. It is very unlikely to stumble across a firm that is still performing manual audit tasks. In today's time, business applications such as the purchase order transaction can occur in a jiffy across time zones. The need for a paper trail has been eliminated by fully integrating modules into business processes, rendering the traditional manual audit approaches impractical and inapplicable. Auditors must have knowledge of electronic information sources if they want their organizations to prosper.

Modern audit technology has liberated auditors to utilize their sound judgment rather than be restricted by physical evaluation, rigid audit programs, and information systems that are not beneficial to the audit process. CAATs are one of the most distinguished techniques designed to assist various auditing procedures (Mahzan & Lymer, 2014; Pedrosa, & Costa, 2019). The goal of CAATs is to increase audit effectiveness by gathering a lot of data, improve efficiency, and reduce audit risk. An

organization needs to feel assured that the information can be relied upon to make sound resolutions, highlight opportunities, and point out possible risks they might encounter.

Through the use of CAATs, auditors have been able to collect data, analyze it, and prepare reports in a timely manner. Despite requiring a large volume of network storage and a server to support the website, many companies and industries have increasingly been using CAATs. CAAT's tools have been used over the past years to conduct audits. The two main tools used are Audit software and Test data generators. These tools have proven to be the most efficient, and it is likely that they will evolve over the coming years and help auditors analyze even more complex data.

Across the globe, organizations and different industries that adopt computer-assisted audit techniques have an upper hand in preparing quality internal audit reports. Computer-based tasks have strongly replaced paper-based tasks in the majority of today's organizations. However, a handful of challenges have become a major hindrance when implementing these techniques. Challenges such as inadequate resources and a lack of the necessary knowledge and expertise to fully utilize the technology have hindered hospitals from maintaining and developing these techniques. The cost of software licensing, training, hardware, and management's time and assistance have also added to these challenges.

In addition to that, some firms may be resistant to change due to fear and fail to see the value in investing in new technology. Therefore, it is upon the hospital’s management to educate its employees on the importance of change by organizing seminars, training, and workshops. Management can also assure its employees of the outcome of this change by creating a positive working environment.

Another challenge with CAATs is that they may not be able to detect certain types of fraud or other irregularities that can be identified through traditional audit methods. This is because CAATs are designed to analyze large amounts of data quickly and may not be able to identify more nuanced or complex issues that require human judgment to detect. Moreover, the use of CAATs may require significant changes to an organization's existing audit processes, which can be difficult to implement and may require additional training for auditors. Finally, some organizations may be hesitant to adopt CAATs due to concerns about data privacy and security, as the use of these tools may require access to sensitive financial or personal information.

The objectives of internal control under CAATs do not differ from those under manual systems. The main goal of internal control is to ensure the accuracy and reliability of accounting data. However, different internal controls are used in manual and computerized data operating systems due to the different nature of control problems. Control is more important in computerized accounting due to the greater

possibility of miscalculations (Jaber & Wadi, 2018). Due to the COVID-19 epidemic in the year 2020, it was obligatory for accountability in the accounting profession to put all their efforts in a manner that suits all users. The pandemic highlighted the need for expanded data security and privacy measures to protect sensitive patient information. In such cases, quality audit reports are vital to organizations, as are controls in place for timely communications.

3. Theoretical Review

The theoretical framework introduces and designs the theory that gives an explanation as to why the research under study exists. The study will use different speculations proposed by different authors to gain an understanding of the dynamic nature of computer-assisted audit techniques.

3.1 Performance Expectancy Theory

This refers to the belief that one will be advantageous when utilizing a particular technology or method (Venkatesh, Morris, Davis, & Davis, 2003). An auditor feels like the use of CAATs will assist in accomplishing the time budget, which will ultimately lead to an increase in time efficiency by reducing the amount of time spent in tests and controls. The use of CAATs can decrease the time needed to manage working papers during reviews. Working papers, a commonly used term in auditing, refer to the records kept by the auditor of the procedures carried out, tests conducted, data obtained, and conclusions reached in the study. With these, the auditor's sense of the appropriateness and advantages of using CAATs will have a significant effect on their expectation to engage with and use them.

Literary sources suggest that the use of CAATs can lead to a more efficient and productive information systems audit in comparison to the traditional audit approach (Saygili, 2010). On the other hand, the employment of CAATs can increase audit coverage by performing 100% transaction testing instead of depending on sample testing (Singleton & Flesher, 2006). Consequently, the utilization and adoption of CAATs by auditors will enhance their audit output and job performance. Medical technology and the computer communication industry have benefited from the advancement of information technology. The smart hospital has gradually received attention. Various medical institutions have also begun promoting smart medical care, from the early electronic medical records to current big data applications such as smart wards, smart halls, the bedside service system, wearable device applications, and robots.

3.2 Contingency Theory

According to this theory, the way organizational members work together and are managed is influenced by both the task environment and the technical aspects of their

work. The theory suggests that the effectiveness of CAATs is contingent upon factors such as the nature of the audit task, the complexity of the information being audited, and the level of risk associated with the audit. In other words, the use of CAATs may be more effective in certain situations than in others. For example, if the audit task involves a large volume of data, the use of CAATs may be more effective in identifying patterns and anomalies in the data than traditional audit techniques. Similarly, if the audit involves a high level of risk, the use of CAATs may help auditors identify potential fraud or errors in the financial statements.

However, the effectiveness of CAATs may be limited in certain situations. If the audit involves a high degree of judgment or requires a deep understanding of the business processes involved, the use of CAATs may be less effective than traditional audit techniques. Additionally, the effectiveness of CAATs may be limited by the quality of the data being audited as well as the accuracy and completeness of the audit trail. By understanding the factors that influence the effectiveness of CAATs, auditors can make more informed decisions about their use in audit practice and develop more effective audit procedures that take advantage of the benefits of technology while minimizing its limitations.

4. CAATs and Internal Audit Reports Quality

From the theoretical framework review, it was expected that CAATs would have a significant effect on the internal audit report of firms in Kenya. The framework is intended to purposefully guide one to understand the relationship between independent and dependent variables.

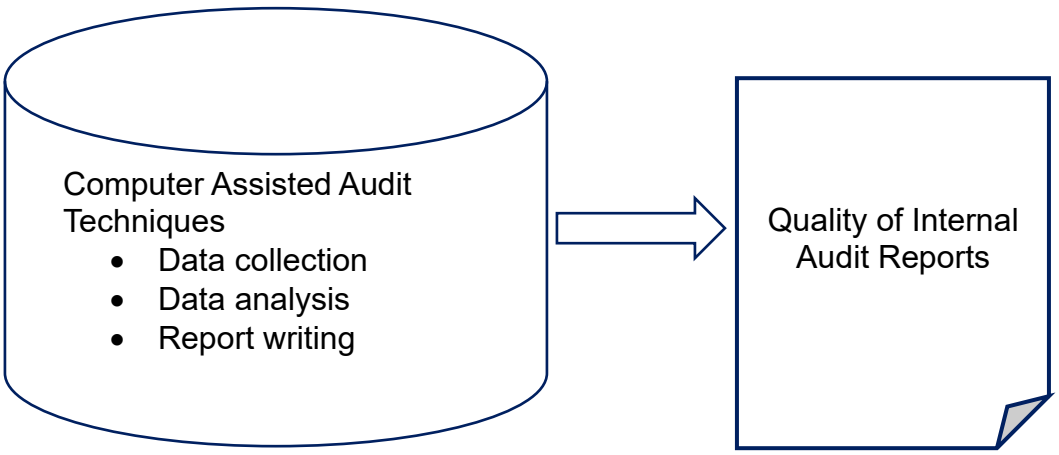

Figure 1: Conceptual framework

4.1 Data Collection

By using CAATs, auditors can make use of statistical techniques and other relevant audit tools to gather large volumes of healthcare data more efficiently and accurately than with manual methods. These tools can gather data from various sources, such as databases, spreadsheets, and accounting software. Examples of data collection software include Generalized Audit Software (GAS) and Test Data Generators. Mahzan and Lymer (2008) proposed a model that can be really useful for internal auditors who want to adopt CAATs successfully. The model has four different dimensions that cover motivation factors, the best ways to implement them, criteria to measure performance, and challenges that could get in the way of successful implementation. The model was found to be GAS.

GAS is a type of CAAT that allows auditors to perform various data-related tasks such as data extraction, manipulation, summarization, and analysis (Boritz, 2003). The data can be used to know more about the patients, identify different anomalies in the health sector, and identify other possible issues that might hinder service provision to patients. The use of CAATs can also reduce the risk of human error and increase the reliability of audit reports. As a result, the auditor can provide a more comprehensive and reliable audit report to management for assessment. Data transforming generators in particular are used to test the accuracy of CAATs as well as to ensure that the technology is able to handle data that has been transformed. They can generate a large number of test cases with different inputs. In general, the choice of test data generator depends on the type of testing that needs to be conducted.

3.2 Data Analysis

Are tools used to analyze and interpret data collected during audits. These tools assist in identifying patterns, trends, and anomalies in the data, which can provide valuable insights into day-to-day operations. Such tools include Sampling and Audit Command Language. By using sampling, auditors can analyze data more accurately and efficiently; therefore, they can identify potential risks. This can help to ensure that the audit report is presented fairly and accurately. In addition to that, sampling helps to improve the efficiency of the audit process, as it can automate many of the tasks that would otherwise be performed manually.

It can assist in identifying patients who are at risk of developing a particular condition, such as diabetes. By identifying these patients early, hospitals can intervene with preventative measures to reduce the risk of the condition progressing. It can also be used to monitor the effectiveness of treatments, which leads to improved patient care. On the other hand, ACL also helps auditors quickly extract data from a variety of sources for the purpose of analysis, thus ensuring that the audit is thorough and

accurate. Additionally, ACL can be used to create quality reports and other relevant documentation for better decision-making.

3.2 Report Writing

By using CAATs, auditors can support their findings and conclusions in relation to the data collected through a management report and an internal control report. In order to convince management of the best action to take, an auditor must ensure that the findings are supported by recommendations and that the report is in compliance with relevant laws and regulations. The management report typically includes an executive summary, a description of the audit scope and objectives, a summary of audit findings, and recommendations for addressing any issues identified during the audit. It may also include a discussion of significant risks or weaknesses identified during the audit process.

An internal control report is prepared to communicate the results of an audit of internal controls to management. It provides valuable insight to management on the effectiveness of internal controls during the audit. This report helps management identify areas for improvement by addressing issues that would otherwise risk operations. It is an important tool for ensuring the integrity of audit findings. The auditor must also ensure that he communicates in a timely manner to allow room for discussion. Timeliness, according to Al Matarneh (2011), refers to the ability of the internal audit report to meet the set deadlines for issuance to management. Untimely reports might have a negative impact on daily processes, create unnecessary inefficiencies, and reveal perceived threats.

3.2 Quality of internal audit report

Quality is determined by how well it meets the needs of the intended users, how accurately it reflects the audit findings, and how effectively it communicates the results of the audit for evaluation and decision-making purposes. The report should be well organized and easy to understand, with clear headings and subheadings that help the reader navigate the content. Technical jargon should be avoided, and when it is used, it should be thoroughly explained in a simple way. This will help to ensure that the findings and recommendations are communicated effectively to the hospital management. For a quality internal audit report to be complete, it should address all the objectives and provide a comprehensive overview of the audit findings. Comprehensive reports that the internal auditor provides to the management are expected to assure and instill confidence that the internal controls are sound and effective (Arena & Azzone, 2007). The quality of the audit report may have significant effects on the accuracy and dependability of the financial statements and may give rise to potential conflicts of

interest that may compromise the objectivity of the audit process (Njagi, 2023). The CAATS may help raise the standard of reports. An accurate summary of the audit process, including the scope of the audit, methodology used, and any limitations encountered, should be taken into consideration. It can also be reviewed by an independent third party to identify any gaps in the report.

5. Empirical Review

Numerous studies have examined the impact of CAATs on the internal audit reports of hospitals. For instance, in a case like the COVID-19 pandemic, it was necessary for the auditors to be as organized as possible. It was mandatory for all the patients' medical records to be known to anyone who came into contact with them. This initiative helped in containing the virus by administering the correct medicine, identifying other diseases that the patient may be suffering from, and reaching out to those who came into contact with the infected.

According to Bierstaker et al. (2001), the impact of technology on audit planning can be utilized to provide client-specific internal controls that assist the auditor in detecting weaknesses in the systems. They found that technology can be helpful in analyzing the client's business processes, determining and evaluating the level of controls, and suggesting tests that need to be carried out. In addition, technology can ensure compliance with audit standards and other regulations related to auditing. By interviewing IT professionals from the four firms, he was able to describe the use of audit technology. Bierstaker et al., (2001) studies were descriptive in nature and concentrated on a single audit application at a single audit firm; therefore, both studies are not generalizable to the internal auditor's actual use of technology.

According to Braun and Davis (2003), Devaraj and Kohli (2003) found that the increased use of IT encourages firms to use advanced computer-based tools and motivates auditors who lack computerized systems training to enhance their skills. In summary, previous research suggests that the impact of IT has contributed to the development of the audit process. What are the possible risks in the healthcare environment? An example is an outbreak like cholera, which, according to the WHO, can kill within hours of contamination if left untreated. Such an outbreak requires data collection to identify the exact source of the spread and come up with strategies to overcome it. The number of resources to put in place for risk assessment so that the auditor can target the audit procedures more effectively. Regulators must establish clear standards and guidelines for auditors in order to preserve uniformity in the caliber of audits conducted (Kamau et al., 2023a). It is acknowledged that the auditor's final audit report—internal or external—has relevance. In light of the importance of audits, a company must conduct an internal audit, which is carried out by an internal auditor, to

evaluate its internal controls, corporate governance, and accounting procedures, identify risks, confirm compliance with company objectives, and finally write reports (Midecha, 2022). According to Kamau et al. (2023b), audit committee independence is crucial to managing financial crises. CAATS is helpful in enhancing the caliber of audit reports, just as it is in controlling distress.

CAATs enhance the effectiveness of risk management in hospitals. The study surveyed 100 hospital managers and found that CAATs played a key role in identifying, evaluating, and mitigating risks in hospitals. According to a Citizen Digital news article published on December 14, 2022 (EACC, NHIF Begin Probe On Hospitals Engaging in Fraud), EACC Chairman Eliud Wabukala noted, "In August last year, we concluded 100% biometric registration; nowadays you don't need to have an NHIF card. If you go to a facility, if you haven't registered as a member yet and are contributing as a member, they only take your biometrics. That, in essence, has curbed the issue of impersonation since all our claims now come in electronically." However, it is important to note that the effectiveness of CAATs is dependent on the auditor's ability to use them effectively. Therefore, adequate training and support are vital to ensure that internal auditors can use these tools to their full potential.

6. Summary and Conclusions

he use of CAATs has had a mixture of positive and negative effects on the internal audit report. A study by KPMG (2015) showed that the majority of auditors are unable to use data analytics effectively to accomplish their work, or they utilize it in an impromptu manner. It is therefore necessary to organize training sessions, workshops, and seminars. As a result, auditors can acquire new knowledge that is consistent with the requirements of technology.

Similarly, Braun and Davis (2003) conducted interviews with practicing auditors to learn more about their experience with computer-assisted audit techniques. They found that auditors manifest a lower belief in their technical ability when applying CAATs. As a way of boosting the auditor's confidence, they recommended additional training in order to use these tools. Internal audits may not be fully independent due to conflicts of interest. For instance, internal auditors may be influenced by the management or may have personal relationships with the management, which could compromise their objectivity.

Internal audit may not have sufficient resources or expertise to effectively carry out its own functions. This could lead to inadequate coverage and weak internal controls, which could negatively impact the organization's performance. Another instance is that it may be difficult to implement and use the technology due to a lack of standardization across hospitals, which can limit its effectiveness. The International Auditing and

Assurance Standard Board sets a high quality standard in order to ensure uniformity of practice among auditors worldwide, thereby boosting public confidence in the auditing profession.

To be able to test the client's existing accounting platform, the audit software ought to run on an effective client database. Some customers might be reluctant to admit to auditors that they run the software directly on genuine files because they are worried it could corrupt their database. As a solution to the issue, a backup copy is run on the platform, provided that the client's database and copied files are identical. However, the solution would require adequate resources and consume time.

The study underscores the importance of well-structured report writing. CAATs facilitate the preparation of management and internal control reports. These reports provide insights into audit findings, recommendations, and compliance with regulations. Quality internal audit reports are accurate, comprehensive, and effectively communicate findings to hospital management. Empirical evidence highlights the impact of CAATs on risk management in hospitals. The adoption of CAATs enhances risk identification, evaluation, and mitigation. However, the effectiveness of CAATs relies on auditors' competence and training. Challenges such as limited technical expertise, resistance to change, and concerns about data privacy and security also influence the implementation of CAATs. In conclusion, CAATs have transformed the internal audit process in Kenyan firms, improving efficiency and risk management. However, challenges related to training, technical expertise, and data security must be addressed to fully harness the benefits of CAATs in audit practices. The study emphasizes the need for ongoing training and support to maximize the potential of CAATs and enhance the quality of internal audit reports in Kenya.

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