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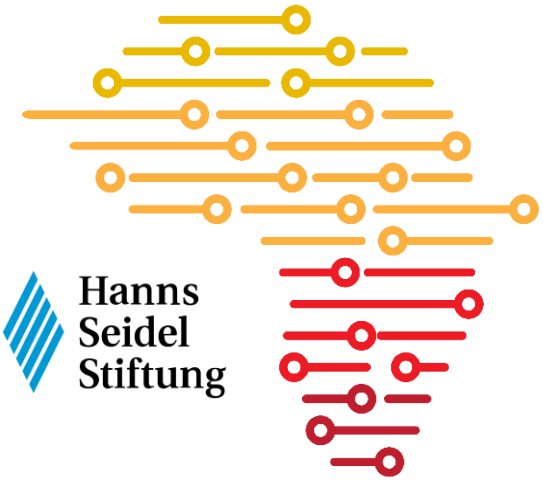
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# African Governance in the Digital Age




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TAYA RISHA
African Centre of Excellence in Digital Governance

# E-audit to monitor e-government progress to address better service delivery and digital divide

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## Abstract

*Computer auditing is a systematic and logical process that follows a risk-based methodology to monitor an organisation's information and processes. Computerised auditing provides significant advantages such as speed and accuracy of operations and the ability to see the real-time financial status of a company. In addition, the system can provide reliable information to assist in decision-making, minimise the likelihood of arithmetical and human errors and improve the quality of information. This paper will examine how e-audits can be used to monitor e-government progress to address better service delivery and bridge the digital divide, using a quantitative research approach. Thirty questionnaires were sent to participants in different government departments in South Africa. A total of 17 questions were asked. The study findings suggest that e-auditing is a useful software solution that could be implemented in South Africa to manage and fast-track the roll-out of e-government, specifically in rural areas, where it has not yet been introduced. In*

*addition, e-auditing can be used to track service delivery processes. Secondly, the study demonstrated the quality and efficiency of the e-auditing process, by eliminating human error and curtailing the manipulation of data or information, and the potential for corruption. However, various strategies need to be put in place.*

**Key words**: e-government, e-auditing, service delivery, digital divide

## Introduction

E-auditing has the potential to streamline auditing processes, boost productivity and raise audit standards. An audit is intended to increase transparency and fairness, ensure the credibility of financial reporting and make sure that all government entities, including local governments, are using state resources in a proper manner (Calocha and Herwiyanti, 2020).

However, the South African Local Government Association (SALGA) conducted research in 2011 in response to increasing perceptions that local government is generally corrupt. This research was followed by reports of the Auditor-General (A-G), which stated that 25 municipalities in South Africa received disclaimers, meaning that their financial statements cannot be relied on, and that 100 municipalities in South Africa received unqualified audits with findings (Local Government Brief, 2013). Additionally, some municipalities are being placed under administrative control for maladministration (Glasser, 2020). This has led to the failure of some government projects, due to the misappropriation of funds.

National and provincial government are responsible for providing the basic services that the people of South Africa are entitled to, as enshrined in the Constitution, including healthcare, education, housing, safety and security, water and sanitation, social security, and an environment that is not harmful to health and wellbeing (Constitution of the Republic of South Africa, 1996). Government is also responsible for providing essential infrastructure and programmes that enable economic opportunities and growth. Therefore, online auditing is required to monitor the day-to-day expenditure in both local government and the government sector, to ensure that funds allocated are utilised appropriately to avoid maladministration and ensure proper allocation of government resources.

Since e-auditing is widely used in Jordan, where it has proven to be beneficial, South African auditors can consider adopting e-auditing to minimise the improper management of government or state funds to provide proper and effective service delivery in the public sector (Calocha and Herwiyanti, 2020).

South Africa held its first democratic elections in 1994 after many years of apartheid, which had created division among people of all races. The government of the time had thrived on secrecy, clandestine activities and the suppression of information (Magade, 2020). There was no transparency or communication and it is no secret that, even today, ordinary South Africans still find it difficult to connect with government leaders (Florini, 2007).

In the process of restructuring the old government system, the Batho Pele principles, which include e-government as one of the guiding public service transformational tools, were adopted to ensure public service for all in South Africa (Department of Public Service and Administration (DPSA), 2021). The government, by way of its Information Technology Policy Framework, announced its intention to deviate from the traditional, bureaucratic, silo-type processes followed in other departments and agencies, and to modernise their role and functions according to the needs and requirements of the citizens of the country (Department of Public Service and Administration (DPSA), 2021).

Despite all the funds that government put into information and communication technology (ICT) development, the country continues to experience poor service delivery. This has led to ongoing public protests, which later turned into violence and the destruction of property (Noruwana, 2015). Poor service delivery, resulting from corruption, has also led to most government institutions being placed under administration, leaving the e-government project incomplete (Noruwana, 2015).

Barely a day goes by without shocking revelations of fraud, corruption, wastage, and infrastructure deterioration (Tau, 2021). The most jarring revelations concern the impact of service delivery failures on the most vulnerable citizens (Mukhari, 2019). Despite the Auditor-General's report (2019), which expressed concerns regarding reporting deficiencies by on the part of municipalities and government departments, government continues to spend billions of rands due to irregular and unauthorised expenditure and continuous project failures. The Auditor-General's report also painted a grim picture of deteriorating governance and has

increasingly stressed the lack of accountability for the misuse of public funds (Tau, 2021). This underscores the need for an effective monitoring mechanism, such as e-auditing.

## Background

Effective and reliable service delivery is one of South Africa's greatest challenges (Development Bank of Southern Africa (DBSA), 2021), regardless of the continued investment in ICT and e-government initiatives. The progress of e-government initiatives has been unsatisfactory, dating back to 2004 (Mosehlana, 2018) and the lack of progress continues to broaden the digital divide among citizens. The failure rate of this platform is rooted in corruption and a lack of suitable measurement and evaluation frameworks (Mosehlana, 2018).

In terms of the South African Constitution, service delivery is the responsibility of provincial and local government (Department of Public Service and Administration (DPSA), 2021). However, citizens in all 278 municipalities complain about poor service delivery caused by government's lack of resources to fulfil their duties to the broader public, and to manage the frequency of irregular expenditure (Farelo and Morris, 2006).

Over and above corruption being the primary factor in e-government failure, 'direct copying', creates gaps between the design and implementation of the system (Cloete, 2012; Heerden and Rossouw, 2014). Countries like South Africa copied the e-government concepts and processes from European countries without adapting them to the South African culture and economy, and thus the benefits of e-government in some municipalities have not yet been seen (Cloete, 2012; Heerden and Rossouw, 2014: 475). Some managers who are supposed to be supporting e-government implementation are not doing so, and display 'political syndrome' of who came up with the idea (Anthopoulos et al., 2016).

There are various benefits associated with e-government, but only if these platforms are designed to meet the needs of residents and are properly managed (Mawela et al., 2016). To manage this inconsistency and the imbalance of resources in government and local

municipalities, an e-auditing platform can be implemented to ensure appropriate management of all government resources. This research will present how innovative use of ICT, such as e-audits by policymakers and auditors can improve government service delivery.

## Literature review

In South Africa, the crisis related to poor service delivery and limited access to technology (Aruleba and Jere, 2022) persists. This has led many people to move from rural areas to cities to access the benefits of telecommunications (Mkhomazi and Iyamu, 2011). This gap was particularly evident during the Covid-19 pandemic, and learners fell behind with school curriculum (Mkhomazi and Iyamu, 2011).

## E-government progress in South Africa

E-government refers to the use of information and communication technologies (ICT) for public administration and management (Kroukamp, 2005). The current roll-out of e-government in South Africa is less than 70% complete.

E-government projects in South Africa fail due to the lack of a comprehensive e-government strategy, and a lack of clear policies and documentation for an e-government framework to guide the implementation process (Jakoet-Salie, 2020). Some guidelines did not provide clarity on implementation processes, which resulted in difficulties in realising the benefits and value-add throughout the process (Francesco et al., 2016). The availability and accessibility of e-government services are critical in digital societies, particularly in improving a country's economic growth.

Its importance is embraced in enabling rural residents to hold down jobs with urban enterprises while they continue to reside in rural communities, thus creating new economic opportunities that can reduce migration (Gregg et al., 2008). Furthermore, e-government services produce economic benefits and enhance the conditions of people's lives in rural areas where

depopulation and despair are frequently evident (Kellogg Foundation, 2001). This includes access to health care and education.

## The digital divide in South Africa

The digital divide is a complex problem with no single solution, and addressing it requires a combination of policies, public-private partnerships, and community-based initiatives (Mphidi, 2008). Some of the factors that encourage promote a digital divide is the lack of upgraded infrastructure. A lack of infrastructure investment results in unequal access to the internet and digital services, especially in rural or economically underdeveloped areas (Mphidi, 2008). If South African governments continue not to invest sufficiently in creating and maintaining a digital infrastructure, such as broadband networks and cellular coverage, the digital divide in South Africa will continue to expand (Mphidi, 2008).

The second factor that contribute to the digital divide is the high cost of internet services. The problem is that when governments do not regulate or subsidise internet service providers, the cost of internet access remains high, making it unaffordable for low-income individuals or families, which further exacerbates the digital divide (Levine & Taylor, 2018). Public services are only partially available online if there are no alternative offline options for essential government services like healthcare, education and social welfare. People without digital access or skills will have difficulty using these services (Anrijs, 2023). Digital access is particularly important as it has the ability to increase access to information that may unlock people's potential and improve their lives (Mphidi, 2008). This requires proper monitoring and regular evaluation (Waema and Adera, 2011).

## Service delivery

South Africa recorded more than 900 service delivery protests from August to January 2022 (Defence Web, 2022). A contributing factor to the strikes is that communities are excluded from decision-making processes, and government officials' corruption impacts service delivery daily

(Cloughton, 2021). Corruption appears to be a permanent problem that has made communities lose hope in their government, negatively impacting the country's economic development (Bohler-Mueller et al., 2016). Van Antwerpen and Ferreira (2016) highlighted that poor levels of service delivery are influenced by a lack of qualified officials in government who are able to do essential maintenance work and to develop appropriate strategies to keep communities running smoothly. Continued strikes are forever reported in the news and media, where police are used as a weapon to maintain order (Noruwana, 2015). The solution does not lie in policing, but rather in effective monitoring strategies for the success of e-government to be seen and to access real-time government information. Despite this, the South African government has made important improvements with regard to creating greater equality within society and building infrastructure in towns. However, the challenges of life, such as poor service delivery, remain ongoing (Bohler-Muller et al., 2016).

## E-government in the municipal context

Local government is the delivery arm of government; they are at the frontline of understanding the needs of citizens (Mawela, 2016). One of the responsibilities of municipalities is to ensure that all residents receive better quality service delivery (Nkosi and Mekuria, 2010). The significance of local government is seen during 'service delivery protests' that are primarily against poor service delivery and the absence of accountability by local councillors (Alexander, 2010).

The implementation of e-government is very limited at local government level. Local government lag behind efforts to implement e-government. From an e-government perspective, the emphasis has mainly been on improving the internal administration process of local authorities, which is regarded as e-administration (Waema and Adera, 2011). The issue of poor ICT platforms for internal reporting was also noted by the Auditor-General of South Africa (AGSA), the Municipal Finance Management Act (MFMA 2021-2022) and the South African Institute of Chartered Accountants (SAICA, 2022).

Information technology controls are underpinning credible reporting and can contribute immensely to the success of municipalities and government (Waema and Adera, 2011). ICT and governance should be used together for the government to achieve its objective, yet IT governance processes in 75% of the 79 municipalities are ineffective in South Africa (South African Institute of Chartered Accountants, 2022). The lack of system controls has resulted in large sums of money being spent without desired results (Lesolang, 2015).

## Auditing

An audit is an instrument used by an organisation to measure its performance and financial control. It aims is to protect itself against fraud and the mismanagement of resources (Skenjana and Kimemia, 2011), and to further evaluate if the processes and procedures implemented require enhancement (Skenjana and Kimemia, 2011). In accordance with the government's objective, several types of audits can be defined in the public sector.

### Financial audit

A financial audit verifies that the financial statements of the business and organisation are verified and balanced, in line with generally accepted accounting principles. This type of auditing evaluates if all the incoming and outgoing principles are recorded (Kritzinger, 2017). Financial auditing pays attention to the budgets and financial statements, revenue and sale costs, trial balance, transaction documents, and accrual accounts (Kritzinger, 2017). The study by Aikins (2015) argued that national and local government pay more attention to the financial management process than to strategies and process efficacy. The author further mentioned that, even though government performs this type of audit, it was not conducted timeously.

### Audit of legality

Audit of legality concordance is intended to verify that all transactions and processes are in full accordance with the law of the land, and do not in any case harm or influence an organisation or

an individual for its own means (Van Vuuren, 2014). The author further mentioned that these three types of audits are rarely performed by either local or national government.

**Audit of efficacy**

An audit of efficacy aims to validate if the results of a programme for which money was allocated, conformed with the objective for which the programme was designed. An efficacy audit is designed to measure how clean an organisation is, as opposed to what it means to be clean, and how frequently it is audited. Efficacy is determined using evidence-based scientific methods (Pincus et al., 1999).

**Audit of economy and efficiency**

An audit of economy and efficiency is conducted to verify how resources have been managed, and whether resources have been acquired at minimum cost and employed for maximum benefit (Pincus et al.,1999). South Africa has policies which are not aligned with the economy (Khamfula, 2007). Audits of systems and procedures evaluate the rules and principles used by the organisation to verify its system and processes for improvement and quality conformance (Kritzinger, 2017). The final category is a service delivery audit.

Service delivery audits involved a complete review of processes, issue and time tracking systems, and an understanding of scheduling and prioritisation (Kritzinger, 2017). According to the Auditor-General of South Africa, all government departments and municipalities are required to perform regular audits to measure if all the controls and processes are working effectively (Auditor-General South Africa, 2022). The audit reports, published each year, analyse the audit outcomes at national, provincial and municipal levels (Auditor-General South Africa, 2022). The purpose of this auditing is to promote accountability and promote sound financial governance performance in South Africa. In reality, the government needs to examine the gap in auditing that inhibits better service delivery performance.

The gap is also evident where the auditors communicate their findings to users of financial statements. The auditor uses generic language to describe the auditor's work effort. Users do not get a complete picture of the extent of the auditor's procedures on a particular audit. As a result, people see a disparity between what is really done and what they think is done in conjunction with the audit (Consultation Paper, 2011). Increased transparency in auditing may have a positive impact on perceptions of audit quality.

## The benefits of e-auditing

Government and local government are failing to achieve clean audits. Although Operation Clean Audit was initiated in 2009 with the aim of ensuring that all government sectors achieved clean audits by 2014, some government departments and local municipalities have still not met the objective. Only 14% of the sector did so by 2014. (Mnguni & Subban, 2022). E-auditing will be the first project to be implemented in South Africa.

Some of the primary concerns identified during that crucial era when clean audits were identified as a fundamental requirement by government, were the filing of inaccurate financial statements that were not in line with the South African government's accounting system and revenue management issues. There were also concerns about performance data that had been recorded incorrectly and was not in line with reporting requirements. In addition, there are several elements of irregular expenditure. Some departments did not provide sufficient supporting documentation for the financial accounts, casting doubt on the audits (Auditor-General, 2015). Poor governance, according to the National Development Plan (NDP) (2011: 413), can seriously weaken national development and damage the government's ability to achieve development and socio-economic transformation as intended. This contributes to a decline in public trust in government, inefficient resource management and inadequate transparency and accountability.

In addition to all these challenges, even though some departments undertake annual audits, this is not the case for all, such as the Passenger Rail Agency (Prasa), where an annual audit was not conducted and 3 000 fictitious workers were paid. This indicates that audit processes need to be

improved, as it is tarnishing the image of the government sector. Despite the efforts, plans and strategies mentioned in the Auditor-General's media release (2021), they had little impact. E-auditing can offer a better solution to mitigate some of the challenges that identified as impacting the achievement of a clean audit.

Computer auditing is a systematic and logical process that follows a risk-based approach to monitor an organisation's information and processes of (Dhansay, 2019). E-auditing provides major advantages such as the speed and accuracy of operations, as well as the capacity to access the company's real-time financial status. (Lutui and Ahokovi, 2018). The system can also provide reliable information for decision-making.

E-auditing reduces the likelihood of arithmetic and human error to a minimum and is far more efficient (Lutui and Ahokovi, 2018). Machine-generated records are neat and precise; which limits deficiencies reported by local municipalities and government, and that impact efficient service delivery to the citizens of the country (Lutui and Ahokovi, 2018). Computerised auditing offers a range of services, providing up-to-date business information and instantly available data that can be made available to different users in different locations simultaneously. This ensures efficient management of information (Lutui and Ahokovi, 2018). E-auditing has proven to be effective in obtaining more transparent results and generating high-quality reports, free from manipulation or errors. Given that South Africa is facing serious challenges with regard to administrative and financial corruption, audit systems that provide high levels of accuracy are necessary to minimise theft and financial misappropriation.

## Data collection

The researcher used questionnaires to determine key areas related to the application of e-auditing, the importance of auditing, challenges, and competencies associated with e-auditing in monitoring the status of e-government progress and in combatting corruption to achieve service delivery progress. Approximately 30 participants – ranging from senior managers working on finance-related issues, directors and deputy directors working on policy and governance-related

issues, stakeholders working in local communities in various districts in Limpopo Province (Capricorn, Mopani, Sekhukhune, Vhembe and Waterberg) – responded to the questionnaire. The questionnaire contained 17 questions, and participants could respond with 'agree', 'disagree' or 'neutral'.

Table 1.1 below shows the questionnaire elements and the number of respondents for each.

**Table 1.1**

| Number | Question | Agree | Neutral | Disagree |
|---|---|---|---|---|
| 1 | Perform financial audit regularly | **7** | **3** | **20** |
| 2 | Perform audit of legality | **3** | **0** | **27** |
| 3 | Perform audit of efficacy | **0** | **0** | **30** |
| 4 | Audit of economy and efficacy | **5** | **1** | **24** |
| 5 | Service delivery audit | **10** | **5** | **15** |
| 6 | Manual auditing is considered successful in South Africa, and there is no need for other ways of auditing | **2** | **0** | **28** |
| 7 | There is necessity for using electronic auditing in South Africa | **28** | **0** | **2** |
| 8 | The use of electronic auditing helps to increase the efficiency of auditing | **25** | **5** | **0** |
| 9 | The use of electronic auditing will help to reduce corruption | **20** | **4** | **6** |
| 10 | Electronic auditing is challenging for auditors in terms of the use and implementation | **15** | **5** | **10** |
| 11 | The electronic audit limits the cases of manipulation and errors during the audit process | **30** | **1** | **1** |
| 12 | Electronic auditing helps to improve decision-making | **25** | **0** | **5** |
| 13 | E-audit will be helpful in monitoring the progress of e-government | **28** | **2** | **0** |

| | | | | |
|---|---|---|---|---|
| 14 | Electronic auditing contributes to collecting, auditing and analysing of data at the same time, comparing compared to the manual system | **30** | **0** | **0** |
| 15 | Electronic auditing does not provide all the evidence the auditor needs. | **12** | **8** | **10** |
| 16 | The electronic audit contributes to reducing the external audit fees | **30** | **0** | **0** |
| 17 | Electronic auditing has a significant role when auditing computerised data | **21** | **0** | **9** |

**Data analysis of the interview questions**

There are various types of audits and, in the first questionnaire, the researcher sought to identity the type of audit that government usually performs in South Africa.

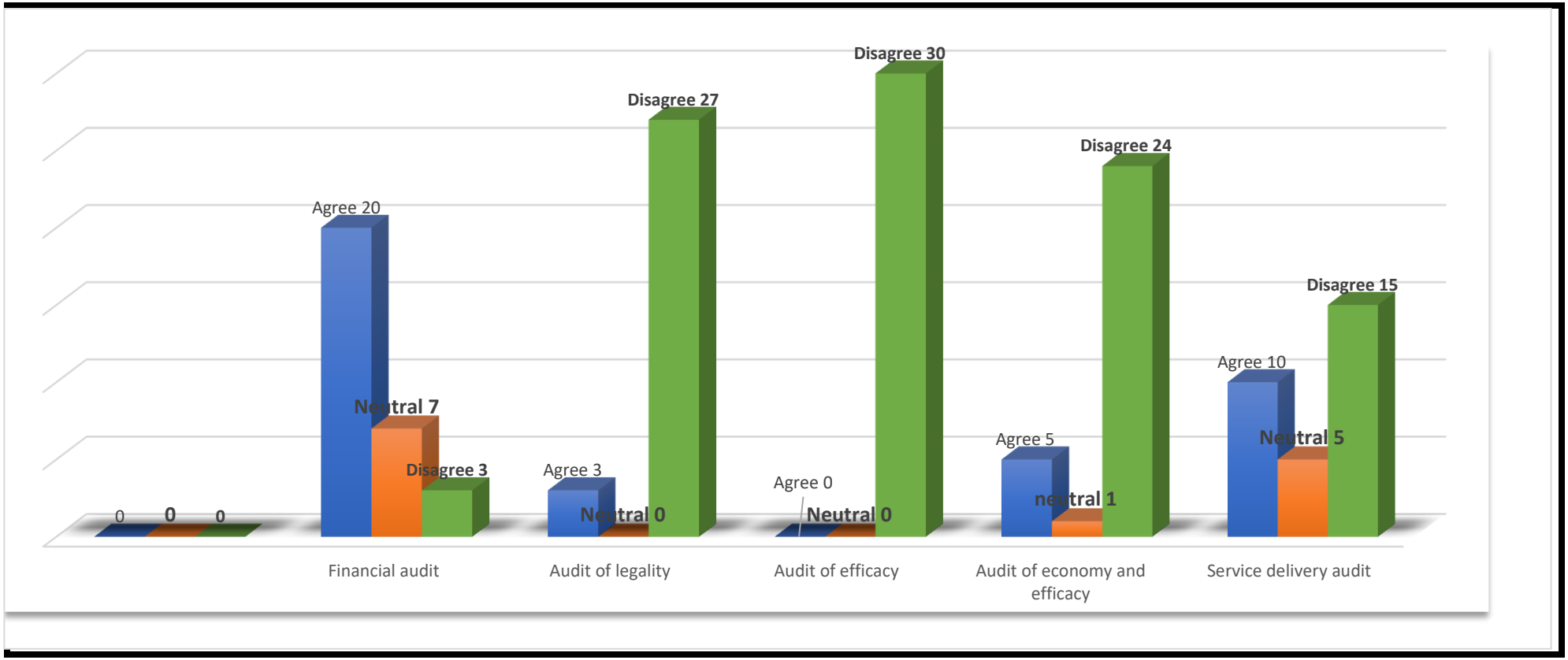
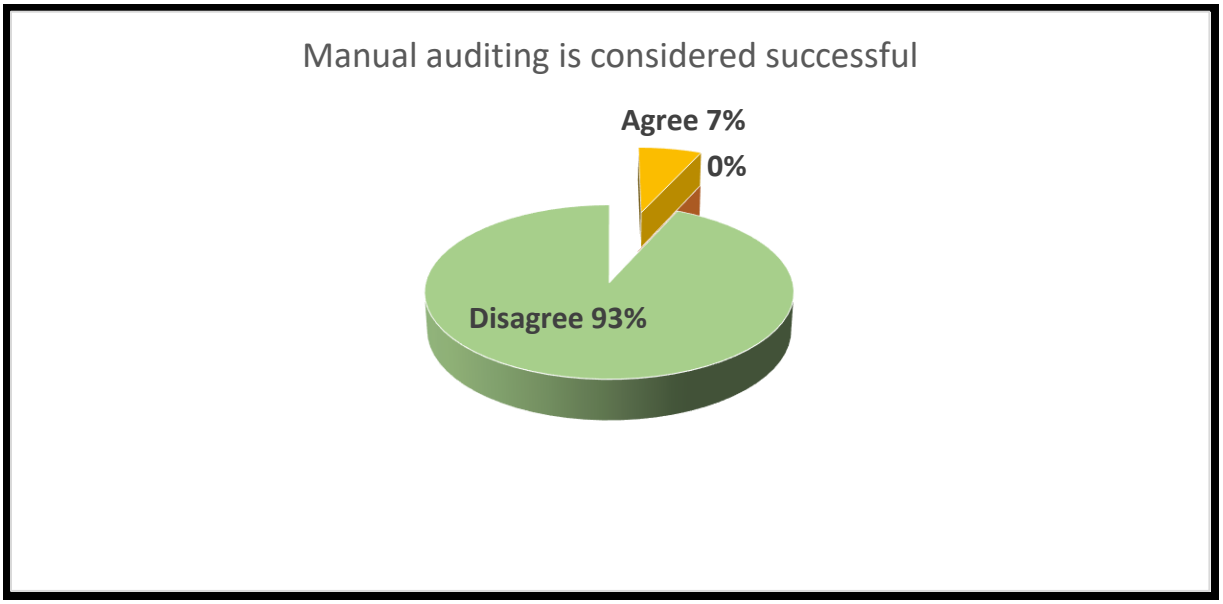



**Figure 1.1**: Types of audit government performs

As per the information provided in Figure 1.1 above, the government is obliged to perform various types of audits, such as financial, legality and service delivery, to ensure that all processes and financial transactions are properly utilised and that policies are aligned with the economy. However, according to information provided by the participants, the government mostly focuses on financial audits rather than on policies, procedures and legality.

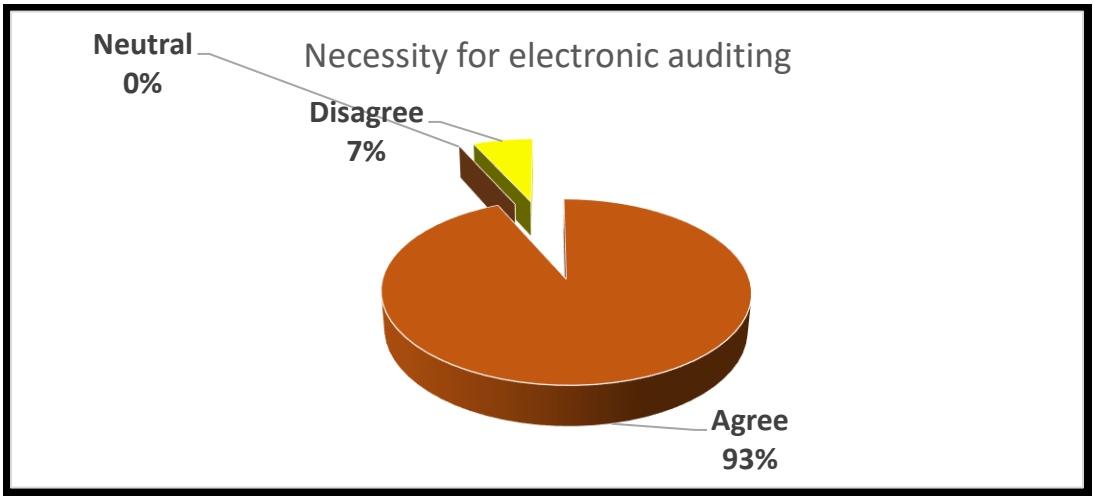
A legality audit aims to verify if all resources used in the organisation are legitimate, including the monitoring of 'ghost workers' – a term used to describe paying people who do not actually exist in the organisation or business. Non-performance of legality audits has led the Passenger Rail Agency of South Africa (Prasa) to operate with 2 600 non-existent or ghost employees at a cost of R200 million rand (Maharaj, 2022).

**Figure 1.2:** Manual reporting



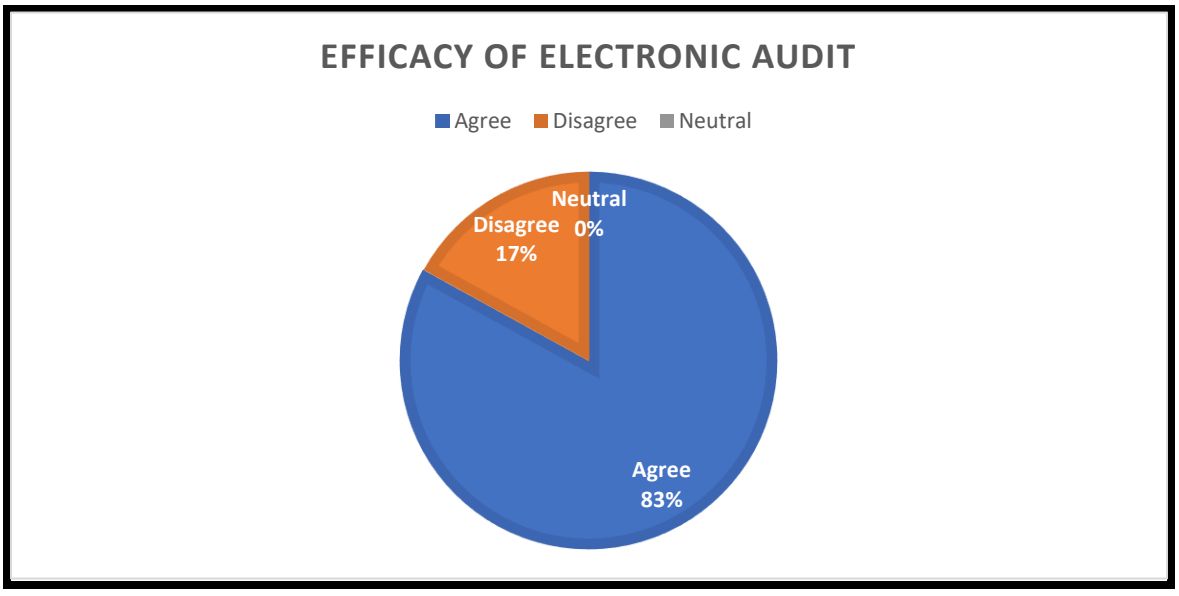

According to Figure 1.2 above, 93% of participants indicated that manual auditing no longer serves its purpose. In comparison, 7% of participants disagreed with the idea that manual audits still serve a purpose and that there was no need to replace the old process.

**Figure 1.3:** Necessity for electronic auditing



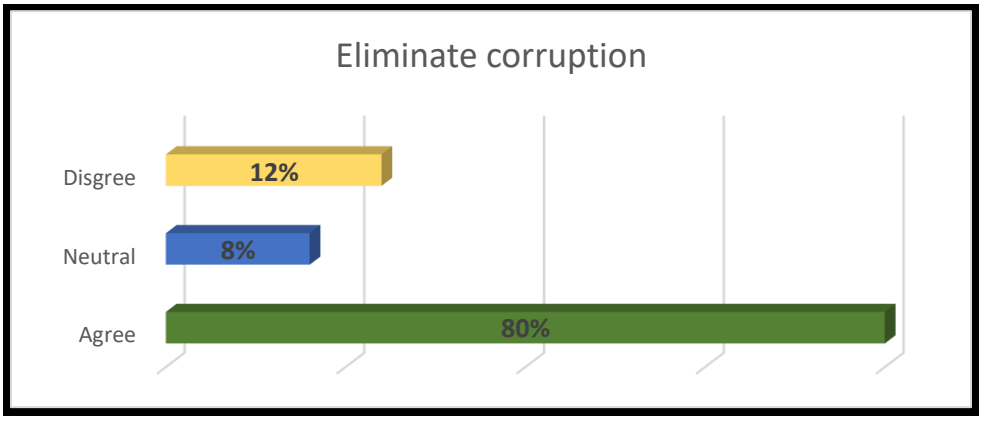

"E-auditing processes that leverage digital technology to conduct audits, primarily using electronic data and tools instead of traditional paper-based methods," (Blahušiaková et al., 2022). Interestingly, when participants were asked if they understood what e-auditing is and if it could be of importance to current existing challenges, 93% of the respondents said they believed that electronic auditing was important for South Africa. In turn, only 7% thought there was no need to implement electronic auditing. This is a very small percentage compared to the first category.

**Figure 1.4:** Efficacy of electronic audit



E-auditing can ensure data integrity is aligned with the business's overall goals and helps to increase the efficiency of auditing. The third question, which asked about the importance of electronic auditing and how it increases the efficiency of auditing, yielded a similar result to the second question. In this case, 83% of respondents agreed that it would have a positive impact on the auditing process, while 17% of participants disagreed.

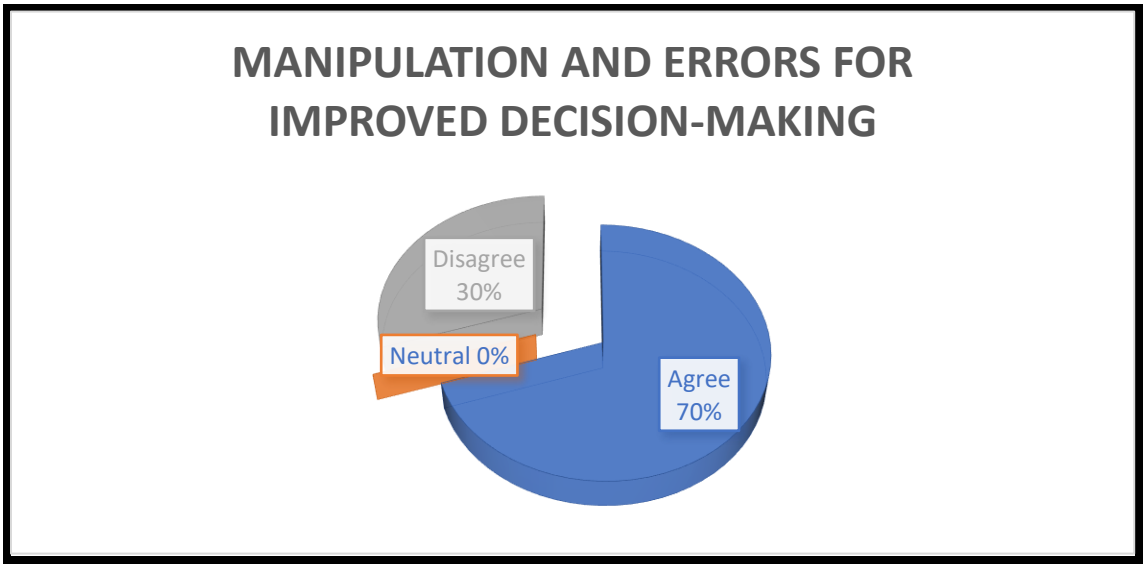
**Figure 1.5:** Eliminate corruption




This question provides a comprehensive picture of people's willingness to use technology and implement modern techniques in the auditing field. Interestingly, 80% of respondents believed that electronic auditing would assist the government and auditors in monitoring corruption and optimising the use of government resources. Of the remainder, 12% disagreed and 8% were neutral.

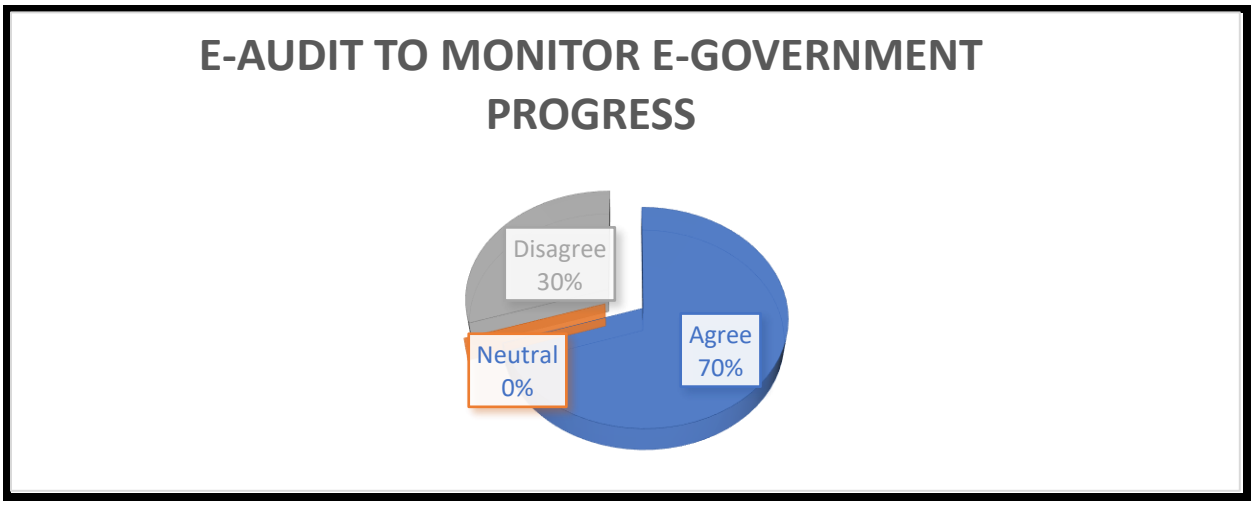
The researcher asked participants to indicate whether electronic auditing was challenging for auditors in terms of its use and implementation. Half the participants (50%) agreed that auditors are not ready to deal with the implementation as they fear that they lack the necessary skills. Some 17% of participants did not express their opinions, while 33% agreed that auditing teams are not prepared for this step.

**Figure 1.6:** Eliminate manipulation and improve decision-making




This question also evaluated the importance of electronic auditing to reduce manipulation and errors to improve decision-making. Participants answered in different ways: 83% agreed that e-auditing would reduce human error and the manipulation of data which, in turn, would help the department to make informed decisions. While 10% of participants did not want to share their opinion, 7% argued that it would not make a difference and that the high level of corruption would continue.

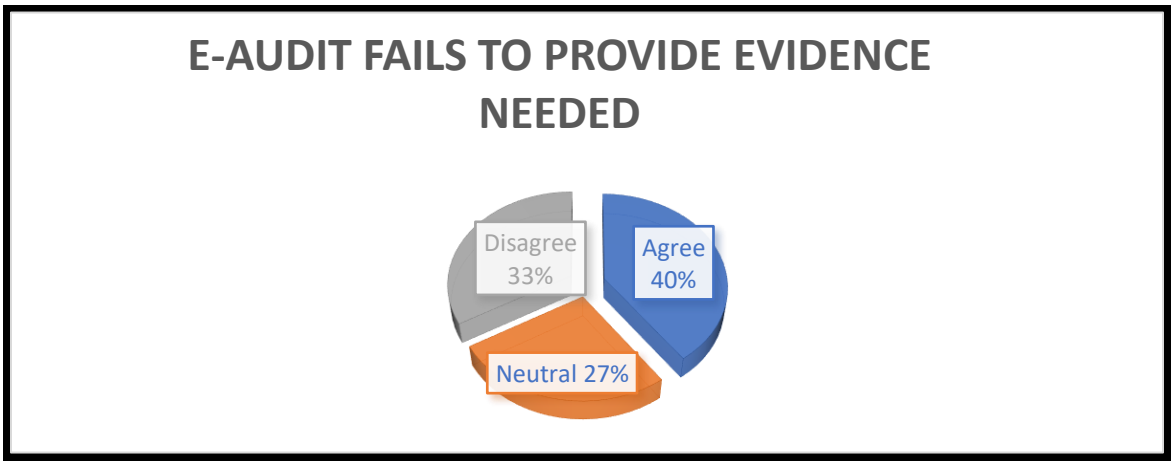
**Figure 1.7:** Monitor e-government progress



E-government was developed with the aim of implementing electronic services that citizens could access via the internet. However, these platforms have never been accessed because of a lack of monitoring mechanisms and corruption (Nyansiro et al., 2021). Participants were asked to indicate whether using e-auditing would be helpful in monitoring e-government. A significant 93% of respondents believe that the implementation of e-auditing software would assist in monitoring the progress of e-government, while 7% disagreed.

When asked if electronic auditing contributes to collecting, auditing and analysing data simultaneously compared to the manual system, 100% of participants agreed.

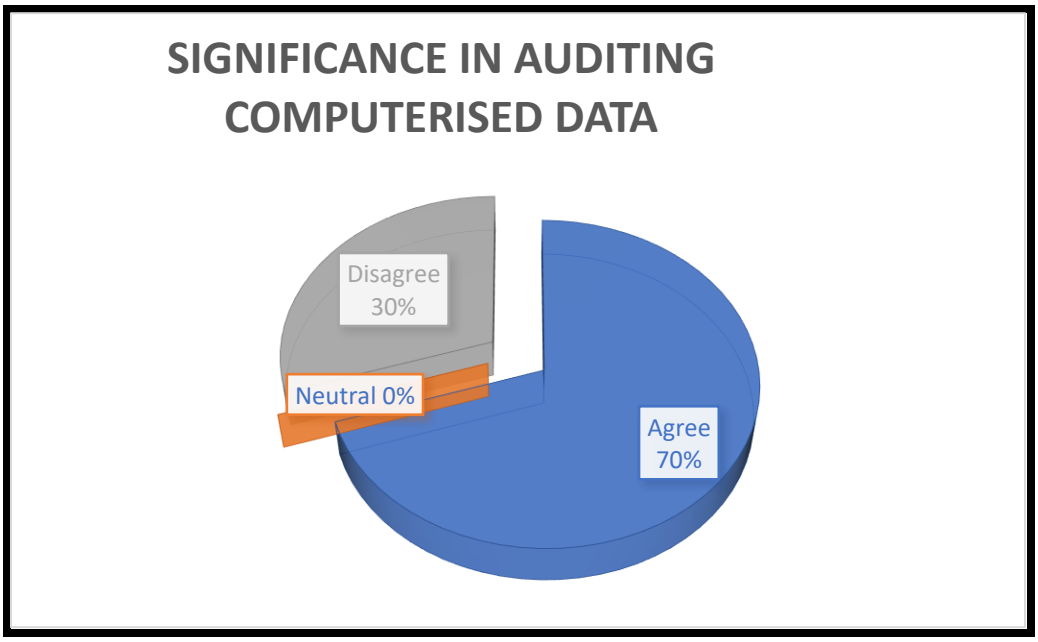
**Figure 1.8:** E-audit lacks evidence




This question pertained to the evidence in favour of electronic auditing, specifically the ability of electronic auditing to limit manipulation and errors during the audit process. The question targeted the availability of evidence for auditors while performing their duties. The question was framed to ask whether electronic auditing failed to provide all the evidence that an auditor needs. Surprisingly, 40% of the respondents agreed that this method could not provide the auditors with sufficient evidence. In contrast, only 33% thought it would not have a negative impact on the availability of evidence and 27% of participants did not want to share their opinion.

When asked if electronic auditing would contribute to reducing external audit fees, 100% of the participants agreed.

**Figure 1.9:** Value for e-auditing




Notably, 70% of participants agreed that an electronic audit plays a significant role in auditing computerised data, while 30% of participants believe that it would not contribute substantially to the auditing of computerised data.

## Summary and conclusions

Firstly, the results of the study indicate that e-auditing is a valuable software solution to before South Africa. It has the potential to manage and fast-track the roll-out of e-government in areas where it has not yet been implemented, specifically the rural areas, to address the ongoing digital divide.

Secondly, e-auditing can enhance the quality and efficiency of the auditing process by eliminating human error and preventing the manipulation of data or information, which mostly results in corruption. However, various strategies to implement e-auditing must be developed, together with workshops and training to educate policymakers and auditors about this new mechanism for eradicating corruption, and the benefits of the platform. The adoption process should be

communicated with the Office of the Auditor-General and all government departments, especially the Department of Public Service and Administration, as well as the private sector. All businesses will be required to achieve all their documentation, and this will help to eliminate cases of data manipulation and errors.

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