

The effect of the Commission on Audit Information System (COA IS) on the personnel productivity in COA regional office IV-A employees

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Abstract

This study determined the effectiveness of the Commission on Audit Information System (COA IS) and its effect on the productivity of the COA Regional Office No. IV-A personnel. Specifically, it assessed the effectiveness of the COA IS in terms of system reliability and accessibility, accuracy and timeliness of information, user-friendliness and functionality, data security and integrity, and responsiveness of technical support; the level of employees' productivity in terms of task completion rate, accuracy of work outputs, time efficiency, quality of work performance, and job satisfaction; and the significant effect of the respondents' demographic profile and the COA IS on employees' productivity using weighted mean, standard deviation, Pearson correlation, and regression analysis. It used a descriptive-correlational research design, with a survey questionnaire as the primary data collection tool, administered to 202 personnel of the COA Regional Office No. IV-A who were selected through total enumeration. The gathered data were statistically analyzed to determine the relationship between the effectiveness of the COA IS and employees' productivity. Findings indicated an overall weighted mean (OWM) of 3.11 for the COA IS, which was verbally equivalent to the respondents' description "Often", indicating moderate effectiveness; while employees' productivity registered an OWM of 2.68, tantamount to their "Agree" responses to the questionnaire statements. Among the COA IS dimensions, data security and integrity received the highest rating (OWM = 2.87), whereas job satisfaction received the lowest rating (OWM = 2.53) among the productivity variables. The results further showed that age, designation, and length of service significantly affected selected dimensions of COA IS effectiveness and employees' productivity, whereas gender did not. Additionally, the COA IS significantly influences employees' productivity. It is concluded that the COA IS contributes positively to employees' productivity and audit performance. It is therefore recommended that COA strengthen system reliability, enhance technical support services, and provide continuous training programs to further improve system effectiveness and employees' productivity.

Keywords: COA Information System; employee productivity; system effectiveness; audit performance; digitalization

1. Introduction

The Commission on Audit has initiated plans to digitalize its audit operations, as highlighted during the agency's 2023 Strategic Planning Conference led by Chairperson Gameliel Cordoba. The initiative aims

to establish a technology-driven and easily implementable government accounting system that adheres to international standards. In line with this objective, the COA also intends to implement an electronic audit (e-audit) system by digitalizing government transactions in collaboration with various government agencies. 1202

This initiative further seeks to leverage technology to enhance audit techniques and procedures, including automating audit processes for electronic collections and payments. Moreover, the Commission on Human Rights emphasized that the COA's digitalization efforts can strengthen government accountability, promote transparency, and safeguard public funds. Consequently, these advancements are expected to contribute to the efficient and reliable delivery of government programs and projects, particularly those aimed at providing social services and equal opportunities to the public (Czarina Nicole Ong Ki, Manila Bulletin, May 17, 2023).

Also, due to the COVID-19 pandemic, government agencies are forced to shift operations to online transactions. The Commission on Audit has undertaken initiatives to modernize its public auditing practices in order to strengthen the agency's resilience during crises and emergencies, such as the COVID-19 pandemic. As part of its modernization efforts, the COA stated that it is transitioning from a traditional paper-based audit system to a technology-enabled, digitally driven audit approach through its Audit Modernization Program (AMP). COA Commissioner Roland Pondoc stated that the Commission on Audit's AMP comprises five specific initiatives, one of which is the development of an Audit Service Continuity Plan.

This plan outlines strategies and mechanisms to address the adverse effects of disruptive events while protecting personnel by equipping auditors with the necessary tools and competencies to continue performing their duties. Furthermore, the AMP seeks to enhance the COA's capability to electronically receive, manage, and securely store records by establishing a centralized digital repository. This system is intended to efficiently accommodate and manage the growing volume of electronic data transmitted by government agencies and offices (Elizabeth Marcelo, The Philippine Star, February 27, 2023).

During the pandemic's early rush to create hybrid and remote work environments. Shifting to remote work provided surprising opportunities among the challenges. The Commission on Audit further emphasized that although the pandemic significantly affected the conduct of public auditing, it also created opportunities for the agency to adopt more innovative and efficient approaches in carrying out its mandate. The COA likewise noted that the transition toward digitally driven audits and the modernization of audit programs are expected to enhance the efficiency and effectiveness of state auditors in performing their duties.

Lou Trebino explained that auditing primarily involves evidence gathering and validation, wherein auditors traditionally relied on firsthand verification of findings. However, technological advancements have gradually transformed this conventional approach to the audit process (Russ Banham, Forbes Insights, October 26, 2022).

This study is aligned with the Sustainable Development Goals (SDGs), particularly SDG 8 on Decent Work and Economic Growth, SDG 9 on Industry, Innovation, and Infrastructure, and SDG 16 on Peace, Justice, and Strong Institutions. It contributes to SDG 8 by examining how the Commission on Audit Information System (COA IS) enhances personnel productivity through improved efficiency, accuracy, and timeliness of audit processes. An effective information system promotes decent work by reducing manual workload, minimizing errors, and enhancing employees' ability to perform their duties more efficiently, thereby supporting sustained economic growth within public sector institutions.

This research aligns with SDG 9 as it focuses on the utilization of digital infrastructure and innovation in government operations. The implementation of COA IS represents the modernization of audit processes through information technology, strengthening institutional infrastructure, and fostering innovation in public financial management. It supports SDG 16 by highlighting the role of information systems in promoting transparency, accountability, and efficiency in government auditing. Improved productivity and system effectiveness within the Commission on Audit contribute to stronger institutions, good governance, and public trust.

The implementation of the Commission on Audit Information System (COA IS) signifies the government's initiative to modernize public-sector functions through digital innovation. This study emphasizes the influence of information technology on the productivity of personnel in the Commission on

Audit Regional Office No. IV-A, demonstrating their ability to improve job efficiency, diminish manual workload, and foster favorable working circumstances. Moreover, enhanced audit system performance fosters greater institutional accountability, transparency, and effective governance, hence strengthening the role of information technology in establishing efficient and reliable public institutions.

1.1. Background of the Study

The Commission on Audit (COA) is responsible for safeguarding public funds and ensuring that government financial transactions are transparent and accountable. COA has placed Information Systems (IS) to make the audit process easier, ensure reports are sent on time, and improve data accuracy to achieve these goals. The COA Information System (COA IS) is very helpful to personnel in doing their jobs well. It does this by automatically processing data, enabling people to send documents online, and providing real-time access to audit information.

In the Philippine setting, several government agencies have already adopted an accounting system or information system to enhance the efficiency and quality of service delivery. The existence of these technologies has increased the efficiency and effectiveness of government agencies. In COA, the audit team are distributed across the country since government agencies are allocated to different regions. To ensure consistency in audit procedures and findings across regions, it is important that every audit team member is informed and updated in a timely manner.

Even though e-mails and messengers are already used, an audit information system would be more appropriate so that no information is missed by any member of the audit team. It is also important for auditors to have access on prior years' data or information, and since the maintenance of paper files have caused many problems like misplacement or being destroyed due to fortuitous events, current year's auditors would have difficulties checking significant details.

COA already has information system in place, but these systems are mostly for the online submission only of required reports to the office. It has been COA's agenda to adapt to the ever-changing environment in conducting audit procedures. The purpose of this study is to evaluate the effect of the COA Information System (COA IS) on the productivity of employees in the Commission on Audit Regional Office No. IV-A. The research aims to deliver insights by identifying the system's strengths, weaknesses, and areas for improvement, thereby informing management decisions, optimizing system implementation, and refining work processes. The results may also help COA staff improve at what they do and find better ways to use the information system. The study emphasizes the significant role of technology-based solutions in advancing the Commission on Audit's mission to strengthen accountability in public service. Not only does evaluating the COA IS's effectiveness demonstrate how well the system works, but it also shows that the agency is dedicated to digital transformation and continuous improvement.

1.3. Theoretical Framework

This study is supported by Commission on Audit Circular No. 2021-006 dated September 6, 2021, entitled "Guidelines on the Use of Electronic Documents, Electronic Signatures, and Digital Signatures in Government Transactions." The circular provides guidance on the submission of electronic documents by audited agencies to auditors in place of physical or paper-based documents, particularly in transactions requiring the signature of an authorized signatory. Under existing rules, a document requires a signature; the use of an electronic signature in an electronic document shall be recognized as an acceptable alternative and shall carry the same legal effect as a handwritten signature affixed on a written document.

All government entities that elect to use or implement a system using a digital signature shall issue internal rules in the adoption of the Circular, including sanctions for unauthorized and illegal use of digital certificates or electronic signatures, subject to existing laws and regulations, such as the Cybercrime Prevention Act of 2012 and the regulations issued by the Department of Information and Communications

Technology. To secure the electronic records with signatures, the government entity shall designate a focal person to develop, maintain, and update the system accordingly. Also, implement a security awareness program, such as training for its employees, and to develop and implement policy and guidelines on the use of digital signatures. At a minimum, the implementation of digital signatures shall bear the following characteristics: authentication, integrity, and non-repudiation. The Circular shall primarily govern the use of digital and other electronic signatures in government transactions within the audit jurisdiction of the COA, in accordance with the E-Commerce Act. The provisions set forth under the Rules of Court, the Rules on Electronic Evidence, and other applicable laws, rules, and regulations under the Anti-Wiretapping Act and the Bank Secrecy Law shall apply in a supplementary character to the said Circular.

The study is supported by the “Technology Acceptance Model,” which explains that the adoption and utilization of information technologies can provide both immediate and long-term benefits to organizations and individuals, including enhanced performance, improved financial and time efficiency, and greater convenience.

The benefits of office automation are often challenging to quantify, as they tend to be qualitative and subjective, making it difficult to measure immediate financial gains. Common misconceptions suggest that increased automation directly leads to higher productivity and staff reductions; however, this is not always the case. Moreover, hidden costs frequently arise during the implementation phase, including the need for extensive employee training and the need to address technical issues associated with immature or “bug-riddled” systems. The true advantages of automation are realized when it is strategically applied to specific tasks, such as enhancing data accessibility and automating repetitive manual processes, thereby improving overall operational efficiency. In conclusion, the promise of office automation was often overshadowed by implementation challenges, underscoring the need for a strategic, targeted approach to achieve real, tangible results (Curley, 1984).

This study reviews existing literature on Decision Support System (DSS) effectiveness and empirically tests key factors influencing DSS success. It identifies that the effectiveness of DSS depends not only on technical system quality but also on the quality of information provided, the adequacy of user support, and the effectiveness of system utilization. The research emphasizes that user satisfaction and improved decision-making performance are critical indicators of DSS effectiveness.

The empirical test conducted confirms that higher system quality, relevant information, and adequate user support significantly enhance both user satisfaction and decision outcomes. The study emphasizes the importance of aligning DSS capabilities with users' needs and the organizational environment to maximize benefits. (Sharda, Barr & McDonnell, 1988)

The capability of technology to deliver various benefits has consistently encouraged Information Systems (IS) management research to explore individuals' willingness to adopt and accept innovative technologies (Davis, 1989). This theory supports the idea that the effectiveness of COA IS depends on how well employees accept and use it in their daily operations. Higher acceptance translates to better productivity and system outcomes. In addition, the study applies the “Information Systems Success Model” where it posts that high-quality systems and information lead to user satisfaction and greater utilization, ultimately resulting in improved individual and organizational performance. that high-quality systems and information lead to user satisfaction and greater utilization, ultimately resulting in improved individual and organizational performance.

Lastly, the “Socio-Technical Systems Theory” suggests that organizational effectiveness depends on the harmonious interaction between social (people, culture, structure) and technical (tools, technology, processes) components. In the COA context, even a highly advanced information system may not yield productive results if employees are not adequately trained, supported, or motivated. Therefore, both human and technical factors must be balanced to realize the system's full potential.

The study incorporates the three theoretical models, namely the Technology Acceptance Model, the Information Systems Success Model, and the Socio-Technical Systems Theory, to form a comprehensive foundation for assessing how the COA Information System influences employee productivity. These theories emphasize that the success of information systems is influenced not solely by technological quality but also by user acceptance, user satisfaction, and the support provided by the organization.

1.3. Conceptual Framework

This study adopts the cause-and-effect framework to show the effect of the COA IS on employee productivity.

The Independent Variable (IV) includes the COA information that is currently used by the auditors in performing audit procedures, which includes: (a) Demographic profile; (b) System Reliability and Accessibility; (c) Accuracy and Timeliness of Information; (c) User-Friendliness and Functionality; (d) Data Security and Integrity; and (e) Responsiveness of Technical Support. The Dependent Variable (DV) is Employee Productivity, which includes: (a) Task Completion Rate; (b) Accuracy of Work Outputs; (c) Time Efficiency; (d) Quality of Work Performance; and (e) Job Satisfaction.

This study examined the effectiveness of the COA Information System and its direct impact on the productivity of COA Region IV-A personnel. When the system is reliable, accurate, user-friendly, and secure, employees can perform their tasks more efficiently and with higher quality. However, this relationship may be influenced by factors such as ICT infrastructure, user acceptance and competence, and management support, which can either enhance or diminish the system's effect on productivity.

Moreover, the framework highlights that an effective COA Information System enhances the efficiency and productivity of COA personnel by improving the accessibility, accuracy, security, and reliability of audit-related information. It also recognizes that demographic factors may influence how employees utilize the system in performing their duties. The framework further emphasizes the importance of user acceptance, technical support, and continuous training in maximizing the benefits of the system. Likewise, it demonstrates that an efficient information system can contribute to faster completion of audit tasks, improved quality of work outputs, and better decision-making processes. Through this framework, the study aims to determine the significant effect of the COA IS on employee productivity in COA Regional Office No. IV-A.

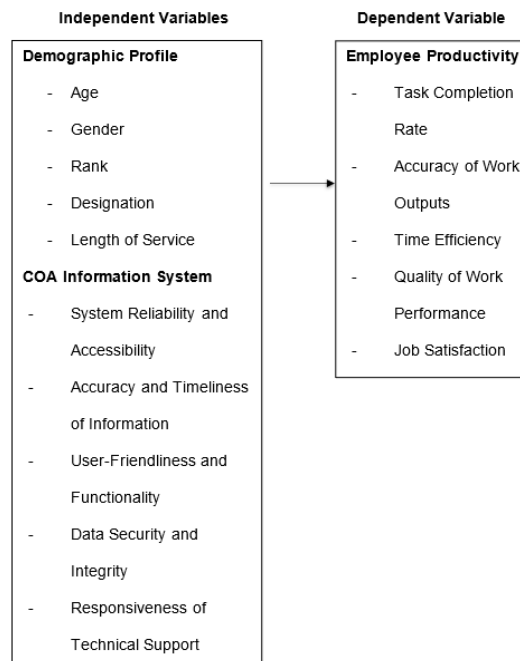


Figure 1. Research Paradigm

Figure 1 presents the study's research paradigm, in which the demographic profile and COA

Information System (COA IS) dimensions serve as independent variables influencing employee productivity. 1206 Employee productivity is measured in terms of task completion, accuracy, time efficiency, and quality of work performance, and job satisfaction. The arrow illustrates the influence of the independent variables on the dependent variable.

1.4. Statement of the Problem

This study sought to determine the impact of the currently implemented audit information system on the use of COA personnel. It aims to answer the following questions:

- What is the demographic profile of the respondents in terms of:
 - Age
 - Gender
 - Rank
 - Designation
 - Length of Service?
- How may the COA Information System (COA IS) be described in terms of:
 - System Reliability and Accessibility
 - Accuracy and Timeliness of Information
 - User-Friendliness and Functionality
 - Data Security and Integrity
 - Responsiveness of Technical Support
- What is the level of employee productivity among Regional Office IV-A personnel in terms of:
 - Task Completion Rate
 - Accuracy of Work Outputs
 - Time Efficiency
 - Quality of Work Performance and
 - Job Satisfaction
- Does the demographic profile of the respondents have a significant effect on the level of effectiveness of the COA IS?
- Does the demographic profile of the respondents have a significant effect on the level of productivity of the employees?
- Does the COA Information System (COA IS) have a significant effect on employees' productivity?

1.5. Research Hypotheses

- The demographic profile of the respondents has no significant effect on the effectiveness of the auditing information system implementation.
- The demographic profile of the respondents has no significant effect on the level of productivity of the employees.
- The COA Information System (COA IS) has no significant effect on employee productivity.

1.6. Significance of the Study

The results of this study will provide a significant basis for determining the impact of an auditing information system on the performance of audit procedures of COA personnel. Similarly, this study will make a significant contribution to the following:

For COA personnel, the results of this study will determine whether adopting an auditing information system would improve the quality and quantity of audit performance. Upon implementation of an auditing information system, the public would have assurance that any findings would be addressed by the audit team in a timely manner.

For other Researchers, the outcomes of this study will provide significant input for further research

on the implementation of an auditing information system for performing audit procedures.

To the MPA department, this study would be a valuable primary source for related research. This study aims to encourage everyone to let God be the center of everything. Also, information system can be adapted to the said Department for monitoring records and information still relevant to the department.

1.7. Scope and Limitation of the Study

This study emphasizes assessing the effectiveness of the Commission on Audit Information System (COA IS) and its influence on personnel productivity in the COA Regional Office IV-A. It aims to evaluate how the system's reliability, accessibility, user-friendliness, data accuracy, and security contribute to the efficiency and performance of employees in performing their tasks.

The study covers personnel of COA Regional Office IV-A, including technical, administrative, and auditing staff who regularly use the COA IS in their operations. The research will collect data through survey questionnaires and interviews to measure both the perceived effectiveness of the system and employee productivity indicators such as task completion, time efficiency, and work quality.

This chapter reviews the relevant literature and studies related to the current research. These provided the researcher with broader perspectives that helped in conceptualizing and understanding the impact of adopting an auditing information system on the audit procedures of the Commission on Audit.

1.8. Review of Related Literature and Studies

1.8.1. Related Literature

Chairperson Gameliel Cordoba emphasized that the development of a user-friendly, technology-driven government accounting system compliant with international standards would enable the creation of a comprehensive database capable of identifying patterns and detecting fraudulent activities more efficiently. He likewise stressed the need to align existing rules and regulations with evolving conditions and emerging issues by formulating updated policies, including enhanced audit guidelines for electronic payments and transactions conducted through social media platforms. In addition, he highlighted the importance of training and equipping auditors and agency personnel involved in financial transactions on updated accounting and auditing rules and regulations.

Furthermore, the initiative focuses on modernizing audit processes through the use of technology. This includes establishing a technology-driven government accounting system, digitizing government transactions in collaboration with various government agencies, and transitioning to electronic auditing, or e-audit, as the primary audit method.

Meanwhile, Commissioner Rolando Lipana stated that the strength of the Commission on Audit as an institution stems from its continuous efforts to develop strategies to address the increasingly complex and evolving demands of international partners, the government, and the Filipino people regarding public accountability and state audit mechanisms. He also expressed confidence that the insights generated during the strategic planning conference would serve as the foundation for guiding COA toward becoming one of the top-performing Supreme Audit Institutions.

The Commission's strategic roadmap is anchored on five strategic goals: improving the quality and timeliness of audits, enhancing government accountability services, strengthening the performance of adjudicatory and investigatory functions, reinforcing operational support, and improving general administration and support services. [Czarina Nicole Ong Ki, Manila Bulletin, May 17, 2023]

As per Executive Order No. 170 the State recognizes the vital role of Information and Communications Technology (ICT) in nation-building; the need to develop human resources for the information age that are skilled in the use of ICT and a population capable of operating and utilizing electronic appliances and computers; its obligation to facilitate the transfer and promotion of technology and to ensure

network security, connectivity and neutrality of technology for the national benefit.

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Section 27 of Republic Act (RA) No. 8792, otherwise known as the “Electronic Commerce Act” requires all government departments, bureaus, offices, agencies, and government-owned or controlled corporations to establish methods and procedures for the payment or settlement of fees and other obligations through electronic data messages or electronic documents, including the issuance of electronic receipts acknowledging such payments.

In line with the State policy embodied in Republic Act No. 11032, or the “Ease of Doing Business and Efficient Government Service Delivery Act of 2018,” the implementation of digital payment systems in government transactions is expected to improve the efficiency of public service delivery, accelerate financial transactions, enhance revenue generation, and minimize opportunities for graft and corruption.

The digitalization of payment systems also supports the government’s initiative to establish an inclusive digital finance ecosystem, consistent with the Digital Payments Transformation Roadmap 2020–2023 and the National Strategy for Financial Inclusion 2022–2028. Moreover, it complements ongoing efforts to expand access to formal financial services, particularly for vulnerable and underserved sectors of society.

Furthermore, the COVID-19 pandemic underscored the advantages of digital payment services across different sectors by enabling faster, more convenient, secure, and transparent delivery of government services and business transactions. The adoption of digital payment systems for government disbursements likewise facilitates the timely distribution of financial assistance to beneficiaries, promotes financial inclusion among marginalized sectors, contributes to the realization of the country’s long-term vision under Ambisyon Natin 2040, and supports the nation’s transition toward an inclusive, resilient, and future-ready economy.

The study by Wadesango, N., Mhaka, C., & Wadesango, V. (2020) examined how analytical procedures are applied in internal auditing to improve the reliability and accuracy of financial information. The findings revealed that analytical procedures are essential in identifying irregularities, enhancing audit efficiency, and supporting informed decision-making. However, the study also noted challenges, including limited technical expertise and inadequate system support, that hinder the effective implementation of these procedures.

This study bears significance to the current study as it supports the role of information systems, such as the COA Information System (COA IS), in enhancing audit processes. Similar to the findings of Wadesango, N., Mhaka, C., & Wadesango, V. (2020), the current study emphasizes that system reliability, information accuracy, and technical support are critical to improving employee productivity and audit performance. Both studies highlight that the effectiveness of audit tools and systems directly influences the quality, efficiency, and reliability of audit outputs.

The study on The Emergence of Artificial Intelligence Ethics Auditing (Schiff et al., 2024) discusses the growing need to audit artificial intelligence systems to ensure transparency, accountability, and ethical compliance. The study highlights that as organizations increasingly rely on automated, data-driven systems, auditing must extend beyond financial accuracy to encompass fairness, data integrity, and responsible system use. It emphasizes that effective auditing requires reliable information systems, strong data governance, and continuous monitoring to maintain trust and credibility.

This study serves as a basis for the present research as it reinforces the importance of system reliability, data security, and integrity in audit processes. Similar to the COA Information System (COA IS), the effectiveness of digital audit tools depends on their ability to produce accurate, secure, and trustworthy information. Both studies highlight that well-designed information systems not merely improve audit efficiency and productivity but also enhance accountability and confidence in audit outcomes.

Recent literature continues to confirm that age significantly influences the adoption and effective use of information systems in organizational settings. Venkatesh et al. (2016) found, using the Unified Theory of Acceptance and Use of Technology (UTAUT2), that age influences the relationships among performance expectancy, effort expectancy, and technology use, indicating that younger users tend to adapt more quickly to new systems than older users.

Similarly, a study by Marangunić and Granić (2015) revealed that older employees often

experience lower perceived ease of use and self-efficacy when interacting with information systems, which can hinder adoption. In contrast, younger employees demonstrate higher confidence and adaptability, leading to more effective system utilization.

In a public sector context, Alalwan et al. (2017) found that age significantly influences users' behavioral intention to adopt e-government systems, with younger individuals showing greater acceptance and usage. This supports the notion that familiarity with digital technologies plays a crucial role in system effectiveness. More recent studies further reinforce this trend. Dwivedi et al. (2019) emphasized that demographic factors, particularly age, remain significant predictors of technology adoption, especially in digital transformation initiatives. Likewise, a study by Awa, H. O., Ojiabo, O. U., & Emecheta, B. C. (2021) highlighted that age influences user readiness and adaptability to information systems, with younger employees being more responsive to system updates and innovations.

In the context of workplace productivity, Nguyen et al. (2022) found that older employees may require additional training and technical support to effectively use organizational information systems, as differences in digital literacy can affect performance.

Shaouf and Altaqqi (2018) examine how gender influences technology adoption, usage, and user responses. The review found that men are generally more influenced by perceived usefulness and performance outcomes, while women place greater emphasis on ease of use, trust, and social factors. It also noted that although gender differences exist, these gaps are gradually narrowing due to increased exposure to technology, improved system design, and organizational support.

This study contributes to the present investigation by supporting the idea that gender can influence user perceptions and interactions with information systems. However, consistent with more recent findings, the current study revealed that gender is not significantly associated with the effectiveness of the COA Information System (COA IS) or employee productivity, suggesting that a well-designed and accessible system may minimize gender-based differences in system use and evaluation. The study conducted by Qazi et al. (2022) investigated gender differences in the utilization of information and communication technology (ICT) and related skills through a systematic review and meta-analysis of various studies. The findings revealed that gender differences in ICT use and skills are generally small and often not statistically significant, although a slight advantage was observed in favor of males in some technical aspects. However, the results varied across contexts, suggesting that factors such as access, experience, and training play a more important role than gender alone.

This study is relevant to the present research as it supports the finding that gender has no significant influence on the effectiveness of the COA Information System (COA IS) and employee productivity. Consistent with Qazi et al. (2022), the study outcomes indicate that when information systems are accessible and user-friendly, gender differences in usage and perception tend to diminish. This implies that system design, training, and support are more critical factors in enhancing productivity than gender-based differences.

Recent studies continue to highlight the influence of psychological factors, particularly computer anxiety, on the adoption and effective use of information systems. Marangunić and Granić (2015) found that computer anxiety negatively affects users' perceived ease of use and behavioral intention toward technology adoption, indicating that users with higher anxiety are less likely to adopt and efficiently utilize information systems.

In a more recent study, Al-Emran, M., Mezhuyev, V., & Kamaludin, A. (2018) found that computer anxiety has a direct negative effect on users' intention to adopt information systems, particularly in environments where users have limited technical skills or experience. This supports the idea that psychological readiness is critical in successful system implementation.

Furthermore, research by Rafique et al. (2021) showed that digital literacy and continuous training reduce computer anxiety, thereby improving system acceptance and user performance. It was highlighted that organizational support and system usability play a key role in minimizing anxiety and enhancing user satisfaction and productivity.

Recent literature continues to emphasize that top management support is a critical factor in the success of information systems implementation and performance. Shao (2016) identified top management support as one of the most important determinants of enterprise system success, noting that leadership involvement ensures alignment between system implementation and organizational goals.

Similarly, a meta-analytical study by Sharma and Yetton (2016) reaffirmed that top management support has a significant and substantial effect on information system success, particularly through resource allocation, strategic direction, and user support. In a more recent study, Sanusi (2021) found that top management commitment and support are essential in implementing information system risk management, as leadership is responsible for providing resources, setting policies, and ensuring effective system governance. The study further emphasized that strong executive involvement enhances organizational performance and system reliability.

Moreover, recent research on IS project success (Loureiro, 2024) indicates that leadership support remains a key success factor for effective system implementation and performance outcomes, particularly in complex organizational environments.

Recent studies continue to affirm that confidence in using computers is a key determinant of technology adoption and effective system use. Marangunić and Granić (2015) found that self-efficacy significantly influences perceived ease of use and behavioral intention, indicating that users with higher confidence are more likely to adopt and utilize information systems effectively. Similarly, Binyamin, S. S., Rutter, M., & Smith, S. (2018) reported that computer self-efficacy has a strong positive effect on users' acceptance of information systems, particularly through its influence on perceived usefulness and ease of use.

More recent research further reinforces this relationship. A study by Li et al. (2024) found that computer self-efficacy significantly correlates with behavioral intention to use technology, as well as learning motivation and cognitive engagement, highlighting its role in improving system utilization and performance. In addition, Rahman and Ahmad (2025) showed that users with high computer self-efficacy demonstrate greater readiness and confidence in adopting new technologies, emphasizing that self-efficacy reduces resistance and enhances system acceptance. Darmawati et al. (2025) conducted a systematic literature review to examine the role of Artificial Intelligence (AI) in the financial reporting systems of local governments. Their analysis of 20 academic articles shows that AI technologies, particularly machine learning and expert systems, are being applied to automate routine financial processes, detect fraud, predict financial performance, and improve reporting accuracy.

These AI tools also enhance efficiency by speeding up data processing and reducing administrative workload, enabling government officials to focus more on strategic tasks. However, the review also highlights major challenges, such as limited technology infrastructure, regulatory gaps, and difficulties in integrating AI across government agencies. The study concludes that further development of practical AI implementation models and supportive policies is essential for sustainable adoption in the public sector.

Systematic reviews of information technology (IT) adoption consistently demonstrate its positive impact on employee efficiency and work performance. IT systems automate repetitive and routine tasks, reduce manual workloads, and accelerate workflow processes, facilitating employees' concentration on more valuable tasks. Studies indicate that IT improves productivity by providing timely access to accurate information, minimizing errors, and enhancing communication and collaboration across organizational functions (Al Munawar, 2025).

Moreover, human factors such as technology readiness and employee competence significantly influence the effectiveness of IT in improving work efficiency. Employees with higher digital skills and positive attitudes toward technology are more likely to realize efficiency gains from IT tools. These findings are significantly pertinent to the current study, as they support the premise that information systems, through automation, accuracy, and workflow optimization, enhance job performance and productivity, which are central objectives of this research.

The literature on Accounting Information Systems (AIS) consistently shows that AIS plays a significant role in enhancing the quality of financial reporting. A systematic literature review of AIS studies highlights that AIS supports organizations by integrating and automating the collection, processing, storage, and presentation of financial data, thereby enabling the production of accurate, reliable, relevant, and timely

financial reports.

Most empirical studies included in the review found a positive and significant relationship between AIS implementation and financial report quality, indicating that effective AIS use leads to higher data accuracy, reduced manual errors, and enhanced reporting efficiency. However, some studies also noted that AIS alone may not be sufficient without complementary factors like competent human resources or strong internal controls, which also affect reporting outcomes (Nasution & Welly, 2025).

The execution of Management Information Systems (MIS) has been shown to positively impact employee productivity across various organizational contexts. MIS facilitates faster access to accurate information, automates routine administrative tasks, and improves coordination among work units, enabling employees to perform their duties more efficiently (Paramarta & Umami, 2024; Izjumadillah & Herman, 2024). By reducing redundant manual work and streamlining workflows, MIS allows staff to focus on higher-value tasks, which enhances both operational efficiency and overall job performance (PubTexto, 2025).

Additionally, studies indicate that user satisfaction and system quality are key factors influencing the effectiveness of MIS in contributing to productivity, underscoring the importance of proper implementation, training, and system design. These findings are pertinently applicable to the present study, as they reinforce the concept that information systems enhance organizational performance by improving efficiency, accuracy, and employee effectiveness.

A systematic review by Science-Gate (2024) found that information systems (IS) have a positive influence on employee performance in public sector organizations. The study found that adopting IS, such as electronic government systems (EGS), enhances employees' ability to perform tasks effectively by improving access to information, supporting decision-making, and reducing reliance on manual processes.

The review also emphasized that the efficiency and accuracy of work outputs increase when IS are properly implemented, while elements such as infrastructure, training, and organizational readiness significantly influence the magnitude of these improvements. These findings are directly pertinent to the current study, as they illustrate that information systems can enhance job performance, operational efficiency, and employee effectiveness, which align with the research objective of investigating how IS affects productivity and work outcomes in organizational settings.

Robotic Process Automation (RPA) has been shown to significantly improve operational efficiency and business process optimization by automating repetitive, rule-based tasks that are traditionally performed manually. According to Legito (2023), RPA reduces manual effort, minimizes errors, accelerates task execution, and streamline workflows, resulting in higher productivity, faster response times, and cost savings.

Additionally, RPA enhances process consistency and provides greater visibility into operations, supporting data-driven decision-making and continuous improvement. These findings are pertinent to the current study as they illustrate how information systems can optimize work processes, reduce repetitive tasks, and enhance employee performance, aligning with the research objective of investigating the effect of information systems on operational efficiency, productivity, and overall job performance in organizational settings.

Business Process Management Systems (BPMS) play a critical role in automating, streamlining, and optimizing organizational workflows. According to Martin-Navarro, Lechuga Sancho, and Medina-Garrido (2023), BPMS integrates users with tasks and automates repetitive steps, thereby improving operational efficiency, reducing human error, and ensuring consistency across business processes. Automated workflows also provide real-time monitoring and clear audit trails, supporting better decision-making and compliance.

The literature shows that BPMS enables employees to focus on more valuable tasks, thereby improving productivity and job performance. The findings are pertinent to the current study, as they illustrate that information systems can diminish redundant manual tasks, enhance work processes, and elevate employee performance and satisfaction, consistent with the research objective of examining the

influence of information systems on efficiency, accuracy, and overall work outcomes in organizational contexts. Huang and Rust (2022) provide a conceptual framework for understanding how artificial intelligence (AI) and intelligent automation transform business processes by augmenting and automating tasks that were traditionally carried out by humans. They describe different levels of AI capability from mechanical intelligence (performing routine, repetitive tasks) to more advanced cognitive functions and explain how AI systems can complement human work by taking over simpler tasks and gradually supporting more complex decision processes. 1212

1.8.2. Related Studies

Recent studies affirm that auditing has evolved significantly due to advancements in information and communication technologies. Appelbaum, Kogan, and Vasarhelyi (2017) highlighted that data analytics and digital audit tools enhance audit efficiency, accuracy, and decision-making, allowing auditors to shift from manual procedures to more analytical tasks. Similarly, Issa, Sun, and Vasarhelyi (2016) emphasized that big data and advanced analytics enable auditors to focus on forward-looking assessments, improving the reliability and relevance of audit outcomes. In addition, Kokina and Davenport (2017) discussed the role of Robotic Process Automation (RPA) in auditing, noting that automation reduces manual workload, speeds up audit processes, and enhances audit quality. Sledgianowski, Gomaa, and Tan (2017) further reinforce the need for IT competencies among auditors. It was found that auditors must develop skills in data analytics and information systems to remain effective in a digital environment.

Furthermore, a study by Lombardi, Secundo, and Dumay (2020) highlighted that digital transformation in auditing improves transparency, efficiency, and real-time reporting, but also requires continuous upskilling of auditors in IT-related competencies. Lastly, research by Teeter, Alles, and Vasarhelyi (2017) showed that continuous auditing and monitoring systems enhance audit effectiveness by enabling real-time data analysis and reducing reliance on traditional manual audits.

Although digitalization offers numerous advantages, it also introduces new challenges for organizations, particularly in relation to digital materiality within the evolving digital society. Han et al. (2016) emphasized that inadequate information technology (IT) skills among auditors may increase audit risk. The authors further noted that auditors must continuously enhance their IT competencies to effectively address emerging technological challenges.

Moreover, auditing standards now encourage auditors to utilize available information technology and seek the assistance of specialists when necessary. The expectation gap likewise serves as a catalyst for change, arising when audit services fail to satisfy societal expectations. Consequently, the failure of auditors to improve their competence may create significant issues within the audit profession, as deficiencies in capability may widen the expectation gap and impair the effectiveness of audit functions.

Sledgianowski, Gomaa, and Tan (2017) confirms that the auditing profession continues to evolve with digitalization, requiring auditors to develop stronger IT-related competencies. They have emphasized that modern auditors must possess skills in data analytics, information systems, and digital tools to maintain audit quality in a technology-driven environment. Similarly, Pan and Seow (2016) highlighted that the shift toward digital and paperless auditing has transformed audit processes, making them more efficient and flexible, while also requiring auditors to adapt to new working methods and technological platforms.

More recent studies further reinforce the growing demand for continuous learning. Lombardi, Secundo, and Dumay (2020) found that digital transformation in auditing necessitates continuous professional development, as auditors must update their competencies to effectively use emerging technologies including artificial intelligence, large data, and automation instruments. In addition, a study by Kroon, Alves, and Martins (2021) emphasized that ongoing training and education are critical in enabling auditors to adapt to digital tools and maintain audit quality. The study also noted that insufficient IT competence can negatively affect audit efficiency and effectiveness.

Issa, Sun, and Vasarhelyi (2016) along with Kokina and Davenport (2017) observed that automation and digital tools allow auditors to focus more on analytical tasks rather than routine procedures, increasing flexibility but potentially reducing direct interaction with clients. Furthermore, a study by

AICPA (2022) reported that continuous upskilling and reskilling are essential for auditors to remain relevant, particularly as the profession increasingly adopts digital technologies and remote

A study by Abdullah et al. (2024) found that artificial intelligence, big data analytics, and cloud computing significantly improve efficiency, accuracy, and decision-making in accounting and auditing processes, enabling organizations to produce more reliable and timely outputs. Similarly, Aldoseri et al. (2024) emphasized that AI-driven digital innovation enhances operational efficiency, continuous learning, and predictive decision-making, thereby supporting organizational adaptability and performance.

In the context of governance, Bena et al. (2025) highlighted that while digital technologies enhance decision-making and operational efficacy, they also introduce significant challenges such as data security risks, governance complexity, and ethical concerns. The study further noted that organizations must establish strong governance frameworks, skilled personnel, and effective data management practices to fully benefit from digital transformation.

Moreover, Naamane et al. (2023) noted that cloud computing and big data analytics enhance information processing and decision-making capabilities but also pose challenges such as system complexity, integration issues, and security risks, which require proper planning and management.

From a public sector perspective, OECD (2025) reported that digital technologies, particularly AI, improve efficiency, responsiveness, and accountability in government operations, but require strong data governance, alignment with organizational goals, and effective implementation strategies.

The study examines the relationship between organizational investments in Information Technology (IT) and audit risk. It explains that IT investments substantially affect the quality of accounting information and the effectiveness of internal controls, both of which are key factors in assessing audit risk. The study finds that well-planned and properly implemented IT investments can reduce audit risk by improving data accuracy, strengthening internal control systems, and enhancing the reliability and timeliness of financial information. However, the study also emphasizes that inadequate IT controls, poor system integration, and insufficient user competence may increase audit risk. Complex IT environments can introduce new vulnerabilities, such as system failures, data manipulation, and security threats, which auditors must carefully evaluate during audits (Han et al., 2016).

Al-Hiyari, Al-Mashregy, and Mat (2019) reported that auditors' IT knowledge and training significantly influence the effective use of audit information systems, while insufficient technical skills reduce the benefits of available technologies. In addition, a study by Kroon, Alves, and Martins (2021) found that auditor competence and organizational support positively influence the utilization of digital audio technology, underscoring the need for technical skills and management commitment for effective implementation.

The Technology Acceptance Model (TAM) is the predominant idea utilized to elucidate an individual's acceptance of an information system (Martin, 2022). The Technology Acceptance Model explains the factors influencing the acceptance and utilization of computer technology, which include actual use, attitude toward using technology, behavioral intention, perceived ease of use, and perceived usefulness. The model was adapted from the Theory of Reasoned Action and emphasizes that system effectiveness largely depends on perceived usefulness and perceived ease of use.

Researchers frequently utilize TAM in examining behavioral intentions and the use of information technology, as Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) are considered significant determinants of users' acceptance of technology. Perceived usefulness refers to the extent to which an individual believes that using a particular system can enhance job performance, while perceived ease of use pertains to the degree to which a person believes that utilizing the system would require less effort.

Moreover, many information systems researchers have shown interest in understanding human trust in the context of technology acceptance. Trust in technology remains an essential factor as technological advancements become increasingly complex and unpredictable for users. Previous studies also indicate that technology acceptance varies by user type. Consequently, examining technology acceptance among specific user groups, such as lecturers or teachers, remains important and warrants further research.

Martin (2022) updated the Technology Acceptance Model to provide a more robust explanation of how users adopt and accept emerging technologies in organizational environments. The model highlights two primary determinants, namely Perceived Usefulness, which pertains to the extent to which users believe that technology can improve their job performance, and Perceived Ease of Use, which refers to the extent to which users perceive that utilizing the technology requires minimal effort.

Martin's version integrates external factors such as organizational support, user training, and system quality, which influence these perceptions and ultimately affect the user's Behavioral Intention to use the system, leading to actual system use. The model also considers user attitude as a mediating factor between perceptions and intention.

This updated TAM highlights the significance of user experience and organizational context in technology acceptance, suggesting that effective implementation strategies should address both the technical and human aspects of technology adoption.

According to Schorr (2023), the Technology Acceptance Model was developed to guide the conduct of effective user acceptance testing and to provide a theoretical basis for understanding users' acceptance of digital technologies. The model also provides a framework for predicting and improving user acceptance by identifying the key factors that influence user adoption of technology. The study emphasized that perceived usefulness and perceived ease of use are among the most significant determinants of users' acceptance of digital technologies. Furthermore, the model recognizes behavioral intention to use as an important predictor of actual system usage.

The findings likewise indicate that TAM serves as an effective framework for understanding technology acceptance; however, it also possesses certain limitations that require further enhancement. Although the model highlights the importance of perceived usefulness and perceived ease of use, it also suggests that other factors, such as users' attitudes toward technology utilization, may influence acceptance. Moreover, the model may be improved by incorporating additional variables, including subjective norm, voluntariness, facilitating conditions, and self-efficacy. Nevertheless, the model's increasing complexity may also be one of its limitations.

Tarhini, Hone, and Liu (2015) reported that gender, age, and educational level significantly affect users' behavioral intention and satisfaction in e-learning systems, suggesting that demographic differences influence technology adoption and perceived effectiveness. In addition, Al-Emran, Mezhyuev, and Kamaludin (2018) emphasized that educational attainment and technological experience positively influence users' readiness and ability to utilize information systems effectively.

The study also noted that users possessing elevated educational qualifications are generally more adaptable to digital platforms and system changes. Furthermore, a study by Al-Rahmi et al. (2021) found that user demographics, particularly educational attainment and technological competence, significantly influence the satisfaction and effectiveness of digital systems, underscoring the importance of user-centered system design and ongoing training.

According to Elias and Lubua (2021), usability, functionality, and reliability influence users' satisfaction when adopting a library information system. The findings reveal that usability and reliability are the strongest predictors of user satisfaction, with users valuing systems that are easy to use and consistently perform without errors. Functionality also positively affects satisfaction, but to a lesser extent. The study emphasizes that improving these system quality dimensions is critical to encouraging system acceptance and continued use.

Moreover, the present study validates the DeLone and McLean Information Systems Success Model through empirical investigations that identify significant relationships among the dimensions of information systems success, including system quality, information quality, user satisfaction, and individual impact. According to DeLone and McLean, the model emphasizes assessing the interrelationships among the dimensions of success and establishing a comprehensive framework for conceptualizing and operationalizing information systems success.

The study further revealed a significant relationship between information quality and individual impact, as well as the relevance of system use and service quality in evaluating information systems' success. The findings likewise highlighted the importance of using a comprehensive framework to measure

IS success and of considering multiple dimensions of quality, such as information quality, system quality, and service quality. In addition, the study underscored the need to clearly define the context or frame of reference when assessing the “net benefits” derived from information systems.

The study conducted by Al-Kofahi, Hassan, and Mohamad (2020) revealed that the Information Systems (IS) Success Model has been extensively applied across various fields, including enterprise resource planning, e-health, e-learning systems, knowledge management systems, e-procurement systems, e-commerce, and e-government systems. The findings further indicated that most studies using the model were conducted in the educational and public sectors.

System quality factors such as usability, functionality, and reliability play a vital role in determining user satisfaction and the overall effectiveness of information systems. A study on library system adoption revealed that reliability and usability significantly influence user satisfaction, with reliable system performance and intuitive interfaces being highly valued by users (Elias & Lubua, 2021).

System quality is of paramount importance in determining user satisfaction and the overall success of information systems. A study on business intelligence systems found that high system quality encompassing reliability, accuracy, and accessibility significantly improves user satisfaction (Rahmawati et al., 2023). Satisfied users are more likely to continue using the system efficiently, which enhances organizational decision-making and performance. This underscores the importance of investing in reliable and robust information systems that foster user trust and positive perceptions.

User satisfaction is considered a vital factor in the successful adoption and utilization of information systems. The study conducted by Hidayah, N. A., Fetrina, E., & Taufan, A. Z. (2020) using the End-User Computing Satisfaction (EUCS) method within the context of an academic information system revealed that system quality, information quality, and service quality are significant determinants of user satisfaction. Among these factors, particularly information quality (accuracy and timeliness), were found to have a substantial influence on users' satisfaction levels. Furthermore, satisfied users are more likely to effectively maximize system utilization, thereby improving their productivity and work performance.

The study conducted by Fitria, Yahya, Ali, Purnamawati, and Mappalotteng (2024) examined the influence of system quality on user satisfaction in e-learning environments, particularly focusing on the mediating roles of perceived ease of use and perceived usefulness. The findings indicated that high system quality positively influences users' perceptions of the system's ease of use and usefulness, thereby enhancing overall user satisfaction.

The study further emphasized that perceived ease of use and perceived usefulness serve as significant mechanisms through which system quality affects user satisfaction. Consequently, the research highlighted the importance of developing systems that are both functional and user-friendly to improve user engagement and encourage continuous use.

Shrestha and Vassileva (2019) reported that system usability and quality significantly influence perceived usefulness and users' intention to use information systems, emphasizing that user-friendly interfaces improve satisfaction and system adoption. More recent studies further reinforce these findings. Martin-Navarro et al. (2025) found that system quality, service quality, and information quality positively affect users' perceptions of usefulness and overall satisfaction with business process management systems, highlighting the importance of user-centered system design and support services.

In addition, Raza, Capretz, and Ahmed (2015) emphasized that understandability, learnability, operability, and attractiveness significantly contribute to software usability and user satisfaction. The study highlighted that systems with intuitive and user-friendly interfaces improve user performance and acceptance.

This study investigates the effects of interface usability attributes on user satisfaction with Enterprise Resource Planning (ERP) systems, while accounting for the mediating roles of perceived usefulness and perceived ease of use. The findings indicate that interface usability significantly enhances users' perceived ease of use, which, together with perceived usefulness, strongly determines user satisfaction. The study highlights that a well-designed, user-centric interface enhances users' navigation efficiency and elevates

their view of the system's worth, thus promoting increased satisfaction and adoption rates (Dollado, Jr., 1216 2022).

A study by Bostrom and Gupta (2016) reaffirmed that information systems are more effective when organizational, human, and technological factors are integrated, emphasizing that user involvement and organizational support are essential for successful system implementation. The study highlighted that systems that focus solely on technical requirements often fail to achieve the intended organizational outcomes.

Similarly, Berg, Aarts, and van der Lei (2018) found that socio-technical approaches improve system acceptance and usability because they consider workflow practices, employee interaction, and organizational culture alongside technical design. Their study emphasized that system success depends on how well technology fits actual work processes.

Sarker, Chatterjee, and Xiao (2019) stressed that digital transformation initiatives require alignment between technology, people, and organizational processes. The study noted that failure to address social and organizational dimensions often leads to resistance, reduced productivity, and ineffective system utilization. In addition, a study by Califf, Sarker, and Sarker (2020) highlighted that socio-technical perspectives are increasingly important in digital work environments because employee adaptability, collaboration, and user experience significantly influence system effectiveness and productivity outcomes.

Furthermore, research by Tarafdar, Beath, and Ross (2019) found that organizations adopting socio-technical approaches experience better system acceptance, employee engagement, and operational efficiency because users are more involved in system design, implementation, and continuous improvement processes.

According to Raharjo and Simanungkalit (2024), the role of usability in the success of information technology (IT) projects. It shows that systems designed with high usability are more likely to be accepted by users, reducing resistance and increasing satisfaction. Poor usability, on the other hand, often leads to project delays, increased training costs, and low adoption rates. The research stresses that usability should be a core focus throughout the IT project lifecycle to ensure effective system implementation and user engagement.

Data security and integrity are fundamental components of effective audit information systems. Robust security measures safeguard sensitive audit data from unauthorized access and ensure its accuracy and consistency throughout processing and storage. According to Al-Shamaileh and Khanfar (2021), strong data security enhances user trust, which is critical for acceptance and effective use of information systems. Moreover, Kagan and Segal (2018) emphasize that maintaining data integrity through encryption and validation controls is essential for reliable audit outputs and accountability. In the public sector context, Gharavi and Yu (2017) highlight the importance of security frameworks in protecting sensitive information and supporting operational efficiency.

This study examines how information security measures influence user trust and system usage in cloud computing environments. It finds that robust security protocols, including data protection and access control, significantly increase user trust, which in turn drives higher system adoption and continued usage. The research highlights that users are more willing to rely on systems they perceive as secure, emphasizing the critical role of security in technology acceptance and sustained engagement (Shamaileh & Khanfar, 2021).

According to Kagan and Segal (2018), the critical importance of maintaining data integrity within audit information systems. It highlights how data integrity; ensuring data is accurate, consistent, and protected from unauthorized alteration which is essential for reliable audit outcomes. The study outlines methods such as encryption, access controls, and validation procedures that help safeguard audit data against corruption and manipulation, thereby supporting the credibility and effectiveness of audit processes.

Gharavi and Yu (2017) explore the unique information security challenges faced by public sector organizations, including limited resources, legacy systems, and strict regulatory requirements. It discusses strategies such as implementing robust security policies, continuous monitoring, employee training, and adopting advanced technologies to mitigate risks. The research emphasizes that addressing these challenges is critical to protecting sensitive public data and maintaining public trust.

Responsiveness of technical support significantly influences information system effectiveness, user

satisfaction, and system utilization. Kalankesh et al. (2020) found that service responsiveness is one of the most influential factors affecting user satisfaction, highlighting that timely technical assistance and effective communication improve users' experiences and system acceptance. Similarly, Hamdan and Al-Hajri (2021) reported that service quality, including technical support responsiveness, positively affects user satisfaction in accounting information systems, emphasizing that prompt IT assistance minimizes disruptions and improves system efficiency.

Furthermore, research on information systems for research by Azeroual, Schöpfel, and Saake (2021) emphasized that user acceptance and satisfaction depend not only on system quality but also on support responsiveness and data reliability, reinforcing the importance of technical assistance in maintaining effective system use. Also, effective technical support and service quality are critical factors in maintaining user acceptance and satisfaction with information systems, particularly in environments where system reliability and continuous usage are essential.

Furthermore, Loureiro (2024) highlighted that information systems projects are more successful when organizations provide strong technical support, effective communication, and continuous user assistance, as these factors improve system acceptance and long-term utilization. Rita, Oliveira, and Farisa (2019) found that website design, security and privacy, and fulfillment significantly affect overall electronic service quality, which, in turn, influences user satisfaction, trust, and continued system utilization.

The study emphasized that high-quality electronic services improve user experience and encourage sustained usage. Similarly, Mahadevan and Joshi (2022) revealed that efficiency, system availability, privacy, and fulfillment positively affect customer satisfaction and loyalty, reinforcing the importance of reliable and user-friendly electronic services.

Also, Mamakou et al. (2024) highlighted that electronic service quality and user experience are significant predictors of customer satisfaction, particularly in digital platforms where usability, responsiveness, and reliability influence users' perceptions and trust. In addition, Fan et al. (2022) found that dimensions such as system structure, automated fulfillment, security reliability, and interactive support services positively influence customer trust and engagement, indicating that service quality enhances both satisfaction and continued system use.

Furthermore, Ighomereho et al. (2022) proposed that reliability, security, fulfillment, ease of use, and responsiveness are critical dimensions of e-service quality, emphasizing that organizations must continuously improve these areas to enhance user satisfaction and overall system effectiveness.

Alalwan et al. (2017) found that well-designed information systems improve users' ability to complete tasks efficiently by enhancing accessibility, usability, and process integration. The study highlighted that systems with effective workflows and user-friendly interfaces enable faster, more accurate task completion. Similarly, a study by Tarafdar, Beath, and Ross (2019) revealed that information systems that streamline work processes and reduce repetitive tasks significantly improve employee productivity and task completion efficiency. The study emphasized that system reliability and usability are critical factors influencing users' performance outcomes.

Research by Abdelwahed et al. (2023) found that digital systems and performance management tools positively affect employee productivity by improving work engagement, monitoring task progress, and facilitating timely completion of responsibilities.

In audit-related environments, Puspasari, Firdaus, and Samboteng (2024) found that implementing a task management system significantly improved employee performance within the Audit Board (BPK). The study emphasized that information systems enhance task organization, workflow monitoring, and completion of audit-related activities, thereby improving operational efficiency. Alles (2015) highlighted that advanced audit technologies and continuous auditing systems strengthen internal controls by enabling real-time monitoring, early detection of irregularities, and improved fraud prevention. The study emphasized that effective IT integration enhances transparency and reduces the likelihood of material misstatements.

Kokina and Davenport (2017) revealed that technology, including artificial intelligence and robotic process automation, improves audit efficiency and reduces human error. However, the study also noted that

inadequate system governance, poor implementation, and insufficient user competence may increase 1218 operational and audit risks. In addition, Lombardi, Secundo, and Dumay (2020) found that digital transformation in auditing improves audit quality and decision-making, but it requires robust IT governance, strong security controls, and continuous training to minimize system vulnerabilities and maintain data integrity.

Eulerich et al. (2023) reported that audit technologies positively influence audit task outcomes by improving the speed, consistency, and effectiveness of audit procedures. The study highlighted that automated audit tools help auditors review large amounts of information more efficiently, although proper oversight and professional judgment remain essential. Kokina et al. (2025) found that Artificial Intelligence (AI), Robotic Process Automation (RPA), and machine learning technologies enhance audit workflows by automating repetitive tasks and improving data analysis capabilities. Nonetheless, the study indicated that effective implementation relies on user proficiency, transparency, and sufficient system control.

In addition, Anwar and Akeel (2026) noted in a systematic review of AI integration in auditing that digital audit systems improve audit effectiveness, efficiency, and quality by enabling faster data processing and analytical support. The study further highlighted that technological capabilities must align with audit task requirements and users' competencies to maximize performance benefits. Auditing contexts, ensuring the accuracy of audit outputs is essential for compliance and effective control enforcement (Romney & Steinbart, 2017).

Fu et al. (2024) found that accuracy, completeness, consistency, and timeliness remain the most frequently used dimensions in assessing data quality, emphasizing that high-quality data improves decision-making and organizational efficiency. Similarly, Wang et al. (2023) reported that completeness, relevance, consistency, and timeliness are among the most important dimensions of data quality, particularly in information systems where users rely on accurate and accessible data for operational and strategic decisions.

Miller et al. (2024) highlighted that modern data quality frameworks continue to emphasize accessibility, understandability, reliability, and consistency as essential dimensions for ensuring that data is useful and effective for end users. In addition, Okafor et al. (2025) found that dimensions such as relevance, usefulness, completeness, timeliness, and accessibility significantly affect usability and efficacy of information systems, underscoring the necessity of delivering information in a user-friendly and comprehensible style. Recent studies continue to validate and extend the DeLone and McLean Information Systems Success Model, which highlights that system quality, information quality, and service quality substantially affect system utilization, user satisfaction, and organizational advantages. Jeyaraj (2020) conducted a meta-review of DeLone and McLean studies and found strong empirical support for the interconnections between system quality, information quality, service quality, user satisfaction, and net benefits across different organizational settings. Similarly, Ojo (2017) validated the updated DeLone and McLean IS Success Model and confirmed that System quality, information quality, and service quality favorably influence user satisfaction and system utilization, hence enhancing organizational performance and effectiveness.

Alfaki (2021) found that service quality, user satisfaction, and system use significantly contribute to the net benefits of information systems, underscoring the importance of technical support and user-centered system design for IS success.

Maramba, Chatterjee, and Newman (2019) found that usability dimensions such as ease of use, interface design, learnability, and efficiency are critical factors affecting the successful adoption of Health Information Systems (HIS). The study revealed that user-friendly systems improve task accuracy, reduce errors, and enhance overall productivity, while poor usability leads to frustration and reduced system utilization. Similarly, Yen and Bakken (2021) highlighted that effective system usability and workflow integration improve task completion and reduce cognitive workload among users, particularly in knowledge-intensive and data driven environments. The study emphasized that systems with intuitive interfaces and accessible information significantly improve operational efficiency and user satisfaction.

More recent studies further support the importance of information systems in time management and workflow efficiency. Tarafdar, Beath, and Ross (2019) found that well-designed information systems help employees manage tasks more effectively by automating routine activities, streamlining workflows, and

reducing time spent searching for information. The study emphasized that system reliability and usability significantly affect employee productivity and time efficiency.

Abdullah et al. (2024) found that high levels of system quality, information quality, and service quality positively affect operational efficiency, user satisfaction, and employee performance. The study further emphasized that reliable systems contribute to improved work output quality and enhanced organizational effectiveness.

Ojo (2017) corroborated the DeLone and McLean Information Systems Success Model, demonstrating that system quality, information quality, and service quality greatly affect user happiness and system use, hence enhancing organizational performance and effectiveness.. Similarly, Al-Emran, Mezhuyev, and Kamaludin (2018) emphasized that ease of use, perceived usefulness, and system quality strongly affect users' satisfaction and intention to continue using information systems. The study highlighted that user-friendly systems improve productivity and efficiency by enabling users to complete tasks more effectively. More recent studies further reinforce the importance of user satisfaction in organizational settings. Hamdan and Al-Hajri (2021) found that system quality, information quality, and service quality positively influence user satisfaction in accounting information systems, which in turn enhances employee performance and operational efficiency.

In addition, Abdullah et al. (2024) reported that high-quality information systems improve user satisfaction, work efficiency, and decision-making quality, emphasizing that satisfied users are more likely to utilize systems effectively and achieve better performance outcomes. Furthermore, recent literature on information systems success indicates that user satisfaction acts as a mediator between system quality and employee productivity. Systems that provide reliable information, responsive support, and intuitive interfaces increase user confidence and reduce operational frustrations, leading to improved work quality and efficiency.

Bakotić (2016) found that employees with higher job satisfaction tend to demonstrate better work performance, stronger engagement, and greater organizational commitment. The study emphasized that supportive work environments and effective organizational systems positively affect employee productivity. Similarly, Tarafdar, Beath, and Ross (2019) reported that well- designed information systems improve job satisfaction by reducing workload stress, streamlining tasks, and improving work efficiency. The study highlighted that employees who perceive systems as useful and user-friendly are more motivated and productive in performing their duties. Abdelwahed et al. (2023) found that employee productivity and work quality improve when organizations provide supportive digital systems, adequate resources, and positive work environments. The study also emphasized that job satisfaction enhances employee engagement and operational efficiency.

Karatepe and Olugbade (2017) found that employees who receive adequate organizational support and opportunities for professional growth demonstrate higher organizational commitment and lower turnover intentions. The study emphasized that supportive work environments significantly improve retention and productivity. Similarly, Hom, et al. (2017) noted that job satisfaction and organizational support remain among the strongest predictors of employee retention, particularly in knowledge-intensive and public-sector organizations. Employees who perceive their work environment as supportive are more likely to remain committed to the organization.

More recent studies further reinforce the role of technology and system support in employee retention. Tarafdar, Beath, and Ross (2019) reported that effective digital systems reduce employee stress, improve work efficiency, and enhance job satisfaction, thereby lowering turnover intentions. The study found that user-friendly systems and responsive support services positively contribute to employee engagement and retention.

1.8.3. Synthesis of the Reviewed Literature and Study

The reviewed literature and studies collectively establish that information systems play a significant

role in improving organizational efficiency, employee productivity, and audit effectiveness. Studies on digital transformation and audit technologies revealed that information systems enhance operational efficiency through the automation of routine processes, the augmentation of data accuracy, the optimization of workflows, and the support of faster decision-making (Appelbaum, D., Kogan, A., & Vasarhelyi, M. A., 2017; Kokina & Davenport, 2017; Lombardi et al., 2020).

Similarly, studies on management information systems and automation technologies emphasized that information systems reduce manual workloads, improve process consistency and enable employees to focus on higher-value tasks, thereby increasing productivity and work performance (Legito, 2023; Martin-Navarro et al., 2023; Kumar & Malhotra, 2023).

The reviewed theories further support the relationship between information systems and employee productivity. The DeLone and McLean IS Success Model posits that system quality, information quality, and service quality substantially affect user satisfaction, system utilization, and organizational benefits (DeLone & McLean, 2003; Ojo, 2017; Jeyaraj, 2020). The Technology Acceptance Model (TAM) posits that perceived usefulness and perceived ease of use influence users' behavioral intention and actual technology utilization (Martin, 2022; Schorr, 2023). These theories suggest that reliable, accessible, and user-friendly systems encourage effective use, thereby improving employee performance and productivity.

Numerous studies have also emphasized the impact of demographic and psychological factors on information system effectiveness. Research showed that age, educational attainment, computer self-efficacy, and computer anxiety affect users' adaptability, perception, and utilization of information systems (Marangunić & Granić, 2015; Al-Emran, M., Mezhyuev, V., & Kamaludin, A., 2018; Li et al., 2024). Younger employees and users with higher digital competence tend to adapt more effectively to technological changes, while insufficient technical skills and computer anxiety negatively affect system acceptance and productivity (Rafique et al., 2021). However, recent studies revealed that gender differences in information system usage are becoming less significant when systems are accessible, user-friendly, and supported with adequate training and organizational support (Shaouf & Altaqqi, 2018; Qazi et al., 2022).

Moreover, the literature consistently identified system reliability, information quality, usability, data security, and technical support responsiveness as critical determinants of information system effectiveness. Studies found that systems that provide accurate, timely, relevant, and accessible information improve task completion, operational efficiency, and quality of work outputs (Fu et al., 2024; Wang et al., 2023; Miller et al., 2024). Likewise, usability factors such as ease of use, interface design, learnability, and functionality significantly influence user satisfaction, efficiency, and system adoption (Maramba et al., 2019; Yen & Bakken, 2021; Dollado, Jr., 2022). Furthermore, strong security measures and responsive technical support enhance user trust, minimize disruptions, and improve system utilization and productivity (Al-Shamaileh & Khanfar, 2021; Hamdan & Al-Hajri, 2021; Kalankesh et al., 2020).

Studies on employee productivity further demonstrated that information systems positively influence task completion rates, output accuracy, time efficiency, work performance quality, and job satisfaction. Research revealed that well-designed systems streamline workflows, reduce repetitive tasks, and improve employee efficiency and performance (Tarafdar et al., 2019; Abdelwahed et al., 2023). In auditing environments, automated audit systems and digital technologies improve audit quality, consistency, and effectiveness by enabling real-time monitoring and analytical processing (Alles, 2015; Eulerich et al., 2023; Kokina et al., 2025). Additionally, user happiness was recognized as a crucial mediator between system quality and employee productivity, indicating that content users are more inclined to employ systems efficiently and produce higher-quality outputs (Hamdan & Al-Hajri, 2021; Abdullah et al., 2024).

Furthermore, studies underscore the importance of organizational support, job satisfaction, and employee retention in maximizing the benefits of information systems. Employees who receive adequate technical support, training, and organizational resources demonstrate higher job satisfaction, stronger organizational commitment, and lower turnover intentions (Bakotić, 2016; Karatepe & Olugbade, 2017; Hom et al., 2017). Supportive digital environments and effective information systems also improve employee engagement and work satisfaction, which contribute to higher productivity and performance (Kim & Park, 2021; Sakrak & Koku Dogan, 2025).

Overall, the reviewed literature and studies support the present research by confirming that effective

information systems significantly contribute to employee productivity, operational efficiency, and organizational performance. The findings consistently suggest that system reliability, information quality, usability, data security, technical support, and user satisfaction are essential factors influencing the effectiveness of information systems. In the context of the Commission on Audit Information System (COA IS), these factors are expected to influence employee productivity, task performance, and audit efficiency among COA Regional Office No. IV-A personnel.

However, despite the extensive literature on information systems and productivity, limited studies specifically examine the effectiveness of COA IS and its relationship with employee productivity in the Philippine public sector audit environment. Thus, the present study seeks to fill this void by investigating the effect of COA IS effectiveness on employee productivity among the COA Regional Office No. IV-A personnel.

Moreover, the framework recognizes that the effectiveness of the COA Information System contributes to improved employee productivity by enhancing the accessibility, accuracy, reliability, and security of audit-related information. An efficient and user-friendly system enables personnel to complete tasks more effectively and produce quality work outputs.

The framework also acknowledges that factors such as demographic profile, user competence, and organizational support may influence how employees utilize the COA IS in performing their duties. Thus, the study aims to determine the extent to which the effectiveness of the COA IS significantly affects the productivity of COA Regional Office No. IV-A personnel. In addition, the conceptual framework assumes that the successful implementation of the COA Information System can support the modernization of audit processes within the organization. Through improved system functionality and technical support, employees are expected to perform their responsibilities with greater efficiency, accuracy, and consistency, thereby contributing to enhanced organizational performance and service delivery.

2. Methodology

The study used a descriptive-survey research design to assess the impact of an auditing information system as a tool in the performance of audit procedures among Commission on Audit personnel.

2.1. Research Design

The study used a purposive and stratified research design to investigate how various factors related to the Commission on Audit Information System (COA IS) influence personnel productivity. The design is appropriate because it facilitates the analysis of correlations among quantifiable factors without manipulating them, which aligns with the organizational and system context of COA.

The inclusion of demographic profiles as moderating variables recognizes that factors such as age, education, and experience may influence how individuals interact with the system and how the system affects their productivity. This aligns with research emphasizing the role of user characteristics in technology acceptance and performance outcomes.

Analytically, correlation and regression techniques were employed to understand the strength and direction of relationships between independent and dependent variables and to test the predictive power of system-related factors on productivity outcomes. Moderation analysis further explored how demographic variables may alter these relationships.

Overall, this research design provides a systematic, empirical approach to evaluating the impact of information system factors on audit personnel productivity, offering insights that could guide COA management in optimizing system features and support services to enhance work performance.

2.2. Population and Sampling Techniques

The participants in this study were personnel from the COA Regional Office No., including

supervising auditors, audit team leaders, audit team members, and administrative personnel. IV-A. To 1222 identify the appropriate sample size for the study, Slovin's formula was employed. This formula is widely utilized when the total population is known, and the researcher intends to determine a sample size based on a specified margin of error.

This study used a 0.05 (5%) margin of error, which is considered acceptable in social science research. By substituting the total population into the formula, the required number of respondents was computed to ensure that the sample adequately represents the population. The combination of respondents guarantees a comprehensive viewpoint across the five provinces of the COA Regional Office No. IV A. The overall number of responders will be determined by the number of COA personnel recipients in each province.

The respondents were selected through purposive sampling to ensure that participants had direct experience and actual exposure in using the COA Information System in the performance of their official duties. This approach allowed the study to gather relevant and reliable data regarding the effectiveness of the COA IS and its impact on employee productivity.

Table 1. Population and Sample of the Study

Name of Province	Population	Sample
Batangas	76	39
Cavite	76	39
Laguna	81	41
Rizal	68	35
Quezon	82	42
Total	383	196

Slovin's Formula with 5% margin of error

Slovin's formula was applied to ensure the sample accurately represents the population while keeping the margin of error within 5%. This proportional allocation ensures that each province contributes a sample size relative to its population, maintaining representativeness across the regional office.

2.3. Research Instrument

The instruments used by the researcher to gather data were a questionnaire and interviews with selected personnel. The findings would tell the demographic profile of the respondents in terms of age, sex, designation, and length of service; the level of the impact of implementing an auditing information system on the audit procedures performed by the audit team members.

There are four sets of instruments to gather data for this study. The first set was the "Demographic Profile" of the respondents, while the second set was the questionnaire used for assessment of the effectiveness of the COA information system in the audit procedures performed by the audit team. The third set was the Level of Employee Productivity. Lastly, the effect of the COA on Employee Productivity.

The questionnaires, as a research instrument, used a four-point scale to quantify the respondents' responses in each item as follows:

Table 2. Effectiveness of the COA Information System (COA IS) (Four Point Scale)

Mean Range	Verbal Interpretation
4	Always (A)
3	Often (O)
2	Seldom (S)
1	Never (N)

Table 3. Level of Employee Productivity (Four Point Scale)

Mean Range	Verbal Interpretation
4	Strongly Agree (SA)
3	Agree (A)
2	Disagree (D)
1	Strongly Disagree (SA)

This research employed a quantitative design with a structured questionnaire. The study commenced with problem identification, literature review, and the formulation of research questions and hypotheses. Based on validated instruments from previous studies, a questionnaire was developed consisting of four parts: informed consent, demographic information, and Likert-scale items measuring the key variables.

3.4. Research Procedure

In this study, a random sampling technique was employed because the population did not belong to a single category, class, or group. This sampling technique is particularly useful in situations where a targeted sample is required and where proportional representation is a primary consideration.

This design involves selecting individuals as samples based on the researcher's judgment and established criteria. Participants are chosen because there is a sufficient basis to consider them as representatives of the entire population.

Statistical Treatment

The data collected from the respondents were analyzed and interpreted using statistical software, such as Microsoft Excel Data Analysis and SPSS Statistics, given the factors of age, sex, designation, and length of service, as well as the level of impact of implementing an auditing information system.

Descriptive statistics such as percentage and weighted mean, were utilized to summarize the demographic profile of the respondents and the level of effectiveness of the COA Information System. Meanwhile, correlation was employed to determine the significant relationship and effect of the COA IS on employee productivity among COA Regional Office No. IV-A personnel.

The following statistical tools will be used to analyze the collected data.

Table 4. Alignment of Research Problems and Statistical Treatment

Research Problem	Statistical Tool used
Quantitative Questions	
1. How may the COA Information System (COA IS) be described in terms of: 1.1 System Reliability and Accessibility 1.2 Accuracy and Timeliness of Information 1.3 User-Friendliness and Functionality 1.4 Data Security and Integrity 1.5 Responsiveness of Technical Support	Weighted Mean and Standard Deviation
2. What is the level of employee productivity among Regional Office IV-A personnel in terms of: 2.1 Task Completion Rate 2.2 Accuracy of Work Outputs 2.3 Time Efficiency 2.4 Quality of Work Performance 2.5 Job Satisfaction	Weighted Mean and Standard Deviation

Research Problem	Statistical Tool used
Quantitative Questions	
3. Is the demographic profile of the respondents have a significant effect on the level of effectiveness of the COA IS in the cited variables?	
4. Is the demographic profile of the respondents have a significant effect on the level of productivity of the employee in the cited variables?	Pearson Product-Moment Correlation Coefficient (r)
5. Is the COA Information System (COA IS) have significant effect on the employee productivity?	Pearson Product-Moment Correlation Coefficient (r)

For the Scoring and Interpretation Guide:

Rating Scale	Interpretation
3.50-4.00	Always
2.50-3.50	Often
1.50-2.49	Seldom
1.00-1.49	Never

Rating Scale	Interpretation
3.50-4.00	Strongly Agree
2.50-3.50	Agree
1.50-2.49	Disagree
1.00-1.49	Strongly Disagree

To provide interpretation for the computed Pearson Product-Moment Correlation Coefficient (r), the following guide was adopted:

Rating Scale	Interpretation
$\pm 0.91-1.00$	Very High Positive/Negative Correlation
$\pm 0.71-0.90$	High Positive/Negative Correlation
$\pm 0.41-0.70$	Moderate Positive/Negative Correlation
$\pm 0.21-0.40$	Low Positive/Negative Correlation
$\pm 0.01-0.20$	Very Low Positive/Negative Correlation

To determine whether the correlation is statistically significant, the computed r- value was compared with the critical r-value from the Pearson correlation table using a 0.05 level of significance for a two-tailed test.

- If computed $r >$ critical r, reject the null hypothesis (there is a significant relationship).
- If computed $r \leq$ critical r, fail to reject the null hypothesis (no significant relationship).

3. Results and Discussion

This chapter presents, analyzes, and interprets the data collected to identify the significant relationship between the effectiveness of COA IS and the productivity level of the COA Region IV-A

personnel.

The presentation of data is organized according to the specific problems stated in Chapter 2 of this study. It includes the demographic profile of the respondents, including age, gender, rank, designation, and length of service. It further presents the level of effectiveness of the COA IS in terms of system reliability and accessibility, accuracy and timeliness of information, user-friendliness and functionality, data security and integrity, and responsiveness of technical support.

Moreover, this chapter discusses employee productivity levels based on task completion rate, accuracy of work outputs, time efficiency, quality of work performance, and job satisfaction. The relationship between the effectiveness of the COA IS and employee productivity is likewise examined using appropriate statistical tools to determine whether a significant effect exists.

The results are presented in tabular form, accompanied by analyses and interpretations that elucidate the study's conclusions. These analyses serve as the basis for the conclusions and recommendations presented in the succeeding chapter.

3.1. Demographic Profile

Table 5. Age of the Respondents

Age	Frequency	Percentage
20 - 29	67	33.17%
30 - 39	135	66.83%
Total	202	100.00%

Table 5 presents the age distribution of the respondents, showing that out of 202 participants, the majority belong to the 30–39 age group, comprising 135 respondents or 66.83%, while 67 respondents or 33.17% fall within the 20–29 age group. This indicates that most respondents are in the early to mid-career stage, characterized by a balance of professional experience and adaptability to organizational systems.

The dominance of respondents in the 30–39 age group suggests that the study's findings on the effectiveness of the COA IS and employee productivity are largely reflective of individuals who are both technologically capable and professionally experienced. This may result in a more favorable assessment of system effectiveness, particularly in terms of task completion, accuracy, and time efficiency.

Table 6. Gender of the Respondents

Age	Frequency	Percentage
Male	60	29.70%
Female	142	70.30%
Total	202	100.00%

Table 6 presents the gender distribution of the respondents, showing that of 202 participants, 142 (70.30%) are female, while 60 (29.70%) are male. This shows that most respondents are female, implying a greater representation of women in the research population.

The predominance of female respondents suggests that the overall assessment of the COA Information System (COA IS) may be more influenced by perceptions of usability, accessibility, and ease of use. This suggests that system features such as user interface design, clarity of functions, and ease of navigation are critical factors in determining system effectiveness.

Moreover, the gender composition indicates that the COA IS should continuously ensure a user-friendly design and adequate support mechanisms to sustain effective utilization among users. Recognizing gender-based differences in system perception can help improve system implementation strategies, training

programs, and user support services, thereby enhancing overall employee productivity.

Table 7. Designation of the Respondents

Age	Frequency	Percentage
ATL	95	47.03%
ATM	86	42.57%
ADASS	21	10.40%
Total	202	100.00%

Table 7 shows the distribution of respondents according to designation. Out of 202 respondents, 95 or 47.03% are Audit Team Leaders (ATL), 86 or 42.57% are Audit Team Members (ATM), and 21 or 10.40% are Audit Team Assistant Supervisors (ADASS). This indicates that most respondents are directly involved in audit operations, particularly in execution and supervision roles.

This finding suggests that most respondents are actively engaged in core audit functions, where the use of the COA Information System (COA IS) is essential in performing audit procedures, processing data, and generating reports. Their designation implies regular interaction with the system, making their responses highly relevant in assessing system effectiveness.

The dominance of ATLs and ATMs suggests that the evaluation of the COA IS is largely based on the perspectives of personnel directly involved in audit execution and supervision. This strengthens the validity of the findings, as these respondents are the system's primary users.

However, the smaller proportion of ADASS respondents suggests that higher-level supervisory perspectives may be less represented. Hence, while the results provide strong insights into operational effectiveness, consideration may also be given to incorporating broader managerial perspectives in future studies.

Table 8. Length of Service of the Respondents

Age	Frequency	Percentage
1 – 5 years	68	33.66%
6 – 10 years	124	61.39%
11 – 15 years	10	4.95%
Total	202	100.00%

Table 8 illustrates the distribution of responders based on their term of service. Out of 202 respondents, the majority, 124 or 61.39%, have 6–10 years of service, followed by 68 or 33.66% with 1–5 years, and only 10 or 4.95% with 11–15 years. This indicates that most respondents are at the mid-level of their careers, with considerable experience and remaining actively engaged in operational tasks. This finding suggests that the majority of respondents have already developed familiarity with audit processes and organizational systems, including the COA Information System (COA IS), which enhances their ability to evaluate system effectiveness. At the same time, their relatively moderate tenure implies continued adaptability to technological changes and system improvements.

The predominance of respondents with 6–10 years of service suggests that the COA IS assessment is largely based on individuals with both adequate experience and developed system familiarity, making their evaluation reliable and informed. However, the smaller proportion of respondents with longer tenure (11–15 years) suggests that insights from highly experienced personnel may be less represented. This highlights the importance of continuous training and system enhancement to ensure that both newer and more experienced employees can effectively utilize the system, thereby sustaining productivity across all levels of service.

The findings further imply that employees with moderate years of service may possess a balanced combination of institutional knowledge and technological adaptability, allowing them to maximize the benefits of the COA IS in performing audit functions. Their familiarity with both traditional and digital audit processes enables them to assess how the system contributes to task completion, accuracy of outputs, and time efficiency. Moreover, the presence of respondents with varying lengths of service provides a broader perspective on how the COA IS supports employee productivity. COA Information System (COA IS)

Table 9. System Reliability and Accessibility

Table 9 shows that all indicators under system reliability and accessibility were rated as “Often,” with an overall weighted mean of 2.93. The highest mean was recorded for ease of access to the COA IS from the workstation (3.42), while the lowest mean was on the system allowing work without interruptions (2.64).

The standard deviation values range from 0.48 to 0.81, indicating generally low to moderate dispersion in responses, suggesting that respondents have relatively consistent perceptions of the reliability and accessibility of the COA Information System. The overall standard deviation of 0.36 further implies a high level of agreement among respondents, reinforcing the consistency of the observed mean ratings.

Indicators	Mean	SD	Verbal Interpretation
1. The COA Information System is available whenever I need it.	3.14	0.63	Often
2. The system performs consistently without frequent errors or crashes.	2.65	0.48	Often
3. I can easily access the COA IS from my workstation.	3.42	0.56	Often
4. System downtime rarely affects my work.	2.81	0.81	Often
5. The COA IS allows me to work without interruptions.	2.64	0.49	Often
Overall Weighted Mean	2.93	0.36	Often

This indicates that the COA Information System is generally reliable and accessible, although users still experience occasional interruptions and performance issues.

This discovery corroborates the DeLone and McLean Information Systems Success Model, highlighting system quality attributes such as reliability, accessibility, and availability. It is a crucial determinant affecting system use and user contentment. Previous studies likewise emphasize that while accessible systems enhance efficiency and task performance, system interruptions and downtime may hinder productivity and reduce overall system effectiveness.

Table 10. Accuracy and Timeliness of Information

Indicators	Mean	SD	Verbal Interpretation
1. The information provided by the COA IS is accurate and reliable.	3.55	0.52	Always
2. The system updates audit data promptly.	3.10	0.75	Often
3. I receive timely notifications and reports through the COA IS.	2.93	0.72	Often
4. The COA IS helps me make decisions based on current information.	2.71	0.78	Often
5. There are minimal delays in retrieving audit data from the system.	3.13	0.56	Often
Overall Weighted Mean	3.09	0.52	Often

Table 10 shows that the indicators under accuracy and timeliness of information were generally rated as “Often,” with an overall weighted mean of 3.09. The highest mean was recorded for the precision and dependability of information provided by the COA IS (3.55), interpreted as “Always,” while the lowest mean was on the system helping users make decisions based on current information (2.71), interpreted as “Often.”

The standard deviation values show low to moderate dispersion in the responses. Participants typically maintain uniform judgments about the precision and timeliness of data acquired from the COA Information System. The overall standard deviation of 0.52 indicates reasonable agreement among respondents, but there were differences in system responsiveness and decision-support capability.

This indicates that the COA Information System consistently provides accurate and reliable information; however, there are instances where timeliness and its usefulness for decision-making may be improved.

This finding is aligned with the DeLone and McLean Information Systems Success Model, which identifies information quality, particularly accuracy and timeliness, as a critical factor influencing system effectiveness and user satisfaction. Prior studies also suggest that accurate and timely information enhances decision-making and work efficiency, while delays or outdated data may limit the overall usefulness of the system in supporting productivity.

Moreover, the findings imply that respondents generally perceive the COA IS as dependable in providing the information necessary for audit operations and work-related tasks. However, the relatively lower rating on decision-making support indicates that improvements in real-time data updates, processing speed, and accessibility of current information may further enhance the system’s effectiveness and contribution to employee productivity. This suggests that further enhancement of the COA IS, particularly in providing timely and accessible information, may strengthen its role in supporting efficient audit operations and improving employee productivity.

Table 11. User-Friendliness and Functionality

Indicators	Mean	SD	Verbal Interpretation
1. The COA IS interface is easy to navigate.	3.22	0.83	Often
2. I can perform required audit tasks efficiently using the system.	2.69	0.67	Often
3. The system's features meet the needs of administrative and audit work.	2.96	0.68	Often
4. I find it easy to learn new functions of the COA IS.	2.93	0.71	Often
5. The system helps me complete audit processes faster.	2.56	0.71	Often
Overall Weighted Mean	2.87	0.60	Often

Table 11 shows that all indicators under user-friendliness and functionality were rated as “Often,” with an overall weighted mean of 2.87. The highest mean was recorded for the system interface being easy to navigate (3.22), while the lowest mean was on the system helping complete audit processes faster (2.56).

The standard deviation values indicate a moderate dispersion of responses, suggesting that while respondents generally perceive the COA Information System as user-friendly and functional, there are notable variations in user experience. The overall standard deviation of 0.60 implies that respondents share relatively similar views, although differences in system navigation, efficiency, and learning adaptability were observed.

This indicates that the COA Information System is generally user-friendly and functional; however, there are areas for improvement in enhancing efficiency in completing audit tasks.

This finding supports the Technology Acceptance Model, which emphasizes that perceived ease of

use and functionality influence users' acceptance and effective utilization of a system. Previous studies also suggest that systems that are easy to navigate and aligned with user needs improve work performance, while limitations in functionality may reduce efficiency and productivity.

Table 12. Data Security and Integrity

Table 12 shows that the indicators under data security and integrity were generally rated as "Often," with an overall weighted mean of 3.48. Selected indicators such as protection of sensitive audit information (3.51), confidence in data security (3.54), and trust in maintaining data integrity (3.56) were rated as "Always," while data loss prevention (3.48) and access control mechanisms (3.32) were rated as "Often."

The standard deviation values reflect low to moderate dispersion of answers, which means that respondents have the same perception about the data security and integrity of the COA Information System. The overall standard deviation of 0.59 indicates a reasonable agreement among respondents, with some variation in their perceptions of access control mechanisms and data protection features.

Indicators	Mean	SD	Verbal Interpretation
1. The COA IS protects sensitive audit information effectively.	3.51	0.59	Always
2. I am confident that the data in the system is secure from unauthorized access.	3.54	0.60	Always
3. The system prevents data loss during operations and ensures a backup is in place.	3.48	0.70	Often
4. I trust the COA IS to maintain the integrity of audit records.	3.56	0.59	Always
5. Access control mechanisms in the system are sufficient.	3.32	0.75	Often
Overall Weighted Mean	3.48	0.59	Often

This indicates that the COA Information System ensures a high level of data security and integrity; however, certain areas, particularly access control and data loss prevention, may still require improvement.

This finding is consistent with information security frameworks, which emphasize that data protection, integrity, and access control are critical to system effectiveness. Prior studies likewise indicate that strong security measures enhance user trust and system utilization, while gaps in control mechanisms may expose the system to potential risks and affect overall reliability.

Table 13. Responsiveness of Technical Support

Indicators	Mean	SD	Verbal Interpretation
1. Technical support promptly addresses my system issues.	3.29	0.74	Often
2. The support team provides clear and helpful solutions.	3.12	0.70	Often
3. I receive timely updates on system maintenance or problems.	3.06	0.69	Often
4. Technical assistance is available when I need it.	3.16	0.68	Often
5. The COA IS supports team effectively resolves user concerns.	3.18	0.68	Often
Overall Weighted Mean	3.16	0.62	Often

Table 13 shows that all indicators under the responsiveness of technical support was rated as

“Often,” with an overall weighted mean of 3.16. The highest mean was recorded for technical support promptly addressing system issues (3.29), while the lowest mean was on receiving timely updates on system maintenance or problems (3.06).

The overall standard deviation of 0.62 reflects a moderate consistency in responses. While respondents generally perceive technical support as responsive, the variability indicates that user experiences are not entirely uniform, particularly in terms of timeliness and effectiveness of support services. This indicates that technical support for the COA Information System is generally responsive; however, improvements can still be made in providing timely updates and communicating about system concerns.

This finding supports the DeLone and McLean Information Systems Success Model, which identifies service quality, including responsiveness and support, as a key factor influencing user satisfaction and system effectiveness. Prior studies likewise suggest that efficient technical support enhances system usability and productivity, while delays in assistance and communication may hinder optimal system use.

Furthermore, the findings suggest that responsive technical support plays an important role in the effective utilization of the COA IS by helping users address technical issues and minimize work disruptions. Efficient assistance and system guidance enable employees to continue their tasks with less delay, thereby supporting productivity and work performance. However, enhancing communication regarding system maintenance, updates, and technical concerns may further improve user satisfaction and overall system effectiveness.

3.2. Level of Employee Productivity

Table 14. Task Completion Rate

Indicators	Mean	SD	Verbal Interpretation
1. I am able to complete my audit tasks on time using the COA IS.	2.78	0.73	Agree
2. The system helps me meet deadlines consistently.	2.78	0.77	Agree
3. I rarely experience delays in finishing my assigned tasks.	2.78	0.73	Agree
4. The COA IS enables me to handle a higher volume of work.	2.45	0.85	Seldom
5. I can efficiently prioritize my tasks using the system.	2.54	0.87	Agree
Overall Weighted Mean	2.67	0.70	Agree

Table 14 shows that the indicators under task completion rate were generally rated as “Agree,” with an overall weighted mean of 2.67. Most indicators, such as completing tasks on time, meeting deadlines, and minimizing delays, obtained equal means of 2.78, while the lowest mean was recorded on the system enabling users to handle a higher volume of work (2.45), interpreted as “Seldom.” This indicates that the COA Information System supports timely task completion and deadline adherence; however, it may have a limited contribution in increasing the volume of work handled by employees.

The standard deviation values indicate moderate to high dispersion in responses, suggesting that while respondents generally agree that the COA Information System supports task completion, there are notable variations in user experience. The overall standard deviation of 0.70 indicates that perceptions are less consistent than those of other variables, particularly in handling higher workloads and prioritizing tasks efficiently. The overall standard deviation of 0.70 reflects a moderate to high level of dispersion, indicating that while respondents generally agree that the COA Information System supports task completion, user experiences vary considerably, particularly in workload handling and task prioritization.

This discovery aligns with the Technology Acceptance Model, which posits that while useful, easy-

to-use systems improve task performance efficiency, they do not always directly translate into increased workload capacity. Prior studies likewise indicate that information systems enhance the accuracy and timeliness of outputs, but system limitations and workload factors may affect employees' ability to handle higher task volumes.

Table 15. Accuracy of Work Outputs

Indicators	Mean	SD	Verbal Interpretation
1. The COA IS helps me produce accurate audit reports.	2.91	0.69	Agree
2. Errors in my work outputs have decreased due to the system.	2.70	0.67	Agree
3. The system reduces mistakes in data entry and processing.	2.84	0.61	Agree
4. I feel confident about the quality of my audit outputs.	2.80	0.75	Agree
5. The COA IS contributes to higher accuracy in my work.	2.94	0.68	Agree
Overall Weighted Mean	2.84	0.63	Agree

Table 15 shows that all indicators under accuracy of work outputs were rated as "Agree," with an overall weighted mean of 2.84. The highest mean was recorded for the system, contributing to higher accuracy in work (2.94), while the lowest mean was for the decrease in errors in work outputs (2.70).

The standard deviation values indicate low to moderate dispersion in responses, suggesting that respondents generally share consistent perceptions of the accuracy of work outputs using the COA Information System. The overall standard deviation of 0.63 implies a reasonable level of agreement, although slight variations were observed in respondents' confidence in the quality of their outputs and the system's impact on reducing errors.

This indicates that the COA Information System enhances the accuracy of audit outputs and supports error reduction, although some errors may still occur during work processes.

This finding aligns with the DeLone and McLean Information Systems Success Model, which emphasizes information quality as a key determinant of system effectiveness. Prior studies likewise show that information systems improve the accuracy and reliability of outputs, thereby contributing to better work performance and productivity.

Furthermore, the findings suggest that the COA IS contributes to improving the reliability, consistency, and accuracy of audit-related outputs by providing organized and dependable information for users. The system assists employees in performing their tasks more effectively, which supports better quality work performance and reduces the likelihood of inaccuracies in audit processes. However, the lower rating on error reduction implies that occasional inaccuracies and operational challenges may still occur, highlighting the need for continuous system enhancement, regular monitoring, and user training to further improve accuracy and overall employee productivity.

Table 16. Time Efficiency

Indicators	Mean	SD	Verbal Interpretation
1. The system reduces the time I spend on repetitive tasks.	2.55	0.87	Agree
2. I can complete audit procedures faster with the COA IS.	2.55	0.73	Agree
3. The COA IS saves me time in accessing and analyzing data.	2.55	0.68	Agree
4. I spend less time correcting errors due to the system.	2.74	0.75	Agree
5. The system allows me to use my work hours more productively.	2.55	0.68	Agree
Overall Weighted Mean	2.59	0.69	Agree

Table 16 shows that all indicators under time efficiency were rated as “Agree,” with an overall weighted mean of 2.59. The highest mean was recorded for spending less time correcting errors (2.74), while the remaining indicators had equal means of 2.55.

This indicates that the COA Information System contributes to improving time efficiency by minimizing time spent on tasks and error correction, although the improvement is moderate.

The standard deviation values indicate moderate to high dispersion in responses, suggesting that while respondents generally agree that the COA Information System improves time efficiency, there are notable variations in user experience. The overall standard deviation of 0.69 suggests less consistency in perceptions, particularly in reducing repetitive tasks and improving workflow speed.

This finding is consistent with the Technology Acceptance Model, which suggests that perceived usefulness of a system enhances efficiency in task performance. Prior studies likewise show that information systems help reduce processing time and improve productivity by streamlining work processes and minimizing repetitive tasks.

Table 17. Quality of Work Performance

Indicators	Mean	SD	Verbal Interpretation
1. The COA IS helps improve the overall quality of my work.	2.80	0.75	Agree
2. I am more thorough and precise in my audit tasks using the system.	2.73	0.82	Agree
3. The system supports my ability to produce comprehensive audit findings.	2.79	0.76	Agree
4. I can focus more on important tasks because of system automation.	2.78	0.77	Agree
5. The COA IS enhances my professional performance.	2.76	0.81	Agree
Overall Weighted Mean	2.77	0.77	Agree

Table 17 shows that all indicators under quality of work performance were rated as “Agree,” with an overall weighted mean of 2.77. The highest mean was recorded for improvement in overall quality of work (2.80), while the lowest mean was on being more thorough and precise in audit tasks (2.73).

The standard deviation values indicate moderate to high dispersion in responses, suggesting that while respondents generally agree that the COA Information System enhances work performance quality, there are notable variations in user experience. The overall standard deviation of 0.77 implies less consistency in perceptions, particularly regarding precision, comprehensiveness, and improvements in professional performance.

This indicates that the COA Information System contributes to improving work performance quality, including accuracy, comprehensiveness, and task focus, although the level of improvement is moderate.

This discovery aligns with the DeLone and McLean Information Systems Success Model, which emphasizes system and information quality as crucial determinants of individual performance. Prior studies likewise suggest that effective information systems enhance the quality of outputs by supporting better analysis, decision-making, and task execution.

Table 18. Job Satisfaction

Indicators	Mean	SD	Verbal Interpretation
1. Using the COA IS makes my work more enjoyable.	2.43	0.99	Disagree
2. I feel motivated to perform better with the support of the system.	2.62	0.96	Agree
3. The system reduces work-related stress and frustration.	2.41	0.86	Disagree
4. I am satisfied with the tools and resources provided by the COA IS.	2.55	0.96	Agree
5. Overall, the COA IS contributes positively to my job satisfaction.	2.65	0.95	Agree
Overall Weighted Mean	2.53	0.91	Agree

Table 18 shows that the indicators under job satisfaction were generally rated as “Agree,” with an overall weighted mean of 2.53. While respondents agreed that the COA is motivating them to perform better (2.62), it provides satisfactory tools and resources (2.55), and contributes positively to job satisfaction (2.65), they disagreed that the system makes work more enjoyable (2.43) and reduces work-related stress and frustration (2.41).

The standard deviation values indicate a high dispersion of responses, suggesting that respondents have varied perceptions regarding the impact of the COA Information System on job satisfaction. The overall standard deviation of 0.91 indicates low consistency in responses, suggesting that the system’s influence on enjoyment, motivation, and stress reduction varies significantly among users.

This indicates that while the COA Information System supports certain aspects of job satisfaction, its impact on employees’ enjoyment and stress reduction is limited.

This finding is aligned with the Technology Acceptance Model, which suggests that system usefulness can enhance performance and satisfaction, but does not necessarily address emotional factors such as stress and enjoyment. Prior studies likewise indicate that while information systems improve work efficiency, other factors such as workload and work environment also influence overall job satisfaction.

Furthermore, the findings imply that while the COA IS contributes to employee motivation and supports the completion of work tasks through accessible tools and resources, its influence on the emotional aspects of work remains limited. This suggests that improving system usability, reducing technical interruptions, and providing continuous user support may help enhance employee satisfaction, lessen work-related stress, and improve the overall user experience.

Table 19. Significant Effect of Demographic profile to Effectiveness of the COA IS

Demographic		COA IS				
		System Reliability and Accessibility	Accuracy and Timeliness of Information	User-Friendliness and Functionality	Data Security and Integrity	Responsiveness of Technical Support
Age	Pearson Correlation	-.261**	-.083	-.326**	.339**	.163*
	Sig. (2-tailed)	.000	.242	.000	.000	.021
	N	202	202	202	202	202
Gender	Pearson Correlation	-.092	-.105	-.032	-.077	-.089
	Sig. (2-tailed)	.193	.137	.656	.275	.205
	N	202	202	202	202	202
Designation	Pearson Correlation	-.026	-.010	-.205**	-.236**	-.376**
	Sig. (2-tailed)	.709	.888	.003	.001	.000
	N	202	202	202	202	202
Length of Service	Pearson Correlation	-.253**	-.025	-.186**	.145*	.129
	Sig. (2-tailed)	.000	.722	.008	.039	.067
	N	202	202	202	202	202

The table presents the relationship between respondents' demographic profiles and the effectiveness of the COA Information System (COA IS) using Pearson's correlation analysis.

Results show that age has significant relationships with system reliability and accessibility ($r = -0.261$, $p = 0.000$), user-friendliness and functionality ($r = -0.326$, $p = 0.000$), data security and integrity ($r = 0.339$, $p = 0.000$), and responsiveness of technical support ($r = 0.163$, $p = 0.021$), while no significant relationship was found with accuracy and timeliness of information ($p = 0.242$). This suggests that age influences how respondents perceive various aspects of the COA IS. This finding is supported by technology adoption literature, which indicates that age differences affect users' interaction with information systems, particularly in terms of ease of use and system acceptance.

In contrast, gender shows no significant relationship with all variables, indicating that perceptions of COA IS effectiveness are consistent across male and female respondents. This aligns with extensions of the Technology Acceptance Model, which suggest that gender differences in system usage and perception may not always be significant in professional or organizational settings.

For designation, significant relationships were observed with user-friendliness and functionality ($r = -0.205$, $p = 0.003$), data security and integrity ($r = -0.236$, $p = 0.001$), and responsiveness of technical support ($r = -0.376$, $p = 0.000$). This implies that job roles influence how system features are perceived. This is consistent with the DeLone and McLean Information Systems Success Model, which highlights that user characteristics and roles affect system use and evaluation, particularly in terms of system quality and service quality.

Similarly, length of service shows significant relationships with system reliability and accessibility ($r = -0.253$, $p = 0.000$), user-friendliness and functionality ($r = -0.186$, $p = 0.008$), and data security and integrity ($r = 0.145$, $p = 0.039$). This indicates that experience within the organization influences perceptions of the system. Prior studies support that employees with longer tenure develop greater familiarity with systems, which affects their assessment of usability, reliability, and security. Overall, the findings indicate that selected demographic factors, particularly age, designation, and length of service, have significant relationships with certain dimensions of COA IS effectiveness, while gender does not significantly influence users' perceptions. These results support the existing literature, which indicates that individual differences and user characteristics play a role in shaping perceptions of information system effectiveness and utilization.

Table 20. Significant Effect of Demographic profile to Level of Productivity of COA Personnel

Demographic		Level of Productivity				
		Task Completion Rate	Accuracy of Work Outputs	Time Efficiency	Quality of Work Performance	Job Satisfaction
Age	Pearson Correlation	-.365**	-.417**	-.297**	-.369**	-.422**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	202	202	202	202	202
Gender	Pearson Correlation	-.077	-.048	-.083	-.077	-.054
	Sig. (2-tailed)	.274	.493	.240	.274	.446
	N	202	202	202	202	202
Designation	Pearson Correlation	-.044	.118	-.033	.048	-.063
	Sig. (2-tailed)	.538	.095	.636	.493	.377
	N	202	202	202	202	202
Length of Service	Pearson Correlation	-.312**	-.347**	-.260**	-.333**	-.330**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	202	202	202	202	202

Table 20 illustrates the correlation between the respondents' demographic profiles and their levels of productivity using Pearson's correlation analysis.

The results indicate that age exhibits a substantial negative correlation with all facets of productivity, namely task completion rate ($r = -0.365$, $p = 0.000$), accuracy of work outputs ($r = -0.417$, $p = 0.000$), time efficiency ($r = -0.297$, $p = 0.000$), quality of work performance ($r = -0.369$, $p = 0.000$), and job satisfaction ($r = -0.422$, $p = 0.000$). This implies that as age increases, perceived productivity tends to decrease. This finding is supported by studies in technology adoption, which suggest that younger employees tend to adapt more easily to information systems, thereby enhancing their productivity.

In contrast, gender shows no significant relationship with any of the productivity variables, as all p -values are greater than 0.05. This indicates that productivity levels are not influenced by gender. This is consistent with the Technology Acceptance Model, which suggests that gender differences may not significantly affect system use and performance outcomes in organizational contexts.

For designation, no significant relationship was found across all productivity variables, indicating that job position does not significantly influence productivity levels among respondents.

Meanwhile, the length of service shows a significant negative relationship with all productivity variables, including task completion rate ($r = -0.312$, $p = 0.000$), accuracy of work outputs ($r = -0.347$, $p = 0.000$), time efficiency ($r = -0.260$, $p = 0.000$), quality of work performance ($r = -0.333$, $p = 0.000$), and job satisfaction ($r = -0.330$, $p = 0.000$). This suggests that employees with longer tenure may exhibit lower perceived productivity, possibly due to factors such as resistance to new systems or established work routines.

Overall, the findings indicate that age and length of service significantly affect COA personnel's productivity, whereas gender and designation do not. These results support existing literature, which emphasizes that individual characteristics, particularly age and experience, influence how employees adapt to information systems and, consequently, their productivity.

Table 21. Significant Effect of COA IS to Level of Employee Productivity of COA Personnel

Demographic		Task Completion Rate	Accuracy of Work Outputs	Time Efficiency	Quality of Work Performance	Job Satisfaction
System Reliability and Accessibility	Pearson Correlation	.653**	.582**	.700**	.561**	.568**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	202	202	202	202	202
Accuracy and Timeliness of Information	Pearson Correlation	.652**	.735**	.789**	.672**	.494**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	202	202	202	202	202
User-Friendliness and Functionality	Pearson Correlation	.688**	.608**	.692**	.584**	.702**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	202	202	202	202	202
Data Security and Integrity	Pearson Correlation	.187**	.278**	.319**	.219**	.054
	Sig. (2-tailed)	.008	.000	.000	.002	.449
	N	202	202	202	202	202
Responsiveness of Technical Support	Pearson Correlation	.638**	.648**	.710**	.607**	.516**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	202	202	202	202	202

Table 21 presents the relationship between the effectiveness of the COA Information System (COA IS) and the level of employee productivity using Pearson correlation analysis.

Results show that system reliability and accessibility have a significant positive relationship with all productivity variables, including task completion rate ($r = 0.653$), accuracy of work outputs ($r = 0.582$), time efficiency ($r = 0.700$), quality of work performance ($r = 0.561$), and job satisfaction ($r = 0.568$), all with p -values of 0.000. This indicates that a more reliable and accessible system enhances employees' performance and productivity.

Similarly, accuracy and timeliness of information show strong positive relationships with all productivity dimensions, particularly time efficiency ($r = 0.789$) and accuracy of work outputs ($r = 0.735$), suggesting that timely and accurate information significantly improves work efficiency and output quality.

User-friendliness and functionality also exhibit significant positive relationships with all productivity indicators, with the highest correlation observed in job satisfaction ($r = 0.702$). This implies that systems that are easy to use and aligned with user needs contribute to both performance and satisfaction.

For data security and integrity, significant positive relationships were observed with task completion rate ($r = 0.187$), accuracy of work outputs ($r = 0.278$), time efficiency ($r = 0.319$), and quality of work performance ($r = 0.219$), while no significant relationship was found with job satisfaction ($p = 0.449$). This suggests that while data security supports performance, it may not directly influence employees' satisfaction.

Lastly, responsiveness of technical support shows significant positive relationships with all productivity variables, with the highest correlation in time efficiency ($r = 0.710$). This suggests that proficient technical support improves employees' ability to execute tasks effectively and sustain productivity.

Overall, the findings reveal that all dimensions of COA IS effectiveness have significant positive effects on employee productivity, except for data security and integrity, which do not affect job satisfaction. These findings corroborate the DeLone and McLean Information Systems Success Model, which asserts that system quality, information quality, and service quality substantially affect individual performance and user satisfaction. Prior studies likewise confirm that effective information systems improve efficiency, accuracy, and overall work performance, thereby enhancing employee productivity.

Furthermore, the findings imply that the effectiveness of the COA IS plays a significant role in enhancing employee productivity and overall work performance among the personnel. The strong positive relationships observed among system reliability, information quality, user-friendliness, and technical support indicate that employees are able to accomplish their tasks more efficiently, accurately, and timely when the system effectively supports their operational requirements. The results suggest that continuous enhancement of system features, accessibility, technical support services, and information quality may further strengthen employee productivity and user satisfaction. Overall, the findings emphasize the importance of maintaining an effective and responsive information system to support efficient audit operations and improve organizational performance.

4. Summary, Conclusions and Recommendations

This chapter presents the summary of findings, conclusions, and recommendations derived from the study entitled "Effect of the Commission on Audit Information System (COA IS) on Employee Productivity in COA Regional Office No. IV-A." It provides a synthesis of the key results from the data analysis, draws conclusions from the findings, and offers recommendations to enhance the effectiveness of the COA Information System and improve employee productivity. The conclusions and recommendations are formulated in accordance with the study's objectives and are intended to serve as a basis for policy and system improvements within the organization.

4.1. Summary of findings

This study assessed the effect of the Commission on Audit Information System (COA IS) on employees' productivity in the COA Regional Office No. IV-A. Specifically, it examined the effectiveness of the COA IS in terms of system reliability and accessibility, information accuracy and timeliness, user-friendliness and functionality, data security and integrity, and responsiveness of technical support. It also determined the level of employee productivity in terms of task completion rate, accuracy of work outputs, time efficiency, quality of work performance, and job satisfaction. Furthermore, the study analyzed the relationship between the respondents' demographic profile and both COA IS effectiveness and employee productivity, as well as the significant effect of COA IS on productivity.

- The respondents' demographic profile in terms of age and gender, designation, and length of service, is capable of evaluating the COA Information System (COA IS) due to their direct involvement in audit functions. The majority belong to the mid-career group, particularly those aged 30–39, representing the highest proportion, while the least represented group falls within the younger/older age brackets. In terms of length of service, most respondents have 6–10 years of experience, while the lowest proportion has shorter or longer tenure. Their roles as Audit Team Leaders and Audit Team Members ensure regular use of the system, enabling them to provide informed and reliable assessments of its effectiveness.
- The COA Information System (COA IS) is generally rated as “Often,” indicating moderate effectiveness across all dimensions. Among the dimensions, data security and integrity received the highest mean rating, reflecting strong user confidence, while technical support's responsiveness registered the lowest mean, indicating areas for improvement in response time and communication. The system is dependable and provides accurate information; however, occasional interruptions and performance issues were noted.

Overall, the COA IS contributes positively to task completion, accuracy, time efficiency, and quality of work performance, although its impact on job satisfaction remains limited.

- The level of employee productivity is generally moderate, as indicated by an overall rating of “Agree.” The COA Information System (COA IS) supports timely task completion, improves the accuracy of work outputs by reducing errors, and enhances time efficiency by minimizing repetitive tasks. It also contributes to better work performance by enabling more comprehensive, well-analyzed outputs.

However, the system has a limited impact on job satisfaction, suggesting that factors such as workload, work environment, and organizational support also influence employees' overall satisfaction.

- The findings show that the respondent's demographic profile has varying effects on the effectiveness of the COA Information System (COA IS). Age and length of service are significantly related to several dimensions of system effectiveness, indicating that user experience and adaptability influence system perception. Designation also affects user-friendliness, data security, and technical support, suggesting that the level of system interaction influences evaluation.

In contrast, gender has no significant relationship with any dimension of COA IS effectiveness, indicating that system assessment is consistent across male and female respondents. Overall, age, designation, and length of service influence system perception, while gender does not.

- The findings show that demographic factors have varying effects on employee productivity. Age and length of service have significant negative relationships with all productivity variables, indicating that increased age and tenure are associated with lower perceived productivity. In contrast, gender and designation have no significant effect, suggesting that productivity is consistent regardless of sex and position.

Overall, the results indicate that employees' productivity is influenced by adaptability and experience rather than gender or job rank.

- The findings reveal that the effectiveness of the COA Information System (COA IS) has a significant positive influence on employee productivity. Improvements in system reliability, information quality, user-friendliness, data security, and technical support contribute to better task completion, more accurate outputs, greater time efficiency, and higher-quality work performance.

While most system dimensions also positively influence job satisfaction, data security and integrity show no significant effect on it. Overall, the results confirm that enhancing COA IS effectiveness improves employee performance and productivity.

4.2. Conclusions

Based on the findings of the study, the following conclusions were drawn in relation to the research questions and hypotheses:

- The respondents, characterized by age, gender, designation, and length of service, represent a workforce that is capable of evaluating the COA IS due to their experience and involvement in audit functions.
- The COA IS is generally effective across all dimensions, particularly in system reliability and accessibility, accuracy and timeliness of information, data security and integrity, user-friendliness and functionality, and responsiveness of technical support. However, minor limitations were noted regarding system interruptions, workload capacity, and the communication of system updates.
- The level of employee productivity is generally satisfactory, as evidenced by favorable results in task completion rate, accuracy of work outputs, time efficiency, and quality of work performance. However, the system has only a limited influence on job satisfaction, indicating that productivity is affected by both system-related and non-system factors.

On the Relationship Between Demographic Profile and COA IS Effectiveness (Hypothesis Testing): The null hypothesis is partially rejected. Age, designation, and length of service are significantly related to selected dimensions of COA IS effectiveness, whereas gender is not. This indicates that certain demographic factors influence users' perception of system effectiveness.

- On the Relationship Between Demographic Profile and Employee Productivity (Hypothesis Testing):

The null hypothesis is partially rejected. Age and length of service are significantly related to all productivity variables, whereas gender and designation are not. This implies that experience-related factors influence employee productivity.

- On the Effect of COA IS on Employee Productivity (Hypothesis Testing):

The null hypothesis is rejected. The effectiveness of the COA IS has a significant positive effect on employee productivity across all dimensions, except for data security and integrity in relation to job satisfaction. This confirms that System quality, information quality, and service quality significantly contribute to improved employee performance.

4.3. Recommendations

In light of the foregoing findings and conclusions, the following recommendations are hereby proposed:

- COA Regional Office No. IV-A may strengthen coordination with the Information Technology Office to enhance the reliability and accessibility of COA IS. This may involve implementing system upgrades, establishing regular preventive maintenance schedules, and deploying real-time monitoring tools to promptly detect and resolve system issues. Efforts to minimize downtime and ensure uninterrupted system access should be prioritized to avoid disruptions to audit operations. Improving system availability across workstations and ensuring stable connectivity will enable personnel to perform their tasks more efficiently, thereby enhancing overall productivity.

- Measures may be implemented to optimize the performance and processing speed of the COA IS to support faster and more efficient audit operations. This may include upgrading hardware and network infrastructure, optimizing database management systems, and refining system architecture to improve response time and data retrieval processes. Regular performance assessments and system evaluations may also be conducted to identify bottlenecks and inefficiencies. Enhancing system speed will allow users to complete tasks more quickly, reduce delays in accessing critical information, and improve overall time efficiency and task completion. The COA may enhance the user-friendliness and functionality of the COA IS by improving its interface design and aligning system features with audit workflows. This may include simplifying navigation, standardizing system processes, and incorporating user-centered design principles to make the system more intuitive and easier to use. Additionally, integrating features that support automation, reduce manual inputs, and streamline audit procedures may improve efficiency. These enhancements are expected to enable personnel to handle higher workloads with greater ease, minimize errors, and improve overall performance.
- COA Regional Office No. IV-A may institutionalize continuous capacity-building and training programs to enhance users' proficiency in utilizing the COA IS. This may include regular training sessions, refresher courses, and re-orientation programs, particularly for employees with longer lengths of service who may require additional support in adapting to system updates and technological advancements. The conduct of hands-on workshops, the development of user manuals, and provision of technical briefings may further improve users' knowledge and skills. Such initiatives will help maximize system utilization, improve adaptability, and enhance employee productivity.
- The delivery of technical support services may be strengthened to ensure timely and effective assistance to system users. This may include establishing a dedicated helpdesk system, implementing faster issue-resolution mechanisms, and developing clear protocols for reporting and tracking system concerns. Additionally, the timely dissemination of the system updates, maintenance schedules, and advisories should be ensured to keep users informed of system changes. Improving technical support responsiveness will help minimize work disruptions, enhance user confidence in the system, and support efficient audit operations.
- Existing data security measures may be further reinforced by enhancing access control mechanisms and implementing stricter protocols for user authentication and authorization. This may include adopting role-based access controls, regularly reviewing and updating user access privileges, and enforcing strong data protection policies. Regular system audits and security assessments may likewise be undertaken to identify potential vulnerabilities and ensure compliance with established information security standards. Strengthening these controls will help safeguard sensitive audit data, maintain data integrity, and enhance user trust in the system.
- The COA may explore the integration of productivity-oriented features within the COA IS to improve efficiency and workload capacity. This may include adopting automation tools such as automated report generation, workflow tracking systems, and standardized templates to reduce repetitive, manual tasks. Process enhancements may also be implemented to streamline audit procedures and minimize redundancies. These improvements will allow personnel to focus on more analytical and value-adding tasks, thereby increasing productivity and overall effectiveness in audit operations.
- Complementary initiatives may be implemented to improve user experience and overall work environment, considering that the COA IS has a limited impact on job satisfaction. This may include strengthening workload management practices, streamlining audit processes, and reducing unnecessary administrative burdens. Moreover, establishing user feedback mechanisms, such as surveys and consultations, can help identify concerns and areas for improvement. Addressing both system-related and non-system factors will enhance employee satisfaction, motivation, and overall

productivity.

Overall, the findings of the study underscore the importance of maintaining an effective, reliable, and user-oriented information system in enhancing employee productivity and supporting efficient audit operations within COA Regional Office No. IV-A. The study further emphasizes that continuous system improvement, capacity-building initiatives, and strengthened technical support are essential in maximizing the benefits of the COA IS and ensuring its long-term contribution to organizational performance and service delivery. The effectiveness of the system in terms of reliability, accessibility, information accuracy, user-friendliness, data security, and technical support contributes positively to the efficiency and quality of audit operations. Moreover, the study underscores the importance of continuous system enhancement, capacity-building programs, and responsive technical support in ensuring that the benefits of the COA IS are sustained and maximized. By strengthening these areas, the Commission on Audit may further improve employee performance, promote operational efficiency, and support the delivery of transparent, accountable, and effective public service.

Future researchers are encouraged to broaden the scope of the study by utilizing a larger sample size and other COA regional offices or government agencies to improve the generalizability of the findings. They may also consider examining additional variables, such as organizational culture, workload, and work environment, to better explain variations in job satisfaction and productivity. Furthermore, the use of mixed methods, particularly qualitative approaches, is recommended to gain deeper insights into users' experiences and the effectiveness of the COA Information System.

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