

# Perceived Effectiveness, Challenges, and Recommendations on the Digitalization of Financial Management through Electronic New Government Accounting System

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## Abstract

This study assessed the perceived effectiveness of financial management digitalization through the Electronic New Government Accounting System (eNGAS) in the Department of Agrarian Reform (DAR) Masbate. Anchored on the Technology Acceptance Model, DeLone and McLean IS Success Model, and Public Accountability Theory, the study used a descriptive-quantitative research design. Data were gathered from 30 DAR Masbate personnel involved in budgeting, accounting, auditing, reporting, and financial data management through a structured Likert-scale questionnaire. Frequency count, percentage, weighted mean, and Pearson correlation were used to analyze the data. Findings showed that eNGAS was strongly implemented in budgeting and fund allocation, accounting and reporting, auditing and internal control, and financial data management and documentation. Respondents also strongly agreed that eNGAS improved transaction efficiency, report accuracy and timeliness, transparency in fund utilization, and accountability in financial operations. However, challenges were identified, including occasional system errors, limited technical knowledge, insufficient training time, slow internet connectivity, inadequate equipment, and difficulty in migrating old records. The Pearson correlation result showed a moderate positive and statistically significant relationship between eNGAS implementation and perceived effectiveness, indicating that stronger system implementation is associated with improved financial management practices. The study recommends continuous technical support, system maintenance, help desk assistance, user manuals, system evaluation, feedback mechanisms, and integration with other government financial systems. The study supports SDG 9, SDG 16, and SDG 17 by promoting digital innovation, transparent governance, and institutional coordination. Its sustainability impact lies in strengthening technological, institutional, and governance sustainability in public financial management.

**Keywords:** Accountability, Internal Control, Budgeting and Fund Allocation, Department of Agrarian Reform, Digital Financial Management, Electronic New Government Accounting System, Financial Reporting, Public Financial Management, Transparency

## 1. Introduction

The rapid advancement of information and communication technology has transformed public sector financial administration by promoting more efficient, transparent, accurate, and accountable systems for managing public funds. In the Philippines, one major reform is the adoption of the Electronic New Government Accounting System (eNGAS), a digital platform designed to standardize and streamline government financial recording, processing, reporting, and monitoring. This study focuses on the perceived effectiveness of financial management digitalization through eNGAS in the Department of Agrarian Reform (DAR) Masbate, particularly in relation to budgeting and fund allocation, accounting and reporting, auditing and internal control, and financial data management and documentation. It also considers personnel perceptions of eNGAS in improving transaction efficiency, report accuracy and timeliness, transparency in fund utilization, and accountability in financial operations.

Digital transformation in public sector accounting has become central to modern governance because it improves reporting efficiency, strengthens accountability mechanisms, and supports decision-making processes. Irmawati and Haliah (2025) emphasized that digital accounting systems enhance government financial reporting, although their effectiveness depends on organizational readiness, technological infrastructure, and user competence. In the Philippine setting, Navarro et al. (2023) found that communication gaps, limited training, and insufficient management support affected eNGAS adaptation among government agencies in Nueva Ecija, while Puga (2023) reported that users in state universities and colleges in Iloilo generally perceived eNGAS as useful and relatively easy to operate despite technical and familiarity-related challenges. Porpayas and Sumampong (2024) further observed that eNGAS and eBudget improved financial reporting speed and transparency, although system downtimes and adjustment difficulties remained operational concerns. Villanueva (2025) likewise noted that training and institutional support are essential to successful digitalization in financial

management. The Department of Agrarian Reform is a government agency responsible for agrarian reform implementation, land redistribution, rural development, and the management of public funds for programs and operations. In DAR Masbate, eNGAS is used to record, process, and report financial transactions in line with government accounting standards. Its adoption is intended to improve financial accuracy, strengthen internal control, expedite report generation, reduce manual errors, and enhance accountability. Since DAR handles public funds intended for agrarian reform beneficiaries, evaluating the perceived effectiveness of eNGAS is important in determining whether digital financial management contributes to improved governance, operational efficiency, transparency, and responsible fund utilization.

The reviewed literature consistently shows that digital public financial management systems improve efficiency, reporting accuracy, transparency, internal control, and accountability, but their success depends on institutional readiness, user competence, governance support, and technical capacity. Fakhri and Noordiyati (2025) found that digital government accounting systems improve accounting integration and data security frameworks, while Hodge and Harriss (2025) reported that digital transformation enables real-time budget tracking and strategic financial planning. Lakat (2025) noted that regional financial applications accelerate reporting cycles and improve fund monitoring, although interoperability issues and uneven digital literacy may limit system efficiency. Rajala (2025) similarly observed that digital accounting technologies reduce bureaucratic delays, but resistance to organizational change and regulatory misalignment remain barriers. In budgeting and fund allocation, Safariah et al. (2025) found that accounting information systems improve budget planning accuracy and budgetary control, while Arianto et al. (2025) reported that e-budgeting systems enhance transparency and accountability through structured budget data. Del Paso et al. (2025) emphasized that digital cost-data integration supports evidence-based fiscal decision-making, and Bernales Vásquez (2025) confirmed that digitization in public financial management improves fiscal discipline and reporting speed. For accounting and reporting quality, Almgrashi (2025) found that digital accounting systems improve sustainable decision-making through data accuracy, accessibility, and transparency. Omar, Aluwi, and Hussein (2026) reported that digital transformation improves government accountants' performance when supported by leadership competence and structured measurement systems, while Gomes and Quesado (2024) concluded that digitalization strengthens strategic financial management and modernizes public governance frameworks. Digital transformation also affects auditing and internal control. Umbet et al. (2025) found that IT-based audit systems improve fiscal integrity and risk governance through automated audit trails, while Zhang and Shi (2025) reported that audit digitalization reduces internal control weaknesses through continuous monitoring and automated compliance checks. Tambunan et al. (2024) showed that auditing accounting information systems strengthens internal control quality, and Nasution, Napitupulu, and Buaya (2025) concluded that internal audit modernization improves compliance monitoring and fraud prevention but requires investment in digital competencies. However, Zardini et al. (2025) warned that digital technologies may produce inefficiencies when poorly aligned with organizational needs, and Alarcon et al. (2026) emphasized that internal control implementation may be constrained by technological skill limitations and resistance to monitoring. Transparency and accountability are dominant themes in digital financial governance. Eltweri et al. (2025) found that accounting digital transformation enhances financial transparency when supported by strong governance structures. Gcabashe and Pillay (2025) reported that municipal financial accountability improves when digital systems are paired with accountability frameworks, while Putri (2025) concluded that information technology, internal control systems, and performance-based budgeting strengthen government performance accountability. Aripov (2024) emphasized that digital technologies reduce corruption risks and enhance accountability through automated reporting and audit tracking, and Evans et al. (2025) concluded that digital accounting reforms improve fiscal governance, transparency, and comparability of financial information. Local studies support these findings. Porpayas and Sumampong (2024) found that eBUDGET and eNGAS enhanced accountability, streamlined procedures, and improved reporting accuracy in DPWH Surigao del Norte. Villanueva (2024) reported that automated accounting systems improved record accuracy and processing speed where implemented effectively, although inadequate technical support and limited training hindered full utilization. Macalinao, Ringor, and Cadelina (2023) found that strong accounting information systems improved the accuracy, completeness, and consistency of LGU financial reports. Batuna and Ordoñez (2025) showed that digitalized internal controls improved governance compliance, although manual practices persisted, indicating the need for institutional reforms alongside digital adoption. The Philippines 2025 Public Expenditure and Financial Accountability (PEFA) Report also indicated improvements in budget reliability, transparency, and documentation quality, with digital reforms including eNGAS contributing to public financial management performance. Additional local and policy-based evidence shows that digital financial management reforms require capacity-building, policy support, and system integration. Bureau of the Treasury training reports show the importance of preparing personnel to operate eNGAS and eBUDGET. The Department of Budget and Management's Public Financial Management Reforms Roadmap (2024–2028) emphasizes allocative efficiency, operational efficiency, transparency, and data accuracy through integrated systems and personnel training, while the E-Governance Act (2024) institutionalizes electronic systems across government agencies. Paunan (2026) reported that blockchain technology was introduced in the national budget cycle to support verifiable budget records. Ornedo (2023) confirmed that eNGAS improved the accuracy and consistency of financial reports in the National Bureau of Investigation, and Gita-Carlos (2024) highlighted DBM's digital governance dashboards for fiscal transparency and efficiency.

Globally, digital transformation in public financial management is associated with stronger budgeting, reporting, audit, internal control, transparency, and accountability systems. Irmawati, Haliah, and Nirwana (2025), Lestari (2025), and Yesbarianus Parindingan, Haliah, and Nirwana (2024) found that digital government reporting enhances timeliness, accessibility, comparability, traceability, and accountability. Tuama (2024) noted that e-governance systems improve accounting integration, data standardization, and interoperability. Mbonigaba Celestin, Mishra, and Mishra (2025) highlighted the role of artificial intelligence and blockchain in strengthening automation, data immutability, and fraud prevention, while Alassuli et al. (2025) found that digital accounting transformation enhances transparency when mediated by good governance. Spano et al. (2024), however, cautioned that digital transformation must be supported by institutional culture, strategic implementation, and organizational adaptability. In digital budgeting, Jin and Wang (2025), Salhudin et al. (2024), Tanjung et al. (2024), Thwaini (2025), Indrawan et al. (2024), Khairati and Putra (2024), Omonova (2025), Jumardi (2025), Fachrulla et al. (2025), and Idris (2025) collectively show that digital budgeting improves fiscal transparency, monitoring, forecasting accuracy, budget efficiency, processing accuracy, and accountability. In accounting information systems and reporting integrity, Sampaio and Silva (2025), Zace and Shuli (2025), and Rios (2025) found that automation, ERP systems, blockchain, and AI improve processing efficiency, reporting timeliness, financial control, and reporting integrity. In auditing and internal control, Ilori (2025), Liang (2025), Volodina and Grossi (2024), Karagiorgos (2025), Fand et al. (2025), and Zhelev and Kostova (2024) emphasized automation, data analytics, digital audit talent, risk assessment, audit effectiveness, and reliable control systems. In the Philippine context, digital governance studies show similar benefits and challenges. Benemerito (n.d.) emphasized the value of structured financial management processes for operational efficiency and accountability. Villaseñor (2024) found that government personnel with stronger digital competencies were more effective in implementing digital systems, while Binaluyo et al. (2024) showed that digital tools improve record-keeping and monitoring but may be limited by cybersecurity risks, lack of trained personnel, and infrastructure concerns. Andaya et al. (2025) found that digital governance initiatives in the Philippines improve efficiency and transparency but face fragmented adoption, organizational resistance, and lack of standardization. Bernales-Vasquez (2025) observed that digital systems enhance accuracy, timeliness, traceability, transparency, and accountability but require capacity-building and harmonized standards. At the local and agency level, Cereno (2024) reported that digital transformation improves budgetary allocation accuracy, reporting speed, and public access to financial information, although connectivity, technical expertise, and integration remain issues. Andres et al. (2024) found that digitized financial procedures reduce processing time and improve transparency, while Angeles (2024) showed that digital and financial literacy influence adoption and operational efficiency. Palma et al. (2023) emphasized that user-friendly interfaces, interoperability, and real-time reporting are important determinants of e-government system success. Andres et al. (n.d.) found that eNGAS improved accounting, reporting, and financial control in LGUs of Cagayan Province, while Navarro et al. (2023) confirmed that consistent training and standardization improved utilization, reporting speed, and financial statement accuracy.

This study is anchored on the Technology Acceptance Model (Davis, 1989), the DeLone and McLean IS Success Model (DeLone & McLean, 1992; 2003), and Public Accountability Theory as articulated by Mark Bovens (2007). The Technology Acceptance Model (Davis, 1989) explains that user intention to adopt a system is shaped by perceived usefulness and perceived ease of use. In this study, the model supports the assessment of how DAR Masbate personnel perceive eNGAS as a tool for improving financial accuracy, efficiency, timeliness, and reporting processes. If personnel view eNGAS as useful and easy to operate, they are more likely to use it effectively; if not, resistance and underutilization may occur. The DeLone and McLean IS Success Model (DeLone & McLean, 1992; 2003) provides a basis for examining system success through system quality, information quality, service quality, system use, user satisfaction, and net benefits. In the context of eNGAS, this means assessing whether the system is reliable, produces accurate and timely financial information, supports user needs, and generates organizational benefits such as improved internal control, transparency, efficiency, and accountability. Public Accountability Theory as articulated by Mark Bovens (2007) frames eNGAS not only as a technological tool but also as a mechanism for responsible public governance. Since public officials are expected to manage public resources transparently, lawfully, and efficiently, eNGAS may strengthen fund monitoring, compliance, reporting standards, and public trust. The conceptual basis of the study follows an input-process-output approach. The inputs include the demographic profile of DAR employees, the implementation of eNGAS, personnel perceptions of system effectiveness, encountered challenges, proposed measures, and the relationship between implementation and perceived effectiveness. The process involves survey questionnaires, data gathering, presentation, analysis, and interpretation. The expected output is an empirical assessment of the perceived effectiveness, challenges, and recommendations concerning financial management digitalization through eNGAS in DAR Masbate.

Although many studies have examined digital public financial management, e-budgeting, digital auditing, IT governance, accounting information systems, and eNGAS adoption, most focus on national systems, general government settings, local government units, or selected educational institutions. Existing studies confirm that digital financial systems improve transparency, efficiency, accountability, and reporting quality, but they also identify gaps in training, infrastructure, user readiness, standardization, and organizational support. However, limited empirical evidence focuses specifically on how eNGAS functions within the Department of Agrarian Reform, particularly in a provincial office where budgeting, fund

utilization, reporting, documentation, and internal control are carried out in direct support of agrarian reform programs. This study addresses that gap by assessing the digitalization of the financial management system of DAR Masbate through eNGAS. It examines the extent of eNGAS implementation in budgeting and fund allocation, accounting and reporting, auditing and internal control, and financial data management and documentation. It also assesses personnel perceptions of eNGAS effectiveness in improving financial transaction efficiency, accuracy and timeliness of reports, transparency in fund utilization, and accountability in financial operations. Further, it identifies challenges, proposes measures for system enhancement, and determines whether there is a significant relationship between the implementation of eNGAS and its perceived effectiveness in improving financial management practices.

The study is aligned with SDG 9 – Industry, Innovation and Infrastructure because it examines digital innovation in government financial management through eNGAS. By assessing how a digital accounting platform supports budgeting, accounting, auditing, reporting, and documentation, the study contributes to understanding how technological infrastructure can improve institutional systems and operational efficiency. The study is also aligned with SDG 16 – Peace, Justice, and Strong Institutions because its central concerns are transparency, accountability, internal control, compliance, and responsible management of public funds. Since DAR Masbate manages resources connected to agrarian reform programs and public service delivery, strengthening digital financial governance may support institutional integrity and public trust. The study may also relate to SDG 17 – Partnerships for the Goals because digital financial management reforms involve coordination among government agencies, oversight bodies, policy frameworks, training mechanisms, and institutional support systems. The literature cited in the study emphasizes the role of national reforms, e-governance policies, capacity-building, and inter-agency systems in strengthening public financial management.

This study contributes to multidisciplinary sustainability by linking financial management, public administration, accounting, digital governance, institutional policy, and public accountability. From a technological sustainability perspective, it evaluates how eNGAS supports the modernization of financial operations and reduces dependence on manual processes. From an institutional sustainability perspective, it provides evidence that may help DAR Masbate strengthen internal controls, reporting systems, documentation practices, and personnel capacity. From a governance sustainability perspective, the study supports transparency, accountability, compliance, and responsible fund utilization. The study also has socio-economic and community relevance because DAR manages public funds intended for agrarian reform programs and beneficiaries. Improved financial management may help ensure that resources are properly allocated, monitored, reported, and protected from inefficiencies. Therefore, the study is significant not only to accounting and administrative personnel but also to policymakers, oversight bodies, other government agencies, future researchers, and the community that benefits from transparent and accountable government financial operations.

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## **2. Material and methods**

### **2.1 Research Design**

The study employed a descriptive-quantitative research design to determine the perceived effectiveness of financial management digitalization through eNGAS in the Department of Agrarian Reform. Quantitative data were gathered through structured questionnaires and were statistically analyzed to describe the implementation of eNGAS and determine the relationship between system implementation and perceived effectiveness in improving financial management practices. This design was appropriate because it allowed systematic measurement and analysis of respondents' perceptions across a defined group.

### **2.2 Locale of the Study**

The study was conducted at the Department of Agrarian Reform Masbate. DAR is a national government agency mandated to implement the Comprehensive Agrarian Reform Program, which promotes equitable land distribution, agricultural productivity, and improved socio-economic conditions among agrarian reform beneficiaries. The DAR Provincial Office of Masbate manages administrative and financial transactions related to land acquisition and distribution, support services, infrastructure projects, and operational expenditures. Since the office handles public funds and uses eNGAS for recording, processing, and reporting financial transactions, it served as an appropriate setting for assessing the effectiveness of financial management digitalization.

### **2.3 Respondents of the Study**

The respondents were employees of the Department of Agrarian Reform Masbate, particularly personnel involved in financial management functions such as budgeting, accounting, auditing, reporting, and financial data management. Their direct involvement in these processes made their perceptions and experiences relevant in evaluating the implementation and effectiveness of eNGAS.



## **2.4 Sample and Sampling Procedure**

The study used convenience sampling, a non-probability sampling technique in which respondents were selected based on availability, accessibility, and willingness to participate. The study included DAR personnel who were readily available during the data collection period. Thirty copies of the questionnaire were distributed to the respondents, allowing the researcher to gather sufficient and relevant responses for assessing the perceived effectiveness of eNGAS in financial management practices.

## **2.5 Research Instrument**

The main research instrument was a structured questionnaire designed to gather data on the perceived effectiveness of financial management digitalization through eNGAS. The questionnaire covered the respondents' demographic profile in terms of age, sex, educational attainment, position, years of service, and level of training or familiarity with eNGAS. It also included items on the implementation of eNGAS in budgeting and fund allocation, accounting and reporting, auditing and internal control, and financial data management and documentation. In addition, the instrument measured personnel perceptions of eNGAS in improving efficiency of financial transactions, accuracy and timeliness of reports, transparency in fund utilization, and accountability in financial operations. It also covered challenges encountered, proposed measures for improvement, and the relationship between system implementation and perceived effectiveness. The questionnaire used Likert-scale items to quantify respondents' perceptions and experiences. To ensure validity, the instrument was reviewed by experts to determine the clarity, relevance, and appropriateness of the items. For reliability, a pilot test was conducted with a small group similar to the study population, and Cronbach's alpha was used to determine internal consistency.

## **2.6 Data Gathering Procedure**

After the thesis proposal was approved by the school thesis committee, the researcher secured permission to conduct the study. The request was noted by the thesis adviser and submitted to the Officer in Charge of the Department of Agrarian Reform for approval. After approval, the validated questionnaire was finalized, reproduced, and distributed to the respondents with their consent. The retrieval of the questionnaires took longer than the expected one-month period, which caused delays in data processing. After retrieval, the responses were tallied, statistically treated with the assistance of an expert statistician, and interpreted to derive the study findings and implications.

## **2.7 Data Analysis Techniques**

The data were analyzed using frequency count and percentage to describe the demographic profile of the respondents. Weighted mean was used to determine the level of implementation of eNGAS, the perceived effectiveness of the system, the challenges encountered, and the proposed measures for improvement. Pearson correlation was used to determine whether there was a significant relationship between the implementation of the Electronic New Government Accounting System and the perceived effectiveness in improving financial management practices in DAR Masbate.

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# **3. Results and Discussion**

## **3.1 Demographic Profile of DAR Masbate Employees**

### **3.1.1 Age**

The study involved 30 DAR Masbate employees. Most respondents were 26–30 years old, representing 13 employees or 43.33% of the total. This was followed by the 31–35 age group with 7 employees or 23.33%. The 21–25 and 36–40 age groups each had 3 employees or 10.00%, while 2 employees or 6.67% were aged 41–45. Only 1 employee or 3.33% each belonged to the 46–50 and 51 years old and above categories. No respondent was 20 years old or below. The age profile suggests that the workforce is generally composed of young adults, particularly employees in the 26–30 age group. This may indicate an adaptable and energetic workforce that can support digital transformation initiatives such as eNGAS. At the same time, the presence of older employees may provide institutional knowledge and mentoring support for younger personnel.

### **3.1.2 Sex**

The respondents were predominantly female. Out of 30 employees, 26 or 86.67% were female, while only 4 or 13.33% were male. This result indicates that the DAR Masbate workforce covered by the study is largely female. The strong female representation may contribute to collaborative and inclusive workplace dynamics, while the presence of male employees provides additional diversity in perspectives and work experiences.

### **3.1.3 Educational Attainment**

Most respondents had completed a Bachelor's degree, representing 19 employees or 63.33%. Meanwhile, 11 employees or 36.67% had earned units in a Master's degree. No respondent had completed a full Master's degree, Doctorate degree, or Doctorate degree units. The findings show that the respondents possess the foundational academic qualifications needed for their roles. The presence of employees with Master's degree units also suggests ongoing professional development, which may support improved performance, adaptability, and capacity to engage with digital financial systems.

### **3.1.4 Position**

The largest group of respondents were Agrarian Reform Program Technologists, with 18 employees or 60.00% of the total. ARPO I personnel comprised 4 employees or 13.33%, while eNGAS Encoders, Finance Staff, and Procurement Support Staff each had 2 employees or 6.67%. Accountant II and SARPT positions each had 1 employee or 3.33%. The distribution shows that the workforce is concentrated in technical and program-related positions, particularly Agrarian Reform Program Technologists. The inclusion of accounting, finance, procurement, and encoding personnel also indicates that the study captured employees with direct or related exposure to administrative and financial processes relevant to eNGAS implementation.

### **3.1.5 Years of Service**

Half of the respondents, or 15 employees representing 50.00%, had 0–5 years of service. Another 14 employees or 46.67% had 6–10 years of service. Only 1 employee or 3.33% had 21 years and above of service, while no respondents were reported under the 11–15 and 16–20 year categories. The results suggest that most respondents are relatively new or early-career employees. This may support adaptability to digital systems, although additional experience and structured training remain necessary. The presence of one long-serving employee may also contribute institutional memory and guidance to less experienced personnel.

### **3.1.6 Level of Training or Familiarity with eNGAS**

Most employees were only slightly familiar with eNGAS, with 17 respondents or 56.67% falling under this category. Nine employees or 30.00% were familiar with the system, while only 1 employee or 3.33% was very familiar. Three employees or 10.00% were unfamiliar with eNGAS. The findings indicate that while most employees have some exposure to eNGAS, their level of familiarity remains limited. This points to the need for additional hands-on training, refresher sessions, and mentoring to improve user confidence and competence. Strengthening familiarity with eNGAS may help reduce errors, improve work efficiency, and support smoother financial operations.

## **3.2 Implementation of the Electronic New Government Accounting System**

### **3.2.1 Budgeting and Fund Allocation**

DAR Masbate employees strongly agreed that eNGAS is implemented in budgeting and fund allocation, with an overall weighted mean of 3.39. The highest-rated indicator was that eNGAS supports compliance with government budgeting guidelines, with a weighted mean of 3.53. This was followed by the view that eNGAS improves coordination among budgeting officers, with a weighted mean of 3.50, and allows quick access to budget utilization data, with a weighted mean of 3.43. The lowest-rated indicator was the accuracy of reflected fund transfers and adjustments, with a weighted mean of 3.23, although it still received an “Agree” interpretation. The results show that eNGAS is perceived as useful in promoting compliance, coordination, and access to budget information. However, the lower rating on fund transfers and adjustments suggests the need for system refinement or user training in this specific function. Porpayas and Sumampong (2024) supports this finding, as their study on finance personnel using eNGAS and eBudget systems demonstrated that digital financial management platforms contribute to greater efficiency, accuracy, transparency, and accountability in handling government funds.

### **3.2.2 Accounting and Reporting**

The implementation of eNGAS in accounting and reporting received an overall weighted mean of 3.43, interpreted as “Strongly Agree.” The highest-rated indicator was that the reporting functions of eNGAS support effective financial decision-making, with a weighted mean of 3.50. Indicators related to accurate recording of financial transactions, timely financial statements, transaction tracing and verification, and compliance with government accounting standards each received a weighted mean of 3.47. The lowest-rated indicator was the consistency of financial data updates and synchronization across departments, with a weighted mean of 3.33. These results indicate that eNGAS improves accounting accuracy, financial reporting, compliance, and decision-making support. However, the lower rating for data synchronization suggests that DAR Masbate may need to strengthen coordination and monitoring across departments. Tuama (2025) found that e-governance initiatives transform traditional accounting systems by fostering greater accuracy, transparency, and efficiency in public sector financial operations. Similarly, Safariah et al. (2025) demonstrated that Accounting Information Systems significantly improve budget planning, control, and reporting accuracy in government contexts.

### **3.2.3 Auditing and Internal Control**

The implementation of eNGAS in auditing and internal control obtained an overall weighted mean of 3.47, interpreted as “Strongly Agree.” The highest-rated indicator was that the system supports verification of financial records for audit purposes, with a weighted mean of 3.53. Other highly rated indicators included the provision of clear audit trails, minimization of fraudulent entries, and system logs that enable user accountability, each with a weighted mean of 3.50. The lowest-rated indicator was real-time monitoring of fund movement, with a weighted mean of 3.40. The findings show that eNGAS strengthens auditing, accountability, compliance, and internal control processes by making records traceable

and verifiable. The slightly lower rating on real-time fund monitoring suggests an area for improvement in system utilization or functionality. Hashim (2025) found that robust internal controls within electronic government accounting systems improve the effectiveness of financial reporting and audit processes.

### **3.2.4 Financial Data Management and Documentation**

The implementation of eNGAS in financial data management and documentation received an overall weighted mean of 3.52, interpreted as “Strongly Agree.” The highest-rated indicators, each with a weighted mean of 3.57, were the organization of financial records in a centralized digital database, fast data retrieval through the search function, regular creation of data backups, and access to needed documents by authorized personnel. The lowest-rated indicator was support for long-term archiving of financial data, with a weighted mean of 3.37. The results suggest that eNGAS is highly effective in organizing, securing, retrieving, and documenting financial records. It also reduces reliance on paper-based documentation and supports data accuracy and completeness. However, the lower rating for long-term archiving indicates that data storage practices may still be improved. Lestari (2025) emphasized that digital systems in the public sector enhance transparency, accuracy, and timeliness in financial reporting and document management, which supports your result that employees see eNGAS as a reliable platform for secure and accessible financial data.

## **3.3 Perceived Effectiveness of eNGAS**

### **3.3.1 Efficiency of Financial Transactions**

DAR Masbate personnel strongly agreed that eNGAS improves the efficiency of financial transactions, with an overall weighted mean of 3.43. The highest-rated indicators were that eNGAS accelerates financial transaction processing and improves personnel productivity, both with weighted means of 3.50. The system was also rated highly for promoting faster approval of financial requests and allowing real-time updates of financial records, each with a weighted mean of 3.47. The lowest-rated indicator was the decrease in transaction errors since eNGAS implementation, with a weighted mean of 3.33. The findings indicate that eNGAS helps streamline financial workflows, reduce manual workload, speed up approvals, and improve productivity. However, the lower rating on error reduction suggests that continuous monitoring and user training are still needed. This is supported by Safariah et al. (2025), who reported that digital accounting systems significantly improve transaction processing efficiency and reduce manual workload in government financial operations. Likewise, Al-Khaddash, Jarrar, and Abuhashesh (2024) found that digital financial management systems contribute to faster processing, improved access to real-time data, and higher staff effectiveness, reinforcing the perceptions expressed by your respondents.

### **3.3.2 Accuracy and Timeliness of Reports**

Personnel strongly agreed that eNGAS improves the accuracy and timeliness of reports, with an overall weighted mean of 3.45. The highest-rated indicators, each with a weighted mean of 3.50, were precision in financial computations, consistency of reports with actual financial data, automatic report updates after every transaction, and improved report accuracy since adopting eNGAS. The lower-rated indicators, including elimination of delays in report preparation and provision of real-time information for management review, still received a weighted mean of 3.40 and were interpreted as “Strongly Agree.” The results show that eNGAS is perceived as effective in producing accurate, reliable, and timely financial reports. Its automatic computation and updating functions support report consistency and management decision-making. However, the findings also indicate minor opportunities to further improve reporting speed and real-time management access. Kimani (2024) found that AIS enhances financial reporting accuracy by improving data integrity and reducing errors, which parallels your indicator that reports are consistent with actual data and accurate.

### **3.3.3 Transparency in Fund Utilization**

The transparency of fund utilization through eNGAS received an overall weighted mean of 3.51, interpreted as “Strongly Agree.” The highest-rated indicator was that fund disbursement is traceable through system-generated logs, with a weighted mean of 3.57. Other highly rated indicators included openness in financial recording, easy access to budget utilization reports, and compliance with transparency policies, each receiving a weighted mean of 3.53. The lower-rated indicators on monitoring fund flow and reducing misappropriation still received strong agreement, each with a weighted mean of 3.47. The findings indicate that eNGAS supports transparency by making fund disbursement traceable, financial records accessible to authorized users, and budget utilization easier to monitor. The system also helps discourage manipulation and improves confidence in fund management. Hasan and Hasan (2023) emphasize that digital public sector systems improve transparency and accountability in government reporting, because they make financial information reliable and accessible to stakeholders, reducing information asymmetry and enhancing auditability. Similarly, Hussain and Khalid (2024) found that digital accounting information systems significantly enhance the clarity and accessibility of financial data, enabling stakeholders to monitor and verify fund usage more effectively.

### **3.3.4 Accountability in Financial Operations**

The accountability of financial operations through eNGAS received an overall weighted mean of 3.48, interpreted as “Strongly Agree.” The highest-rated indicators were that eNGAS records all user actions for accountability purposes, ensures proper documentation for every transaction, and promotes ethical conduct in financial operations, each with a weighted mean of 3.57. Personnel also strongly agreed that the system identifies the personnel responsible for financial entries, enhances compliance with accountability standards, and enforces authorization procedures. The lowest-rated indicator was the strengthening of financial responsibility among users, with a weighted mean of 3.32. The results show that eNGAS is perceived as effective in promoting accountability by recording user actions, supporting documentation, enforcing authorization, and enabling traceability of errors and transactions. The system also contributes to ethical financial conduct and reduces the risk of financial mismanagement. Zebua (2025) reported that digital transformation in accounting significantly increases transparency and accountability by providing traceable logs and reliable audit trails that discourage mismanagement and unethical conduct in financial operations.

### **3.4 Challenges Encountered in the Use and Implementation of eNGAS**

DAR Masbate personnel strongly agreed that challenges affect the use and implementation of eNGAS, with an overall weighted mean of 3.28. The highest-rated challenge was occasional system errors or crashes that disrupt work, with a weighted mean of 3.47. This was followed by limited technical knowledge among personnel, with a weighted mean of 3.40, and limited time for training and orientation sessions, with a weighted mean of 3.37. Other concerns included lack of consistent technical support, difficulty in migrating old records, slow internet connectivity, insufficient equipment, delayed approval due to unfamiliarity, resistance to change, and confusion caused by software updates. The findings indicate that although eNGAS provides important benefits, its effectiveness is constrained by technical, logistical, and human resource-related issues. System stability, personnel competence, training availability, internet connectivity, equipment adequacy, and technical support are important areas requiring improvement. Addressing these concerns may help reduce work disruption, improve user confidence, and maximize the value of eNGAS in financial operations.

### **3.5 Proposed Measures to Enhance Financial Management Digitalization**

The proposed measures for improving eNGAS implementation received an overall weighted mean of 3.69, interpreted as “Strongly Agree.” The highest-rated measure was the provision of continuous technical support and system maintenance, with a weighted mean of 3.90. Other highly rated measures included establishing a help desk for real-time assistance, creating user manuals, conducting periodic evaluation of system performance, and strengthening monitoring and feedback mechanisms, each with a weighted mean of 3.70. Additional measures included regular training, hardware and network upgrades, user incentives, system integration, and backup procedures for data recovery. The results show that employees strongly support structured interventions to improve eNGAS implementation. Continuous technical support, user guidance, monitoring, evaluation, training, and system maintenance are viewed as essential to strengthening efficiency, reliability, and user confidence. Implementing these measures may help DAR Masbate develop a more effective, transparent, and resilient digital financial management system.

### **3.6 Relationship Between eNGAS Implementation and Perceived Effectiveness**

The Pearson correlation result showed a computed r-value of 0.51, indicating a moderate positive linear relationship between eNGAS implementation and perceived effectiveness in improving financial management practices. With 28 degrees of freedom, a 0.05 level of significance, and a critical r-value of  $\pm 0.3610$ , the computed r-value exceeded the critical value. Therefore, the null hypothesis was rejected, indicating that the relationship between the variables was statistically significant. This result means that stronger implementation and utilization of eNGAS are associated with higher perceived effectiveness in financial management practices. As employees use the system more consistently in daily operations, they are more likely to observe improvements in accuracy, efficiency, transparency, and accountability. The finding reinforces the importance of fully adopting and sustaining eNGAS as a digital tool for strengthening financial management within DAR Masbate.

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## **4. Conclusion & Recommendations**

The study concludes that DAR Masbate personnel generally perceived eNGAS as an effective digital financial management system, particularly in supporting budgeting and fund allocation, accounting and reporting, auditing and internal control, and financial data management and documentation. Respondents strongly agreed that eNGAS improves efficiency, accuracy, transparency, and accountability in financial operations, with notable strengths in transaction processing, report accuracy, fund traceability, centralized data management, and user accountability. However, the system’s full effectiveness is affected by occasional system errors, limited technical knowledge, limited training time, slow internet connectivity, insufficient equipment, and difficulties in migrating old records. The study further found a moderate positive linear relationship between eNGAS implementation and perceived effectiveness, indicating that stronger system implementation is associated with improved financial management practices in DAR Masbate.



DAR Masbate should strengthen eNGAS implementation by providing continuous technical support and system maintenance, establishing a help desk for real-time assistance, preparing comprehensive user manuals, conducting periodic system performance evaluations, and improving monitoring and feedback mechanisms. The department should also integrate eNGAS with other government financial systems to improve coordination, data consistency, and overall financial management. Further study involving other areas within the same province and a larger sample size is also recommended.

The study was limited to DAR personnel and did not include other government offices. Its findings were based solely on the perceptions and experiences of personnel from DAR Masbate regarding the use and implementation of eNGAS, particularly in budgeting and fund allocation, accounting and reporting, auditing and internal control, financial data management and documentation, perceived effectiveness, challenges, and proposed enhancement measures. Therefore, the results may not fully represent the experiences of other agencies, provinces, or government financial management systems.

### Compliance with ethical standards

The study adhered to institutional ethical standards by ensuring voluntary participation, informed consent, confidentiality of information, and responsible use of data. Ethical approval was secured when applicable, and the authors declare no conflict of interest. All contributions were properly acknowledged, authorship responsibility was observed, and copyright ownership and other ethical considerations were respected throughout the conduct of the research.

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