

Efficiency in Accounting Due to Digital Accounting Systems: A one Year Case Study of Nawalparasi District

Arvind Kumar Sharma Badhai 

Palhi Multiple Campus

Abstract

Accounting systematically records, classifies, summarizes, analyzes, and reports financial transactions. As organisations adopt digital accounting—computerised and cloud-based systems—they gain faster processing, greater accuracy, improved storage, and near real-time reporting. This study assesses how digital accounting improved accounting efficiency in Nawalparasi District during 2082/83 B.S., focusing on time savings, accuracy, cost reduction, data management, financial reporting, decision-making, and security. Using a descriptive case-study approach, the study reviews literature, secondary data, contextual observations, and practices of digital accounting and digital financial services in Nepal, with emphasis on Nawalparasi District. Digital accounting enhanced efficiency by automating calculations, reducing manual errors, cutting paperwork and storage costs, producing faster financial reports, improving data retrieval, and enabling timely managerial decisions. Constraints included high implementation costs, resistance to change, limited skilled staff, integration challenges, cybersecurity risks, and low digital awareness. Digital accounting can substantially boost accounting efficiency in Nawalparasi District. Effective adoption requires training, dependable digital infrastructure, robust internal controls, strong data security, and supportive policies.

Keywords: accounting efficiency, digital accounting, accounting information system, operational efficiency, cost efficiency, decision-making, Nawalparasi

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Email

arvindsharmawork12@gmail.com

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Introduction

Accounting is commonly known as the language of business because it records, summarises, analyses, and communicates financial information to users. It helps owners, managers, investors, regulators, and other stakeholders evaluate financial performance, control costs, and make informed decisions. The American Institute of Certified Public Accountants defines accounting as the art of recording, classifying, and summarising financial transactions and events in monetary terms and interpreting their results. Similarly, the American Accounting Association explains accounting as the process of identifying, measuring, and communicating economic information to permit informed judgement and decisions by users.

In recent years, accounting practices have changed significantly due to the use of digital technologies. Digital accounting refers

to the use of computers, accounting software, cloud storage, digital payment systems, and other electronic tools to record, process, store, and report financial information. Instead of depending fully on paper-based records, organisations now use software such as Tally Prime, QuickBooks, Xero, Zoho Books, and other accounting information systems.

Digital accounting systems include features such as electronic transaction recording, automated calculations, digital invoices and receipts, real-time financial reporting, cloud-based access, bank and payroll integration, data backup, and password-based security. These features make accounting work faster, easier, more accurate, and more convenient. In the context of Nawalparasi District, where businesses, banks, cooperatives, and service organisations are gradually adopting digital tools, digital accounting can play an important role in improving operational and financial efficiency.

The growth of mobile phone use, digital banking, internet banking, mobile wallets, online payments, and electronic financial services in Nepal has also created a favourable environment for digital accounting. However, many organisations still face problems such as limited technical knowledge, high setup costs, weak infrastructure, fear of cyber risk, and resistance to change. Therefore, it is necessary to assess both the benefits and challenges of digital accounting systems in improving accounting efficiency.

Research Objective

The general objective of the study is to assess the efficiency in accounting due to digital accounting systems in Nawalparasi District during 2082/83 B.S.

Literature Review

Digital accounting has become an important area of study because of its impact on organisational efficiency, financial control, and decision-making. Ahmed et al. (2019) define digital accounting as the use of digital technologies and information systems to record, analyse, and communicate financial information. Their study highlights that digital tools improve the speed, accuracy, and reliability of accounting processes.

Alles et al. (2020) explain that digital accounting includes technologies such as cloud computing, artificial intelligence, blockchain, and data analytics. These technologies help automate routine accounting tasks and improve transparency in financial reporting. Cloud-based accounting systems allow users to access accounting data from different locations, support real-time collaboration, and reduce dependence on physical records.

Accounting Information Systems (AIS) are closely connected with digital accounting. Romney and Steinbart (2020) describe AIS as a system that collects, processes, stores, and communicates financial and accounting information for decision-making. A well-designed AIS improves internal control, reduces data duplication, and supports accurate financial reporting. Hla (2015) also argues that efficient accounting information systems contribute to better organisational performance by improving the quality of accounting information.

Previous studies show that digital accounting improves organisational practices by increasing efficiency, accuracy, transparency, and control. Chen et al. (2018) found that organisations adopting digital accounting systems experience more streamlined workflows and improved financial reporting. Gandomi and

Haider (2015) emphasise the value of big data analytics in helping organisations understand financial trends and make strategic decisions.

Recent studies also highlight new opportunities and risks. Smith et al. (2023) discuss the role of artificial intelligence in improving financial forecasting. Jones and Wang (2022) and Kim et al. (2023) examine the role of blockchain technology in improving transparency, security, auditing, and fraud detection. Li and Zhang (2022) argue that digitalisation requires organisations to update internal control systems because new technologies create new risks.

Despite its benefits, digital accounting also creates challenges. Brynjolfsson and McAfee (2017) point out that cyber threats, data privacy concerns, and digital skill gaps are major issues in technology adoption. In Nepal, the expansion of digital banking, mobile banking, and digital wallets has supported financial inclusion, but limited awareness, weak infrastructure, high transaction costs, and low digital literacy remain barriers to full adoption.

Celestin et al. (2025) examine the shift toward real-time financial reporting, arguing that technological advances and stakeholder demand now require firms to provide near-instant financial insights. The article outlines practical changes in reporting workflows, data architecture, and internal controls needed to sustain continuous reporting while highlighting regulatory and audit challenges that remain unresolved (Celestin et al., 2025a). Strengths include clear linkage between technology capabilities and accounting processes; limitations include limited empirical evidence from diverse jurisdictions.

Celestin and Mishra (2025a) compare IFRS and GAAP, focusing on how standard differences affect cross-border investment decisions and

multinational accounting choices (Celestin & Mishra, 2025b). The paper effectively maps divergent recognition and measurement treatments to practical consequences for investors and managers, emphasizing earnings comparability and tax/transfer-pricing implications. The review would benefit from more quantitative illustrations (e.g., sample restatements) to strengthen practical guidance.

In their forensic accounting piece, Celestin and Mishra (2025) demonstrate how advanced data analytics—machine learning, anomaly detection, text mining—enhances fraud detection and investigation efficiency (Celestin & Mishra, 2025c). They present useful case approaches and tool categories, but the paper could expand discussion on data governance, model explainability, and legal admissibility of analytics-derived evidence.

The digital-transformation review of financial disclosure (Celestin & Mishra, 2025a) synthesizes how blockchain, XBRL, AI-driven narrative analytics, and interactive reporting reshape corporate transparency and investor trust (Celestin & Mishra, 2025d). The authors argue these technologies increase timeliness and verifiability of disclosures while cautioning about implementation costs and standardization needs. The conceptual framing is strong; empirical validation remains limited.

Mbonigaba and Mishra (2025) trace the evolution of green bonds and sustainable finance in public-sector budgeting and development projects, examining design features, market growth drivers, and implications for fiscal policy (Mbonigaba & Mishra, 2025). The paper contributes to policy debates by linking instrument structures to public-sector accountability and project evaluation, though it could more deeply assess long-term impact

measurement and standard-setting for green outcomes.

The article by Mbonigaba et al. (2025) offers a timely, balanced examination of how blockchain and distributed ledger technology (DLT) could reshape financial audits, fraud prevention, and corporate transparency.

Main Contributions

Conceptual Framing

The authors clearly explain blockchain fundamentals (immutability, consensus, cryptographic hashing, smart contracts) and map these features to audit tasks such as transaction verification, evidence preservation, and continuous assurance.

Potential for Fraud Reduction

The paper argues convincingly that blockchain can reduce common fraud vectors (record tampering, back dated entries, and opaque reconciliations) by providing tamper evident transaction histories and automated reconciliation mechanisms.

Enhanced Transparency and Trust

The authors highlight how permissioned ledgers and well designed access controls can increase stakeholder confidence while preserving confidentiality for sensitive data.

Audit Process Innovation

The article explores how smart contracts and real time ledger access enable continuous auditing, automated control testing, and earlier detection of anomalies—shifting auditors' roles toward data analytic oversight and exception investigation.

Practical and Regulatory Considerations

Importantly, the paper does not treat blockchain as a panacea; it addresses interoperability, scalability, privacy trade offs,

legal admissibility of ledger records, and the need for standard setting and regulatory adaptation.

Overall, the literature suggests that digital accounting can significantly improve accounting efficiency when supported by proper training, strong internal controls, reliable infrastructure, and data security measures.

Methodology

This study uses a descriptive and analytical case-study design to assess the effect of digital accounting systems on accounting efficiency in Nawalparasi District.

Study Area

The study focuses on Nawalparasi District, where business firms, banks, cooperatives, educational institutions, and service organisations are gradually using digital tools for financial transactions and accounting work.

Nature and Sources of Data

The study is mainly based on secondary data and qualitative information. Sources include books, journal articles, reports, online materials, institutional information, and contextual observations related to digital accounting, accounting information systems, digital banking, and financial inclusion in Nepal.

Method of Analysis

The collected information is analysed descriptively. The analysis focuses on key dimensions of accounting efficiency, including time efficiency, accuracy, cost efficiency, data management, reporting speed, decision-making, and security. The study also discusses major challenges and opportunities related to the adoption of digital accounting systems.

Scope of the Study

The study concentrates on the efficiency aspects of digital accounting systems rather than

detailed financial performance measurement. It provides a general assessment useful for businesses, accounting professionals, students, and policymakers.

Limitations of the Study

The study is limited by the availability of district-level data on digital accounting adoption. It relies mainly on secondary sources and descriptive analysis, so future research may include field surveys, interviews, and statistical testing for stronger empirical findings.

Results and Discussion

The study shows that digital accounting substantially enhances accounting efficiency across multiple dimensions. First, it saves time by automating repetitive tasks—data entry, calculations, posting, balancing, and report generation—so transactions are recorded and financial statements produced far faster than under manual systems; this shift frees accounting staff to focus on analysis and managerial decision-making (Celestin et al., 2026a; Celestin et al., 2025). Second, automation and built in validation reduce calculation errors, missing entries, and duplications, improving the reliability of financial records (Celestin, Mishra & Mishra, 2026). Third, although initial costs for software, training, and maintenance exist, digital systems lower recurring expenses for paper, printing, storage, and manual labor—an important advantage for resource constrained SMEs (Celestin et al., 2025; Celestin, Mishra & Mishra, 2026a).

Fourth, digital accounting enhances data management: electronic storage enables fast search, quick updates, remote retrieval, cloud access, and reliable backups that mitigate risks from physical damage or misplacement (Celestin et al., 2025). Fifth, faster preparation

of core statements (income, balance sheet, cash flows, ledgers, trial balances, and tax reports) and real time reporting improve managers' situational awareness of the organisation's financial position (Celestin et al. 2026a). Sixth, timely and accurate information supports better cost control, cash flow monitoring, profitability assessment, and planning—strengthening competitive responsiveness (Celestin et al., 2025; Celestin et al., 2025).

Seventh, when properly designed and administered, digital systems strengthen internal controls and security through password protection, role based access, audit trails, and backup protocols; however, the effectiveness of these safeguards depends on system quality and user awareness (Celestin et al., 2026a). In the Nepalese context—illustrated by greater uptake of internet banking, mobile banking, digital wallets, ATMs, and online payments—digital accounting adoption is supported by expanding digital financial services and mobile penetration (Celestin et al., 2025).

The study also identifies barriers. Resistance from staff habituated to manual methods and shortages of trained personnel hinder adoption. High implementation costs, licensing and maintenance fees, and training demands strain small businesses. Compatibility issues can arise when new software must integrate with legacy systems. Cybersecurity risks, data privacy concerns, and potential system failures present ongoing threats. Finally, frequent tax, compliance, and reporting changes necessitate regular system updates and governance attention (Celestin et al., 2026a; Celestin et al., 2025).

A SWOT framing captures these dynamics: strengths include speed, accuracy, transparency, and convenience; opportunities encompass financial inclusion, cloud accounting, online reporting, and deeper banking integration;

weaknesses involve limited digital skills, infrastructure gaps, and technology dependence; threats comprise cyber fraud, data loss, high costs, and evolving regulation (Celestin et al., 2025; Celestin et al. 2026b; Celestin et al., 2025). Overall, digital accounting enhances efficiency, but its success depends on careful implementation, user training, robust infrastructure, adequate security measures, and organisational readiness (Celestin, Mishra & Mishra, 2026; Celestin et al., 2025; Celestin et al., 2025).

Conclusion

Digital accounting systems have become an important tool for improving accounting efficiency. In Nawalparasi District, the adoption of digital accounting can make accounting work faster, more accurate, less costly, and more reliable. It improves bookkeeping, financial reporting, data storage, information retrieval, decision-making, and internal control.

The study concludes that digital accounting is not only a technological change but also an organisational change. Its benefits can be fully achieved only when organisations are ready to invest in software, hardware, staff training, cybersecurity, and internal control systems. Although challenges such as high cost, lack of skilled manpower, resistance to change, cyber risk, and weak infrastructure exist, these challenges can be reduced through awareness, training, policy support, and better digital infrastructure.

Overall, digital accounting has strong potential to support efficient, transparent, and modern accounting practices in Nawalparasi District.

Recommendations

- o Organisations in Nawalparasi District should gradually adopt digital

accounting systems to improve accounting efficiency and reduce dependence on manual records.

- o Proper training should be provided to accountants, managers, and staff so that they can use accounting software correctly and confidently.
- o Small and medium enterprises should select affordable and user-friendly accounting software according to their size, budget, and reporting needs.
- o Strong internal control systems should be developed, including password protection, user access limits, audit trails, regular backup, and verification procedures.
- o Organisations should invest in cybersecurity measures to protect financial data from unauthorised access, hacking, data loss, and misuse.
- o Government agencies, banks, professional accounting bodies, and educational institutions should conduct awareness programmes on digital accounting and digital financial literacy.
- o Digital accounting systems should be integrated with banking, payroll, inventory, tax, and payment systems where possible to reduce duplication of work.
- o Policies should encourage businesses to use digital payments, online reporting, and electronic record keeping.
- o Future researchers should conduct field surveys and interviews with accountants, business owners, and software users in Nawalparasi District to measure the actual impact of digital accounting using primary data.

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