USE OF CLOUD STORAGE TOOLS FOR EFFICIENT RECORDS MANAGEMENT AMONG SMES IN ANAMBRA STATE

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Abstract
This study examined the use of cloud storage tools for efficient records management among Small and Medium-scale Enterprises (SMEs) in Anambra State, Nigeria. The study addressed the steady reliance of many SMEs on manual record-keeping systems, despite the growing importance of digital tools for improving accessibility, security, cost efficiency, and business continuity, by formulating one major purpose with five specific purposes, five research questions, and five null hypotheses. A descriptive survey research design was adopted. The study was conducted in Anambra State, and the study population comprised 1,053 registered SMEs in the manufacturing, services, and construction sectors. A sample of 290 SMEs was drawn using a multistage sampling procedure, involving proportionate stratified sampling across the 21 Local Government Areas and simple random sampling in selecting the SMEs. Data were collected using a researcher-developed instrument, the Innovative Electronic Tools for Efficient Records Management Questionnaire (IETERMQ). The mean and standard deviation were used to address the research question, while Analysis of Variance (ANOVA) tested the null hypothesis at the 0.05 significance level. The results indicated that cloud storage tools were used to a moderate extent for secure and accessible records management among SMEs in Anambra State, with a cluster mean of 3.02. Google Drive received the highest mean rating, while other cloud tools were used to a moderate extent. The findings further revealed that SME type did not significantly influence the use of cloud storage tools. The study concluded that, although cloud storage tools are moderately utilised, infrastructural, financial, and security-related barriers continue to limit broader adoption; therefore, the government should improve reliable internet access, and SMEs should be supported through affordable digital tools and cybersecurity training.

Keywords: cloud storage, records management, SMEs, Anambra State, digital tools

Introduction
The global business environment is undergoing a significant transformation due to digital innovation. Organizations increasingly rely on electronic tools to create, store, process, and retrieve information essential for daily operations and executive decision-making. The shift from paper-based systems to digital records management has become imperative for businesses aiming for efficiency, competitiveness, and sustainability in a knowledge-driven economy (Refaat & Alaa, 2020). Records management remains a critical component of organizational effectiveness, supporting accountability, legal compliance, business continuity, and informed decision-making (Asuquo, 2015).

Small and Medium-sized Enterprises (SMEs) play a vital role in economic development, contributing substantially to employment generation, industrial output, and innovation, particularly in developing countries such as Nigeria (SMEDAN, 2022). In Anambra State, SMEs are central to commercial and productive activities, with the state recognized for its entrepreneurial culture and high concentration of business enterprises (Anoke et al., 2022). (Obidile et al., 2022) Despite their significance, many SMEs continue to operate with inadequate records management structures, relying predominantly on manual filing systems that are often inefficient, insecure, and difficult to maintain over time (Musah & Ibrahim, 2014).

Efficient records management is essential for SME success, as business records provide evidence of transactions, support financial accountability, facilitate planning, and ensure compliance with legal and regulatory requirements (Nkwor & Nkwor, 2015). Poorly managed records result in slow information retrieval, documentation errors, reduced transparency, data loss, and diminished capacity for timely, informed decision-making (Kusi & Yussif, 2019). In many SMEs, these challenges are exacerbated by reliance on paper records, which are susceptible to physical damage, theft, misplacement, and storage constraints.

Cloud storage tools represent a practical digital solution for enhancing records management. Cloud storage involves storing digital information on remote servers managed by third-party providers and accessed through the internet, rather than relying on locally managed physical storage infrastructure (OECD, 2019). This approach allows businesses to store and retrieve data without incurring the costs of maintaining extensive in-house storage facilities. Cloud-based systems also provide flexibility and scalability, which are particularly advantageous for SMEs with limited financial and technical resources (OECD, 2014; OECD, 2019).

The relevance of cloud storage tools for records management is evident in their specific functionalities, such as remote document access, real-time file synchronization across devices, automated data backup, version control, and enhanced security through encryption and controlled access (Alshamaila et al., 2013). These features improve accessibility, minimize the risk of permanent data loss, and facilitate faster retrieval of business information. For SMEs, cloud storage tools streamline the management of financial records, inventory data, customer information, and compliance documents, thereby reducing reliance on physical paper storage.

Cloud storage tools also enhance collaboration and continuity in business operations. Employees can access shared records from various locations, facilitating coordinated work and prompt responses to business needs. For activities requiring frequent access to records, such as reporting, monitoring, tax documentation, and operational planning, cloud-based systems provide clear advantages over traditional filing methods. Additionally, their pay-as-you-go cost structure appeals to small businesses that may lack the resources for substantial upfront investment in digital infrastructure.

Despite these advantages, the adoption of cloud storage tools among SMEs in developing countries remains inconsistent. Barriers such as financial constraints, unreliable internet connectivity, inadequate power supply, limited digital skills, and concerns about privacy and cybersecurity continue to hinder adoption (Bake, 2015; Kusi & Yussif, 2019; Oyelaran-Oyeyinka, 2023). These challenges are particularly acute in Nigeria, where many SMEs struggle to transition from manual to fully digital operations. In Anambra State, where SMEs constitute a significant and dynamic segment of the economy, the study was guided by the persistent reliance on manual record-keeping systems despite the growing need for digital efficiency and business sustainability. To address this issue, the study posed the following research question: What cloud storage tools are used for secure and accessible records management in SMEs in Anambra State? It also tested the following null hypothesis: There is no significant difference in the application of cloud storage tools for efficient records management across SME types in Anambra State.

Research Question

What cloud storage tools are used for secure, accessible records management in SMEs in Anambra State?

Hypothesis

There is no significant difference in the application of cloud storage tools for efficient records management based on the type of SMEs (Manufacturing, Services and Construction) in Anambra State.

Literature Review

Cloud-based tools have become an important component of SME digitalization because they allow the storage, access, and management of business information without relying exclusively on local systems. In the SME literature, cloud computing adoption is generally associated with efficiency gains, especially improved data accessibility, operational responsiveness, and capacity (Oriza & Maulidar, 2024; Abdalla et al 2024). For records-intensive activities, cloud solutions are particularly relevant because they support document storage and retrieval, reducing dependence on manual systems and improving information handling (Saliu et al., 2025). These functions correspond closely with efficient records management, which requires timely access, organization, and secure preservation of business information.

Review from SME studies showed that both perceived benefits and organizational conditions determine adoption. In SMEs, cloud accounting adoption has been linked to organizational readiness and digital vision, and is positively associated with organizational-level performance (Rawashdeh & Rawashdeh, 2023). Related work also shows that perceived benefit, upper management support, perceived quality, and cloud providers' support strongly influence cloud computing adoption, while adoption itself positively shapes SME performance (Mousa et al., 2024). A wider review of cloud computing adoption in SMEs further identifies cost savings as the most frequently reported adoption factor across studies (Olakunle et al., 2022). Collectively, these results indicate that SMEs are more likely to adopt cloud tools when they consider practical value and when internal readiness supports implementation.

At the same time, the literature consistently reports barriers that constrain uptake. Across SME studies, security and privacy matters, resource limitations, and integration complications recur as major obstacles (Oriza & Maulidar, 2024). Empirical findings also point to a lack of awareness, training, and technical difficulties, as well as cost implications, as the reasons for low adoption among SMEs (Dlamini & Schutte, 2024; Dlamini & Schutte, 2025). In Nigeria, organizational barriers and security/information privacy concerns have been identified as major deterrents, alongside technophobia, resistance to change, and vendor trust deficits (Dlamini, 2025). Similar concerns are reflected in studies of cloud accounting adoption, where complexity, security, top management support, adequate resources, and government and provider support all influence use (Amir Hamzah et al., 2023). These findings show that cloud adoption is determined not by technical availability alone but by the interaction among organizational and environmental factors. In Anambra State, existing literature indicates that while digital tool adoption among SMEs is evident, it remains incomplete. Recent studies show that cloud storage tools are utilized to a moderate extent for records management, rather than being fully integrated into business practices 1. These studies also report no significant differences in cloud storage usage across SME types, suggesting that adoption challenges are common to manufacturing, services, and construction firms 2. The same body of work attributes low or moderate digital tool usage to factors such as budgetary constraints, unreliable power supply, cybersecurity concerns, limited awareness, and insufficient training opportunities 3. These findings align with broader SME cloud literature, which highlights that while perceived benefits are influential, security, organizational readiness, and capacity constraints often determine whether adoption becomes routine.

The consequences for SMEs in Anambra State are clear. Cloud storage tools can support more efficient records management by advancing accessibility and retrieval, but the evidence suggests that many SMEs have not yet moved beyond moderate or cautious adoption 4. The literature indicates that increasing adoption will likely depend on lowering perceived risk, strengthening organizational readiness, improving digital skills, and handling infrastructure and support constraints (Amir Hamzah et al., 2023; Amir Hamzah et al., 2025), 5. For the Anambra SME context, this means that cloud storage tools should be understood not simply as technological options, but as records management resources whose efficiency benefits are contingent on effective adoption conditions.

Methods

The study adopted a descriptive survey research design. It was conducted in Anambra State, Nigeria. It was guided by one specific purpose, one research question, and one null hypothesis on the application of cloud storage tools for efficient records management among SMEs. The population consisted of 1,053 registered SMEs in Anambra State, distributed across the manufacturing, services, and construction sectors. The instrument for data collection was a researcher-developed questionnaire titled Innovative Electronic Tools for Efficient Records Management Questionnaire (IETERMQ). The cloud storage section of the instrument contained 13 items covering Google Drive, Dropbox Business, Microsoft OneDrive, Box, iCloud Drive, pCloud, MEGA, Tresorit, Sync.com, Amazon S3, Seafile, Flickr, and Backblaze B2. To ensure the instrument's validity and reliability, several steps were undertaken. The instrument was face-validated by experts in business education and measurement and evaluation, who reviewed each item for clarity, relevance, and appropriateness to the study objectives. To establish reliability, copies of the IETERMQ were administered to 20 SME owners in Enugu State who were not part of the population but shared similar characteristics. The collected data were analyzed using Cronbach's alpha, and the cloud storage section produced a reliability coefficient of 0.9720, indicating high internal consistency and exceeding the recommended threshold of 0.70. Mean and standard deviation were used to answer the one research question, while Analysis of Variance (ANOVA) was used to test the one null hypothesis at the 0.05 level of significance.

Results

Table 1: Cloud storage tools application for secure and accessible records management in SMEs in Anambra State N = 1053

S/N	Cloud Storage Tools	$\bar{X}$	SD	Remarks
14	Google Drive	3.81	1.32	High
15	DropBox Business	3.27	1.32	Moderate
16	Microsoft OneDrive	3.23	1.45	Moderate
17	Box	2.80	1.25	Moderate
18	iCloud Drive	3.18	1.45	Moderate
19	PCloud	2.77	1.37	Moderate
20	MEGA	2.76	1.34	Moderate
21	Tresorit	2.58	1.24	Moderate
22	Sync.com	3.07	1.46	Moderate
23	Amazon S3	2.97	1.50	Moderate
24	Seafile	2.54	1.17	Moderate
25	Flickr	2.53	1.31	Moderate
26	Backblaze B2	2.55	1.27	Moderate
	Cluster Mean	3.02	1.34	Moderate

Data presented in Table 1 indicate that cloud storage tools were used to a moderate extent for secure and accessible records management among SMEs in Anambra State. Google Drive had the highest mean rating of 3.81 and was rated high, while Dropbox Business (3.27), Microsoft OneDrive (3.23), Box (2.80), iCloud Drive (3.18), pCloud (2.77), MEGA (2.76), Tresorit (2.58), Sync.com (3.07), Amazon S3 (2.97), Seafile (2.54), Flickr (2.53), and Backblaze B2 (2.55) were all rated moderate. The cluster mean of 3.02 shows that cloud storage tools were generally used to a moderate extent among SMEs in Anambra State. The standard deviation values, which range from 1.17 to 1.50, indicate moderate variability in the respondents' views, implying that the level of use of cloud storage tools was not uniform across the SMEs. This suggests that while some SMEs made relatively stronger use of cloud storage tools, others used them less extensively, leading to differences in responses.

Test of Hypothesis

Table 2: Summary of ANOVA on the cloud storage tools application for efficient records management based on the type of SMEs in Anambra State

Source of Variance	Number	Df	Sum of Squares	Mean Square	F-ratio	P-value	Remark
Between groups	3	2	1.5	0.7605	1.436	0.238	Not Significant
Within groups	1036	1036	548.8	0.5297			
Total	1039						

The hypothesis test in Table 2 showed no significant difference in the use of cloud storage tools across SME types in Anambra State. The ANOVA result indicated a non-significant difference, $F(2, 1036) = 1.436$, $p = 0.238$. Since the *p-value* was greater than 0.05, the null hypothesis was accepted.

Discussion

The findings of this study showed that cloud storage tools were used to a moderate extent for secure and accessible records management among SMEs in Anambra State, with a cluster mean of 3.02. This indicates that cloud-based records management has gained some acceptance level among SMEs in the state, but its use has not yet become extensive or fully embedded in routine business practice. In practical terms, SMEs appear to recognize the value of cloud tools, many are still operating at a cautious or transitional stage of adoption rather than at a mature level of digital integration.

The result is consistent with the literature reviewed, which presents cloud adoption in SMEs as beneficial but uneven. Studies have shown that cloud-based systems are associated with efficiency gains such as improved accessibility, scalability, and operational responsiveness (Oriza and Maulidar, 2024; Abdalla et al., 2024). The moderate level of use recorded in this study suggests that these potential benefits are known to SMEs in Anambra State, but that awareness of value alone is not enough to guarantee deep adoption. This supports the position of Rawashdeh and Rawashdeh (2023) and Mousa et al. (2024), who found that cloud adoption is shaped not only by perceived benefit but also by organizational readiness, management support, and provider support. The present finding therefore implies that while SMEs may appreciate the usefulness of cloud storage tools, many may still lack the internal readiness or support structure needed for fuller implementation.

The finding that Google Drive had the highest mean score and was the only tool rated high is also meaningful. It suggests that SMEs in Anambra State are more likely to use cloud storage platforms that are familiar, easy to access, and relatively affordable. This aligns with Olakunle Jayeola et al. (2022), who identified cost savings as one of the most frequently reported factors influencing cloud adoption in SMEs. Google Drive is widely available, easy to use, and often accessible through free or low-cost packages, which likely makes it more attractive than platforms such as Amazon S3, Tresorit, or Backblaze B2 that may appear more technical, expensive, or less familiar to SME operators. This pattern reinforces the argument that practical affordability and usability strongly influence adoption behavior among SMEs.

The moderate ratings recorded for all the other cloud storage tools further suggest that adoption is selective rather than comprehensive. SMEs may be experimenting with cloud-based storage, but they are not yet broadly diversifying or institutionalizing their use of multiple platforms. This finding is in line with Saliu et al. (2025), who noted that cloud solutions are relevant to records-intensive activities because they support document storage and retrieval in ways that reduce dependence on manual systems. However, the present result suggests that this relevance has only partly translated into strong usage across the SME sector in Anambra State. That gap between potential and actual use is important. It shows that the issue is not whether cloud tools can improve records management, but whether SMEs are sufficiently equipped and motivated to use them consistently.

No Significant Difference in the Use of Cloud Storage Tools Across SME Types

The hypothesis test showed no significant difference in the use of cloud storage tools across SME types in Anambra State. This means that the moderate use of cloud storage tools cuts across manufacturing, service, and construction SMEs rather than being concentrated in one sector alone. This finding supports the localized literature cited in the review, which indicated that cloud storage use in Anambra State is moderate across SMEs and that adoption challenges are shared across sectors. The result also aligns with the broader literature, suggesting that barriers to cloud adoption are structural and organizational rather than merely sector-specific. Studies have consistently identified security and privacy concerns, inadequate resources, low awareness, training gaps, and integration difficulties as major constraints affecting SMEs generally (Oriza and Maulidar, 2024; Dlamini and Schutte, 2024; Dlamini, 2025). The absence of a significant sectoral difference in this study, therefore, implies that these barriers are widespread across different categories of SMEs in the state.

The findings further support the argument that cloud adoption is determined by more than technological availability. Although cloud tools are available in the market, their effective use depends on organizational conditions such as digital literacy, trust in providers, management support, technical competence, and the ability to manage perceived risks. This position is consistent with Amir Hamzah et al. (2023), who found that security, complexity, top management support, adequate resources, and external support all influence cloud accounting adoption. It is also consistent with the Nigerian evidence cited in the review, which linked weak adoption to technophobia, resistance to change, security concerns, and vendor trust deficits Amir Hamzah et al. (2025). The present study confirms that in Anambra State, cloud storage tools are not rejected outright, but neither are they yet used at a level that would suggest full operational dependence.

Overall, the findings show that SMEs in Anambra State are in an intermediate stage of cloud storage adoption for records management. The tools are being used, and their efficiency is evident, but adoption remains moderate because enabling conditions remain weak. The implication is that cloud storage tools can improve records management among SMEs in the state. However, their effectiveness will depend on stronger organizational readiness, better digital literacy, improved infrastructure, and reduced concern over security and cost. Until those conditions improve, many SMEs are likely to remain cautious users rather than confident adopters of cloud-based records management systems.

Conclusion

The study concluded that cloud storage tools are used to a moderate extent for efficient records management among SMEs in Anambra State. This shows that although SMEs are gradually adopting cloud-based solutions, their use is not yet widespread or fully integrated into daily business operations. Google Drive was the most commonly used tool, while the other cloud storage tools were only moderately used, suggesting that adoption is influenced by simplicity, familiarity, and affordability.

The study further concluded that there is no significant difference in the use of cloud storage tools across manufacturing, service, and construction SMEs. This implies that the barriers limiting adoption, such as financial constraints, low digital literacy, poor internet access, inadequate power supply, and security concerns, are common across SME types. Overall, cloud storage tools have strong potential to improve records management, but stronger infrastructure, digital skills, and support systems are needed for wider adoption.

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