

Generative AI Tools and Workplace Productivity in The Central Bank of Nigeria

Amaza Barka Charles, Sonia Sim Joshua, Johnson Ibukun Olugbenro, Elizabeth Ayuba
Department of Business Administration, Nile University of Nigeria Abuja Nigeria

doi: <https://doi.org/10.37745/ijmt.2013/vol13n26372>

Published July 16, 2026

Citation: Charles A.M., Joshua S.S., Olugbenro J.I., Ayuba E. (2026) Generative AI Tools and Workplace Productivity in The Central Bank of Nigeria, *International Journal of Management Technology*, 13(2), 63-72

Abstract: *This seminar paper assesses Generative Artificial Intelligence (AI) tools and workplace productivity in the Central Bank of Nigeria. Generative AI tools have become important digital innovations that support employees in performing workplace tasks such as report writing, data summarization, document preparation, communication, and information processing. The study is anchored on the Technology Acceptance Model (TAM), which explains technology adoption based on perceived usefulness and perceived ease of use. The paper adopts a descriptive approach by reviewing relevant literature on generative AI and workplace productivity. Findings from existing studies indicate that generative AI tools improve efficiency, reduce workload, enhance accuracy, and support faster completion of administrative and analytical tasks. However, challenges such as lack of training, data privacy concerns, underlying ethical issues and uncertainty about the reliability of AI-generated outputs were also identified as factors affecting effective adoption. The paper concludes that generative AI tools are valuable support systems that enhance workplace productivity when properly integrated into organizational processes. It recommends continuous staff training, development of clear usage policies, and improvement of digital infrastructure to ensure effective adoption within the Central Bank of Nigeria.*

Keywords: Generative AI Tools, workplace productivity, technology acceptance model, central bank of Nigeria, digital transformation

INTRODUCTION

The rapid advancement of digital technologies has significantly transformed the global workplace, especially with the emergence of artificial intelligence (AI). Among the various forms of AI, generative AI tools have become one of the most impactful innovations in recent years. Generative AI refers to systems capable of producing human-like content such as text, reports, codes, summaries, and analytical outputs based on learned data patterns. Examples include ChatGPT, Microsoft Copilot, and Google Gemini. These tools are increasingly being used in organizations to enhance productivity, reduce workload, and improve decision-making processes.

Globally, organizations are experiencing a shift from traditional manual workflows to AI-assisted operations. This transformation is driven by the need for faster service delivery, improved accuracy, and cost efficiency. In knowledge-based institutions, generative AI is particularly valuable because it supports employees in handling complex data, generating reports, and automating repetitive cognitive tasks. In the financial sector, productivity is highly dependent on accuracy, speed, and data-driven decision-making. Institutions such as Central Banks rely heavily on economic analysis, policy formulation, and financial reporting. The integration of generative AI into such processes has the potential to significantly improve operational efficiency and reduce human error.

In Nigeria, digital transformation is gradually gaining attention across public and private institutions. The Central Bank of Nigeria (CBN), as the apex financial institution, plays a critical role in maintaining monetary stability, regulating financial institutions, and guiding economic policy. With increasing global pressure for technological advancement, there is growing interest in how AI tools can support the CBN in achieving higher productivity levels. However, despite the potential benefits of generative AI, many organizations in developing countries, including Nigeria, still face challenges such as inadequate digital infrastructure, limited technical expertise, resistance to change, and weak regulatory frameworks. These challenges affect the effective adoption and utilization of AI technologies in workplace settings.

Therefore, understanding the relationship between generative AI tools and workplace productivity in the Central Bank of Nigeria is essential for improving efficiency, policy development, and digital transformation strategies.

Statement of the Problem

Despite the rapid growth and adoption of generative AI technologies globally, many organizations in Nigeria, including the Central Bank of Nigeria, have not fully integrated these tools into their daily operations. Employees in many public institutions still rely heavily on manual processes for documentation, reporting, and analysis. This often leads to delays, increased workload, and reduced productivity. Although generative AI tools have been shown to improve efficiency in other countries, their impact within Nigerian public financial institutions remains underexplored.

Furthermore, there are concerns about the readiness of employees to adopt AI technologies. Issues such as lack of knowledge gaps in use of Generative use of A.I, cybersecurity risks, and fear of job displacement hinder acceptance of these tools. Additionally, the absence of clear institutional policies on AI usage further limits its integration. As a result, the potential benefits of generative AI in improving workplace productivity in the Central Bank of Nigeria remain largely untapped. This study therefore investigates how generative AI tools influence workplace productivity within the institution and identifies the challenges affecting their adoption. The main objective of this study is to assess the generative AI tools and workplace productivity in the Central Bank of Nigeria. The specific objectives are to:

1. Assess the impact of generative AI tools on employee productivity.
2. Identify the benefits of generative AI in workplace operations.
3. Examine the challenges affecting AI adoption in the Central Bank of Nigeria.
4. Determine strategies for improving the effective use of generative AI tools in the workplace.

LITERATURE REVIEW

Conceptual Clarification

Conceptual clarification involves explaining the key concepts in a study in order to ensure proper understanding of how they are used within the research context. In this study, the major concepts include generative artificial intelligence (AI), workplace productivity, digital transformation, and the Central Bank of Nigeria (CBN).

Generative Artificial Intelligence (AI)

Generative artificial intelligence refers to a branch of AI systems designed to create new content based on patterns learned from existing data. Unlike traditional AI systems that only analyze or classify data, generative AI is capable of producing original outputs such as written text, summaries, reports, codes, images, and predictions. These tools operate using advanced machine learning models, particularly large language models, which are trained on vast datasets to understand human language and generate meaningful responses. Common examples include ChatGPT, Microsoft Copilot, and Google Gemini. In workplace settings, generative AI is used to support tasks such as drafting documents, analyzing financial reports, summarizing large datasets, and improving communication efficiency. Its relevance in modern organizations lies in its ability to reduce workload, save time, and enhance decision-making accuracy.

Workplace Productivity

Workplace productivity refers to the efficiency and effectiveness with which employees complete assigned tasks within an organization. It measures how well inputs such as time, skills, and resources are converted into outputs such as reports, services, and decisions. Productivity in the workplace is influenced by several factors including employee skills, technology adoption, work environment, and organizational structure. In modern organizations, productivity is no longer measured only by speed but also by accuracy, quality of output, and innovation. In the context of generative AI, workplace productivity is enhanced when employees are able to complete tasks faster, reduce errors, and improve the quality of their outputs with the assistance of AI tools.

Digital Transformation

Digital transformation refers to the integration of digital technologies into all areas of an organization, resulting in fundamental changes in how the organization operates and delivers value. It involves the use of technologies such as artificial intelligence, cloud computing, big data analytics, and automation systems to improve efficiency and service delivery. In financial

institutions, digital transformation is critical for improving operational efficiency, enhancing customer service, and supporting data-driven decision-making. Generative AI is a key component of this transformation because it enables automation of cognitive and administrative tasks.

Central Bank of Nigeria (CBN)

The Central Bank of Nigeria (CBN) Central Bank of Nigeria is the apex monetary authority in Nigeria responsible for regulating the financial system, formulating monetary policy, and maintaining economic stability. The CBN plays a central role in managing inflation, supervising commercial banks, and ensuring financial system stability. Due to its large volume of data processing and policy-related responsibilities, the institution heavily relies on accurate information, timely reporting, and efficient administrative processes. The adoption of modern technologies such as generative AI has the potential to significantly enhance the productivity of staff within the institution by improving the speed and accuracy of financial analysis, reporting, and communication.

Theoretical Review

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was introduced by Davis (1989) to explain how individuals come to accept and use new technologies in workplace environments. The model emphasizes that technology adoption is influenced mainly by two key perceptions: Perceived usefulness, perceived ease of use, Perceived Usefulness. This refers to the extent to which employees believe that using a technology will help them perform their job better. In the context of generative AI tools, usefulness can be understood in terms of how these tools assist employees in: Drafting reports and documents, summarizing financial data, generating policy briefs, Improving communication speed In workplace settings like the Central Bank of Nigeria Central Bank of Nigeria, employees are more likely to use generative AI tools when they observe that these tools make their daily administrative and analytical tasks easier and faster.

Empirical Review

Recent empirical studies have shown that generative AI tools are increasingly being adopted in workplace environments to enhance efficiency and improve output quality. A major report by Microsoft Research (2024) examined the use of generative AI tools such as Microsoft Copilot in real workplace environments. The study found that employees using generative AI were able to complete tasks such as writing, summarizing, and information processing more efficiently. The study emphasized that productivity improvements depend on how well the tools are integrated into daily work processes and how employees are trained to use them effectively. Similarly, experimental studies summarized by the OECD (2025) indicate that generative AI has the potential to improve productivity by automating repetitive cognitive tasks. These studies show that employees using AI tools perform tasks faster and with reduced cognitive effort, especially in writing and administrative functions

A study published in the Journal of Workplace Learning (2025) examined employees' perceptions of generative AI tools in a multinational corporation. The findings revealed that AI tools support workplace learning by improving employees' ability to perform tasks, share knowledge, and develop new skills. The study also noted that employees view generative AI as a supportive tool rather than a replacement for human effort. In another study published in PLOS ONE (2026), researchers found that employees using generative AI tools reported improvements in innovative job performance. The study showed that AI tools assist workers in generating ideas, improving creativity, and enhancing task execution in professional environments.

Recent studies have also focused on how generative AI affects time usage and task efficiency in the workplace. A 2026 study on AI and time allocation found that workers using generative AI tools experienced a reduction in working time due to improved efficiency. However, the study also noted that the saved time was sometimes used for non-work activities rather than increasing output, suggesting a shift in how productivity gains are utilized. In addition, research from workplace analytics reports shows that organizations using AI tools experience improved task completion speed and reduced workload, although challenges such as workflow disruption and adaptation issues still exist.

Empirical studies also highlight several challenges associated with the adoption of generative AI in workplaces. A 2025 study on project management found that many employees express concerns about job security, data privacy, and reliability of AI-generated outputs. Despite recognizing productivity benefits, some workers remain skeptical about full adoption of AI tools in their daily tasks. Similarly, studies on AI implementation in organizations report issues such as inaccurate outputs, ethical concerns, and regulatory limitations as major barriers to effective adoption, particularly in public institutions.

Literature Gap

Despite the growing body of empirical studies on generative artificial intelligence and workplace productivity, several gaps still exist in the literature, particularly in terms of context, sector-specific analysis, and institutional focus.

Firstly, most existing studies between 2020 and 2026 have focused on general workplace environments, multinational corporations, or technology-based industries, with limited attention given to public financial institutions. This creates a gap in understanding how generative AI tools function within highly regulated financial organizations such as the Central Bank of Nigeria.

Secondly, many studies emphasize technical performance outcomes, such as speed, efficiency, and automation benefits, without adequately exploring how employees in sensitive government financial institutions perceive and adapt to these tools in their daily administrative and policy-related tasks. This is particularly important because Central Banking operations require accuracy, confidentiality, and strict regulatory compliance.

Thirdly, existing literature has largely concentrated on developed economies, where digital infrastructure and AI adoption are more advanced. There is limited empirical evidence from developing countries like Nigeria, where challenges such as digital skill gaps, infrastructural limitations, and policy constraints may influence the use of generative AI tools in the workplace.

Furthermore, there is a noticeable lack of studies that specifically examine how generative AI tools are being integrated into Central Banking functions such as financial reporting, economic analysis, communication, and documentation processes. This leaves a gap in understanding the practical application of AI in Central Banking environments.

Therefore, this study is necessary because it seeks to address these gaps by focusing specifically on the use of generative AI tools and workplace productivity in the Central Bank of Nigeria. It provides context-specific insight into how AI tools are being utilized in a Nigerian public financial institution, contributing to both local and global discussions on AI adoption in sensitive regulatory environments.

By focusing on the Central Bank of Nigeria, this study helps to bridge the gap between global AI adoption trends and the realities of implementation within Nigeria's financial governance system, and usability factors based on the Technology Acceptance Model.

METHODOLOGY

This study adopts a descriptive research design. A descriptive design is appropriate because it focuses on systematically describing the characteristics, usage, and relevance of generative artificial intelligence tools in workplace productivity without manipulating variables or testing relationships. The design allows the researcher to present factual information on how generative AI tools are being used within organizational settings, particularly in enhancing administrative and analytical tasks. The population of the study consists of staff members working in the Central Bank of Nigeria, including professionals in departments such as: Banking supervision, Economic research, Information technology, Finance and accounts, Administration and human resources. These staff members are relevant because they are directly or indirectly involved in tasks that may be enhanced by the use of generative AI tools.

A sample will be drawn from the population of staff in the Central Bank of Nigeria using a simple random sampling technique. This technique is appropriate because it gives all members of the population an equal chance of being selected, thereby reducing bias. The sample size will be determined based on accessibility, availability, and willingness of staff to participate in the study. The instrument for data collection is a structured questionnaire developed by the researcher. The questionnaire is designed to gather information on the awareness, usage, and perceived usefulness of generative AI tools in workplace activities.

The questionnaire is divided into sections covering: Demographic information of respondents, Awareness of generative AI tools, Areas of application in workplace tasks, perceived benefits in administrative and analytical work, Challenges affecting the usage of AI tools. The instrument will be subjected to face and content validation by experts in research methodology and information technology. This ensures that the questionnaire adequately captures the objectives of the study and is suitable for collecting relevant data. Reliability of the instrument will be ensured through a pilot test conducted on a small group of respondents outside the study population. The results from the pilot study will be used to assess the consistency and clarity of the questionnaire items. Data collected through the administration of questionnaires to selected respondents in the Central Bank of Nigeria. The questionnaires will be distributed either physically or electronically, depending on accessibility and convenience. The data collected will be analyzed using descriptive statistics, such as: Frequency tables, Percentages. This method is appropriate because the study is descriptive in nature and does not involve hypothesis testing or inferential analysis

RESULTS AND DISCUSSION

This section presents a descriptive discussion of the expected outcomes based on existing literature on generative artificial intelligence tools and workplace productivity. Since this study is a seminar paper, no primary data were collected; therefore, the discussion is based on reviewed literature and logical interpretation of how generative AI is applied in workplace environments, particularly within financial institutions such as the Central Bank of Nigeria.

Expected Awareness of Generative AI Tools

Based on the literature reviewed, it is expected that a large proportion of employees in modern financial institutions are aware of generative AI tools such as ChatGPT-like systems, document automation tools, and intelligent writing assistants. This is because digital transformation in banking institutions has increased exposure to artificial intelligence applications. In the Central Bank of Nigeria, staff are expected to have moderate to high awareness due to the institution's involvement in economic data processing and policy documentation.

Expected Areas of Use of Generative AI Tools

From reviewed studies, generative AI tools are commonly applied in workplace settings for: Report and memorandum writing, Data summarization, Drafting policy documents, Email communication, Research assistance and information synthesis. In a Central Banking environment, these tools are expected to support administrative and analytical tasks that require large-scale text processing and structured reporting.

Expected Benefits to Workplace Productivity

Literature suggests that generative AI tools are expected to improve workplace productivity in the following ways: Faster completion of writing and documentation tasks, Improved clarity and structure of reports, Reduced workload on routine administrative tasks, Enhanced ability to process large volumes of information, Support for decision-making through summarized insights. These

benefits are particularly relevant in institutions like the Central Bank of Nigeria where accuracy, speed, and data handling are essential in daily operations.

Expected Challenges in the Use of Generative AI Tools

Despite the benefits, literature also highlights several expected challenges in the use of generative AI tools in workplace environments: Limited technical training among employees, Concerns about data privacy and confidentiality, Fear of job displacement due to automation, Dependence on AI-generated outputs without verification, Inconsistency or inaccuracy in generated information. In regulated institutions such as the Central Bank of Nigeria, these challenges are expected to be more pronounced due to strict data security and compliance requirements.

CONCLUSION AND RECOMMENDATIONS

This seminar paper examined generative artificial intelligence tools and workplace productivity in the Central Bank of Nigeria, with emphasis on how these tools are used to support administrative and analytical functions in modern workplace settings.

From the literature reviewed, it is evident that generative AI tools have become important technological innovations in contemporary organizations. These tools assist employees in tasks such as report writing, data summarization, communication, and document preparation, thereby improving efficiency and reducing workload.

The study was anchored on the Technology Acceptance Model (TAM), which explains technology adoption through two main constructs: perceived usefulness and perceived ease of use. Based on this model, it is evident that employees are more likely to accept and use generative AI tools when they believe the tools are helpful in improving job performance and are easy to operate without requiring advanced technical skills.

Literature further indicates that generative AI tools generally enhance workplace productivity by increasing speed, improving accuracy in documentation, and supporting routine administrative tasks. However, challenges such as lack of adequate training, concerns about data privacy, and uncertainty about the reliability of AI-generated content still affect full acceptance and usage.

In conclusion, generative AI tools are valuable technological innovations that support workplace productivity. Their successful adoption in institutions like the Central Bank of Nigeria depends largely on employees' perceptions of usefulness and ease of use as explained by the Technology Acceptance Model.

Based on the findings and the Technology Acceptance Model framework, the following recommendations are made:

Firstly, the Central Bank of Nigeria should prioritize training and capacity-building programs to improve employees' understanding of generative AI tools. This will enhance perceived ease of use and encourage wider adoption.

Secondly, management should demonstrate the practical usefulness of generative AI tools in improving daily work tasks such as reporting, documentation, and data analysis. This will increase perceived usefulness among employees.

Thirdly, user-friendly AI platforms should be adopted or developed within the organization to ensure that employees can easily interact with the tools without technical difficulty.

Fourthly, clear guidelines should be established to address concerns about data privacy, confidentiality, and accuracy of AI-generated outputs, which may affect trust and acceptance.

Finally, the organization should encourage a supportive digital environment where employees are guided on how to integrate AI tools into their workflow without fear of job replacement, thereby increasing acceptance and sustained usage.

Suggestions for Further Studies

This seminar paper has examined generative artificial intelligence tools and workplace productivity in the Central Bank of Nigeria using the Technology Acceptance Model as the theoretical framework. Based on the scope and limitations of this study, the following suggestions are made for further research.

Future studies should consider conducting empirical (field-based) research to collect primary data from employees within financial institutions in Nigeria. This will help to provide more accurate and context-specific findings on how generative AI tools are actually used in real workplace environments.

Further research should also explore comparative studies between public and private financial institutions in Nigeria to understand differences in AI adoption, digital readiness, and productivity outcomes.

In addition, future studies may examine the impact of generative AI tools on specific job roles, such as economic analysts, auditors, and administrative officers, to determine how different departments experience AI integration.

Researchers are also encouraged to investigate the ethical and regulatory implications of generative AI use in Central Banking systems, especially in relation to data security, confidentiality, and decision-making transparency.

Lastly, further studies should expand to include longitudinal research designs that track how generative AI adoption evolves over time within Nigerian financial institutions.

REFERENCES

- Ajayi, O., & Akinyemi, F. (2022). Digital transformation and emerging technologies in African financial institutions. *African Journal of Information Systems*, 14(2), 45–60.
- Brynjolfsson, E., Li, D., & Raymond, L. R. (2023). Generative AI at work: Productivity and labor market effects. National Bureau of Economic Research Working Paper.
- Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., & Wright, R. (2023). Multidisciplinary perspectives on opportunities and challenges of generative AI. *International Journal of Information Management*, 71, 102642.
- Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günnemann, S., & Hüllermeier, E. (2023). Opportunities and challenges of large language models. *Learning and Individual Differences*, 103, 102274.
- Kshetri, N. (2022). The economics of artificial intelligence in developing countries. *Telecommunications Policy*, 46(5), 102–118.
- Microsoft Research. (2024). Generative AI in real-world workplaces: Productivity insights. Microsoft Publications.
- Noy, S., & Zhang, W. (2023). Experimental evidence on the productivity effects of generative AI. NBER Working Paper Series.
- OECD. (2025). Unlocking productivity with generative AI: Evidence from experimental studies. Organisation for Economic Co-operation and Development.
- PwC. (2023). Global AI jobs barometer: The productivity impact of AI. PricewaterhouseCoopers.
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.
- Statista. (2024). Artificial intelligence usage in global workplaces. Statista Research Department
- UNESCO. (2023). Guidance for generative AI in education and work environments. United Nations Educational, Scientific and Cultural Organization.
- World Bank. (2023). Digital development report: AI and economic transformation in developing countries. World Bank Publications.
- World Economic Forum. (2024). The future of jobs report 2024. WEF.