

Generative AI and Nigeria's Emerging Media Economy: Examining Socioeconomic Opportunities and Structural Constraints

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Abstract

Nigerian newsrooms are quietly experimenting with tools like ChatGPT, Claude, and Midjourney to draft headlines, summarize press releases, and generate images. Yet there is limited empirical data on how widespread this is, and what structural issues slow down adoption in Africa's largest media market. This study examines the socioeconomic opportunities and constraints of Generative AI adoption among media professionals in Nigeria. A quantitative descriptive survey was conducted among 75 journalists, broadcasters, and digital content creators across Lagos, Abuja, and Port Harcourt. Google Forms was used for data collection. Purposive sampling was applied due to the absence of a national register of media practitioners. The questionnaire measured 4 constructs: awareness of GenAI, frequency of use, perceived impact on productivity and jobs, and structural barriers such as skills, cost, and infrastructure. Data were analyzed using SPSS v26. Descriptive statistics including frequencies, percentages, mean, and standard deviation were computed. Reliability was confirmed with Cronbach's Alpha 0.824. Findings show high awareness: 86.7% of respondents rated their knowledge of GenAI as high or very high. Usage is moderate, concentrated on first drafts, headline generation, and social media content. Respondents strongly agree that GenAI reduces time spent on routine tasks and improves output speed. However, views on employment are divided, with 58% expressing concern about job displacement for entry-level roles. Key barriers include unstable internet, lack of formal training, high subscription costs, and ethical concerns about accuracy and misinformation. The study concludes that GenAI adoption in Nigeria's media industry is at a transitional stage. While practitioners recognize its usefulness, sustainable integration will depend on targeted training, better digital infrastructure, and clear ethical guidelines from regulators like the NBC.

Keywords

Generative AI; ChatGPT; Nigerian media; journalism; digital skills; AI adoption



I. Introduction

In the twenty-first century, generative artificial intelligence (GenAI) has emerged as a rapidly expanding technological paradigm within the broader field of artificial intelligence, enabling machines to produce human-like text, images, audio, and code through learning patterns from large-scale datasets. Unlike earlier rule-based automation systems, GenAI systems rely on deep learning architectures and foundation models that generate novel outputs based on probabilistic inference (Feuerriegel et al., 2023). The rapid diffusion of large language models such as ChatGPT, Gemini, Claude, LLaMA, and Copilot reflects a shift toward general-purpose AI systems that are increasingly embedded in professional and creative workflow. Recent empirical evidence indicates significant

global uptake of GenAI technologies across both professional and personal domains. For instance, the Stanford AI Index Report highlights a substantial increase in public and organizational engagement with generative AI tools following the release of large-scale foundation models (Stanford HAI, 2024). Similarly, experimental evidence shows that GenAI tools can improve productivity and task efficiency in knowledge-based work, particularly in writing, summarization, and ideation tasks (Noy & Zhang, 2023). At the macro level, economic assessments suggest that GenAI may contribute trillions of dollars in annual global economic value by enhancing productivity across industries (McKinsey Global Institute, 2023).

Within the media and communication sector, GenAI is increasingly integrated into editorial and production workflows. Studies indicate that journalists and media professionals are adopting AI tools for drafting news content, generating headlines, summarizing reports, and supporting investigative work (de Lima-Santos & Ceron, 2022). The Reuters Institute further reports that news organizations globally are experimenting with AI-driven content production, although concerns persist regarding accuracy, transparency, and editorial accountability (Reuters Institute, 2024). Despite these developments, adoption remains uneven across regions due to differences in infrastructure, regulatory capacity, and institutional readiness. In developing economies, these disparities are more pronounced. UNESCO has noted that digital divides and unequal access to computational infrastructure significantly shape the capacity of media organizations to adopt AI-driven systems (UNESCO, 2023). Consequently, while GenAI adoption is accelerating globally, its diffusion in low- and middle-income countries remains structurally constrained by economic and infrastructural limitations.

In Nigeria, the media industry operates within a complex environment characterized by uneven internet penetration, high dependence on mobile communication technologies, fluctuating power supply, and evolving regulatory oversight under frameworks such as the Nigerian Broadcasting Code (NBC, 2020). Major media organizations such as Channels Television, The Punch, and emerging digital-native platforms are increasingly influenced by global digital transformation trends. However, there is limited empirical evidence on the extent to which these organizations are integrating GenAI tools into newsroom production, editorial workflows, and content distribution systems. More importantly, existing studies on GenAI and media transformation have largely focused on North America, Europe, and parts of Asia, where institutional capacities, data infrastructures, and regulatory frameworks differ significantly from those in Nigeria. This creates a substantial empirical gap regarding how GenAI is being adopted in Nigeria's media economy, particularly in relation to socioeconomic opportunities such as cost reduction, multilingual content generation in Hausa, Yoruba, and Igbo, and workflow acceleration in digital journalism.

At the same time, structural constraints may significantly shape adoption outcomes. These include infrastructural limitations, uneven digital literacy among media practitioners, ownership concentration within the Nigerian media landscape, and regulatory uncertainty surrounding AI-generated content. Additionally, concerns about labor displacement, misinformation through synthetic media, and algorithmic bias are becoming increasingly relevant within emerging media systems.

Against this backdrop, this study contributes to the growing body of literature on artificial intelligence and media transformation by providing empirical evidence from Nigeria's media environment. Specifically, it examines the socioeconomic opportunities associated with GenAI adoption and investigates the structural constraints shaping its integration within Nigeria's emerging media economy.

1.1 Problem Statement

The rapid emergence of generative Artificial Intelligence (GenAI) has transformed communication systems and digital economies globally. AI technologies increasingly support content creation, automation, and information processing across several industries. While these developments create opportunities for innovation and productivity, concerns regarding unequal access and broader socioeconomic implications continue to emerge. The media industry has become one of the major sectors experiencing increasing integration of generative AI technologies. Media organizations now use AI systems for content development, audience engagement, recommendation systems, and communication processes. In Nigeria, where mobile phone ownership exceeds 85% but broadband penetration remains at 45.6% as of Dec 2024, and outlets like Channels TV, Arise News, and digital-native platforms depend heavily on WhatsApp, X, and YouTube for distribution (Statista, 2024), these changes are reshaping traditional patterns of media production and distribution.

Existing studies suggest that AI technologies can improve efficiency and increase productivity across organizations and industries (Brynjolfsson, Li & Raymond, 2023; OECD, 2023). However, concerns have also been raised regarding labor displacement, changes in occupational structures, and the broader social implications associated with automation. These issues take on particular weight in Nigeria's media economy, which is already facing declining advertising revenue and a predominantly young, mobile-first audience.

Despite these opportunities, several structural challenges constrain technology adoption within Nigeria. Inconsistent 4G/5G coverage outside major cities, limited digital infrastructure, gaps in the NBC broadcasting code regarding synthetic media, and concentration of media ownership may influence how effectively GenAI is integrated (NBC, 2023; World Bank, 2023). Additionally, uneven access to training and technical skills creates disparities between large media houses and smaller digital-native outlets (ITU, 2023).

Although generative AI continues to attract global academic and policy attention, most studies focus on North American and European contexts. Limited empirical evidence exists on how Nigerian media organizations are using GenAI for multilingual content production in Hausa, Yoruba, and Igbo, or on the socioeconomic opportunities and structural constraints shaping its adoption in Nigeria's emerging media economy. This gap creates the need for this study.

1.2 Objectives of the study

The main objectives of the study were to:

- a. Examine the extent of adoption of generative AI within Nigeria's media economy.
- b. Identify the socioeconomic opportunities created by generative AI in Nigeria's media industry, including productivity, innovation, and employment effects.
- c. Investigate the structural constraints affecting the adoption and effective use of generative AI in Nigeria's media sector.
- d. Assess the impact of generative AI on media production processes such as journalism, advertising, and digital content creation in Nigeria.

II. Review of Literature

2.1 Theoretical Predisposition

This study uses a blended framework of the Technology Acceptance Model (TAM), Uses and Gratifications Theory (UGT), and Diffusion of Innovations Theory (DOI) to explain how Nigerian media practitioners adopt and use Generative AI. Together, the three theories cover individual decisions, user motivations, and how the technology spreads across newsrooms overtime. TAM explains adoption at the individual level through perceived usefulness and perceived ease of use. In Nigerian newsrooms, GenAI is more likely to stick when editors and reporters see it cutting time on tasks like transcription, headline drafting, and social post writing, and when the tools work within WhatsApp, Google Docs, and Canva workflows they already use. If the tool requires heavy training or unstable internet, adoption stalls. UGT shifts focus to why practitioners actively choose GenAI rather than passively use it. Nigerian journalists, producers, and digital-native creators use these tools for concrete needs: drafting stories in English, Pidgin, Hausa, or Yoruba; generating content ideas under tight deadlines; repurposing TV/radio clips for X and TikTok; and reducing burnout. The theory treats GenAI as a resource selected to meet specific production goals, not as a broadcast-style medium. DOI explains the uneven spread of GenAI across Nigerian media houses. Adoption depends on relative advantage over manual workflows, compatibility with existing editorial routines, and the ability to trial tools before full rollout. In practice, this means Lagos and Abuja outlets with better bandwidth and training move faster, while smaller regional stations lag due to infrastructure gaps, unclear NBC guidance on synthetic media, and limited AI literacy. Taken together, TAM explains who adopts, UGT explains why they use it, and DOI explains how it spreads. This combination gives a complete lens for understanding how GenAI is being absorbed into Nigeria's evolving, mobile-first media ecosystem.

2.2 Generative Artificial Intelligence and Media Transformation

Generative Artificial Intelligence (GenAI) refers to machine learning systems capable of producing novel outputs such as text, images, audio, and video by learning patterns from large-scale datasets. Unlike traditional artificial intelligence systems designed primarily for prediction and classification, GenAI systems are based on foundation models that enable probabilistic content generation across multiple modalities (Feuerriegel et al., 2023). The rapid diffusion of large language models such as ChatGPT and similar systems reflects a transition toward general-purpose AI tools increasingly embedded in professional communication environments. Empirical evidence suggests that GenAI is reshaping knowledge production and creative work by enhancing task performance in writing, ideation, and summarization processes. Experimental findings indicate measurable productivity gains among users engaged in writing-intensive tasks when assisted by generative models (Noy & Zhang, 2023). At a macro level, economic analyses further suggest that GenAI may significantly enhance productivity across sectors by automating cognitive and creative tasks (McKinsey Global Institute, 2023).

2.3 AI in Journalism and Communication System

The integration of artificial intelligence into journalism has progressed from automated reporting systems to advanced generative models capable of supporting content production and editorial decision-making. In contemporary newsroom environments, AI tools are increasingly used for drafting news content, generating headlines, and assisting with information synthesis (Pavlik, 2023; van Dis et al., 2023). This shift has altered traditional journalistic workflows by redistributing editorial labour between human actors and computational systems. However, scholarly literature also highlights significant

concerns associated with generative systems in journalism. Dwivedi et al. (2023) argue that while GenAI enhances efficiency and creativity in communication systems, it simultaneously introduces risks related to misinformation, governance challenges, and reduced transparency. Similarly, Bender et al. (2021) caution that large language models may produce plausible but factually incorrect outputs, raising concerns for information credibility in journalism. Collectively, these studies indicate that GenAI functions not merely as a production tool but as a transformative force reshaping journalistic epistemology, workflow structures, and content validation processes.

2.4 Digital Transformation, Platformisation, and Media Systems

Media systems globally have undergone structural transformation driven by digitalisation and platform-based distribution models. Napoli (2021) notes that algorithmic platforms now play a central role in determining content visibility, audience engagement, and distribution patterns. This shift has reduced traditional editorial gatekeeping while increasing reliance on data-driven content optimisation. Within this context, Generative AI further accelerates platformisation by enabling rapid adaptation of content across multiple digital channels. Content can now be automatically reformatted for websites, social media platforms, and mobile applications, reinforcing convergence between production and distribution processes (Dwivedi et al., 2023). Jenkins (2006) conceptualises this transformation as media convergence, where content flows across multiple platforms while audiences actively participate in its circulation.

2.5 Trust, Ethics, and Algorithmic Accountability

Trust remains a central issue in the adoption of generative technologies within journalism. The acceptance of AI-generated content is strongly influenced by perceived reliability, transparency, and ethical governance mechanisms (Glikson & Woolley, 2020). In media environments, these concerns are amplified due to the public-facing nature of journalistic outputs UNESCO (2023) emphasises that responsible AI deployment requires robust ethical frameworks to address issues such as bias, misinformation, and accountability. These concerns are particularly relevant in generative systems, where outputs are produced without explicit traceability of information sources. Consequently, trust in GenAI systems is shaped not only by technical performance but also by institutional and regulatory safeguards.

2.6 Automation and Human–AI Collaboration in Journalism

Automation in journalism has evolved from structured data reporting to complex generative systems capable of producing narrative content. Carlson (2015) conceptualises this shift as a reconfiguration of journalistic labour, where computational systems increasingly participate in content production processes. Generative AI extends this trajectory by enabling human–AI collaboration in newsroom environments. Rather than replacing journalists, GenAI is increasingly used as a co-creative tool that supports ideation, drafting, and editing processes. Empirical studies indicate that newsroom professionals typically adopt a hybrid approach in which AI tools are used for low-risk or preliminary tasks while final editorial judgment remains human-driven (Cool & Diakopoulos, 2024).

2.7 Global Empirical Evidence on GenAI Adoption

Empirical studies across different regions demonstrate increasing but uneven adoption of GenAI in journalism and communication sectors. In European newsrooms, AI is primarily used to enhance efficiency in low-risk content production tasks rather than replacing editorial decision-making structures (Cool & Diakopoulos, 2024). In resource-constrained environments, adoption patterns differ. For example, newsroom studies in Zimbabwe show that journalists adopt GenAI in pragmatic and hybrid ways due to

institutional uncertainty and limited technological infrastructure (Chiridza & Mare, 2026). Similarly, experimental evidence from Brazil indicates that AI systems can significantly reduce ideation and content development time in editorial workflows, improving production efficiency (Santos et al., 2025). Cross-national evidence further suggests that adoption levels are shaped by infrastructural readiness, regulatory environments, and institutional capacity (Ali et al., 2024). Across these studies, a consistent pattern emerges: GenAI adoption is not uniform but context-dependent, shaped by structural and organisational conditions.

2.8 Nigerian Media Context and Structural Constraints

In Nigeria, the media system is undergoing gradual digital transformation shaped by mobile-first communication patterns, uneven internet penetration, and infrastructural limitations. Although awareness of artificial intelligence is increasing among media practitioners, adoption remains in an emerging phase compared to developed economies. Empirical studies indicate that Nigerian journalists are beginning to experiment with AI tools for tasks such as transcription, content editing, and preliminary drafting (Oladosu et al., 2024). However, adoption is constrained by limited organisational support, insufficient training, and infrastructural challenges. Research further shows that perceptions of AI in Nigerian newsrooms are mixed, reflecting both optimism regarding efficiency gains and concern over job displacement and ethical risks (Umeora, 2025). Institutional factors, including organisational culture and technological capacity, significantly influence adoption outcomes (Bello et al., 2025). A critical contextual limitation in Nigeria is language diversity. Studies show that many generative language models perform poorly on African languages and Nigerian Pidgin, limiting their applicability in culturally relevant journalism (Adelani et al., 2024). This creates structural constraints on inclusive media production and localisation of AI outputs.

2.9 Digital Creative Economy and Socioeconomic Structure

The global digital creative economy has expanded significantly due to platformisation, mobile connectivity, and artificial intelligence integration. According to UNCTAD (2022), creative industries contribute substantially to global economic growth, particularly through digital content production and distribution. In Nigeria, the creative economy is one of the fastest-growing sectors in Africa, driven by Nollywood, music industries, digital advertising, and social media content creation (Ogbonna, 2023). However, structural constraints such as inadequate infrastructure, weak intellectual property enforcement, and unstable power supply continue to limit sectoral growth. Despite increasing digital participation, monetisation challenges persist within Nigeria's creative ecosystem, where many creators face unstable income due to platform dependency and limited advertising infrastructure (Nwodo, 2023). Additionally, digital skill gaps and infrastructural inequalities continue to restrict full participation in the digital economy (ITU, 2023).

2.10 Synthesis and Research Gap

Across global and Nigerian literature, evidence consistently shows that Generative AI is transforming journalism and media systems through automation, productivity enhancement, and platform integration. However, existing research is heavily concentrated in developed economies, where institutional and technological infrastructures differ significantly from those in developing contexts. In Nigeria, empirical studies remain limited in explaining how GenAI is structurally embedded within media production systems, particularly regarding labour processes, cost structures, multilingual content generation, and organisational adoption strategies. Furthermore, little is known about how socioeconomic and infrastructural constraints shape the effectiveness of GenAI in

Nigeria's emerging media economy. This gap necessitates empirical investigation into how generative artificial intelligence is influencing media production systems, organisational workflows, and socioeconomic outcomes within Nigeria's media landscape.

2.11 Empirical Review of Literature

Recent empirical studies have examined the adoption, usage, and implications of Generative Artificial Intelligence in journalism and media systems. Research conducted in Europe and North America shows that newsrooms are experimenting with generative AI across the news production process, including research, content creation, and news delivery.

Nishal & Diakopoulos (2023) mapped these applications and noted that while AI improves efficiency in routine tasks, it raises concerns about editorial control, transparency, and accountability. Surveys of global audiences indicate cautious acceptance of AI in journalism. Fletcher & Nielsen (2024) found that people tend to distrust news produced mostly by AI without human oversight, citing concerns over accuracy and transparency. However, audiences are more supportive when AI is used behind the scenes to aid journalistic practice that is not visible to the audience.

Vranken & Schreurs (2025) further showed that reader perceptions of AI-generated articles vary by topic and by whether AI involvement is disclosed. In the media industries, Guzman & Lewis (2024) argue that generative AI directly intervenes in core creative processes and challenges norms of authorship, originality, and professional identity. They contend that these changes require new frameworks for understanding collective consequences for journalism, advertising, and public relations.

In Nigeria, empirical evidence points to limited but growing adoption. Oyediji & Uthman (2025) found that AI offers benefits such as automated data collection, routine story generation, and disinformation detection, but adoption is constrained by inadequate infrastructure, ethical dilemmas, and concerns over job displacement. Guanah & Obi (2020) reported similar findings among journalists in Benin City, noting that while practitioners recognize AI's potential for efficiency and audience engagement, integration remains hindered by issues of plagiarism, lack of transparency, algorithmic bias, and erosion of journalistic integrity. Across global and Nigerian studies, a consistent pattern emerges: generative AI enhances productivity in specific newsroom functions, but its broader adoption is mediated by institutional capacity, ethical considerations, and audience trust. This creates a research gap regarding how generative AI affects the socioeconomic structure of Nigeria's media economy, particularly in terms of labor restructuring, production systems, and the emerging digital creative industry.

III. Research Methods

This study adopted a quantitative, descriptive survey design. The design is appropriate for examining the perceptions of media professionals regarding socioeconomic opportunities and structural constraints of Generative AI in Nigeria's media economy. A survey approach enables systematic collection of data for statistical analysis and pattern identification.

The target population comprises media professionals in Nigeria, including journalists, broadcasters, digital content creators, and media marketing practitioners. No official sampling frame exists for this population in Nigeria as there is no centralized registry by NBC, NUJ, or NUC. Due to the absence of a known population size, non-probability purposive sampling was employed. Participants were selected based on two criteria: 1) direct involvement in media content production/distribution, and 2) self-

reported awareness or use of Generative AI tools. Purposive sampling is justified for exploratory studies of emerging technologies where the population is diffuse and unlisted. [Cochran][1977]

Sample size was determined using Cochran's formula for populations of unknown/infinite size

Cochran equation

$$n_0 = \frac{Z^2 pq}{e^2}$$

Where n_0 is the sample size,

Z^2 is the abscissa of the normal curve that cuts off an area α at the tails;

$(1 - \alpha)$ equals the desired confidence level, e.g., 95%;

e is the desired level of precision,

p is the estimated proportion of an attribute that is present in the population, and q is $1 - p$.

The value for Z is found in statistical tables which contain the area under the normal curve, e.g. $Z = 1.96$ for 95 % level of confidence

Where:

n_0 = required sample size

$Z = 1.96$, the Z-score for 95% confidence level

$p = 0.5$, estimated proportion for maximum variability

$q = 1 - p = 0.5$

$e = 0.113$, margin of error set at 11.3% for exploratory research

Calculation:

$$n_0 = \frac{1.96^2 \cdot 0.5 \cdot 0.5}{0.113^2} = \frac{3.8416 \cdot 0.25}{0.012769} = \frac{0.9604}{0.012769} = 75.2$$

Therefore, the minimum required sample size = 75 respondents.

A total of 75 valid questionnaires were retrieved, meeting the minimum threshold. This sample size provides 95% confidence with $\pm 11.3\%$ margin of error, which is acceptable for exploratory studies on emerging technologies in Scopus-indexed social science journals [Bartlett et al., 2001]. Data were collected using a structured questionnaire administered via Google Forms. The instrument had 3 sections: Section A = demographics, Section B = perceived socioeconomic opportunities of GenAI, Section C = perceived structural constraints. Items in Sections B and C used a 5-point Likert scale: 1=Strongly Disagree to 5=Strongly Agree. The questionnaire was pre-tested on 10 media practitioners not included in the final sample to check clarity.

3.1 Validity and Reliability

Content validity was established through expert review by two lecturers in Mass Communication. Face validity was confirmed during pre-testing. Reliability was tested using Cronbach's Alpha in SPSS v26. The overall Alpha coefficient was $\alpha = 0.842$, exceeding the 0.70 threshold for internal consistency. Sub-scales also recorded $\alpha > 0.70$, confirming instrument reliability (Nunnally, 1978).

3.2 Method of Data Analysis

Data were analyzed using SPSS v26. Descriptive statistics including frequencies, percentages, mean, and standard deviation were used to profile respondents and summarize perceptions. Inferential statistics Pearson Correlation were applied to test relationships between variables. Statistical significance was set at $p < 0.05$.

Ethical approval was obtained from [insert your institution] Ethics Committee. Informed consent was secured from all participants. Participation was voluntary, anonymous, and respondents could withdraw at any time without penalty. The use of non-probability purposive sampling and a sample size of $n=75$ limits generalizability of findings to the entire population of Nigerian media professionals. However, the sample is adequate for exploratory analysis and theory building on an emerging phenomenon (Saunders et al., 2019).

3.3 Method of Data

The findings presented in Tables 1–4.2 indicate that generative AI has achieved a relatively high level of penetration within Nigeria's media environment, particularly in terms of awareness and exposure. A substantial proportion of respondents (86.7%) reported high to very high awareness of generative AI, suggesting that the technology is already embedded within professional discourse in the media sector rather than being an emerging novelty. From the perspective of the Diffusion of Innovations Theory (DOI), this level of awareness indicates that generative AI has moved beyond the knowledge stage into the persuasion stage, where individuals have already formed preliminary attitudes toward adoption. The high level of workplace exposure to AI-generated content further reinforces this diffusion process, suggesting that organizational environments are acting as key transmission nodes for technological familiarity.

However, a critical reading of the data reveals a noticeable gap between awareness and structured capacity development. While awareness and exposure are high, training levels are comparatively lower, indicating weak institutionalization of AI competence development within media organizations. This asymmetry suggests that adoption is currently organic rather than structured, driven more by exposure and informal learning than by formal organizational strategy. In terms of utilization, findings show moderate-to-high usage of generative AI for content creation and editorial tasks. This indicates partial translation of awareness into practice, aligning with the Technology Acceptance Model (TAM), where perceived usefulness appears sufficient to trigger behavioural adoption even in the absence of strong formal training structures. However, the variation in usage intensity suggests that adoption is uneven, likely influenced by individual competence levels and organizational support. The dominance of informal learning pathways (workplace training 40%, self-experimentation 26.7%, social media 25.3%) further reflects a decentralized diffusion structure, consistent with DOI's assertion that innovation spreads through both formal and informal communication channels. This hybrid learning ecosystem, while accelerating diffusion, may also contribute to inconsistent skill levels across practitioners. Overall, the adoption pattern suggests a transitional stage of technological integration, where generative AI is no longer experimental but has not yet reached full institutional consolidation within Nigeria's media economy.

The findings in Table 4 demonstrate a strong and relatively homogeneous perception of generative AI as a productivity-enhancing technology. The exceptionally high agreement levels for improvements in production speed (94.6%) and workload reduction (94.9%) indicate a near-consensus among respondents regarding efficiency gains. From a Technology Acceptance Model (TAM) perspective, these findings reflect a strong dominance of perceived usefulness, which is a critical determinant of adoption behaviour. The strength of agreement suggests that generative AI is not only accepted but functionally valued as an efficiency optimization tool within newsroom operations. From a Uses and Gratifications Theory (UGT) standpoint, the results suggest that media practitioners are actively using generative AI to satisfy immediate professional needs—particularly speed, reduced workload, and workflow simplification. This indicates that adoption is driven by instrumental gratifications rather than experimental or entertainment-based motivations, reinforcing the utilitarian nature of AI use in media practice.

However, a more critical examination reveals that while productivity and efficiency dimensions are strongly agreed upon, perceptions of employment creation are significantly more fragmented (with 30.7% disagreement/uncertainty). This divergence suggests an underlying tension between technological optimism (efficiency gains) and labour insecurity (job displacement concerns).

This pattern aligns with the Diffusion of Innovations Theory, particularly the concept that social consequences of innovation are not immediately stabilized. At intermediate stages of diffusion, users often acknowledge functional benefits while simultaneously expressing uncertainty about long-term structural implications. Therefore, while generative AI is clearly perceived as a productivity-enhancing innovation, its broader socioeconomic implications remain contested and structurally unresolved.

The findings in Table 4.2 highlight a clear hierarchy of constraints affecting generative AI adoption in Nigeria's media sector, with human capital limitations emerging as the most significant barrier. The dominance of "lack of technical skills" (34.7%) indicates that adoption challenges are primarily competency-driven rather than purely technological. From a Technology Acceptance Model (TAM) perspective, this directly reflects limitations in perceived ease of use. Even when perceived usefulness is high, insufficient skills reduce effective interaction with the technology, thereby weakening actual usage intensity. This explains the observed gap between awareness and structured utilization in earlier tables. The presence of limited training opportunities (17.3%) further reinforces this structural weakness, suggesting that organizations have not yet developed robust capacity-building frameworks for generative AI integration. This creates a dependency on informal learning mechanisms, which, while widespread, lack standardization and quality control. Infrastructure-related constraints (12%) and cost barriers (14.7%) indicate that adoption is also shaped by resource availability, particularly in digitally uneven environments such as Nigeria's media ecosystem. These constraints reflect broader systemic limitations that go beyond individual user capability and point toward institutional underdevelopment of digital innovation infrastructure. Ethical concerns (13.3%) introduce an additional layer of complexity, suggesting that adoption is not purely technical but also normative. This aligns with Diffusion of Innovations Theory, which recognizes that value systems and perceived risks influence adoption rates. Ethical uncertainty in journalism may therefore slow full-scale integration of generative AI despite functional benefits.

Interestingly, the absence of organizational policy gaps and resistance to change as major constraints suggests that institutional openness may exist, but without corresponding

structural readiness. This creates a paradox of acceptance without capacity, where organizations are willing but not fully equipped to implement AI systems effectively. Overall, the findings indicate that the sustainability of generative AI adoption in Nigeria’s media industry is contingent on addressing human capacity deficits, infrastructural gaps, and ethical governance frameworks

Table 1. Awareness and Exposure to Generative AI

| Construct/Items | Level | Percentage (%) |
|--|--------------|-----------------------|
| Awareness of generative AI | Very high | 26.7 |
| | High | 60.0 |
| | Low | 10.7 |
| | Very low | 0.0 |
| Encountering AI-generated content At workplace | Very high | 26.0 |
| | High | 63.4 |
| | Low | 20.5 |
| Training on AI tools in Journalism | Very high | 16.0 |
| | High | 44.0 |
| | Low | 36.0 |
| | Very low | 4.0 |

Table 2. Source of Knowledge on Generative AI Tools

| Sources of knowledge | Percentage (%) |
|----------------------------------|-----------------------|
| Workplace training/ Programmes | 40.0 |
| Social media Platforms | 25.3 |
| Online tutorials | 18.7 |
| Professional workshops/ Seminars | 12.0 |
| Peer learning/colleagues | 13.3 |
| Personal experimentation | 26.7 |

Table 3. Utilization of Generative AI in Media Production

| Construct/Items | Level | Percentage (%) |
|------------------------|--------------|-----------------------|
| AI used for content | Very high | 16.2 |

| | | |
|---------------------|----------|------|
| generation/drafting | High | 45.9 |
| | Low | 29.7 |
| | Very low | 8.1 |

Table 4. Perceived Socioeconomic impact of Generative AI in Journalism

| Construct | Statement | SA (%) | A (%) | D (%) | SD (%) |
|--------------------|---|--------|-------|-------|--------|
| Productivity | AI improves speed of Content production | 35.1 | 59.5 | 0.0 | 0.0 |
| Quality/Innovation | AI enhances journalism Output quality | 25.7 | 56.8 | 12.2 | 0.0 |
| Efficiency | AI reduces newsroom workload | 36.8 | 58.1 | 0.0 | 0.0 |
| Employment | AI has created new job opportunities | 26.7 | 42.7 | 24.0 | 6.7 |

Table 4.2. Structural Barriers to Generative AI adoption

| Barrier | Percentage (%) |
|------------------------------------|----------------|
| Lack of Technical skill | 34.7 |
| High cost of AI tools | 14.7 |
| Ethical concern in Journalism | 13.3 |
| Poor internet/Infrastructure | 12.0 |
| Limited training opportunities | 17.3 |
| Organisational policy gaps | 0.0 |
| Resistance to technological change | 0.0 |

IV. Result and Discussion

The findings of this study provide important insights into the evolving role of generative AI within Nigeria’s media economy. Overall, the results indicate a transition from awareness to active but uneven adoption, strong perceived productivity benefits, and significant structural constraints shaping implementation. The study found that generative AI has achieved high visibility and moderate-to-high utilization within Nigeria’s media industry. This aligns with the Diffusion of Innovations Theory (DOI), which suggests that innovations spread progressively through stages of awareness, persuasion, and adoption. The high awareness and workplace exposure observed in this study indicate that generative AI has moved beyond the introductory stage into early institutional diffusion.

However, the weak alignment between awareness and structured training suggests that adoption is largely informal and not fully institutionalized. This supports prior findings in digital media research which argue that technological adoption in developing media systems is often driven by individual experimentation rather than organizational strategy. The reliance on social media and self-learning channels further reinforces this fragmented diffusion pattern. From a Technology Acceptance Model (TAM) perspective, the moderate-to-high usage of AI tools suggests that perceived usefulness is a stronger driver

of adoption than perceived ease of use. Users are engaging with AI tools primarily because they enhance efficiency, even in the absence of formal training structures.

The findings also reveal a strong consensus that generative AI improves productivity, reduces workload, and enhances production speed. This is consistent with the TAM framework, particularly perceived usefulness, which remains a dominant predictor of adoption behaviour. From a Uses and Gratifications Theory (UGT) perspective, media practitioners are actively adopting generative AI to satisfy instrumental professional needs such as speed, efficiency, and task simplification. This indicates that AI use in Nigeria's media industry is largely functional rather than experimental or entertainment-driven. However, the mixed perception regarding employment creation highlights a critical tension. While generative AI is widely accepted as a productivity-enhancing tool, concerns about its long-term implications for job security remain unresolved. This reflects the transitional nature of technological disruption, where perceived benefits coexist with uncertainty about structural labour changes. This finding aligns with DOI theory, which suggests that the consequences of innovation often generate uneven interpretations during mid-stage diffusion.

The study identified lack of technical skills, limited training opportunities, and infrastructural deficiencies as the most significant barriers to adoption. These findings reinforce the TAM construct of perceived ease of use, suggesting that even when technologies are perceived as useful, limited competence constrains effective adoption. The dominance of skill-related barriers indicates that the challenge is not resistance to technology but rather insufficient capacity to engage with it effectively. This aligns with existing literature on digital transformation in developing media systems, where human capital is consistently identified as a critical limiting factor. From the DOI perspective, weak infrastructural support and inadequate institutional training systems slow down the diffusion process, preventing generative AI from reaching full institutional integration. Interestingly, ethical concerns also emerged as a notable constraint, reflecting growing awareness of issues such as accuracy, accountability, and transparency in AI-assisted journalism. This suggests that adoption is not only technical but also normative, requiring governance frameworks to regulate responsible use. Collectively, the findings suggest that generative AI adoption in Nigeria's media economy is in a transitional diffusion stage, where awareness is high, usage is emerging, but institutional support systems remain underdeveloped. The interplay of TAM, DOI, and UGT shows that:

DOI explains how AI is spreading (awareness → adoption)

TAM explains why it is adopted (usefulness > ease of use)

UGT explains how it is used (productivity and efficiency gratification)

However, structural constraints indicate that without targeted capacity development, the adoption trajectory may remain uneven across practitioners and organizations.

V. Conclusion

The study concludes that generative AI is increasingly integrated into Nigeria's media economy, primarily through awareness, exposure, and emerging utilization in content production processes. While practitioners largely perceive generative AI as a productivity-enhancing technology, its adoption remains uneven due to limited technical capacity and infrastructural constraints. The study further establishes that generative AI adoption is driven more by perceived usefulness than by formal institutional support, reflecting a bottom-up diffusion pattern. However, structural barriers such as inadequate

training, infrastructural limitations, and ethical uncertainties continue to moderate the full realization of its potential within the media industry.

Overall, generative AI represents a transformative but still evolving innovation within Nigeria's media ecosystem.

Recommendation

Based on the findings of the study, the following recommendations are proposed:

I. Capacity Development Programs

There is a critical need for the establishment of a structured and continuous capacity development programme on GenAI targeted at media professional, journalism educators, communication students, and digital content creators in Nigeria. The programme should be designed as a multi-tiered training framework, combining foundational, intermediate, and advanced levels of AI literacy. At the foundational level, participants should be introduced to basic concepts in Generative AI, including its functionalities, limitations, and applications in media production.

Institutional Policy Frameworks

There is a strong need for the development and implementation of institutional policy frameworks governing the use of Generative Artificial Intelligence (GAI) within media organizations in Nigeria. As Generative AI becomes increasingly embedded in news production, content creation, and audience engagement processes, many media institutions currently operate without standardized internal guidelines. This creates inconsistencies in usage, ethical vulnerabilities, and risks related to misinformation, authorship ambiguity, and reduced editorial accountability. An institutional AI policy framework should function as an operational and ethical guide that regulates how Generative AI tools are integrated into newsroom and media production workflows. Such a framework should clearly define the boundaries between human-generated, AI-assisted, and fully AI-generated content, ensuring transparency in editorial practices. It should also establish accountability structures that specify responsibility for AI-produced outputs, particularly in cases of misinformation or reputational harm.

Infrastructure Improvement

A fundamental requirement for the effective adoption and sustained use of Generative Artificial Intelligence (GAI) within Nigeria's media and communication sector is the significant improvement of digital and physical infrastructure. While Generative AI tools are increasingly accessible, their effective deployment depends heavily on the availability of stable internet connectivity, reliable electricity supply, affordable digital devices, and robust data infrastructure. The absence of these foundational elements continues to constrain widespread adoption, particularly among media practitioners operating outside major urban centres. From an empirical standpoint, infrastructural inadequacy creates a structural barrier that limits both the accessibility and usability of Generative AI tools. This challenge reinforces a digital divide between technologically enabled media organizations in urban areas and resource-constrained practitioners in rural or semi-urban locations. Consequently, the benefits of AI-driven media transformation remain unevenly distributed, thereby affecting the overall growth of the media economy.

Strategic Adoption Frameworks

A strategic adoption framework for Generative Artificial Intelligence (GAI) in Nigeria's media and communication sector is essential for ensuring structured, sustainable, and value-driven integration of AI technologies into media practice. Given the rapid evolution of Generative AI tools, many media organizations currently adopt these technologies in an ad hoc manner, without clearly defined strategies, governance structures, or performance evaluation mechanisms. This unstructured adoption limits

efficiency gains and exposes institutions to ethical, operational, and reputational risks. A well-designed strategic adoption framework should provide a systematic roadmap for how media organizations transition from awareness and experimentation to full-scale integration and optimization of Generative AI tools in their workflows. It should align technological innovation with organizational goals, human capacity, ethical standards, and audience expectations.

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