Generative-AI: Guarantees, Risks, Ethical Issues, Inclusiveness, and Regulatory Compliance in Marketing

By

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ABSTRACT: The transformational experienced in 21st century business world is credited to the shift in technological innovations geared towards solving business challenges. A significant innovation that has significantly impacted with myriads of opportunities in marketing the advent of the Generative AI (Gen-AI) innovation. These benefits are not without deep concerns on potential risk, considerations for ethical standards, obstacles to diversity/equity, and overall regulatory compliance. The purpose of this research is to examine the transformative impact of Gen-AI on these challenges. Previous studies have shown significant gap between 'firms' willingness to implement enduring AI framework. Acknowledging that this area of study is still in its nascent stages, the methodology adopted was a comprehensive review of literature, insights from industry experts, and information obtained from social networks. The theoretical basis of the study was the Technology Acceptance Model - TAM. The authors have also developed the GREIR framework (Guarantees, Risk, Ethics, Inclusiveness, and Regulatory compliance) as a unique process through which customers, organizations, and society could sustainably benefit from Gen-AI. This framework notably considers inclusivity for the first time in Gen-AI marketing literature, thus creating valuable avenues for future research.

KEYWORDS: Gen-AI, Inclusiveness, Regulatory implications, Potential risks, Ethical marketing standards.

INTRODUCTION

One of the most remarkable shifts in paradigm in the 21st century is the proliferation innovative tech that are of service value addition to the marketing industry, one of such tech adoption by marketers is Generative Artificial Intelligence (Gen-AI) with plausible applications by end-users and organization ((Krakowski, 2025; & He, *et al.,* 2025). This innovation has resulted in effective creation of contents to suit a wide range of audience, with capabilities for personalized and interactive customer experience. (Brynjolfsson, *et al.*, 2023; & Cobb, 2023); According to a 2023 McKinsey report, 'Generative AI (Gen-AI) is capable of unlatching trillions of dollars in divers'

sectors of global economy, in which lies sales/marketing functions as primary beneficiaries of this revolutionary tech trend, as well as increasing boost in productivity/efficiency in personalized content development and in conducting automated tasks. Previous research has shown Gen AI growth/development in Gen-AIs' capabilities and value addition in various areas of marketing such as customer service management, and employee motivation in Tech environment (Eshiett & Eshiett, 2025; & Eshiett & Eshiett, 2021), entertainment (Agostinelli, *et al.,* 2023), finance (Brüggen, *et al.,* 2025), healthcare (Raza, *et al.,* 2024; & Serrano, *et al.,* 2024), product

designs/development (Eshiett & Eshiett, 2022), Education-art/writing (Barrett & Pack, 2023; Chan, 2023; & Epstein, *et al.,* 2023), sales (Kumar, *et al.,* 2025). A typical area of challenge is the inability of stakeholders to effectively implement organizational compliance and regulatory controls, thus creating sustainability gap in Gen-AI regulatory accomplishments, as well as skill gap mismatch between required AI competencies and existing workforce capabilities. Hence; organizations have to ensure skill upgrade for employees through training and retraining.

Documented evidence has shown that Gen-AI originated from the Markov natural language models in the 20th century (Bremaud, 2013; & Hayes, 2013), and climaxed between 2020 to 2022 based on innovative discoveries in providing solutions to diverse sectoral challenges, with the public launch of ChatGPT in late 2022, enhancing effective decision making using natural language capabilities ((Brüggen, *et al.,* 2025)/ This innovative step has transformed universal accessibility to non-interactive contents creation. Other sectors that Gen AI had direct impacts were educational, creative task, workplace engagements; interactive natural conversation, creative content creation, coding, and analytical solutions (Krakowski, 2025).

Applications of Gen AI by customers/Organizations

Gen AI applications as earlier stated traverse diverse sectors of human endeavors such as Healthcare – pharmaceutical research with ease in medical decision making (Serrano, *et al.,* 2024), Marketing – ease in the process of creating promotional and product service contents, Artist – now have effective platform for entertainment contents that suits diverse audience need, (Agostinelli, *et al.,* 2023; & Wahid, *et al.,* 2023),); educational sectors deploy Gen Ai effectively in teaching, learning , research and community service delivery (Guha, et al., 2024; & Mangal, et al., 2024; & Du Plessis, 2025); The finance sector now have an all-important tool for value added service delivery to a wider range of customers, thereby enhancing global competitiveness, at a reduced costs, enhanced efficiency, and better strategy in personalized customer service management.

2. Literature Review

Gen AI Evolution, Guarantees, Adoption, and Diffusion

Gen-AI evolved from the Markov Algorithmic generated chains which models natural language in the 20th century (Bremaud, 2013; & Hayes, 2013), and used in generating texts (Fine, *et al.,* 1998), the proliferation of sophisticated computers aided processing capabilities used symbolic AI methods to generate AI planning systems in the early 1990's and were used in generating crisis management action plans for the military (Burstein, ed. 1994) , in manufacturing industry for process planning and management, and in prototype decision making for unaided space crafts. In 2014, advancement in technology resulted in the creation of neural networks with capabilities for learning generative models such as the advent of Generated Pre-trained Transformer (GPT), otherwise known as GPT-1 in 2018, GPT-2 in 2019, these were the foundational model for ChatGPT (Cao, *et al.,* 2023; & Schlag Wein & Willcocks, 2023), further development resulted in the advent of unsupervised models which ended the need for humans in data labelling, everything was now managed by larger networks without human interference.

Risk, Ethical Issues and Inclusiveness in Gen-AI

The benefits of Gen AI is riddled with challenges such as legal issues (**Brewer, *et al.,*2024**), health challenges (**Vemula, *et al.,* 2023),** diverse environmental problems from procurements to disposal of Gen AI materials (**Crawford, 2024**), increasing global carbon footprint traceable to Gen AI (**Dhar, 2020; &** Ding, et al., 2025), pandemic experiences in recent years that affected all facets of human endeavors (Eshiett *et al,* 2022; & Eshiett & Eshiett, 2022), effective management of AI generated hazardous waste from extraction of AI inclined resources to disposal (Eshiett & Eshiett, 2024), and the unresolved challenges of increasing greenhouse gas emission (**Pelton,, et al., 2025**),and socio-cultural upheavals due to mismatched contents for diverse audience (Simon, *et al.,* 2023,; **&** Stone, Adam 2024). Earlier innovations made provision for human supervisory roles, but the unsupervised automated upgrade creates opportunity for potentially dangerous practices by individual and

organizations, hence the need for effective control to harness its guaranteed benefits, thus creating gap in regulatory compliance by Gen AI.

Ethically, diverse breaches has been identified in the process of adopting Gen AI such as copyright breaches with involves unauthorized usage and modification of copyright contents (Chan, 2023), inappropriate applications by students and teachers (Barrett & Pack, 2023), and non-inclusive arrangement in design, deployment and usage of Gen AI facilities (Mangal, et al., 2024). Other studies have shown existential threats such as in potential job losses in diverse industries (Thompson, 2023), abuses in general content creation due to non-regulatory controls (Alilunas, 2024; & Collinson, 2023), diverse challenges research findings/outcomes (Schlagwein & Willcocks, 2023), and in uncontrollable perpetuation of fraudulent practices globally (Gupta, *et al.*, 2023). This study identifies gaps in ethics relating to gen AI applications as a limiting factor on customer perception, the ethical challenges pinpoint the need to close the ethical gap.

2.1. Theoretical framework

Technology Acceptance Model

This study focuses on the effective implementation sustainable marketing of Gen AI innovation by thorough assessment of approaches that could enhance speedy adoption and diffusion, in the light of overwhelming guarantees/benefits and limitations such as risks, ethical issues, inclusiveness and regulatory compliance, The study adopted the Technology Acceptance Model – TAM which explains the process of adoption of innovation by customers, based on perceived satisfaction with tech product, and subsequent diffusions (spread out) through dedicated social system, the resultant outcome shows that, individual customer/organizations begins to adopt the product (Everett, 2003). TAM examines "Perceived usefulness, perceived ease of use, and user acceptance of information technology", (Davis, 2008), by juxta-positioning two theoretical models on user acceptance of tech (Davis. *et al.*, 1989). There is also the extension of TAM theoretical basis (Schlag Wein & Willcocks, 2023; Sheth & Atul, 2021: & Venkatesh; & Davis, 2000). Others effort by scholars to unify the various TAM models (Pappas, et al., 2018; & Venkatesh, *et al.*, 2003). To this end, the adoption of Diffusion of Innovation theory is to establish a theoretical basis that examines key determinants of customers' behavioral tendency such as; (Innovation [Rogers 2003], Adopters [Meyer. 2004],

Other issues highlighted by previous studies include inconsistencies in adoption and diffusion process (Chan, 2023; & Dhar, 2020; & Ding, et al., 2025), plagiarism/copyright issues (Barrett & Pack, 2023; & Crawford, 2024), leadership/governance (Eshiett & Eshiett, 2022; & Vemula, *et al.,* 2023), content creation abuses as in hate speech (Ali Lunas, 2024; & Collinson, 2023)/ Hence, sustainable Gen AI governance could be guaranteed if sustainable policy framework are comprehensively implemented by stakeholders. The model is illustration in figure 1, with detailed explanation on each of the dimensions as such as Guarantees, Risk, Ethical Standards, Inclusiveness, and Regulatory compliance as follows;
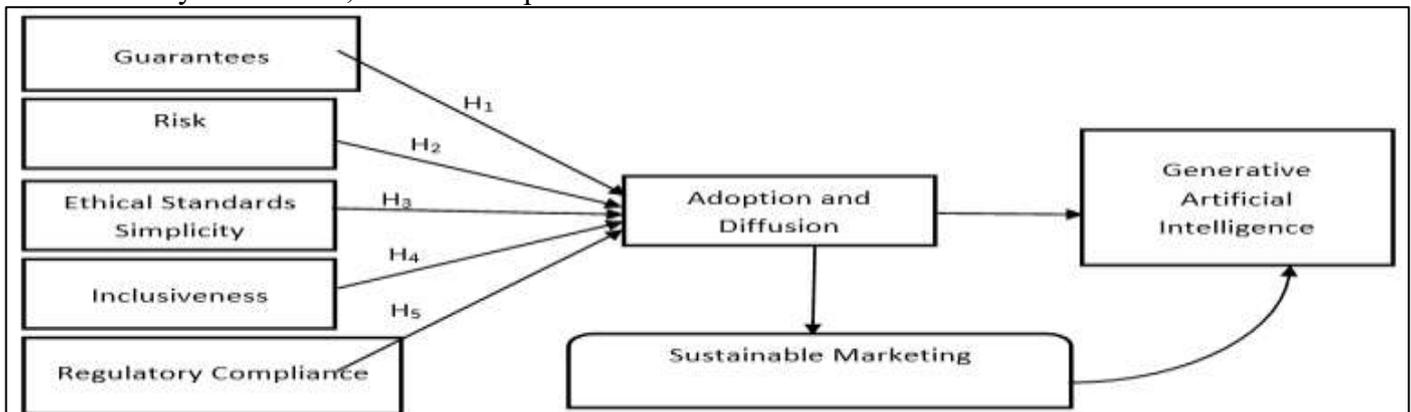

Figure 1: Study Framework.

Guarantees: The essence of technological innovation is to solve societal problems smartly; while augmenting the standard of life of the people. The derivable guarantees from Gen AI are quite overwhelming, based on its capabilities to

provide solutions to daily problems faced by humans globally. Since the advent of Information system in the early 1970s, consistent development over the decades brought about the advent of Artificial Intelligence – AI, climaxed by the launch of Gen-AI from which has provided plethora of benefits with transcending capabilities as discussed. Therefore, establishes a link between Gen AI and derivable marketing guarantees as illustrated in Figure 1, hence, the research question on Gen AI guarantee is proposed in RQ1

contents that could mar its supposed benefits/ explains some of such potential risks; hence, establishing a link between Gen AI and risk as shown in the theoretical framework of figure 1, the research question on Gen AI risk is proposed in RQ2

RQ2; what precautionary measures have firms established to avert catastrophic effect of risk while implementing Gen AI marketing contents?

Ethical Standards; The existence of unethical practices during the implementation of Gen AI content such as video games, illegal content creation, job losses, rape, child abuse, hate speech, and cybercrime raises so much questions on the sustainability of marketing Gen AI contents. This study examines the significant effect of risk on sustainable marketing of Gen AI. Hence, the hypothetical proposition formulated from the model in figure 1, the research question on ethical standards for sustainable marketing of Gen AI risk is proposed in RQ3

RQ3; What sustainable strategies can marketers deploy in mitigating Gen AI ethical driven ethical breaches?

Inclusiveness: It connotes the all-forms biases//injustices encountered by way of culture/gender/religion/language, it also involves the biased application on data that could result in favorable outcome towards a particular set of audience., handling of specific roles, trainings, and all forms of national and international practices that negates United Nations Sustainable Development Goals on - Inclusivity. The study therefore proposes that; there is a hypothetical relationship between inclusiveness and sustainable marketing of Gen AI contents as proposed in RQ4.

RQ1; How can Gen AI fulfill marketing guarantees such as promotional claims?

Risk: The innumerable benefits of Gen AI is not without potential risk encountered during its operational/implementation processes. It is quite obvious that the supervised version of Gen AI provides opportunity to double check potentially dangerous contents that could affect industry best practices, but the augmented automated version of Gen AI (unsupervised) is fully automated, and may be difficult to extract potentially dangerous

RQ4; How can firms reduce biases when implementing sustainable Gen AI marketing programs?

Regulatory Compliance: Shows the dependence of effective adoption/diffusion of Gen AI innovation on the effectiveness of appropriate regulatory framework that could sustain derivable gains of Gen AI. This involves establishment of appropriate regulatory control measures, augmenting legislation to accommodate new areas of possible breaches, enhance development of tech-driven infrastructural facilities that could enhance a robust and flourishing digital economy. In essence, this study affirms that effective regulatory compliance is pre-requisite for a successful digital era. Hence, the study therefore proposes that the significant effect between regulatory compliance and sustainable marketing of Gen AI contents as proposed in RQ5.

RQ5; What policy measures can government and other stakeholders adopt to enhance the capabilities of Gen AI contents?

Gap of the study

This study has identified diverse gaps that could aid sustainable Gen AI governance based on its pivotal role in nearly all areas of human endeavor, these could assist researchers on areas to their future investigations such as; **i)** Ethical Framework, **ii)** Regulatory Policy Compliance. Iii) Inclusiveness, **iv)** Socio-cultural Tenets Assessment, and **v)** Long-term Impact Assessment

3. Research Methodology

3.1. Research design

Taking into cognition the fact that this field of study is at its early stages, the objective of this study is to acknowledge Gen AI guarantees, risk,

ethics, inclusiveness and regulatory compliance in marketing. In accomplishing the aim of the study, data was obtained through comprehensive review of literature, insightful engagements with industry stakeholders, Gen AI applications, and information gathered from social networks. Previous research has shown valid acknowledgement of these data sources for insightful understanding of study areas with scanty research works (Salunkhe, *et al.,* 2023 & Rajan, *et al.,* 2023). It provided data on Review of Related Literature for Evolution, Adoption, and Diffusion of Gen AI in Business/Marketing, and provided data on Related Literature for Risk, Ethical Issues and Inclusiveness for Gen AI in Business/Marketing.

3.2. Participants

Data was also obtained with valuable insights, trends and outstanding problems encountered in Gen AI marketing from industry reports, magazines and periodicals on Gen AI marketing, Key personnel/experts were granted in-depth interviews as follows; (Intern – 48; Management Trainees – 34; Lower Level Managers – 29; Mid-Level Managers – 17; Directors – 10; and Chief Executive Officers – CEOs -7) in Nigeria and other selected countries of the world. The age range of respondents was 18years and above, educational qualifications raged from Diploma to Post Degrees in their various fields, Business category involved participating firms such as; Small, Medium, and large-scale firms; as well as academic experts in Business, Finance, marketing, retail, Hospitality, Entertainment, Gaming, and Information Systems. The duration of interview was 25-35minutes in which interviewees gave comprehensive insight about their i) specific areas of business, ii) application of Gen AI in business activities, iii) obvious leverages in terms of growth/profitability, iv) how the firm competes with its rivals in the industry, v) challenge g issues faced by firm since the adoption of Gen AI, and vi) comparison of Gen AI performance with previous tech applications

3.2.1. Instruments

Key areas considered based on previous studies include: customer service management (Eshiett & Eshiett, 2021), Games and gaming resources (Agostinelli, *et al.,* 2023), financial sector breaches (Brüggen, *et al.,* 2025), healthcare service resources (Raza, *et al.,* 2024; & Serrano, *et al.,* 2024), new product development (Eshiett & Eshiett, 2022), ethics and responsible traditional and social media advertising (Huh, et al., 2023; & Zhou *et al.* 2023), Education – art/writing (Barrett & Pack, 2023; Chan, 2023; & Epstein, *et al.,* 2023), automated workplace experience (Kumar, *et al.,* 2025; & Thakur & Kushwaha 2024), and all-inclusive and sustainable marketing approaches in Gen AI (Pappas, *et al.* 2018 & Sheth & Paraiyar 2021).

Limitations and other methodological Enhancements for Gen AI; Observable limitations by this study include i) non-standardization of measurement parameters for Gen AI product performance, ii) few or non-existing research outside developed nation like Europe, and America, iii) the evolving speedy rate of tech innovations hampers the relevance of conducted research findings, iv) need for longitudinal research in Gen AI on studies examining long-term effects of Gen AI implementation. Additionally, researchers could enhance this domain by adopting a mix of quantitative and qualitative methodologies, and robust synergy between researchers in marketing and other related Gen AI stakeholders (computer scientists, sociologist/Anthropologist, regulatory agencies, and policy makers) in providing sustainable solutions that could address the complex issues raised by this study.

Consequences of Gen AI Innovations

The adoption and diffusion of Gen AI has significant impact on customers' activities and organizational operations and accomplishments m as well as the entire communities such as;

Guarantees

The transformational impact of Gen AI in the 21st century has consistently shown positive benefits in terms of customers' (real-time creation of personalized advertisements, emails, and social media content) satisfaction, and organizational operational efficiency (seamless customer experiences across all touchpoints) and increased productivity (enhanced ability to anticipate customer needs and preferences), coupled with some challenges. These guarantees include;

Enhanced Productivity and Efficiency

It is quite obvious that Gen AI has been significant in the operational advancement/efficiency of organizations in diverse ways such as;

Automated Content Creation: Gen AI has significantly reduced the time and costs associated with creating and sharing of images, video, audio, text for the purpose of informing diverse spectrum of audience, in marketing, it has become the engine room for brand awareness, digital marketing, customer engagements thus making business visible with increased global patronage through social media, blogging, business websites, and online commentaries.

4. Conclusion

The outstanding benefits of Gen AI to individual and organizations cannot be overemphasized, outstanding guarantees such as efficiency in service delivery has impacted positively on individual capacity building and in the profitability of many organizations. The main areas of concerns lies in the risk encountered by individual and organizations in its operational process, specific ethical breaches have been outlines as such making Gen AI innovation unsustainable. This study advocates the need to strike a balance between positive benefits and how to mitigate obvious pitfalls.

5. Recommendations

The process of integrating Gen AI into their marketing efforts by companies should start with a gradual, step-by-step as organizational implementation strategy. This could be achieved by testing the technology in safer, simpler scenarios before moving on to more sophisticated applications. This progressive method enables organizations to gain experience and make necessary refinements while reducing the risk of adverse outcomes through the process of; i) Creating thorough Gen AI management frameworks that incorporate diverse, ii) interdisciplinary groups tasked with ensuring governance in ethical standards, iii) detecting and addressing bias, and iv) overseeing regulatory adherence, providing fund for training development initiatives that educate marketing personnel about

Gen AI's potential uses, constraints, and responsible implementation practices, and creating clear communication approaches that inform/educate customers about Gen AI's role in

marketing engagements and educate them on their entitlements concerning content produced by Gen AI.

Others include the process of creating detailed risk management strategies that is a crisis response scenarios when Gen AI-produced material leads to harmful outcomes or damages an organization's reputation, firms should focus on industrial engagement that creates best practices, ethical guidelines, and technical standards that promote responsible Gen AI implementation, set up ongoing surveillance systems that can identify and mark Gen AI-created content that may contain bias or other issues before it's delivered to end users, create automated watchdog systems that continuously scan AI-generated material for oversight bias/problems, flagging issues during the pre-content publication phase, and establishing collaborative initiative where organizations need to work together across the marketing industry to correct outstanding Gen AI challenges addressed in this research.

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