

## Artificial Intelligence (AI) and Contemporary Marketing Practices: Implication for Business Revolution in Nigeria

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### Abstract

*In today's rapidly evolving digital era, artificial intelligence (AI) has emerged as a transformative force in modern marketing, fundamentally reshaping how businesses engage with consumers and deliver real value and satisfaction. This study aims to examine the strategic dimensions of AI and their impact on transforming current marketing practices by Nigerian businesses for sustainable growth and global competitiveness. Grounded in the dynamic capabilities theory, the study explores how AI enables firms to remain competitive in an increasingly data-driven marketplace. A qualitative research design was employed, utilizing content analysis of secondary data. The data were thematically analyzed to identify recurring patterns and insights into AI application in contemporary marketing practices. Specifically, three dimensions such as real-time customer engagement, AI-enabled predictive analytics and programmatic advertising were identified as pivotal. The findings indicate that strategic deployment of AI significantly enhances marketing performance. The findings also affirm the relevance of the dynamic capabilities theory, as firms that effectively adapt AI capabilities can dynamically reconfigure their marketing functions to seize emerging opportunities and positively respond to market disruptions. The study concludes that the integration of AI into marketing plans and strategies does not only improve operational efficiency/business growth but also strengthens customer relationships and fosters innovation.*

**Keywords:** Artificial Intelligence, Real-time customer engagement, AI-enabled predictive analytics, Programmatic advertising, Marketing transformation.

## **1. Introduction**

In recent years, the rapid advancement of artificial intelligence (AI) has significantly altered the landscape of global business operations, with marketing being one of the most impacted domains. AI technologies are increasingly being integrated into marketing strategies to improve customer experiences, enhance operational efficiency, and drive data-driven decision-making. The evolution of marketing from traditional methods to more agile, technology-driven approaches reflects a broader digital transformation that is reshaping how organizations interact with customers and respond to market dynamics.

The emergence of artificial intelligence (AI) has initiated a fundamental transformation in the worldwide marketing arena. Artificial intelligence has transitioned from a futuristic notion to a pragmatic instrument that is transforming the manner in which enterprises comprehend and interact with consumers. Artificial intelligence (AI) has achieved extensive acknowledgement as a transformative force capable of revolutionising entire industries and instigating substantial alterations in commercial processes (Noble & Mende, 2023). Only a few years prior, artificial intelligence was associated with robotics or speculative cinema; yet, we now find ourselves on the brink of this impending reality. At present, AI solutions prevail in numerous user-facing interactions.

The expansion of AI and its potential for the marketing sector are substantial (Kumar, 2021). In this context, the incorporation of AI into our daily life is no longer a question of "if," but rather a matter of "when". Although AI is advancing the productivity frontier for economies and enterprises in numerous sectors, marketing is unequivocally a domain poised to benefit significantly from AI (Davenport, Guha, Grewal & Bressgott, 2020; Huang & Rust, 2021).

In a progressively digital and data-driven landscape, marketing strategies must adapt to maintain competitiveness. AI provides the capabilities required to leverage extensive databases, forecast customer behaviour and automate personalised communication tasks previously deemed unfeasible at scale. One of the most notable transformations is the shift towards real-time customer engagement.

Another critical dimension is the application of AI-enabled predictive analytics. This involves using historical data and machine learning algorithms to forecast customer behavior, market trends, and campaign outcomes. Predictive analytics allows marketers to make informed decisions, optimize resource allocation, and design strategies that are responsive to consumer expectations.

This study therefore, seeks to examine the strategic dimensions of AI and their impact on transforming contemporary marketing practices, providing insights that can guide Nigerian organizations in effectively leveraging AI to achieve competitive advantage and improved marketing performance.

### **Statement of the Problem**

Despite the growing integration of artificial intelligence (AI) in marketing, many organizations struggle to fully leverage its strategic dimensions to transform traditional marketing practices. Real-time customer engagement, AI-enabled predictive analytics and programmatic advertising tend to offer immense potentials to enhancing personalization, efficiency and decision-making. In spite of these promising developments, many organizations are yet to fully understand or utilize the strategic potentials of AI in transforming their marketing practices. The lack of clarity on how AI dimensions influence marketing transformation tends to pose a significant challenge to most organizations in Nigeria. More so, there seems to be limited understanding of how these AI-driven tools are effectively reshaping marketing strategies in practice among organizations in Nigeria. This gap in knowledge therefore creates uncertainty for Nigerian marketers seeking to adopt AI technologies to remain competitive in today's dynamic digital landscape. Therefore, it is crucial to examine how these strategic dimensions of AI are influencing and transforming contemporary marketing practices in Nigeria.

### **Objectives of the Study**

**The aim of the study** is to examine the strategic dimensions of artificial intelligence (AI) and their impact on the transformation of contemporary marketing practices in Nigerian organizations. The **specific objectives** are to:

- i. Determine the influence of real-time customer engagement on the transformation of contemporary marketing practices.
- ii. Ascertain the impact of AI-enabled predictive analytics on the transformation of contemporary marketing practices.
- iii. Evaluate the influence of programmatic advertising on the transformation of contemporary marketing practices.

## 2. Literature Review

### Artificial Intelligence and the Marketing Profession

Artificial intelligence (AI), defined by robust algorithms and machine learning skills, has greatly transformed the marketing profession in recent times (Noble & Mende, 2023). Haleem, Javaid, Qadri, Singh & Suman (2022) characterized AI as a technology enabling computers to replicate and understand human interaction and behaviour, while Haenlein & Kaplan (2019) describe it as a 'system' capable of analysing external data, deriving insights and utilising acquired knowledge to accomplish specific objectives and tasks through adaptable methods. Mustak, Salminen, Pl'e & Wirtz (2021) regard AI as a comprehensive framework including many actions and concepts, grounded in the belief that various computer systems, utilising software and algorithms, may assist or do jobs previously requiring human cognitive abilities. Artificial intelligence in marketing is characterised by precision, personalisation and efficiency (Huang & Rust, 2022a; Yu, Zhang, Lin & Wu, 2019).

Undoubtedly, the intelligence of AI derives from its capacity for self-learning and ongoing self-improvement, enhancing its productivity and effectiveness with each task iteration (Verma et al., 2021). Adidas & Netflix illustrate the extensive applications of AI in the business sector. Both organisations employ artificial intelligence to scrutinise extensive customer data in order to discern patterns, trends, and insights that can guide marketing plans and campaigns (Mathur, 2023). Accenture use AI to enhance its marketing budget by optimising data collection, hence decreasing the data flow process duration by 80% (Mishra, Ewing & Cooper, 2022). This has enabled the corporation to reduce the insight lag from 5 months to 5 weeks, allowing Accenture to achieve an additional \$300 million in sales without augmenting media expenditures (Accenture, 2024).

McKinsey & Company conducted an analysis of over 400 AI use cases across 19 industries and nine business functions, concluding that the most substantial potential value of AI is predominantly linked to marketing and sales domains (Chui, Manyika, Miremadi, Henke, Chung, Nel, & Malhotra, 2018). In 2022, a thorough global survey by Salesforce Research indicated a substantial rise in AI usage among marketing professionals compared to the prior year. The poll revealed that 87% of marketing professionals utilised AI to integrate online and offline experiences a significant rise from 71% in 2021. Furthermore, 87% of marketing professionals employed AI to proficiently address client identity issues, reflecting an increase from 82% in 2021. The survey indicated that 88% of marketing professionals utilised AI to automate numerous operations, including reporting,

exceeding the 83% observed in 2021 (Salesforce, 2023). These findings illustrate the increasing dependence on AI in the marketing sector to improve client experiences, optimise operations and enhance productivity.

### **Real-Time Customer Engagement and Transformation of Contemporary Marketing Practices**

Real-time customer interaction denotes the utilisation of AI-powered tools, like chatbots, virtual assistants and automated messaging systems, to communicate with customers instantaneously across diverse digital platforms. These technologies enable organisations to address client enquiries, preferences and behaviours instantaneously, providing prompt and tailored experiences.

In the current consumer environment, there is an increasing need for seamless and instantaneous experiences (Ostrom, Field, Fotheringham, Subramony, Gustafsson, Lemon, Huang & McColl-Kennedy, 2021). AI chatbots and virtual helpers are adept at fulfilling this expectation. AI chatbots provide marketers with a cost-effective means to broaden their outreach and efficiently handle client interactions across multiple platforms (Kshetri, Dwivedi, Davenport, & Panteli, 2023). The effective adoption of chatbots allows firms to enhance their customer service capabilities, facilitating expansion without incurring additional training and staffing costs (Iles, 2020). Although chatbots in marketing services facilitate the swift delivery of straightforward information, respondents express apprehension regarding the potential for chatbots to disseminate inaccurate and misleading information (Arsenijevic & Jovic, 2019). To tackle these challenges, businesses must concentrate on improving chatbot technology to render it more human-like, empathetic and transparent in its interactions with consumers (Kshetri et al., 2023; Tran, Pallant, & Johnson, 2021). Digital assistants are expected to proliferate as technology evolves, requiring continuous research and comprehension of their functionalities and consequences.

### **AI-Enabled Predictive Analytics and Transformation of Contemporary Marketing Practices**

AI-driven predictive analytics utilises machine learning algorithms and data mining methods to examine historical and real-time data for forecasting future customer behaviour, preferences, and market trends. This strategic instrument enables marketers to make informed choices regarding product offerings, pricing, and promotional tactics. Marketers have gradually started employing AI-driven technologies for brand monitoring, sentiment analysis, and social media management and analytics (Kaput, 2022). Companies utilised these strategies to get understanding of customer feelings and trends in order to create more tailored and flexible marketing campaigns. In the 2010s,

the proliferation of Big Data enabled AI-driven prediction algorithms to anticipate future behaviours and trends by examining client behaviour, purchase history, and interactions (Simpson, 2020).

AI data analysis involves the utilisation of AI methodologies and algorithms on extensive datasets to interpret information and enhance comprehension of performance, thereby facilitating data-driven decision-making (Analytics Vidhya, 2023a). More than 40% of marketers have observed an increase in both the volume of campaigns they managed from 2021 to 2022 and a rise in their campaign accomplishments, highlighting the influence of AI-driven analysis (Decker, 2023). AI analytics integrate several facets of artificial intelligence to deliver a contemporary data experience through four essential components: natural language processing (NLP), machine learning, neural networks and deep learning (Arora, 2023; De Bruyn, Viswanathan, Beh, Brock & Von Wangenheim, 2020).

### **Programmatic Advertising and Transformation of Contemporary Marketing Practices**

Programmatic Advertising refers to the automated acquisition and placement of digital advertisements by AI algorithms that evaluate user data to identify the optimal timing, channel, and format for ad dissemination. Unlike traditional ad buying, programmatic advertising delivers precision targeting, real-time bidding, and ongoing optimization. The emergence of search engines like Google has become AI essential for developing algorithms for search engine optimisation (SEO) and pay-per-click (PPC) advertising (Danao & Main, 2022).

Programmatic advertising (PA) has arisen as a significant transformation in media purchasing in the last decade (Stevens et al., 2016). This technology has experienced a significant increase in its proportion of overall web advertising. This increase has coincided with improvements in economical and effective methods for online consumer monitoring and targeting (Cooper et al., 2023). The fundamental components of programmatic advertising consist of advertisers, publishers, demand-side platforms (DSPs) and data management platforms (DMPs) for the administration of ad inventory and campaigns (Kiran & Arumugam, 2020; Riley, 2023). Advertisers promote their products or services by targeting specific audiences through digital advertisements. They administer their advertising campaigns and procure ad inventory through Demand-Side Platforms (Kiran & Arumugam, 2020).

This innovation transforms marketing by enhancing efficiency, minimising unnecessary expenditures, and expanding personalised communications to a worldwide audience, thereby optimising return on investment and campaign efficacy within the digital landscape.

## **Theoretical Framework**

### **Dynamic Capabilities Theory**

The dynamic capabilities theory, introduced by Teece, Pisano & Shuen (1997), posits that competitive advantage in dynamic markets stems from an organization's capacity to purposefully adapt its resources. In marketing, this means that companies must continually refine their strategies in response to consumer behavior, technological advancements, and market fluctuations. AI enhances these dynamic capabilities by enabling real-time responsiveness, agile decision-making, and scalable innovation. The theory provides a robust framework for analyzing how firms utilize AI to maintain competitiveness by dynamically adjusting their marketing operations.

### **Empirical Review**

Kumar, Ashraf & Waqar (2024) examines the existing applications of AI in various marketing roles and its prospective future development and influence on marketing processes. In a swiftly changing environment, enterprises must manage complexity, innovate, and maintain competitive advantages. Building upon existing AI marketing literature, we utilise the dynamic capability theoretical framework, highlighting how organisations adjust and thrive in evolving settings. This study identifies six pivotal marketing domains where AI is poised to effect transformative change, intending to clarify the trajectory for forthcoming marketing innovations and strategies. These domains encompass AI-driven customer insights, marketing performance measurement, automated marketing strategies, ethical considerations, enhancement of customer experiences, and growth prospects through AI implementation.

Yoo (2024) analyses the influence of Artificial Intelligence (AI) on marketing tactics across many sectors, emphasising how AI-driven technologies improve client engagement and refine marketing campaigns. This study aims to examine the varied impacts of AI on marketing techniques and to identify the problems and ethical considerations associated with its deployment. The study employed a qualitative methodology, conducting interviews with 18 marketing professionals to get insights on their experiences and impressions of AI in marketing. The results indicate a notable shift towards the implementation of AI and machine learning technology. Participants acknowledged their proficiency in customising client encounters and enhancing data-informed



decision-making. The research enhances the current knowledge base by highlighting AI's dual function as a revolutionary element in marketing and presenting significant ethical concerns.

Mogaji & Nguyen (2022) aimed to demonstrate the importance of managers' perception and understanding of artificial intelligence in the field of marketing financial services and their ability to identify opportunities and challenges associated with the employment of AI in the field of marketing financial services. The study adopted the quantitative approach and through distributing a questionnaire to a sample of (455) general managers from financial services organizations in (4) countries (United Kingdom, United States of America, Nigeria and Vietnam). The study concluded that the awareness of managers towards the use of AI in marketing financial services is of high importance. Managers in developed countries such as (America and the United Kingdom) enjoyed a high level of understanding compared to developing countries such as (Nigeria and Vietnam), which Managers' understanding of the uses of AI in marketing financial services was below average. The study also concluded that there are many factors affecting the employment of AI in the field of financial services, including data privacy and security, and the need for training and qualification in order to employ it in marketing.

Liu et al (2021) aimed to demonstrate the impact of the predictive capabilities of AI on marketing strategies through the importance of management awareness of the active role of AI in marketing. The responses of (366) managers in various marketing industries in China to a questionnaire designed for the study were analyzed. The study concluded that there was a positive role for the predictive nature of AI in the field of marketing which is activated and benefited through the management being fully aware of the importance of these predictions. That is, management awareness plays an important role in taking advantage of the insights generated by artificial intelligence to make effective marketing decisions.

### **3. Methodology**

This study adopted a qualitative research design to explore how organizations are strategically deploying artificial intelligence (AI) in the marketing of their products and services. Secondary data were sourced from academic journals, industry reports and white papers to gather rich, contextual insights. A content analysis approach was employed, wherein relevant texts were systematically coded and thematically analyzed to uncover patterns and trends related to the strategic application of AI in marketing practices.



Through thematic coding, the data were organized into recurring dimensions of AI application, such as real-time customer engagement, predictive analytics and programmatic advertising. These themes were then interpreted within the framework of the dynamic capabilities theory, which emphasizes a firm's ability to adapt, integrate and reconfigure internal and external resources in response to rapidly changing environments. This approach provided a structured lens for understanding how AI enhances marketing adaptability and innovation in contemporary business contexts.

#### 4. Discussion of Findings

The content analysis yielded three core strategic dimensions through which AI is transforming marketing:

**Table 1. Real-Time Customer Engagement and Transformation of Contemporary Marketing Practices**

S/N	Theme/Focus Area	Tool/Technology	Findings	Author(s)	Implications
1	Real-Time Interaction	AI-powered chatbots, virtual assistants	Enables instantaneous customer communication across platforms; enhances satisfaction and loyalty	Kumar et al. (2019), Kumar (2021)	Real-time communication improves customer experience and boosts brand loyalty
2	Chatbot Capabilities	AI Chatbots	Serve as conversational agents for lead generation and sales conversion	Illescas-Manzano et al. (2021)	Chatbots are key tools for marketing and customer acquisition
3	Emotional AI in Chatbots	Emotional chatbots (e.g., Woebot)	Effectively manage mental health issues and support elderly clients with empathetic engagement	Iancu & Iancu (2023)	Potential expansion into health and wellness marketing channels
4	Customer Expectations	AI-powered virtual assistants	Consumers seek instant, seamless, and personalised digital experiences	Ostrom et al. (2021)	Businesses must deliver consistent and adaptive engagement across platforms
5	Trust and Accuracy Concerns	Chatbots in service delivery	Risks include spreading misinformation	Arsenijevic & Jovic (2019), Tan	Trust must be managed through transparency and

			and confusing users in multi-chatbot systems	& Liew (2022)	user-centric interface designs
6	Future of Chatbots	Multi-chatbot systems, empathetic AI	Trend towards domain-specific bots but risks user uncertainty and reduced trust	Tran et al. (2021), Kshetri et al. (2023)	Development should focus on emotional intelligence, transparency, and domain alignment

The integration of AI-powered tools such as chatbots, virtual assistants, and real-time messaging systems has significantly transformed contemporary marketing practices. These technologies enable instant, personalised interactions with customers, leading to enhanced satisfaction, loyalty, and operational efficiency. Emotional and intelligent agent technologies, such as Woebot, demonstrate the potential of AI in delivering human-like experiences. However, concerns remain regarding misinformation, lack of trust in multi-chatbot systems and the need for empathy in digital communication.

**Table 2. AI-Enabled Predictive Analytics and Transformation of Contemporary Marketing Practices**

S/N	Theme/Focus Area	Tool/Technology	Findings	Author(s)	Implications
1	Predictive Analytics in Marketing	Machine learning algorithms, data mining	Enables forecasting of customer behavior, preferences, and market trends, aiding in informed decision-making regarding products, pricing, and promotions.	Kaput (2022); Simpson (2020)	Empowers marketers to design tailored and flexible campaigns based on customer insights.
2	AI in Brand Monitoring and Sentiment Analysis	AI-driven technologies	Facilitates understanding of customer sentiments and trends through social media management and analytics.	Kaput (2022)	Enhances the ability to create more personalized marketing strategies.
3	Big Data and Predictive Algorithms	AI-driven prediction algorithms	Utilizes client behavior, purchase history, and interactions to anticipate future	Simpson (2020)	Allows for proactive engagement with customers and optimization of

			behaviors and trends.		marketing efforts.
4	Components of AI Analytics	NLP, machine learning, neural networks, deep learning	Integrates various AI facets to deliver comprehensive data analysis, enhancing understanding of performance and decision-making.	Arora (2023); De Bruyn et al. (2020)	Provides a multifaceted approach to analyzing complex datasets for marketing insights.
5	Machine Learning in Trend Identification	Machine learning algorithms	Analyzes data to forecast outcomes without explicit programming, aiding in the identification of trends such as fraud.	Arora (2023); De Bruyn et al. (2020)	Supports proactive measures in marketing and risk management.
6	Transformation of Marketing Practices	AI-enabled predictive analytics	Allows organizations to foresee client needs, decrease churn rates, optimize inventory, and implement proactive campaigns targeting specific groups.	Haleem et al. (2022)	Shifts marketing towards a more responsive, flexible, and efficient model.

The integration of AI-driven predictive analytics in marketing has revolutionized how businesses forecast customer behavior, preferences, and market trends. By leveraging machine learning algorithms, data mining, and big data, marketers can make informed decisions on product offerings, pricing, and promotional strategies. The emergence of AI assistants like Siri and Alexa has further transformed customer engagement.

**Table 3. Programmatic Advertising and Transformation of Contemporary Marketing Practices**

S/N	Theme/Focus Area	Tool/Technology	Findings	Author(s)	Implications
1	Rise of Programmatic Advertising (PA)	Programmatic Advertising Systems	PA has grown significantly as a media-buying method, driven by more efficient and economical digital consumer targeting.	Stevens et al. (2016); Cooper et al. (2023)	Indicates a structural shift in digital advertising toward automation and data-driven targeting.
2	AI-Driven Demand-Side Platforms (DSPs)	AI Algorithms in DSPs	DSPs use AI to determine which impressions to buy and at what price, enabling marketers to reach specific demographics in real time.	Kiran & Arumugam (2020); Riley (2023)	Increases cost-efficiency and effectiveness of ad spend.
3	Role of Publishers	Website Ad Inventory	Publishers monetize their content by auctioning ad space to the highest bidder through DSPs.	Riley (2023)	Provides revenue streams for content creators and enhances ad relevance for users.
4	Data Management Platforms (DMPs) & Targeting	Machine Learning, User Data Tags	DMPs process high-dimensional data into user tags for accurate segmentation and real-time targeting.	Duan & Yang (2018)	Facilitates hyper-personalization and adaptive marketing strategies.
5	Real-Time, Automated Ad Purchasing	AI-Driven Programmatic Engines	Real-time auction-based ad placement enables precise user targeting at scale.	Das (2023)	Replaces manual ad buying with AI automation, reducing inefficiencies.
6	Marketing Transformation via Programmatic Ads	Automated AI Ad Ecosystems	PA automates ad delivery, minimizes waste, enables personalization at scale, and improves campaign ROI and global reach.	Ford et al. (2023)	Redefines digital marketing effectiveness, enabling agile, data-centric strategies.

Programmatic advertising has transformed contemporary marketing by replacing manual media buying with **automated AI-powered systems**. This evolution enables **precision targeting**, **real-time bidding**, and **personalized ad delivery** across multiple digital platforms. Key components

like **DSPs** and **DMPs** work together using **machine learning** and **data tagging** to identify optimal advert placements and target audiences. The result is increased marketing efficiency, reduced waste, improved ROI, and the ability to deliver tailored messages across **diverse touchpoints**. The scalability of this strategy also allows businesses to manage global campaigns with minimal manual intervention.

## **5. Conclusion**

This study underscores the critical role of AI in reshaping and transforming modern marketing strategies for competitive advantage and improved marketing performance. Real-time customer engagement, driven by advancements in AI, has shifted marketing towards a data-driven, consumer-centric model while programmatic advertising signifies a paradigm shift in digital marketing, replacing traditional ad-buying models with intelligent, real-time systems.

AI-enabled predictive analytics has become a cornerstone in modern marketing, offering tools that allow for accurate forecasting, personalized customer engagement and efficient campaign management. The adoption of AI technologies has led to more responsive and flexible marketing strategies, aligning with the evolving needs and behaviors of consumers.

While these innovations improve responsiveness and scalability, organisations must address issues of trust, accuracy and emotional connection to maintain effective and sustainable customer relationships. As AI continues to advance, its role in shaping marketing practices is expected to grow, necessitating ongoing adaptation and innovation from businesses. Hence, as markets continue to evolve, the ability to dynamically integrate AI into marketing operations will be a defining factor for competitive advantage. Businesses that fail to embrace these tools risk falling behind, while those that do will be well-positioned to thrive in the data-driven future.

## **6. Recommendations**

1. Organisations should implement advanced AI-powered platforms like DSPs and DMPs to automate ad bidding and improve audience targeting across digital channels.
2. Organisations should continuously upgrade chatbot systems by improving emotional intelligence and transparency to foster trust and improve customer interactions.
3. Firms must build robust data infrastructure, train marketing teams in AI tools, and promote a learning culture to boost predictive accuracy and deliver personalized experiences.

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