Artificial Intelligence from Marketing Viewpoint: Opportunities and Challenges

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Abstract

This study aims to provide an understanding of Artificial Intelligence (AI) from marketing viewpoint by explaining AI's current state, emergence, potential, implications, and future in the marketing sector of Bangladesh. To achieve these objectives, the researchers used the secondary data source. Secondary data was collected from relevant websites, journals, and articles. Based on the data collected, the researchers were able to identify few global and Bangladeshi companies where AI has been successfully adopted. The researchers have discussed about the challenges of adopting AI in marketing sector of Bangladesh. This study has got few limitations which have been explained. Lastly, the researchers concluded the study with a hopeful note.

Keywords :-*Artificial Intelligence (AI), Marketing, Potential, Challenges, Implications, Strategies.*

1 Introduction

Marketing has experienced a drastic evolution in the past few decades, shifting from traditional media channels to digital platforms. This shift has been further accelerated by the advent of Artificial Intelligence (AI), which is revolutionizing the way businesses understand and engage with their customers (Chaffey and Ellis-Chadwick, 2019). Globally, AI is being integrated into various facets of marketing, from personalized recommendations to predictive customer behavior analytics, transforming the marketing landscape as we know it (Kumar and Reinartz, 2012).

Bangladesh, a rapidly developing country, is not untouched by these global trends. As one of the fastest-growing economies in South Asia, Bangladesh boasts a vibrant market with a diverse consumer base. It's a country where digital transformation is on the rise, with an increasing number of people coming online every day (GSMA, 2020). This digital boom presents an exciting opportunity for the integration of AI in marketing strategies, offering new avenues to understand and reach consumers in innovative ways.

However, the adoption of AI in Bangladeshi marketing strategies is still in nascent stages, with several challenges to overcome, including technical infrastructure, regulatory environment, and the digital literacy of the workforce (World Bank, 2020). This presents a unique opportunity to explore how AI can shape the future of marketing in Bangladesh, the challenges it faces, and the ways to overcome them.

This article will employ a qualitative research approach to provide a comprehensive understanding about from marketing perspective. It aims to shed light on the current state of AI adoption in Bangladesh, its implications in marketing, and the future of AI in Bangladeshi marketing.

1.1 Statement of the Problem and Justification of the Study

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The integration of artificial intelligence (AI) in marketing is a well-studied area globally. Many researchers have explored the benefits and challenges of this integration in various contexts. However, there appears to be a limited amount of academic work specifically focusing on AI's role in the marketing landscape of Bangladesh.

While AI adoption in Bangladesh's broader sectors has been studied to some extent (Ahmed *et al.*, 2019), the focus on the marketing sector in particular appears to be sparse. There is a need to investigate how AI can be utilized to enhance marketing strategies within the unique socio-economic and technological context of Bangladesh.

Furthermore, although challenges to AI adoption in Bangladesh have been mentioned, they have not been thoroughly analyzed in the context of marketing. It is vital to understand these challenges in detail and devise strategies to overcome them, to fully exploit the potential of AI in Bangladesh's marketing landscape.

Moreover, most of the literature focuses on the positive aspects of AI in marketing, such as improved customer segmentation and personalized marketing. However, potential risks and ethical implications of AI in marketing, which are crucial in the Bangladeshi context, have not been adequately explored.

Thus, this article aims to address these gaps by exploring AI from marketing perspective, examining the specific challenges to its adoption, and discussing potential solutions, all while considering the ethical implications and potential risks of AI in marketing.

1.2 Literature Review

Artificial Intelligence and Marketing

The integration of artificial intelligence (AI) into marketing has been a topic of significant interest in academic literature. AI, as defined by Russell and Norvig (2016), is a field of computer science dedicated to the creation of systems performing tasks that require human intelligence. These systems are designed to learn and adapt over time, enabling them to handle complex, data-rich tasks more efficiently.

In marketing, AI has shown potential to dramatically enhance strategies and drive customer engagement. Kumar and Reinartz (2012) identify AI as a key driver in personalized marketing, enabling businesses to understand individual customer behavior and create tailored marketing messages. In addition, AI can help businesses predict future customer behaviors and trends, enabling them to stay ahead of the market (Chaffey & Ellis-Chadwick, 2019).

AI in Marketing: The Global Context

Globally, AI has been successfully integrated into marketing across various industries. For instance, Amazon uses AI to provide personalized product recommendations, while Netflix uses AI to suggest shows and movies based on user behavior (Nguyen et al., 2019). Further, AI-driven chatbots have been instrumental in improving customer service and engagement in various sectors (Van Doorn et al., 2017).

AI Adoption in Bangladesh

Moving to the context of Bangladesh, the adoption of AI in various sectors is in the early stages. The country is witnessing a digital transformation with increasing internet penetration and a burgeoning digital economy (GSMA, 2020). However, the integration of AI in marketing is still a relatively new phenomenon.

A study by Ahmed *et al.* (2019) pointed out the potential of AI in Bangladesh's retail sector, noting that AI can help businesses improve customer segmentation and develop personalized marketing strategies. However, the study also highlighted challenges such as a lack of technical infrastructure and skilled manpower, which are significant barriers to AI adoption.

The literature suggests that while AI has considerable potential to revolutionize marketing, its adoption in Bangladesh faces certain challenges. This article aims to explore these aspects in detail and suggest ways to overcome these challenges and harness the potential of AI in Bangladeshi marketing.

1.3 Research Objectives

1. To assess from marketing perspective the current state of AI in Bangladesh.
2. To evaluate the emergence of AI in Bangladesh from marketing perspective.
3. To examine the potential of AI in Bangladeshi from the perspective of marketing.
4. To study the implications of AI in Bangladesh's marketing industry.
5. To identify the future of AI in Bangladeshi marketing.

2 Methodology

This study is empirical in nature. In line with the objectives of this article, a qualitative research approach will be employed. This approach will allow for a comprehensive understanding of the research topic (Creswell & Plano Clark, 2017). For the study, secondary data was collected from relevant websites, journals, and articles from Google Scholar.

3 Findings and Analysis

3.1 The Emergence of AI in Global Marketing

Artificial Intelligence (AI) has emerged as a significant force in global marketing. Its origins can be traced back to the 1950s, when the term "Artificial Intelligence" was first coined by John McCarthy, an American computer scientist (McCorduck, 2004). However, it wasn't until the advent of big data and advancements in computational power in the 21st century that AI began to play a significant role in marketing.

Over the years, the application of AI in marketing has evolved, moving from simple automation tasks to complex customer engagement strategies. For instance, early applications of AI in marketing included email filtering and spam detection. As the technology advanced, businesses began using AI for customer segmentation, predictive analytics, personalized marketing, and customer service (Kumar & Reinartz, 2012).

Case Studies of Successful AI Integration in Global Marketing

Amazon: Amazon's AI-powered recommendation system is a classic example of successful AI integration in marketing. Using machine learning algorithms, Amazon analyzes a customer's past purchases, browsing history, and items in their cart to suggest products that the customer might be interested in (Nguyen *et al.*, 2019). This personalized approach has significantly boosted Amazon's sales and customer engagement.

- **Netflix:** Netflix uses AI to personalize the viewing experience for its users. By analyzing a user's viewing history, ratings, and other behaviors, Netflix's AI algorithms recommend shows and movies that the user might enjoy (Gomez-Uribe & Hunt, 2016). This has not only improved customer satisfaction but also increased viewer retention for Netflix.
- **Starbucks:** Starbucks uses AI in its "Deep Brew" program to personalize marketing messages to its customers. The AI system considers factors such as order history, time of day, weather, and location to suggest items to customers. This has resulted in increased customer loyalty and sales for Starbucks (Starbucks, 2019).

These cases illustrate how AI has revolutionized marketing globally, providing valuable insights that can be applied to the Bangladeshi context.

3.2 The Status of AI Adoption in Bangladesh

Present Status of AI Adoption in Various Sectors of Bangladesh

Bangladesh, as an emerging economy, has shown an increased interest in adopting AI technologies in various sectors. A report by PwC (2021) indicates that the government of Bangladesh has prioritized the integration of AI in the country's digitalization roadmap, particularly in areas such as healthcare, agriculture, and public services.

In the private sector, a few leading companies have begun to adopt AI technologies to enhance their operations. For instance, Grameenphone, the largest telecommunication operator in Bangladesh, has used AI for customer segmentation and predictive analytics to improve its services (Grameenphone, 2022).

Case Studies of AI in Bangladeshi Marketing

Despite being at an early stage, there are instances of AI adoption in marketing within Bangladesh. Few of the mare discussed below:

- **Grameenphone:** Grameenphone, Bangladesh's largest telecommunication operator, has been a pioneer in adopting AI for improving its marketing strategies. The company has implemented AI in customer segmentation and predictive analytics, enabling it to tailor its services to individual customer needs.
  Grameenphone uses AI to analyze customer behavior and usage patterns, which helps it segment its customer base effectively. This segmentation allows the company to target its marketing campaigns more accurately, leading to increased customer engagement and improved return on investment (Grameenphone, 2022).
- **ShopUp:** ShopUp, a Bangladeshi e-commerce platform, has integrated AI to enhance its customer engagement. The company uses AI to personalize product recommendations, which has resulted in increased customer satisfaction and sales.
  By analyzing customer browsing and purchase history, ShopUp's AI system can recommend products that a customer is likely to be interested in. This personalized approach has not only increased sales but also improved customer loyalty, as customers appreciate the tailored shopping experience (ShopUp, 2022).
- **Pathao:** Pathao, a popular ride-hailing service in Bangladesh, has utilized AI to optimize its marketing campaigns. The company's AI system analyzes data from various sources, including customer feedback and social media, to identify trends and preferences.
  Using these insights, Pathao can create targeted marketing campaigns that resonate with its customers. This approach has helped Pathao increase its customer base and maintain a competitive edge in the crowded ride-hailing market (Pathao, 2022).

These case studies demonstrate the potential of AI in revolutionizing the marketing of Bangladesh. As more businesses follow these examples and adopt AI, the impact on the country's marketing industry is likely to be substantial.

3.3 The Potential of AI in Revolutionizing Bangladeshi Marketing

Artificial Intelligence (AI) holds significant potential in revolutionizing marketing of Bangladesh which are discussed below:

Predictive Analytics for Understanding Customer Behavior

Predictive analytics, a form of AI, can revolutionize the way Bangladeshi businesses understand and engage with their customers. By analyzing past customer behaviors and patterns, predictive analytics can forecast future trends, enabling businesses to anticipate customer needs and preferences. For instance, an e-commerce platform could use predictive analytics to identify products that a customer is likely to purchase in the future, leading to more effective marketing strategies (Shmueli & Koppius, 2011).

AI in Content Generation and SEO

AI can help Bangladeshi businesses in content generation and Search Engine Optimization (SEO). AI tools can generate content based on specific guidelines and keywords, making the content creation process more efficient.

Similarly, AI-driven SEO tools can optimize web content to improve its visibility on search engines, potentially reaching a wider audience (Chaffey & Ellis-Chadwick, 2019).

Chatbots and Virtual Assistants for Customer Service

Chatbots and virtual assistants can significantly enhance customer service in Bangladesh. These AI-powered tools can provide instant responses to customer queries, handle multiple customers simultaneously, and operate round-the-clock, leading to improved customer satisfaction and loyalty (Van Doorn *et al.*, 2017).

AI in Social Media Marketing

AI can also revolutionize social media marketing in Bangladesh. AI tools can analyze social media data to identify trends, monitor brand sentiment, and target potential customers. For instance, an AI tool could analyze the social media activities of a business's target audience, enabling the business to tailor its social media marketing strategy accordingly (Nguyen et al., 2019).

Personalization and Recommendation Engines

AI-driven personalization and recommendation engines can dramatically improve marketing outcomes in Bangladesh. By analyzing a customer's behavior, these engines can provide personalized product recommendations and marketing messages, leading to increased customer engagement and sales, as evidenced by global companies like Amazon and Netflix (Gomez-Uribe & Hunt, 2016).

AI has the potential to revolutionize marketing of Bangladesh, providing businesses with the tools to understand their customers better, enhance their marketing efforts, and ultimately drive business growth.

3.4 Challenges Faced in AI Adoption in Marketing of Bangladesh

Despite the early signs of progress, AI adoption in Bangladesh faces several challenges. The World Bank (2020) identifies infrastructural limitations, a shortage of skilled manpower in AI, and the lack of a clear regulatory framework for AI as significant barriers. Furthermore, data privacy concerns and the digital divide within the population present additional hurdles for AI adoption in Bangladeshi marketing.

While Bangladesh is making strides towards AI adoption in various sectors, its integration into marketing is still in the early stages. Overcoming the identified challenges will be crucial for the successful implementation of AI in the country's marketing landscape.

4 Discussion

4.1 The Implications of AI for Bangladesh's Marketing Industry

The integration of AI into Bangladesh's marketing industry will have far-reaching implications, influencing job roles, ethical considerations, and potential risks which are as follows:

The Impact on Job Roles and Skills Required in the Marketing Industry

The adoption of AI is likely to transform the job landscape in the marketing industry. Some roles, particularly those involving repetitive tasks or data processing, may become automated. However, this does not necessarily mean a reduction in jobs. Instead, it indicates a shift in the nature of roles and the skills required.

Professionals in the marketing industry will need to develop new skills to work effectively with AI. These include data analysis, programming, and a deep understanding of AI technologies. The ability to interpret and apply AI-generated insights will become a crucial skill for marketers (Chui et al., 2018).

Furthermore, as AI takes over routine tasks, marketing professionals can focus more on strategic and creative aspects of marketing, which are harder to automate. This shift could lead to more innovative and effective marketing strategies.

The Ethical Implications of AI in Marketing

The use of AI in marketing also raises ethical considerations. Issues of data privacy and consent are paramount, as AI often relies on large amounts of personal data to function effectively. Marketers will need to ensure they adhere to regulations and best practices regarding data protection (Martin, 2019).

Additionally, the use of AI in personalized marketing can lead to concerns about manipulation and fairness. Businesses must ensure their use of AI is transparent and does not unduly influence or exploit consumers.

Potential Risks and Mitigation Strategies

Potential risks of AI in marketing include data breaches, inaccurate predictions, and over-reliance on AI at the expense of human judgment. To mitigate these risks, businesses should invest in robust data security measures, regularly validate and update their AI models, and maintain a balance between AI and human input in decision-making (Bughin et al., 2017).

While AI has the potential to revolutionize the marketing industry in Bangladesh, its implications must be carefully considered and managed to ensure a successful and responsible AI integration.

4.3 Overcoming Challenges to AI Adoption in Marketing

Despite its potential, the adoption of AI in Bangladesh's marketing industry faces several challenges. However, these challenges can be overcome with strategic planning and collaboration among government, educational institutions, and private organizations. Other ways of overcoming the challenges are:

Addressing Lack of Technical Infrastructure

The development of a robust technical infrastructure is critical for AI adoption. Government plays a pivotal role in this process, investing in necessary infrastructure like high-speed internet and data centers. In addition, private organizations can invest in in-house technical infrastructure, such as servers and cloud computing, to support their AI applications (Bresnahan & Trajtenberg, 1995).

Developing Skilled Manpower

The lack of skilled manpower in AI can be addressed through education and training. Universities and vocational training institutions can introduce courses in AI, machine learning, data science, and related fields. Private organizations can also invest in employee training programs to upskill their workforce (Chui et al., 2018).

Ensuring Data Privacy

Data privacy concerns can be addressed by implementing robust data security measures and adhering to data privacy regulations. Transparency in how customer data is used and ensuring that customers are able to control their personal data are crucial steps towards assuaging privacy concerns (Martin, 2019).

Role of Government, Educational Institutions, and Private Organizations

The government, educational institutions, and private organizations all have roles to play in promoting AI adoption. The government can provide a conducive regulatory environment, invest in necessary infrastructure, and promote AI education and research.

Educational institutions can equip students with the skills necessary for AI through relevant courses and practical training.

Private organizations can invest in AI technologies, provide training for their employees, and collaborate with academic institutions for research and talent acquisition.

While the adoption of AI in Bangladesh's marketing industry presents challenges, they are not insurmountable. With concerted effort and strategic planning, Bangladesh can overcome these obstacles and unlock the full potential of AI.

4.4 The Future of AI in Bangladeshi Marketing

As the digital landscape in Bangladesh continues to evolve, AI is set to play an increasingly significant role in the country's marketing industry. Here are some trends and predictions for the future of AI in Bangladeshi marketing:

Predictive Personalization

With advancements in AI, marketers will be able to predict consumer behavior more accurately and offer highly personalized experiences. This personalization will extend beyond product recommendations to include personalized content, promotions, and customer service (Chaffey & Ellis-Chadwick, 2019).

Voice and Visual Search

As more consumers adopt voice assistants and visual search technologies, AI will be instrumental in optimizing marketing strategies for these platforms. Marketers will need to adapt their SEO strategies for voice search, while visual search will open up new opportunities for product discovery (Kumar et al., 2020).

AI-Driven Content Creation

AI tools will become more sophisticated in generating content, from blog posts and social media updates to personalized marketing messages. This will allow marketers to create content more efficiently and at a larger scale (Chaffey & Ellis-Chadwick, 2019).

The Role of Bangladeshi Companies and Government

Bangladeshi companies will need to invest in AI technologies and upskill their workforce to stay competitive. They will also need to collaborate with AI vendors and academic institutions for research and talent acquisition.

The government has a crucial role to play in promoting AI adoption. This includes investing in necessary infrastructure, creating a conducive regulatory environment, and promoting AI education and research.

The future of AI in Bangladeshi marketing is promising. With the right investment, training, and regulatory support, Bangladesh can harness the power of AI to revolutionize its marketing industry.

4.5 Limitations

There exist a few limitations of this study. Firstly, this study was made based on data collected from a limited number of sources. Secondly, there had been time constraint while doing the study. Thirdly, this study's data was collected from a small number of sample size which has been located in Dhaka city. This makes the implication of the study restricted.

5 Conclusion

Artificial Intelligence holds significant potential to revolutionize the marketing landscape in Bangladesh. From predictive analytics and personalization to content generation and customer service, AI can streamline processes, optimize campaigns, and enhance customer experiences.

However, harnessing the full potential of AI is not without challenges. Technical infrastructure, skilled manpower, and data privacy are key areas that need addressing. There is a clear need for a collaborative approach involving government, educational institutions, and private organizations to overcome these challenges.

Despite the hurdles, the case studies of Grameenphone, ShopUp, and Pathao demonstrate that the adoption of AI in marketing is not only possible but can lead to substantial benefits. These early adopters serve as inspiration for other businesses in Bangladesh to explore AI technologies and integrate them into their marketing strategies.

The future of AI in marketing in Bangladesh is promising. Advancements in AI technologies will continue to provide new opportunities for businesses to connect with their customers in more meaningful and efficient ways. Therefore, it is imperative for businesses in Bangladesh to proactively adopt AI and prepare themselves for the digital marketing landscape of the future.

While the path to AI integration may be complex, the potential benefits make the journey worthwhile. With a strategic approach, investment in infrastructure and skills, and a commitment to ethical data practices, the Bangladeshi marketing sector can successfully harness the power of AI and usher in a new era of innovation and efficiency in marketing.

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