

The Impact of AI-Driven Social Media Advertising on Consumer Purchasing Decision

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ARTICLE INFO	ABSTRACT
Received: 05 Oct 2024 Revised: 10 Dec 2024 Accepted: 18 Dec 2024	<p>The rapid growth in Social media has changed a new form of advertising for businesses called social media advertising. With dynamic changes the digital market has experienced an expansion, reshaping business activities with advance technology. E-commerce has introduced a new purchasing and selling habit of consumers. Artificial intelligence integration changed online shopping by providing personalized customer experiences that have a profound impact. The AI really assists in stimulating profits by transforming inquiries into purchases using extensive information about potential buyers from e-business sites. A sample of responses was also collected from people in the marketing industry and from online platform customers.</p> <p>Lately, the conventional marketing strategy has been reformed because of Artificial Intelligence (AI) technology that gave marketers personalized instruments for constructing advertisements depending on shopping history and internet inquiries. Also AI enables programmatic advertising in real time, manipulating current browsing behaviour to optimize ad targeting on social media platforms.</p> <p>Keywords: Artificial Intelligence, Consumer Behaviour, Purchase Intention, Digital Marketing</p>

INTRODUCTION:

One may define artificial intelligence as a collection of technologies that enable advanced functionalities of computers, such as problem-solving through emulating human intelligence. The main technologies involved in AI systems include computer science, hardware and software engineering, data analytics, linguistics, neuroscience, philosophy, and psychology. AI Marketing is a whole different paradigm of marketing, from simple automation to value addition personalization. AI Marketing employs artificial Intelligence principles, including machine learning, to predict client behaviour and achieve marketing goals. Consumer purchase intentions are complex and intertwined with the behaviour and attitude of consumer. Forecasting purchase decisions often relies on understanding buying intentions, which is considered the most accurate method. Extensive research has explored the impact of digital marketing and artificial intelligence on shaping consumer purchase intention (Busman & Ananda, 2022). Concurrently, digital marketing platforms have expanded to include a diverse range of channels, ranging from email marketing and social media to search engine optimization and content marketing (Chaffey & Ellis-Chadwick 2019). Artificial Intelligence enables personalization and information-oriented experiences, such as product recommendations, customer support chat bots, and predictive analytics for tailored advertising. (Kapoor et al 2017). Consumer have expressed their consensus that digital marketing offers a diverse array of products and facilitates optimal purchasing practices through e-shopping and electronic word of mouth. It provides comprehensive information about products, enhancing the shopping experiences and making it more engaging. This enables consumers to gain a clearer understanding of a product before making a purchase decision (Alwan & Alshurideh, 2022).

Purchase intention is the willingness or desire of a consumer to buy a product or service that contains AI technology. As AI is increasingly being used in all sectors, consumers are becoming more aware of its benefits. The factors that affect purchase intention are the perceived usefulness, ease of use, and trustworthiness of AI based products or services. Consumers also consider taking into consideration perceived risks of AI technology, such as privacy concerns and the threat that AI might take the place of human workers. Hence, the purchase intention towards AI is a result of numerous factors that depict the need for businesses to gain an understanding of consumer attitudes and perceptions towards AI to use it in business activities. (Ragul & Dulloo, 2023).

LITERATURE REVIEW

According to Nagy and Hajdu 2020 the major factor impacting customer attitude towards AI while doing online shopping is trust. Other than trust when it comes to developing attitude and decision making the perceived value component will add greater value and is even more important than perceived ease of use in enhancing attitude and decision making. The shop owners who want to improve their customer satisfaction take help from these results as they are very relevant for them. Anolougously AI should also introduce their online consumers with the advantage of greatest offers and costly items while also adding personalized offerings to them. Information and entertainment are considered to have a major positive impact on social media advertisement (Dehghani & Tumer,2015 ; Sarena & Khanna, 2013) The study explains that when a consumer considers an advertisement appealing,pleasureable to sense and provides sensory pleasure it is considered entertaining (Lim et al,2017; Pollay & Mittal,1993)

According to moore and rodgers(2005) The magnitude of belief & trust of a particular ads affects- how a customer consumes information telecast on a TV commercial. Worth of social media ads is remortably impacted by both interest and information(logan et at,2012).

According to Lee & hong (2016) the impact of creative and informative ads on consumers' expression of empathy have been proven. Advertisements are consumed as information by the buyer as they give them knowledge of both the product which eventually help them in making the right choice.Jamali & Khan 2018- A popular celebrity while endorsing a product has potential to bring customers which generate the revenue of the business.Utilising celebrity endorsement also improves the products image and gets it closer to what customer want (**Roozen & Claeys,2010**)

Yin and Qui,2021 explained that an e-commerce platform should make AI technology development sustainable and start investing in marketing. In order to make this happen they should improve intelligent search, recommendation and interaction technologies constantly, this will result in improving the efficiency of search engines over text ,image, voice and image retrieval. Developing technical capabilities is another challenge in big data retrieval services. Increased involvement with the AI marketing technology on platform creates greater value of customer opinions and enhances their satisfaction level. When it comes to AI virtual assistants, customers prefer correctness and knowledgeable experience more than satisfaction.

Satapathy & Nanda, (2023) point out that the amalgamation of AI with marketing has enhanced efficiency across numerous stages of marketing starting from data analysis to personalized customer interactions,AI has become a strong asset for the market. By providing automation for standard tasks and enabling customised experiences for customers,AI enhances marketing efficiency and ensures the competitiveness of businesses in the fast pace generation. With AI's evolution, it will be the central stone of transformation in digital marketing. Its potential to deliver highly targeted content, adjust to everchanging marketing landscapes and predict customer behaviour makes AI paramount for modern marketing practices. Ultimately ,AI integration signifies technological leap and a fundamental shift in business engagement with the public in this digital era.

Chintalapati & Pandey, (2021) explained that the advancement of artificial intelligence(AI) has been a considerable stimulus in driving digital transformation, escorting in a modern day of disruption across enterprise businesses. Marketing is currently experiencing deep alterations because of incorporation of AI at a crucial level.Modern Marketing plan of action is accepting advanced technologies like AI being paramount for quick success.Incorporating AI powered practices nurtures innovation throughout all marketing campaigns.Amid the digital marketing channels,social media emerges as a governing force,convincing digital marketers to enchain revolutionary marketing techniques. Development of AI is ongoing and will become progressively intelligent and accelerate human thinking as AI continues to grow. It is likely to mix seamlessly with human creativity, possibly surpassing human creative thinking capabilities.

Krishna & Prathapkumar, (2023) indicated that the impact of AI on personalized marketing is disruptive and has thoroughly changed the way organizations communicate with their audiences and meet their needs.Research insights provide an understanding of key aspects of this influence:. AI-driven chatbots, voice assistants, and conversational interfaces have reinvented customer interactions by providing responses that are immediate, personalized, and contextual. In doing so, this ensures not only greater customer service but also a consistent and interactive user experience. Integrated AI brings cohesion in today's marketing channels to the customers' journey. From websites and social media to email campaigns and mobile applications, AI optimizes each touchpoint toward personalized engagement, connection, and loyalty.

Dahiya & Garg, (2023) explained that the increase of digital technology, impacted by the wide usage of smartphones and the effect of social media, caused a fundamental transformation in how a venture communicates with their customers. It becomes a necessity for a business to adapt to the changing environment where communication is popular through social platforms. Implementation of these changes can give a fruitful outcome and increased number of customers which will benefit the business. **Rajdhar 2021** explained that AI is creating a path for businesses and buyers. While businesses innovate, buyers respond to that again and induce businesses to make some adjustments. This process brings about buyer satisfaction and deal improvement in the case of business. Data analysis with appropriate actions will definitely enable businesses to improve their associations with buyers by a long way. It helps e-commerce organizations to become closer to their customers. Artificial Intelligence can make use of large datasets of buyer behaviour and consumption patterns on e-commerce platforms. Self-learning algorithms of AI facilitate creating a tailored shopping experience for online buyers.

Thilagavathy & Kumar, (2021) organizations have benefited greatly from digital marketing, a valid area of marketing science which has improved client involvement through electronic offering. The advancement of technology has shaped digital marketing into a competitive landscape where constant adaptation to digital marketing is necessary. Digital technology has been utilised by companies around the world to improve the service and operation efficiency in marketing. Nowadays AI also helps in making marketing decisions. Artificial intelligence enables the business to understand customer needs and have increased sales and generation of revenue.

According to Manjula (2021), consumers today are actively engaged with AI and its consequent implications, therefore triggering a higher state of curiosity with regard to the effect it has on their lives. The paper discusses how AI will affect consumption patterns, hence shaping purchasing behaviors now and in times to come. AI is composed to reshape our future and is having a great influence on several industries. The effect of it has not been confined to only industries but spilled over to customer behavior and response. Innovation will be driven by the increasing interaction between customers and brands along every stage of the buyer's journey. AI's position in that process is going to further evolve to help consumers make informed choices, thus changing the market dynamics.

Objective: To determine the Impact of Digital Marketing operated by an AI on Consumer Purchase Intention.

Research Methodology: In this study, a consideration of 227 respondents was collected from the marketing industry and customers who use online platforms. Data collection was done through random sampling, and examination for results was done using "Explanatory Factor Analysis".

Finding of Study:

Below is the table showing demographic details of participants: it shows that 50.98% are female participants and 49.02% are male. In terms of age of the respondents, 30.28% fall between 30 to 35 years, 31.39 % between 35 to 40 years, and 38.33% above 40 years of age. On Business sector type, footwear/Apparel are 28.87%, Grocery is 26.32% and electronics is 44.81%.

Details of Respondent

“Variables”	“ Participant”	“ Percentage %”
Gender of Participant		
Male	119	50.98%
Female	108	49.02%
Total	227	100
Age in Years		
30 to 35	72	30.28%
35 to 40	68	31.39%

Above 40	87	38.33%
Total	227	100
Business Sector		
Apparel/ Footwear	64	28.87%
Grocery	69	26.32%
Electronic	94	44.81%
Total	227	100

Factor Analysis**“KMO and Bartlett’s Test”**

“Kaiser - Meyer -Olkin Measure of Sampling Adequacy”		.792
‘Bartlett’s Test of Sphericity’	“Approx. Chi-Square”	3724.730
	df	91
	Significance	.000

“KMO and Bartlett’s Test”, value of KMO is.792**Total Variance Explained**

“Component”	“Initial Eigenvalues”			“Rotation Sums of Squared Loadings”		
		“Total %”		“Total”	“% Of Variance”	“Cumulative %”
1	5.842	41.731	41.721	3.798	26.128	27.128
2	2.665	19.026	60.752	3.598	24.703	51.841
3	2.090	14.931	75.691	2.501	16.872	70.703
4	1.711	12.216	87.906	2.410	17.200	84.903
5	.404	2.970	90.772			
6	.325	2.838	93.096			
7	.242	1.756	94.836			
8	.208	1.486	96.326			

9	.182	1.426	97.652			
10	.109	.762	98.421			
11	.092	.581	92.009			
12	.069	.476	99.484			
13	.042	.358	99.821			
14	.028	.177	100			

All the four factors are contributing to explain the total variance of 84.903%. Personalized Recommendations explained the variance of 26.128%, Behavioral Targeting by 24.703%, Chatbots & Virtual Assistants by 16.872%, and Predictive Analytics by 17.200%.

“S.NO”	“Statements”	“Factor Loading”	“Factor Reliability”
	Personalized Recommendations		.981
1.	AI algorithms analyze customer data to offer personalized product recommendations.	.961	
2.	It can suggest products by understanding individual preferences and purchase history.	.957	
3.	AI delivers personalized offerings to online consumers ensuring they can access the best deals.	.942	
4.	AI optimizes each touchpoint for personalized recommendations, fostering connection and loyalty.	.940	
	Behavioral Targeting		.960
1.	AI enables marketers to target specific consumer segments with tailored messages and advertisements.	.951	
2.	AI-driven digital marketing increases the chances of converting leads into customers	.924	
3.	AI tools emerge as effective aids that influence customer behavioral responses.	.900	
4.	It investigates into customers’ emotional , mental, and behavioral responses., influenced by various factors	.888	

	Chatbots & Virtual Assistants		
1.	Chatbots and virtual assistants powered by AI provide instant support	.908	
2.	It guides customers all through the purchase process	.872	
3	Real - time assistance can enhance consumer trust and confidence of customers	.871	
	Predictive Analytics		
1.	AI algorithms can foresee consumer behavior by examining past data and recognizing patterns	.910	
2.	Marketers can use information to anticipate needs and preferences, adjusting their marketing strategies	.892	
3.	Leveraging AI and data analytics yield highly predictive insights into buyer behaviour	.817	

Factors and the associated variables :Let's start with the first factor of the study . It is personalized suggested that the variable that fall under this factor include, AI algorithms analyze customer data to offer personalized product recommendation, suggest products by understanding individual preferences and purchase history, AI delivers personalized offerings to online consumers,they can access the best deals,and AI optimizes each touchpoint for personalized recommendations,forstering connection and loyalty.The second variable of the study is behavioral targeting,which include variables such as :AI enables marketers to reach niche customer segments with relevant message and ads, AI driven digital marketing improve the chances that leads can be converted into customers,AI applications become empowering tools that influence customer behavioral intentions and it examine consumers emotional, mental and behavioral response to products, which are influenced by several factors. Virtual Assistants & Chatbots is the Third element of the study, it comprises such variables as AI powered chatbots and virtual assistants provide instant support,it guides customers all through the purchase process,and Real time assistance can enhance consumer trust and confidence of customers.Fourth and last factor is predictive analytics. The variables included under this factor are AI algorithms that can foresee consumer behaviour by studying past data and recognizing patterns. Marketers can use information to anticipate needs and preferences, adjusting their marketing strategies and leveraging AI and data analytics yield highly predictive insights into buying behavior.

“Reliability Statistics”

“Cronbach’s Alpha”	“Number of Items”
.885	14

Total reliability of 14 items that includes variables for Influence of AI driven Digital Marketing on Consumer Purchase Intention is 0.885

Conclusion:Artificial Intelligence is being used into digital marketing from which company is driving faster,cheaper and with greater accuracy.From this innovation business and company

transferred how to communicate with their targeted audiences, accompanying a new era of effectiveness and efficiency.To make the best use of value generation requires an understanding of how consumers are affected by digital marketing.Digital marketing plays an important role in deciding the purchasing intention, as mordern and younger generation are more adopt to technology - on the regular basis- they are using mobile phones, computer and tab.Also these customers trust to comfort on the information by these devices - encourage them to explore various new ways of purchasing goods & services through digital platforms. Not only this but creative platforms with effective and efficien

digital Marketing enable buyers to share their experiencing criteria and expectation about the products, which directly impacts the purchasing intention. However - digital marketing do enhance customer satisfaction and simultaneously grow revenue through personalization leading to more of the repeat customers. Also the factors having direct impact of AI operated digital marketing as Consumers purchase intention of the recommendation.

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