

Impact of fintech and Artificial Intelligence in Transforming Consumer Buying Behaviour towards E-Commerce

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Abstract- Online buying behaviour has undergone substantial shifts as a result of E-commerce, which has transformed the way consumers shop. Online buying is a common option for people looking to buy products and services while relaxing in their homes because of how simple purchase it is. E-commerce as a result has a significant impact on how purchase online shop. This impacts online purchasing behaviour in a various way, including the product availability of information, convenience, affordability, and usability. E-commerce has consequently become a well-liked option for customers looking to make purchases online. However, the development of AI (Artificial Intelligence) in the E-commerce sector had a big impact on consumers' online purchasing behaviour. With the aid of its tools, artificial intelligence analyses massive amounts of data, enhances search results, personalizes recommendations, and makes voice and visual search possible. As AI develops and becomes more sophisticated, it will have a bigger impact on how consumers behave when making purchases online. As a result, this study proposed to investigate the impact of AI on buying behaviour in the E-commerce sector. This study explains both the positive and negative effects of AI on consumers' online purchasing decision makings. The study is conceptual in nature and collects data from secondary sources, such as books, reports, websites, newspapers, journals, and theses. Research Scholars, Research practitioners and Industries will benefit from the practical implications of my research.

Keywords—Fintech, E-commerce, online buying behaviour, Artificial Intelligence, consumer buying behaviour.

I. INTRODUCTION

In today's business world, it is undeniable that artificial intelligence (AI) has a profound influence on every business organization. Additionally, artificial intelligence is being adopted to fully anticipate

customer behaviour in order to restore business processes by removing unnecessary tasks. Before the revolution of artificial Intelligence, e-commerce or electronic commerce made an opportunity for entrepreneurs and small businesses to deal its business transactions in online mode and to reach a wider audience at the same time. E-commerce provides numerous benefits such as convenience, price comparability, ease of use, a wide variety of products, and many more, all of which influence online purchasing behaviour. As technology advances, it provides blockchain, cloud computing, and AI (Artificial Intelligence), which broadens the scope of development for entrepreneurs in e-commerce.

"Artificial Intelligence (AI) is the study and advancement of machines that are capable of carrying out operations that typically require cognitive abilities, such as recognizing sights and sounds, making decisions, and language translation," referring to the Oxford Dictionary. Artificial Intelligence changes the scenario of the whole e-commerce sector by offering new opportunities to entrepreneurs. The AI (Artificial intelligence) market in marketing was reported as 15.84 billion dollars in 2021. subsequently is anticipated that the overall market value will have surpassed 107.5 billion by 2028. As a result, AI has emerged as the most prominent trend in a various field, including marketing. AI plays an incredible role in shaping online buying behaviour. Online buying behaviour includes product search and evaluation, selection of a seller or e-commerce platform, use of online payment systems, and post-purchase evaluation of the product or service. Personal preferences, product features, pricing, promotions, brand reputation, and online reviews all influence online

purchasing behaviour. It is also influenced by the user experience and ease of navigation on the e-commerce platform, as well as the security and dependability of online payment systems.

Market for Artificial Intelligence in Marketing

Consequently, advertisers may employ machine learning to analyse enormous quantities of data, conduct personalized sales, and meet customer specifications. Artificial intelligence enables businesses to gain a quick and accurate understanding of their customer's needs, increasing sales and revenues. With the use of these AI technologies, businesses can easily forecast consumer buying behaviour. With the integration of numerous new and cutting-edge technologies, like big data, the concept of AI tools and what they entail in and of themselves are still evolving. A developing state of research is being done on multiple facets of AI tools, with an emphasis on the design of AI tools, covering everything from gathering user requirements to technical issues in a range of contexts. Artificial Intelligence technologies include audio processing, computer vision, machine learning, expert system, natural language processing, etc.,

So, there are various AI technologies used by marketers to have favorable online buying behaviour. Some of the technologies are:

1. Voice Processing technologies: It is the machine learning technology where the software evaluates and decodes the voice or spoken language. Example: Customers can shop hands-free by using voice commands with virtual assistants such as Google Assistant, Amazon Alexa, and Siri.
2. Virtual try on: The technology generates a virtual environment in the real-world environment of the user. It enables customers to examine a product before purchasing it. For example, during online shopping, Estée Lauder processes the user's facial pic to decide on shades of makeup individually, War by Parker's virtual try on for eyewear glasses, KFC's face recognition tool for payment, and many more.
3. Cognitive Robots: These are the robots that use natural language technology to perform operations without human intervention. For example, Walmart's 'Auto-C' robot analyses stock

levels and detects out-of-stock items, allowing stock associates to restock the product, making it easier for customers by increasing product availability.

4. Recommendation system: The system in which an algorithm analyses browsing and order history to understand customer preferences and purchasing behaviour. As an example, Amazon recommends products based on their search history.
5. Test processing technology: It is natural language technology, which includes chatbots and sentiment analysis, that analyses human language or text. For instance, the Sephora company employs a data or text processing tool to analyze product reviews, opinions, and feedback.

Thus, artificial intelligence predicts customer online purchasing behaviour by identifying, analyzing, and interpreting customer data by using its tools and technologies. This projection gives marketers new power to engage in activities that satisfy customers and increase online purchasing. As a result, the study attempts to provide a practical cohesion among the aspects of online purchasing behaviour, artificial intelligence, and e-commerce in order to provide new knowledge.

II. REVIEW OF LITERATURE

Gained insight into how AI integration in digital marketing impacts consumer purchasing behaviour. The customer decision journey is used to evaluate all artificial intelligence-powered web-based advertising software which have the potential to boost the user experience on the web. And concluded that using this technology improves shopping experiences, service quality, and customer trust.

Khan examined the link between artificial intelligence and consumer purchasing patterns. Furthermore, the difference in customer purchasing behaviour based on demographics was investigated. According to the findings of the study, customers consider the AI's recommendations and responsible for 96.1% of customer purchasing behaviour. It was also found that males and females act differently when shopping online and that their income influences their purchasing decisions. Olan et al.

He designed a meta framework that integrates AI, consumer behaviour (CB), and knowledge sharing (KS). When knowledge develops, AI improves consumer attitudes and behaviour, whereas social networks encourage curiosity and encourage learning by having users share their personal experiences with specific items and amenities.

III. OBJECTIVE OF THE STUDY

The primary objective of this paper seeks to develop the knowledge of how technological advances such as AI have advanced online buying behaviour in E-commerce. The study proposed the positive as well as negative impact of artificial intelligence on online buying behaviour.

IV. IMPACT OF ARTIFICIAL INTELLIGENCE ON ONLINE BUYING BEHAVIOR

Just as online commerce has provided numerous benefits to consumers such as shorter shopping time, autonomous suggestions and relevant suggested products and personal customization. There are some negative impact of artificial intelligence on online buying behaviour like privacy concerns, lack of transparency and many other. So, here are some positive and negative impact of artificial intelligence- When it comes to online buying behaviour, Artificial intelligence has a significant impact. Here are some points that shows positive impact.

A. *Positive impact of Artificial Intelligence on online buying behaviour*

Artificial intelligence provides numerous benefits such as reducing human errors, time saving capabilities, digital assistance, and unbiased decisions. Alternatives Evaluation: At this point in the consumer decision-making process, prospective buyers have developed criteria for what they want in a product. Now they weigh their prospective choices against comparable alternatives. Alternatives may present themselves in the form of lower prices, additional product benefits, product availability, or something as personal as colour or style options. A marketer's marketing material should be geared towards convincing consumers that their product is superior to other alternatives.

Purchase decision: This stage starts with the consideration of whether or not to purchase a product and ends when they have decided to purchase the best option. The purchase decision typically in-store or online at that point in time after having completed some form of price comparison research (e.g., researching prices on Amazon).

Inventory Management: In their system, artificial intelligence has a feature that checks the inventory or stock. This allows executives to have an instant look at the stock and make it available to customers on time. This will make it easier for customers to find products that meet their needs. For example, Walmart has a robot named Auto-C that checks the stock level and fills it before the product runs out of stock. This allows customers to easily assess the products.

Personal Recommendations: Artificial intelligence makes personal recommendations based on consumer choices, past browsing behaviour, and order history. It increases customer satisfaction, which increases online Purchasing Power; For example, Amazon suggests products based on the needs of the customer, increasing the likelihood of a purchase, Sephora uses AI tools to recommend makeup and skincare products.

Chatbots benefit: Chatbots are natural language processors that use artificial intelligence (AI) to understand human language and provide self-service to customers. These are intended to answer frequently posed queries, assist users in navigating the app, provide recommendations, and even assist in the successful completion of transactions. Pizza hut, for example, uses a chatbot on its web page and smartphone application to enable consumers to order pizzas and other meals. H&M provides style guidance and product recommendations to its customers via a chatbot on its Facebook Messenger platform.

- Fraud detection: AI logs safeguard customers against fraudulent activities. Pay pal, for example, has a system in place to detect fraud and block suspicious activity.
- Voice Commerce: AI tools, such as voice assistants, make it easier for customers to evaluate the service on a regular basis. Voice-based assistants like Siri, Alexa, and Google Assistant

make customers' shopping experiences easier and more engaging, which increases their purchase intent.

B. Negative impact of Artificial Intelligence on online buying behaviour

There are both positive and negative aspects to each scenario. The same is true for artificial intelligence, which has both positive and negative effects on online purchasing behaviour. Some of them are listed below:

1. **Artificial Intelligence and Freedom of Speech and Expression:** Today, we receive most information online or on social media. Social media platforms or intermediaries can control what we consume. Therefore, at times we are not able to make an informed choice because a biased narrative is presented to us through these platforms, thus impacting our freedom of speech and expression. Although at first glance, these issues seem unrelated, a closer look reveals the close relationship between AI and freedom of expression.
2. **Filter Bubbles:** The AI tools use the customer's search string, queries, and browsing history to provide relevant suggestions. However, because of the filter bubbles, this can sometimes make searching for products difficult. As a result, the consumer receives limited information because the search will relate it to previous or existing information. For example, By demonstrating individuals content that seems identical to their previous engagements, machine learning algorithms on social networking tools may generate feedback loops.
3. **Privacy concerns:** When user data is collected without consent, privacy concerns arise. In AI, websites on E-commerce platforms collect customer information, raising privacy concerns. AI, like personal recommendations, makes use of the customer's personal information, search history, and location. However, these personal details are sometimes abused. Some bogus E-commerce sites, for example, collect and misuse credit card or payment information.
4. **Unfair pricing:** AI tools use dynamic pricing algorithms to charge different prices. They charge different prices based on the customer's browsing history. Amazon, for example, has been chastised

for using dynamic pricing. Even the riding apps charge different prices depending on the time of day, charging more during peak hours.

5. **Overreliance on automation:** AI algorithms' recommendations and suggestions limit customers to a certain extent. The site does not display anything beyond that search history string. Customers are forced to rely entirely on the automation tool as a result. Customers cannot take advantage of or miss out on alternative offers. Customers can use AI recommendations, but they must also conduct their own research and read reviews before making a purchase.

CONCLUSION

In recent years, AI has developed incredibly which has become an emerging trend in a variety of fields, including the online retail sector. Through its various tools and technologies, artificial intelligence significantly advances the online sector. Virtual agents, cognitive robots, data visualization, speech analytics, and recommendation systems are all used in the e-commerce sector. This technology significantly improves customer purchasing behaviour. The recommendation system assists customers by making suggestions based on their browsing history, order history, and search history. Chatbots and virtual systems make the browsing process easier for customers. The AI algorithm detects fraud committed by customers when making a payment or ordering a product or service. By using its tools and technologies, AI can thus ease the customer journey from pre-ordering to post-ordering. Just as each aspect has two phases, AI has a negative impact as well as a positive impact. It includes privacy concerns, as technological advancements are increasing fraud by calling or mailing to customers through fake websites. On the one hand, the recommendation system assists customers by making suggestions, but on the other hand, it employs filter bubbles, which limit the customers' ability to search. Finally, it is concluded that AI has a significant impact on online purchasing behaviour by providing personalized recommendations, better services, fraud detection, and many other benefits. To make certain that the positive consequences of AI are optimized while maintaining the rights and values of consumers, companies and government officials must tackle the ethical

implications as well as hurdles associated with its implementation.

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