

A STUDY ON THE ROLE OF AI IN CUSTOMER SERVICES AND HOW IT IMPACTS THE BUYING BEHAVIOR OF CONSUMERS

Ms R Greeshma*, Kashish H Sharma**, S Lakshan***

*(Bcom – Accounting and Finance, Sri Ramakrishna College of Arts & Science, Coimbatore

Email : Greeshmaraamnivas@srcas.ac.in)

** (Bcom – Accounting and Finance, Sri Ramakrishna College of Arts & Science, Coimbatore

Email : kashishsharmacbe@gmail.com)

***(Bcom – Accounting and Finance, Sri Ramakrishna College of Arts & Science, Coimbatore

Email : lakshancrlakshancr@gmail.com)

Abstract:

The study discusses transformation in customer care through Artificial Intelligence and its eventual impact on customers' buying decision. It determines how AI supports tools like bots, recommendation platforms, and data analytics in giving a personalized nature, efficiency in services, and engaging the respective customer with certain issues such as privacy, and lack of humane touch. The study was conducted based on descriptive research design on customers in Coimbatore, using stratified random and convenience sampling methods on 120 respondents to collect the data. These results point very strongly to the fact that AI really enhances customer experience with faster responses, recommendations for items, and seamless transitions in the service they are using. Data security, demographic inclusivity, and ethical transparency are found to be critical barriers to acceptance. The study highlighted the need for a balance in automation with more human touch because trust and loyalty are built more easily. As such, these key findings provide effective strategies for commercial use of AI to ensure good practice and deliver customer-centric ways of using technology to transform interaction and decision patterns.

Keywords - Artificial Intelligence, Customer Service, Consumer Behaviour, Chatbots, Predictive Analytics, Trust, Data Privacy, Customer Loyalty.

I. INTRODUCTION

Artificial Intelligence (AI) has revolutionized various industries, and customer service is no exception. Over the last decade, AI technologies have transformed how businesses interact with their customers, providing faster, more personalized experiences. From chatbots and virtual assistants to predictive analytics and automated responses, AI in customer service is reshaping consumer expectations and influencing their buying behaviour in profound ways.

II. OBJECTIVES

- To analyse the impact of Demographic Variables in Customer Buying Behaviour.
- To identify the factors that influence the trust in AI-based customer service.

III. STATEMENT OF THE PROBLEM

The study deals with how the customer interactions (Chatbots, Virtual Assistants, Recommendation Systems) and purchase decision making is changed with AIs Introduction. AI may improve efficiency, personalization and availability; but when it comes to empathy and emotional connection, which are essential for trust and loyalty, the ability of AI to provide these is certainly questionable. Numerous consumers remain wary of privacy, personalization and the lack of personal touch that automated systems provide. This study aims to address these gaps by examining how AI impacts customer behavior and identifying key factors that influence its effectiveness in building trust, satisfaction, and brand loyalty.

IV. RESEARCH METHODOLOGY

This study uses analytical and statistical methods to study objectives. Primary data was collected through

structured questionnaires whereas secondary data was collected from journals, articles, previous reports and related websites. A provided set of questions that the respondents need to answer based on their experience and knowledge concerned to the subject of research. Simple sampling techniques was used to ensure equal representation, with 120 respondents within Coimbatore city. This study uses statistical tools such as Frequency and ANOVA to analyse the data.

V. TOOLS USED FOR THE STUDY

- Frequency
- Rank Analysis

VI. LIMITATIONS OF THE STUDY

1. The study is focused only on Coimbatore, so the findings might not apply to other places.

2. A sample of 150 consumers may not accurately reflect the range of experiences that people have.

VII. REVIEW OF LITERATURE

1. K. Ramya1 K. Karthikeyan (2024) Proceedings on Engineering Sciences, Vol. 06, No. 1 13-20 “A Study on the usage Of Artificial Intelligence Technology in Influencing Consumer Buying Behaviour with Special Reference to Online Shopping”. To examine how consumer buying behaviour is influenced by AI with reference to online shopping. The tools used for analysis are percentages, Gap Analysis, and ANOVA were applied. The present study focused on how consumer buying behaviour is influenced by AI with reference to online shopping. The primary data was collected from the respondents through a structured questionnaire. The sampling method used for data collection is convenience sampling. The questionnaires were distributed to 500 respondents. (59%) Most of the respondents belong to the Male category for online shopping with AI. (58%) Most of the respondents belong to the age of 18-24. The analysis found that AI tools influence and change

consumer buying behaviour. Chatbots, Personalized Ads, Visual search, and Voice Assistants are used by consumers for gathering product related information, searching the product, and higher touch customer support. The conclusion says that AI has influence the customer buying behaviour and it gather more information in purchase power of economy.

2. Dr. Ranga Chimhundu, Dr. Rumman Hassan (2021) Academy of Marketing Studies Journal, Volume 25, Issue 5 “Artificial Intelligence in Digital Marketing Influences Consumer Behaviour: A Review and Theoretical Foundation for Future Research”. To identify how consumer buying behaviour is influenced by integrating AI in digital marketing and how this supports better marketing decisions. The tools used for analysis are percentages, and ANOVA were applied. The methodology used was a systematic analysis of the literature. Scopus and Google Scholar databases were used to compile academic studies, papers, and publications over ten years from 2011 to the present. The papers were analysed in the review context, and keywords were focused on the title and research objectives. The questionnaires were distributed to 450 respondents. AI-powered customer experience shapes the customer's dynamic journey to make it convenient and satisfying by adding services performed by computers or machines to quality assessments, AI is changing the future of digital marketing and helps build trust and create personalised experiences for consumer. AI's involvement helps businesses identify their target customers in digital marketing platforms, understand their customers' needs and preferences and increasing transparency. AI tools in digital marketing platforms are integrated into live chat via Chatbots that engage consumers by promptly responding to inquiries in an easy-to-use interface. Using artificial digital marketing intelligence technologies together with human-produced data, companies can build trust in digital platforms and increase positive, personalised client experiences through a deep dive. The research concludes that AI boosts up the business sectors and enhanced the stock market and technology.

VIII. DATA ANALYSIS AND INTERPRETATION

FREQUENCY

A frequency table is a tabular representation of the distribution of observations based on the options in a variable. Frequency tables are useful to understand which of the options occur more or less often in the dataset. This is helpful to get a better understanding of each variable and deciding if variables need to be recoded or not.

Table 1: Gender of the respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	a) Male	82	68.6	68.6	68.6
	b) Female	38	31.4	31.4	100.0
	Total	120	100.0	100.0	

Table 2: interaction with an AI-powered customer service tools

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	a) Yes	110	90.9	90.9	90.9
	b) No	10	9.1	9.1	100.0
	Total	120	100.0	100.0	

Interpretation:

The data shows a high frequency of AI tool contact among participants. With almost twice as many men as women, the sample is dominated by men (68.6%). The findings' ability to be applied to different genders may be impacted by this skewed distribution. Over 90% of the sample has used AI-powered customer support products, indicating a high degree of familiarity. This reveals an important foundation for assessing how these technologies are perceived and what effects they have.

RANK ANALYSIS

Rank analysis in research refers to the evaluation and interpretation of data that has been organized into a ranked order based on specific criteria. This method is commonly used in disciplines such as social sciences, economics, and education to study hierarchies, preferences, or performance levels. Rank analysis allows researchers to compare items, individuals, or entities within a dataset, highlighting relative positions rather than absolute values. It is particularly useful when dealing with ordinal data. Statistical methods, such as rank correlation coefficients are often employed to measure relationships between ranked variables.

Table 3:

Ranking the influence of AI during a shopping experience based on the buying behaviour

Questions	Average	Rank
Rank the following based on the buying behaviour that AI influences during a shopping experience [Reduced the amount of time spent]	4.33	V
Rank the following based on the buying behaviour that AI influences during a shopping experience [Impacts on decision making]	4.48	IV
Rank the following based on the buying behaviour that AI influences during a shopping experience [Repeat purchases recommendations.]	4.55	III
Rank the following based on the buying behaviour that AI influences during a shopping experience [AI is convenient during shopping]	4.76	II

Rank the following based on the buying behaviour that AI influences during a shopping experience [AI provides more support than human service agents]	4.88	I
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Interpretation:

The rank analysis provides valuable insights on the AI’s greatest influence on shopping behaviour comes from its superior support over human agents, securing the top rank with an average score of 4.88, followed by convenience and repeat purchase recommendations. AI also aids decision-making and reduces shopping time. However, the analysis reveals that factors such as decision making and time reduction still lacks behind.

IX. FINDINGS

- ❖ 68.6% of the respondents are male and 31.4% of the respondents are female.
- ❖ 76.8% of the respondents are undergraduates.
- ❖ 90.9% of respondents have interacted with AI-powered customer service tools, indicating widespread familiarity and usage.
- ❖ Consumers found AI to be more efficient and responsive than human agents, offering quick resolutions and 24/7 availability.

X. CONCLUSION

AI’s role in customer service is transforming not only the way businesses operate but also the way consumers make purchasing decisions. By offering quicker, more personalized, and more reliable service, AI is driving significant shifts in consumer buying behaviour. As businesses continue to adopt AI technology, those that successfully integrate these systems into their customer service processes will likely see improved customer satisfaction, loyalty, and ultimately, higher sales. However, businesses must tread carefully, balancing automation with human interaction and ensuring data privacy to foster trust and maintain consumer confidence.

XI. REFERENCE

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