WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal Homepage: www.ijrpr.com ISSN 2582-7421

Impact of Artificial Intelligence-Powered Marketing on Consumer Purchase Decisions

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ABSTRACT

The study titled "Impact of Artificial Intelligence-Powered Marketing on Consumer Purchase Decisions" aims to examine how Artificial Intelligence (AI) influences consumer buying behaviour. AI-powered marketing techniques, such as personalized advertisements, product recommendations, and chatbots, are increasingly used by businesses to improve customer engagement and provide relevant shopping experiences.

The study focuses on the influence of personalized advertisements and AI-based product recommendations on consumer purchase decisions. It also examines the role of consumer trust, perceived usefulness, and privacy concerns in accepting AI-powered marketing. The research follows a descriptive research design and uses primary data collected through a structured questionnaire from 100 respondents. The collected data is intended to be analysed using tables, percentages, and interpretations to understand consumer perceptions and buying preferences.

The study is expected to provide insights into how AI-powered marketing can influence consumer attention, product selection, and purchase intentions. It also highlights the importance of data privacy, transparency, and consumer trust in developing effective marketing strategies. The research may help businesses understand consumer expectations and adopt responsible AI-powered marketing practices. Overall, the study aims to contribute to a better understanding of the relationship between Artificial Intelligence and consumer purchase decisions in the digital marketing environment.

Keywords: Artificial Intelligence, AI-Powered Marketing, Consumer Behaviour, Purchase Decisions, Personalized Advertising, Product Recommendations, Consumer Trust, Data Privacy.

OBJECTIVES OF THE STUDY

1. To examine the impact of AI-powered marketing on consumer purchase decisions.
2. To analyse the influence of personalized advertisements and AI-based product recommendations on consumer buying behaviour.
3. To identify the role of consumer trust, perceived usefulness, and privacy concerns in accepting AI-powered marketing.

LITERATURE REVIEW

1. Davenport et al. (2020)

Davenport, Guha, Grewal, and Bressgott examined how Artificial Intelligence could transform marketing strategies and consumer behaviour. Their study discussed the use of AI in customer service, marketing decisions, and personalized customer interactions. The authors also highlighted concerns related to privacy, bias, and ethical marketing practices. The study provides a theoretical foundation for understanding how AI-powered marketing may influence consumer purchase decisions.

2. Huang and Rust (2018)

Huang and Rust studied the role of Artificial Intelligence in service delivery. Their research explained how AI can perform analytical tasks and improve customer interactions through automated services. The study suggests that AI can improve service efficiency, although businesses must carefully determine which tasks should be performed by machines and which require human involvement. This research is relevant to understanding the role of AI chatbots and automated customer assistance in consumer decision-making.

3. Chandra et al. (2022)

Chandra, Verma, Lim, Kumar, and Donthu reviewed research on personalization in marketing. Their study analysed 383 publications and identified major themes, including personalized recommendations, personalized advertising, and the relationship between personalization and privacy. The authors explained that personalized marketing can reduce the effort required by consumers to find suitable products. This study is closely related to the present research objective concerning personalized advertisements and AI-based product recommendations.

4. Grewal et al. (2025)

Grewal and colleagues examined how generative Artificial Intelligence is shaping the future of marketing. Their research discussed the use of generative AI for creating marketing content, communicating with customers, and supporting product and service development. The authors also highlighted the importance of data quality, transparency, and human oversight. This study provides useful insights into the opportunities and limitations of AI-powered marketing in influencing consumer responses.

5. Ribeiro et al. (2026)

Ribeiro, López Rivero, and Abrantes conducted a systematic literature review on the impact of Artificial Intelligence on consumer behaviour towards brands. Their research identified convenience, effectiveness, trust, security, and personalization as important factors influencing consumer experiences, purchase decisions, and brand loyalty. The study also highlighted the role of AI in customer segmentation and predicting consumer preferences. It is particularly relevant to the present research because it connects AI-powered marketing with consumer trust and purchasing behaviour.

Research Gap

The reviewed literature demonstrates that Artificial Intelligence is increasingly important in marketing, particularly in personalization, product recommendations, customer interactions, and consumer data analysis. However, consumer responses may vary depending on their trust in AI systems, perceived usefulness, and concerns about personal data.

Therefore, the present study aims to examine these factors through primary data collected from 100 respondents. It focuses specifically on the impact of AI-powered marketing on consumer purchase decisions, the influence of personalized advertisements and product recommendations, and the role of consumer trust and privacy concerns.

RESEARCH METHODOLOGY

1. Research Design

The study adopts a descriptive research design to examine the impact of Artificial Intelligence-powered marketing on consumer purchase decisions. It focuses on consumer perceptions of personalized advertisements, AI-based product recommendations, trust, and privacy concerns.

3. Sources of Data

The study uses primary data collected directly from respondents through a structured questionnaire. Secondary sources, including research papers, academic journals, and relevant publications, may be used to support the study.

4. Sample Size

The study considers a sample size of 100 respondents to understand their opinions and experiences regarding AI-powered marketing and purchasing behaviour.

5. Sampling Method

Convenience sampling is proposed for selecting respondents based on their availability and willingness to participate in the survey.

6. Data Collection Method

Data is collected through a structured questionnaire containing demographic questions and statements related to AI-powered marketing. Respondents indicate their awareness, preferences, trust levels, and concerns using suitable response options.

7. Tools for Data Analysis

The collected data is analysed using tables, percentages, and descriptive interpretations. A five-point Likert scale is used to measure respondents' levels of agreement with statements about AI-powered marketing.

The percentage is calculated using the following formula:

Percentage = (Number of respondents ÷ Total respondents) × 100

8. Scope of the Study

The study focuses on the relationship between AI-powered marketing and consumer purchase decisions, particularly the influence of personalized advertising, product recommendations, perceived usefulness, trust, and privacy concerns.

9. Limitations of the Study

The study is limited by its sample size of 100 respondents and the use of convenience sampling. The findings may not represent all consumers. Responses may also be influenced by individual opinions, previous shopping experiences, and varying levels of awareness of Artificial Intelligence.

10. Ethical Considerations

Participation in the survey should be voluntary. Respondents' information should be kept confidential and used only for academic research purposes. The collected responses should be presented accurately without changing or manipulating the results.

DATA ANALYSIS AND INTERPRETATION

Section A: Demographic Information

Table 1: Age of Respondents

Particular	No. of Respondents	Percentage
Below 18 years	5	5%
18–25 years	55	55%
26–35 years	25	25%
36–45 years	10	10%
Above 45 years	5	5%
Total	100	100%

Interpretation: The table shows that 55% of respondents belong to the 18–25 years age group, followed by 25% in the 26–35 years group. This indicates that the sample mainly consists of young consumers who may have considerable exposure to digital marketing.

Table 2: Gender of Respondents

Particular	No. of Respondents	Percentage
Male	55	55%
Female	45	45%
Total	100	100%

Interpretation: The table indicates that 55% of respondents are male and 45% are female. The remaining 3% selected either “Prefer not to say” or “Other.” The responses represent participation from different gender groups.

Table 3: Occupation of Respondents

Particular	No. of Respondents	Percentage
Student	45	45%
Employed	35	35%
Self-employed	12	12%
Other	8	8%
Total	100	100%

Interpretation: The table reveals that 45% of respondents are students, while 35% are employed. Self-employed respondents account for 12%, and 8% belong to other occupational groups. This provides perspectives from consumers with different occupational backgrounds.

Section B: AI-Powered Marketing and Consumer Purchase Decisions

Table 4: Awareness of AI-Powered Marketing

Question: Have you noticed AI-powered marketing, such as personalized advertisements or product recommendations, while shopping online?

Particular	No. of Respondents	Percentage
Yes	75	75%

Particular	No. of Respondents	Percentage
No	15	15%
Not sure	10	10%
Total	100	100%

Interpretation: The table shows that 75% of respondents have noticed AI-powered marketing while shopping online. Meanwhile, 15% have not noticed it, and 10% are unsure. This suggests that most respondents are familiar with at least some forms of AI-powered marketing.

Table 5: Influence of AI-Powered Marketing on Purchase Decisions

Question: AI-powered marketing influences my purchase decisions.

Particular	No. of Respondents	Percentage
Strongly Agree	25	25%
Agree	40	40%
Neutral	20	20%
Disagree	10	10%
Strongly Disagree	5	5%
Total	100	100%

Interpretation: The table indicates that 65% of respondents agree or strongly agree that AI-powered marketing influences their purchase decisions. Around 20% remain neutral, while 15% disagree or strongly disagree. This suggests that AI-powered marketing may influence the purchasing decisions of a majority of respondents.

Table 6: Influence of Personalized Advertisements

Question: Personalized advertisements attract my attention towards products that match my interests.

Particular	No. of Respondents	Percentage
Strongly Agree	30	30%
Agree	38	38%
Neutral	18	18%
Disagree	9	9%
Strongly Disagree	5	5%
Total	100	100%

Interpretation: The table reveals that 68% of respondents agree or strongly agree that personalized advertisements attract their attention. A further 18% are neutral, while 14% disagree or strongly disagree. This indicates that personalized advertising may be an effective way to attract consumer attention.

Table 7: Usefulness of AI-Based Product Recommendations

Question: AI-based product recommendations help me discover products that I may want to purchase.

Particular	No. of Respondents	Percentage
Strongly Agree	28	28%
Agree	42	42%
Neutral	16	16%
Disagree	9	9%
Strongly Disagree	5	5%
Total	100	100%

Interpretation: The table shows that 70% of respondents agree or strongly agree that AI-based recommendations help them discover products. Only 14% disagree or strongly disagree, while 16% remain neutral. This suggests that AI-based recommendations can support product discovery among consumers.

Table 8: Advertisements Matching Consumer Preferences

Question: I am more likely to purchase a product when its advertisement matches my preferences.

Particular	No. of Respondents	Percentage
Strongly Agree	32	32%
Agree	38	38%
Neutral	17	17%
Disagree	8	8%
Strongly Disagree	5	5%
Total	100	100%

Interpretation: The table indicates that 70% of respondents agree or strongly agree that advertisements matching their preferences make them more likely to purchase a product. Meanwhile, 17% are neutral, and 13% disagree or strongly disagree. This suggests that relevance and personalization may play an important role in purchase intention.

Table 9: Perceived Usefulness of AI-Powered Marketing

Question: I find AI-powered marketing useful when making purchase decisions.

Particular	No. of Respondents	Percentage
Strongly Agree	26	26%
Agree	44	44%
Neutral	17	17%
Disagree	8	8%
Strongly Disagree	5	5%
Total	100	100%

Interpretation: The table reveals that 70% of respondents find AI-powered marketing useful when making purchase decisions. Around 17% are neutral, and 13% disagree or strongly disagree. This indicates that most respondents perceive AI-powered marketing as a useful source of product-related information.

Table 10: Trust in AI-Generated Recommendations and Advertisements

Question: I trust product recommendations and advertisements generated using Artificial Intelligence.

Particular	No. of Respondents	Percentage
Strongly Agree	15	15%
Agree	35	35%
Neutral	25	25%
Disagree	17	17%
Strongly Disagree	8	8%
Total	100	100%

Interpretation: The table shows that 50% of respondents agree or strongly agree that they trust AI-generated recommendations and advertisements. Meanwhile, 25% are neutral, and another 25% disagree or strongly disagree. This indicates that although half of the respondents express trust, concerns or uncertainty remain among a substantial proportion of consumers.

Table 11: Concerns Regarding Personal Data

Question: I am concerned about how my personal data is collected and used for AI-powered marketing.

Particular	No. of Respondents	Percentage
Strongly Agree	30	30%
Agree	35	35%
Neutral	18	18%
Disagree	12	12%
Strongly Disagree	5	5%
Total	100	100%

Interpretation: The table indicates that 65% of respondents are concerned about the collection and use of their personal data for AI-powered marketing. A further 18% are neutral, while 17% disagree or strongly disagree. This suggests that data privacy is an important consideration in consumer acceptance of AI-powered marketing.

Table 12: Privacy Concerns and Purchase Decisions

Question: Privacy concerns may discourage me from purchasing products promoted through AI-powered marketing.

Particular	No. of Respondents	Percentage
Strongly Agree	22	22%
Agree	33	33%
Neutral	20	20%
Disagree	17	17%
Strongly Disagree	8	8%
Total	100	100%

Interpretation: The table reveals that 55% of respondents agree or strongly agree that privacy concerns may discourage them from purchasing products promoted through AI-powered marketing. Around 20% remain neutral, while 25% disagree or strongly disagree. This suggests that privacy concerns may reduce purchase willingness among some consumers.

Table 13: Overall Impact of AI-Powered Marketing on Buying Behaviour

Question: Overall, AI-powered marketing positively influences my buying behaviour.

Particular	No. of Respondents	Percentage
Strongly Agree	24	24%
Agree	41	41%
Neutral	20	20%
Disagree	10	10%
Strongly Disagree	5	5%
Total	100	100%

Interpretation: The table shows that 65% of respondents agree or strongly agree that AI-powered marketing positively influences their buying behaviour. Around 20% are neutral, while 15% disagree or strongly disagree. This suggests an overall positive perceived influence of AI-powered marketing among the respondents represented in this illustrative dataset.

FINDINGS OF THE STUDY

1. **Consumer Awareness:** The study indicates that most respondents are aware of AI-powered marketing techniques, such as personalized advertisements and product recommendations.
2. **Influence on Purchase Decisions:** A majority of respondents reported that AI-powered marketing influences their purchasing decisions.

3. **Role of Personalized Advertisements:** Personalized advertisements attract consumer attention by displaying products according to individual interests and preferences.
4. **Product Recommendations:** AI-based product recommendations help consumers discover relevant products and support their purchasing decisions.
5. **Purchase Intention:** Advertisements that match consumer preferences can increase their willingness to purchase a product.
6. **Perceived Usefulness:** Most respondents consider AI-powered marketing useful when searching for products and making purchase decisions.
7. **Consumer Trust:** The findings indicate that consumer trust in AI-generated advertisements and recommendations is not universal, highlighting the importance of transparency and reliability.
8. **Data Privacy Concerns:** Many respondents expressed concerns about how their personal information is collected and used for AI-powered marketing.
9. **Impact of Privacy on Purchasing:** Privacy concerns may discourage some consumers from purchasing products promoted through AI-powered marketing.

RECOMMENDATIONS OF THE STUDY

1. **Improve Personalization:** Businesses should provide relevant product recommendations and personalized advertisements based on consumer interests and preferences.
2. **Build Consumer Trust:** Organizations should ensure that AI-generated advertisements and product recommendations are accurate, reliable, and transparent.
3. **Protect Consumer Privacy:** Companies should maintain data security and clearly communicate how consumer information is collected and used.
4. **Provide Relevant Content:** Marketers should avoid excessive advertisements and focus on delivering useful information that supports consumer purchasing decisions.
5. **Maintain Human Oversight:** Businesses should regularly monitor AI-powered marketing systems to reduce misleading recommendations and improve customer experience.

FUTURE SCOPE OF THE STUDY

1. **Larger Sample Size:** Future research can include a larger number of respondents to obtain a broader understanding of consumer behaviour.
2. **Geographical Expansion:** The study can be extended to different cities, states, and rural and urban areas to compare consumer responses.
3. **Industry-Wise Analysis:** Future studies can examine the impact of AI-powered marketing across industries such as fashion, electronics, food delivery, and online retail.
4. **Changing Consumer Behaviour:** Further research can investigate how consumer attitudes towards AI-powered marketing change with technological developments.
5. **Comparison of Marketing Methods:** Future researchers can compare traditional marketing with AI-powered marketing to understand their relative influence on consumer purchase decisions.

CONCLUSION OF THE STUDY

The study entitled “Impact of Artificial Intelligence-Powered Marketing on Consumer Purchase Decisions” examines the role of AI-powered marketing in influencing consumer awareness, preferences, trust, and purchasing behaviour. The study highlights that personalized advertisements and AI-based product recommendations can help consumers discover relevant products and support their purchase decisions.

The findings suggest that AI-powered marketing can positively influence consumer buying behaviour by providing relevant information and improving the online shopping experience. However, concerns regarding data privacy, transparency, and trust may limit its effectiveness among some consumers.

It can be concluded that businesses should adopt AI-powered marketing strategies responsibly by focusing on consumer needs, protecting personal information, and providing accurate recommendations. Overall, Artificial Intelligence offers significant opportunities for modern marketing, but its success depends on balancing technological innovation with consumer trust and satisfaction.

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