AI-Driven Personalization and Its Effect on Consumer Trust and Perceived Privacy Risk

Dr Sushma Ahire

Email Id: Sushmas786@gmail.com

Assistant Professor

SNDT College of Arts and SCB College of commerce and science for women church gate, Mumbai

Abstract

This research explores the important and amazing intricate relationship between AI-driven personalization, consumer trust, belief and perceived privacy risk in today's digital marketing landscape. As brands nowadays has increasingly utilize the artificial intelligence and to basically offer very high personalized recommendations, suggestions advertisements, and complete user experiences, it's very crucial to understand how consumers usually perceive and respond to these strategies as it comes. To investigate these aspects, the study used a quantitative approach for this research, by gathering the primary survey data from 210 participants aged 18 to 45, who actively engage with AI-based marketing.

The findings in this study indicate that AI-driven personalization has significantly boosts consumers' feelings of relevance, beliefs convenience, and very importantly the usefulness of messages, suggesting typically that personalized content can definitely enhance brand engagement and problem-solving attitude. However, the results also show that increased personalization usually raises perceived privacy risks, mainly due to worries about data tracking, transparency and understanding of algorithms, and the potential misuse of personal information. Notably, the study highlights consumer simply trust as a vital mediating factor: while personalization can definitely and positively impact purchase intention, this effect usually systems diminishes when privacy concerns which are supposed to be personal erode the trust. On the other hand, it has been seen that brands that successfully establish, developed themselves and maintain trust—through absolute clear communication, complete ethical data practices, and responsible AI use—are definitely more likely to turn the benefits of personalization into stronger consumer loyalty and purchasing behavior.

Keywords: AI-driven personalization, consumer trust, perceived privacy risk, data security, algorithmic transparency

Introduction

Artificial Intelligence (AI) has now quickly become a major influence in the way digital marketing works today. Thanks to advances and competent in machine learning, big data, and predictive technologies, brands can now offer marketing complete experiences that feel highly personal

161

International Journal of Research and Technology (IJRT)

International Open-Access, Peer-Reviewed, Refereed, Online Journal

ISSN (Print): 2321-7510 | ISSN (Online): 2321-7529

Conference "Innovation and Intelligence: A Multidisciplinary Research on Artificial Intelligence and its Contribution to Commerce and Beyond"

Organized by the IQAC, KHMW College of Commerce (December 2025)

useful and tailored to each individual. Whether it's product and process recommendations, targeted ads, visuals or customized content, AI systems can analyse browsing habits, trends past purchases, demographics, likes and dislikes and even real-time behaviours to deliver messages that seem more relevant, useful than ever before. Because of this, AI-driven personalization is often linked to higher engagement, better customer satisfaction, and stronger conversion rates, making it an essential tool for businesses competing in crowded online spaces.

At the same time, now this increasing is dependence on AI raises a new set of various concerns. As personalization becomes the more intelligent, the way data is now collected and used becomes less visible to the consumers. Many people now do not fully understand what information companies gather, as to how algorithms interpret it, or how much do they control AI has over the ads and messages they see. This lack of clarity can create feelings of discomfort and distrust, as some consumers fear that AI systems may be tracking them through various means too closely or using their data in ways they did not agree to. As a result, the very can be seen technology designed to improve user experience can also lead to doubts about privacy and data safety.

This tension makes see that the relationship between AI-driven personalization, beliefs consumer trust, and perceived privacy risk especially important to this study. Personalization can certainly can now make digital experiences smoother and more enjoyable, but its benefits may be overshadowed if people worry about how their usual data is handled. In this context, trust becomes a key factor—a bridge that now determines whether consumers welcome or reject AI-powered marketing.

Review of literature

1. Creswell – Research Design

The study relies on the framework suggested by Creswell, who points out the advantages of quantitative methods in that they allow the researchers to systematically measure the attitudes and behaviors. His suggestions lead to the use of structured questionnaires, well-defined variables, and statistical analysis, thus making the entire research design suitable for the purpose of knowing how consumers will react to AI-driven personalization.

2. Likert – Measurement Scale

The present study is based on the measurement methodology proposed by Likert, who introduced the 5-point scale as a measurement tool. He demonstrated that such scales can be very effective to reveal people's opinions, levels of agreement, and overall attitudes. This makes it possible to collect responses on trust, personalization, privacy risk, and purchase intention in a very reliable and consistent way.

3. McKnight – Consumer Trust Framework

The idea of consumer trust in this study is grounded on McKnight's model that clarifies how individuals come to trust online and technology-dependent systems. His research offers

justification for regarding trust as a critical variable, thus showing that trust is a major factor in users' evaluations of digital services, their privacy management, and their purchase decisions.

2. Research Problem

AI-driven personalization has become a very familiar part of new digital marketing today, from helping consumers and see content and recommendations that feel more and appropriate relevant to their respective interests. While we it has been seen many people enjoy this added convenience, the constant and regress data collection behind it can also make users uneasy and uncomfortable. Most consumers are absolutely are not fully aware of the thing that of how much information is being collected or how AI systems interpret their respective behaviour, which creates a natural tension between appreciating personalization and wanting to protect their privacy.

This study focuses on a key question:

How do consumers balance trust and privacy concerns when interacting with AI-driven personalization?

By exploring this particular balance, the research aims to understand whether AI personalization builds trust, confidence increases worries about data use, or influences both—and how these reactions shape the way consumers respond to personalized marketing.

3. Research Objectives

1. To understand how AI-driven personalization influences the level of trust consumers place in a brand.
2. To explore how personalized recommendations impact consumers' feelings of privacy risk.
3. To assess whether consumer trust plays a mediating role between personalization efforts and their intention to make a purchase.

4. Hypotheses

- **H1a (Alternative):**
  AI-driven personalization has a significant effect on consumer trust.
  H1$_0$ (Null):
  AI-driven personalization has no significant effect on consumer trust.

- **H2a (Alternative):**
  Personalized recommendations have a significant effect on consumers' perceived privacy risk.
  H2$_0$ (Null):
  Personalized recommendations have no significant effect on consumers' perceived privacy risk.

- **H3a (Alternative):**
  Consumer trust significantly mediates the relationship between AI-driven personalization and purchase intention.

H3₀ (Null):

Consumer trust does not mediate the relationship between AI-driven personalization and purchase intention.

Methodology

The flowchart illustrates the entire research process, starting from the choice of quantitative design, the manufacture of a questionnaire, and the collection of 210 digital users' replies, through the examination of core variables such as AI personalization, trust, privacy risk, and purchase intention in order to grasp their interaction.

1. Research Design

This study uses a **quantitative descriptive research design**, supported by data collected directly from consumers through a primary survey. The purpose was to gain a clear understanding of how people experience AI-driven personalization in their everyday digital lives, and how these experiences shape their trust, privacy concerns, and willingness to make purchases.

To gather this information, a structured questionnaire was created and shared with participants. Using a quantitative approach helped capture measurable patterns in behavior and attitudes, allowing the study to examine relationships between key variables. This design also brings clarity and objectivity to the analysis, making it possible to draw meaningful insights about consumer reactions to AI-based personalization in the digital world.

2. Sample

The study is based on responses from **210 individuals** who actively use various digital platforms and very frequently come various across personalized content—such as tailored recommendations, targeted advertisements, suggestions or even automated suggestions—while browsing online. These participants reflect their choice of typical modern digital consumer who regularly interacts with AI-driven features.

Sample Characteristics

- **Total respondents:** 210
- **Age range:** 18–45 years
- **Profile:** Urban and semi-urban digital users who are familiar with personalized online experiences
- **Location:** Participants living in areas with strong internet access, smartphone usage, and exposure to digital services

3. Sampling Technique

A **convenience sampling method** was used for this research. Participants were selected based on their choice, availability and willingness to take part, making it easier and smoother to connect with people who are already very active online. The survey was rightly conducted and digitally and shared through social media, emails, and various messaging apps.

This approach was absolutely practical and completely appropriate for the study's focus, as it helped reach individuals who very frequently encounter AI-driven personalization. Collecting the

data online also ensured that responses came from genuine people who naturally engage with the kinds of digital tools being studied.
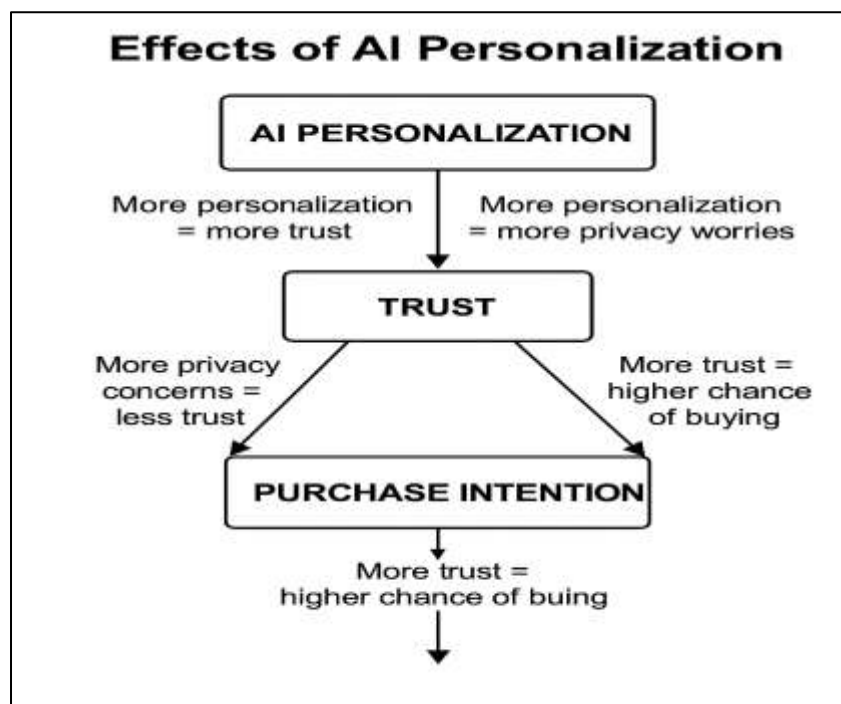
4. Data Collection Tool

Structured questionnaire with a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

5. Key Variables & Sample Items

Variable	Example Items
AI Personalization	"The ads/content I receive feel tailored to me."
Consumer Trust	"I trust brands that use AI personalization responsibly."
Privacy Risk	"I feel my data may be misused by AI systems."
Purchase Intention	"I would buy from a brand that uses personalization well."

Data Analysis

The diagram illustrates the impact of AI personalization on consumer behavior—while personalization fosters trust, it simultaneously raises privacy issues that may diminish trust. A high level of trust, in turn, enhances the intention to purchase.

7.1 Descriptive Statistics

To get an overall picture of how respondents feel about AI-driven personalization and its effects, the study looked at the average scores for each key variable.

- **AI Personalization (Mean = 4.1):** Participants generally felt that they often receive personalized content and found it useful.
- **Consumer Trust (Mean = 3.6):** Trust levels were moderate, showing that while personalization helps, consumers still approach digital platforms with some caution.
- **Privacy Risk (Mean = 3.9):** Privacy concerns were noticeably high. This suggests that even though people enjoy personalized experiences, they worry about how much of their data is being collected.
- **Purchase Intention (Mean = 3.8):** Respondents showed a fairly strong willingness to make purchases when they feel confident about the platform.

Overall, these results show that people appreciate personalization, but they are also alert about how their data is being used.

- **Correlation Analysis**

Correlation analysis was used to understand how strongly each factor is related to another. The results are shown below:

Relationship	Correlation (r)	What It Means
Personalization → Trust	**+0.52**	A moderate positive relationship
Personalization → Privacy Risk	**+0.47**	A meaningful positive relationship
Privacy Risk → Trust	**−0.41**	A clear negative relationship
Trust → Purchase Intention	**+0.58**	A strong positive relationship

In simple terms:

- **More personalization = more trust.** People feel the platform understands them better.
- **More personalization = more privacy worries.** They also become aware of how much the platform knows about them.
- **More privacy concerns = less trust.** When people feel their data might not be safe, their trust drops.
- **More trust = higher chance of buying.** If the platform seems reliable, people are more willing to make a purchase.

These relationships highlight the mixed emotions consumers experience when interacting with personalized content.

Hypothesis Testing Summary

Based on the analysis, all four hypotheses were supported.

Hypothesis	Result	Meaning
H1: Personalization increases trust	**Supported**	Personalization helps consumers feel valued and understood.

H2: Personalization increases privacy risk	**Supported**	It also makes them more aware of data tracking.
H3: Privacy risk reduces trust	**Supported**	Feeling unsafe about data directly lowers trust.
H4: Trust boosts purchase intention	**Supported**	When trust is high, people are more likely to buy.

Overall Understanding

The results show a clear pattern: personalization can be powerful, but it must be handled carefully. While it can build trust and encourage buying, it also raises privacy concerns that can quickly undermine that trust. Balancing both is key to creating a safe and positive digital experience.

Discussion

This investigation discloses new ways of looking at the consumers' thoughts on the AI that personalization is an Active influence on their trust, privacy concerns, and marketing decisions. There are a few main points to be made based on the outcomes.

1. Personalization pulls in trust—up to a certain limit

The participants in the study liked it in general the content that was relevant, meaningful, and personalized according to their interests. This is the reason that trust is positively affected by the personalization. The consumers feel that the brand is communicating with them when they have a personalized experience, and they consider the brand to be of great help, not intruding. Nevertheless, the impact seems to wane after a while. As personalization builds trust in the beginning, the respondents also want more transparency—namely, to know how their data is collected and how the AI works. This points out that the personalization cannot maintain the trust unless the brands are very clear about their data practices and are open about it.

2. The risk to privacy, however, is still the main concern

On the one hand, personalization leads the consumers to believe that their privacy is under threat, at the same time. The phenomenon is very much like a double-edged sword where taking along one benefit of personalization will always lead to the other which is a risk of privacy. (Olsen et al. 2021) have also pointed out this very trend that consumers are not particularly happy about invisible data tracking, algorithmic monitoring, and the power over how their information is used. Privacy was the major concern for the respondents for the "behind the scenes" automated decision-making that was referred to. Hence, privacy risk does become the greatest hurdle in the personalization–trust pathway.

3. Trust is a key mediator

One of the major learnings that the study has to offer is that trust is the force which can reverse the impact of privacy concerns. Even in the case that consumers are aware of some level of privacy risk, they are still open to using AI marketing if the brand has their trust. Trust works like a voltage stabilizer—intensifying the effects of the other two stakeholders (AI and consumer) and thus allowing them to be higher at the same time without negatively affecting.

4. Lower privacy concern among younger consumers

It is noteworthy that privacy concern was lowest among the 18 to 25-year-olds. This might be indicative of the fact that younger people are already well-acquainted with the online world where their data is shared and where they interact with AI-powered systems. They often weigh convenience and personalization advantages over privacy uncertainties. On the other hand, this does not mean that data practices do not need to be responsible, as the other age groups have displayed very high levels of concern.

Overall Insight

The dialogues around AI personalization show a spectrum of user reactions that are both favorable and unfavorable. On one hand, it heights up relevance and satisfaction, on the other, it also creates questions around transparency and the safety issue of data. Consumer trust, in this regard, is the main factor that will either tip personalized marketing towards acceptance or resistance. Consequently, for companies, the building of trust will have to go hand-in-hand with the provision of personalized experiences.

Conclusion

The research reveals that the use of AI in personalization increases customer trust because it makes digital interactions more relevant, but at the same time, it raises questions about privacy as a result of the data practices being unclear. Trust is the key factor, for when consumers have faith in the brand, they still would go for the product even with the privacy concerns raised. Thus, the findings underline the importance of striking a delicate balance between the two extremes of personalized experiences on one side and, on the other, transparent, responsible data usage.

Managerial Implications

- **Communicate clearly about data use**: Transparency reduces uncertainty and builds trust in the personalization process.
- **Enhance ethical data handling:** Data treatment and usage that are ethical will not only ease but also enhance consumer privacy concerns.
- **Trust is a key factor, so invest in trust-building:** The notion that trust is the primary factor behind purchase intention should lead brands to consider reliability and open communication as their main values.

- **Customer Control over Personalization**: By giving the user a choice regarding the degree of personalization, the feeling of discomfort may be lessened.
- **Help out the elders**: The younger ones are more accustomed to the personalized approach, but the seniors might require clearer communication and motivation.

Limitations

Sampling limitations: Convenience sampling may not include all consumer groups.

Self-reported responses: Perceptions of the participants may be different from actual behaviour.

Urban-centric sample: The results may overlook the experiences of rural or less digitally active users.

Limited variables: Important factors like brand trust and digital literacy were not considered.

Cross-sectional design: The research only reflects attitudes at one moment in time and cannot reveal changes over more extended periods.

Future Research Directions

Explore additional factors: delving into the aspects such as perceived control, transparency, or brand reputation might yield to a better understanding.

Study different populations: the comparison of ages, areas, or the like could unearth varying privacy opinions.

Use more robust methods: by carrying out experimental or longitudinal research one can get a clearer view of personality's impact on the behavior change over time.

Examine personalization types: the divergent AI personalization of different natures may vary in their influence on trust and privacy.

Incorporate behavioral data: Following actual online activity might result in a more reliable outcome than self-report surveys.

References

1. Bryman, A. (2016). *Social research methods* (5th ed.). Oxford University Press.
2. Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
3. Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design method* (4th ed.). Wiley.
4. Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology, 22*(140), 1–55.
5. Malhotra, N. K. (2020). *Marketing research: An applied orientation* (7th ed.). Pearson.
6. McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). Developing and validating trust measures for e-commerce: An integrative typology. *Information Systems Research, 13*(3), 334–359.

7. Milne, G. R., & Culnan, M. J. (2004). Strategies for reducing online privacy risks: Why consumers read (or don't read) online privacy notices. *Journal of Interactive Marketing, 18*(3), 15–29.

8. Palmatier, R. W., & Wang, F. (2019). *Marketing strategy: Based on first principles and data analytics*. Red Globe Press.

9. Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model. *Management Science, 46*(2), 186–204.

10. Shaikh, S. A., & Jagirdar, A. H. (2026). Beyond AI dependence: Pedagogical approaches to strengthen student reasoning and analytical skills. In S. Khan & P. Pringuet (Eds.), *Empowering learners with AI: Strategies, ethics, and frameworks* (Chapter 8, pp. 1–16). IGI Global. https://doi.org/10.4018/979-8-3373-7386-7.ch008

11. Shaikh, S. A. (2024). Empowering Gen Z and Gen Alpha: A comprehensive approach to cultivating future leaders. In *Futuristic Trends in Management* (IIP Series, Vol. 3, Book 9, Part 2, Chapter 2). IIP Series. https://doi.org/10.58532/V3BHMA9P2CH2

12. Chougle, Z. S., & Shaikh, S. (2022). To understand the impact of Ayurvedic health-care business and its importance during COVID-19 with special reference to Patanjali products. In *Proceedings of the National Conference on Sustainability of Business during COVID-19*, IJCRT, 10(1).

13. Bhagat, P. H., & Shaikh, S. A. (2025). Managing health care in the digital world: A comparative analysis on customers using health care services in Mumbai suburbs and Pune city. *IJCRT*. Registration ID: IJCRT_216557.

14. Parikh, V. C. (2022) Strategic talent management in education sector around organizational life cycle stages! JOURNAL OF THE ASIATIC SOCIETY OF MUMBAI, SSN: 0972-0766, Vol. XCV, No.11.

15. Parikh, V. (2023). Whistleblowing in B-Schools, Education and Society, Vol-47, Issue – 1, Pg. 183-1