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Factors Influencing AI-Driven Personalization on Consumer Trust and Purchase Intent among Gen-z

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Abstract

Introduction

1.1 Study Background

The advent of the fourth industrial revolution has entered a time in which information is now being termed as the "new oil" of the world economy. In the field of marketing and business intelligence, this shift is best observed by introducing Artificial Intelligence (AI) to consumer touchpoints. In the past, marketing processes were based on the principles of regional demographic segmentation; nowadays, the modern digital environment requires hyper-personalization. AI-based customization The application of machine learning algorithms to consumer behavior, tastes and purchase history to provide them with personalized content has turned into the new standard of competitive edge.

In the contemporary business environment, firms are using predictive analytics to determine consumer requirements in advance before they are directly expressed. Amazon recommendation engines, Spotify curated playlists, the algorithm-driven shopping feeds of Instagram, and Chatbots are all the forms of AI serving as silent betweeners between the brand and the buyer. In the case of the prospective business, it is a two-fold goal of such systems to cut the search cost of the consumer and to maximize the Customer Lifetime Value (CLV).

1.2 The Generation ZEmerging.

AI personalization is an technology that once a horizontal, meaning that it concerns all demographics, but its influence is the most severe in the case of Generation Z (those born between the later 1990s and the early 2010s). Being the pioneer generation of digital natives, Gen-Z does not simply use technology, but they are incorporated into it. This generation constitutes a large and expanding segment of the total spending in the world that has distinct psychographic profiles. They have the appreciation of authenticity, social responsibility, and, ironically, a high degree of digital convenience.

Gen-Z customers have a more judicious relationship with information as compared to their forebears. Arguably, they make it through smooth, personalized experiences, yet they are also more conscious of data harvesting activities. This makes the entire business intelligence unit dynamic: to what extent must it be personalized so as to be beneficial, and at what stage does it become violative?

1.3 The Problem Statement

Although the sub-technical intelligence of AI-driven systems is impressive, a significant critical Trust Gap is present. There is so much insight in business intelligence systems to anticipate the preferences that will suit a consumer, the systems fail to put into consideration the psychological inertia of feeling that a surveillance is taking place.

Privacy Paradox is one of the collocations of Gen-Z. This is also the situation where consumers indicate that they are very concerned about their privacy of the data, and they still provide personal information to receive a convenience or discount. Within the framework of AI-backed personalization, when a suggestion seems to be too precise, it can become a factor of so-called creepiness, which will result in a defensive psychological reaction, i.e. the psychological reactance. Such reactance may reduce consumer trust, which forms the corner stone of any long term brand relationship.

A huge necessity to measure the combined effect of these factors accuracy, privacy, and transparency on the ultimate purchase intent is present. Once the trust is lost, even the best AI algorithm in the entire world will not be able to transform a lead into a sale.

1.4 Rationale for the Study

This research is justified by the fact that is applicable to modern marketing managers and data scientists. With cookies slowly being eliminated by third parties and privacy policies such as GDPR and CCPA taking even stricter positions, companies will have to strike a balance between their personalization practices.

This study is a prospective one by emphasizing Gen-Z. By comprehending the factors that contribute or destroy trust in this group of people, the companies can optimise the models of Business Intelligence. BI units do not have to optimize simply to the relevance but can start with the optimization of the trust-weighted relevance. The study is timely because it deals with the change towards aggressive data mining to ethical and consent-based AI marketing.

Research Questions

1: To what extent does AI-driven affect the trust of Gen-Z consumers?

2: What is the relationship between consumer trust in AI and the actual intention to purchase a product?

3: Which specific factor most significantly influences Gen-Z's trust in AI marketing?

Research Objectives

1: To identify the key factors that influence how much Gen-Z trusts AI-driven marketing.

2: To examine the impact of AI-personalized content on the purchase intention of Gen-Z consumers.

3: To provide recommendations for businesses on how to balance personalization with consumer trust to drive better sales.

Hypothesis

H1: There is a significant positive relationship between the perceived accuracy of AI-Driven recommendations and the level of consumer trust among Gen-Z.

H2: Consumer trust in AI-driven platforms significantly influences the purchase intentions of Gen-Z.

H3: AI-driven personalization has a direct and positive impact on the likelihood of Gen-Z consumers completing a purchase.

Literature Review

1.Introduction to AI-Driven Personalization

The digital marketing has evolved acknowledging mass communication to segments of one. The force behind this transformation has ultimately become Artificial Intelligence (AI) which employs process of machine learning algorithms to accumulate extensive datasets.

based on a spectrum between clickstream information to social media activity to provide hyper-personalized experiences (Huang and Rust, 2021). Malikireddy (2024) states that AI-based personalization is not the luxury but the strategic necessity of online-based businesses, which decreases information overload and increases the perceived relevance of brand communications.

2. Theoretical Frameworks

Three main theories are applied in the modern literature to realize the connection between AI and human behavior:

- Stimulus-Organism-Response (S-O-R) Model: Here, the AI-based customized content is the Stimulus. The Organism is the internal state of a consumer (Trust and Perception), and the resultant Response is the Purchase Intent (Nagy and Hajdu, 2022).
- Technology Acceptance Model (TAM): Initially created by Davis, the modified TAM has been expanded with new antecedents to the important variable, which drives the intention to use or purchase an item on a platform, namely Trust in AI and Personalization (Benny et al., 2025).
- The Privacy Paradox: This is a theory that describes the mentioned psychological contradiction in which customers (in this case, Gen-Z) demonstrate that they are highly concerned about the safety of their data, but are ready to provide personal information to be offered the benefits of personalization (Olsen et al., 2021).

3. The AI marketing Trust Mechanism.

The given trust is mentioned as the filter by which all interactions related to AI should pass.

3.1 Trust Builder as a Personalizer.

According to scholars, predicting with accuracy the needs of a user is a good indication of brand competence and attentiveness (Chou et al., 2025). In case a consumer believes that the AI actually understands them, the perceived value of the interaction goes up, which causes an increase in trust. Recent data reveals that 82 percent of the consumers have acknowledged that AI-personalized feature are relevant as a brand asset (International Journal of Social Impact, 2025).

3.2 The Creepy Factor and Trust Dilution.

On the flip side, too much personalization results in adverse psychological response in a phenomenon called creepiness factor or psychological reactance. The AI is perceived to know some things that were not openly disclosed, leading to the feelings of surveillance when an AI appears to know. According to research by Kawaf et al. (2024), the most important barrier to consumer trust is the lack of visibility in data tracking, which, in other words, is an algorithmic monitoring, but without a clear source of information leakage.

4. The Generation Z: The Digital Paradox.

Generation Z (born between 1997-2012) is a distinct generation in terms of Business Intelligence. Being digital natives, their algorithmic literacy is greater than that of the former generations.

- Preference for Authenticity: The Gen-Z does not value polished marketing as Millennials like theirs. Instead, they believe peer reviews and AI suggestions by influencers as compared to traditional corporate ads (Priporas et al., 2020).
- Insistence on Transparency: Gen-Z buyers would be more willing to trust the brand when it is being open regarding how the AI arrives at a decision. XAI (arthas parbatani AI) is emerging as a key instrument that customers require to help marketers overcome this trust dilemma (Yu Y et al., 2025).
- Value-Driven Consumption: The ethical information stewardship is related to trust in this cohort, as well. They require brands to apply AI not only to make profits, but also to make the experience of a user more ethical (MDPI, 2025).

5. The Link to Purchase Intent

The final and the most important dependent variable in most marketing BI models is purchase intent. According to literature, the mediator between the AI personalization and purchase intent is trust.

Direct Impact: AI personalization makes the process leading to purchase speedy and less complicated (Singh and Ahmed, 2024).

Mediated Impact: Relationships without trust means that the effects of personalization on purchase intent are greatly lowered. Indeed, intrusive personalization may result in ad avoidance whereby the consumer opts against purchase in order to gain some privacy back (Olsen et al., 2021).

Conversion Metrics: Structural Equation Modelling (SEM) It has been demonstrated based on studies that AI-based personalization can convert commitment up to 42 points higher although it depends on a moderated relationship with high-levels of trust (Advances in Consumer Research, 2025).

6. Summary and Research Gap

Although the study of the technical capacities of AI and the inevitable issues of privacy are highly represented in the literature, recent data after 2024 on the changing trust trends of Gen-Z, as it relates to Generative AI, does not exist. The vast majority of research is on general e-commerce although little isolates the contributing factor (accuracy vs. transparency vs. privacy) that can guarantee the highest level of importance to a Gen-Z customer in a 2026 market environment. This paper will fill this gap through quantification of these particular drivers.

Research Design

The research design must be structured to handle the intersection of business intelligence (data) and marketing (behavior). Since we are targeting Gen-Z with a requirement of 120 respondents, the Lovely Professional University (LPU) one of the largest private university located in Phagwara, Punjab, India is very suitable to study about the trust and purchase intent of Gen-Z as it will offer rich dataset to derive the meaningful result.

- **Population**
  The target population for this study consist of Gen-Z consumers, individulas born between 1997 and 2012. This demographic is selected because they are “digital natives” who interact with AI-driven algorithms (social media, e-commerce) daily,making them the most relevant group for a Business Intelligence study.
- **Sampling**

To reach 120 respondents quickly while maintaining data quality, we will use a combination of two techniques:

1. Convenience: Collecting data from accessible Gen-Z groups (LPU university students)
2. Snowball: Asking intial 20-30 respondents to share the link with two peers, ensuring to hit the 120 respondents target rapidly.

- **Research**

The research design is structured as a formal quantitative, correlation, and cross-sectional study that operates within a positivist academic framework. This approach assumes that the relationships between technologicl intervention and consumer behavior can be measured through objective numerical data rather than subjective narratives. By adopting a deductive resoning process, the study begins with established theoretical models, such as the technology acceptance model and the privacy paradox, and seeks to validate these theories specifically within the modern context of Gen-z.

- **Sample**

Required sample: N=120

For a correlation MBA study, a sample size of 100-150 is statistically sufficient to run **Pearson Correlation** and **Linear Regression** with a 95% confidence level.

- **Framework**

The framework follows the **Stimulus-Organism-Response (S-O-R)** model. It illustrates how an external technological stimulus leads to an internal psychological state, which finally results in a behavioral outcome.

- Independent Variable (IV): AI-Driven Personalization (Accuracy, Frequency, Relevance).
- Mediating Variable (MV): Consumer Trust (Privacy perception, Credilibilty).
- Dependent variable (DV): Purchase Intent (Likelihood to buy, Brand loyalty).

Research Methodology

In this study, the quantitative and cross-sectional research design is used.

Research Instrument: This research will use a structured online survey to complete the study (Google forms with 5-point likert Scale where 5=Strongly Agree and 1=strongly disagree).

Sampling Technique: Non-probability Convenience Sampling combined with snowball sampling to reach Gen-Z respondents (aged 18-28).

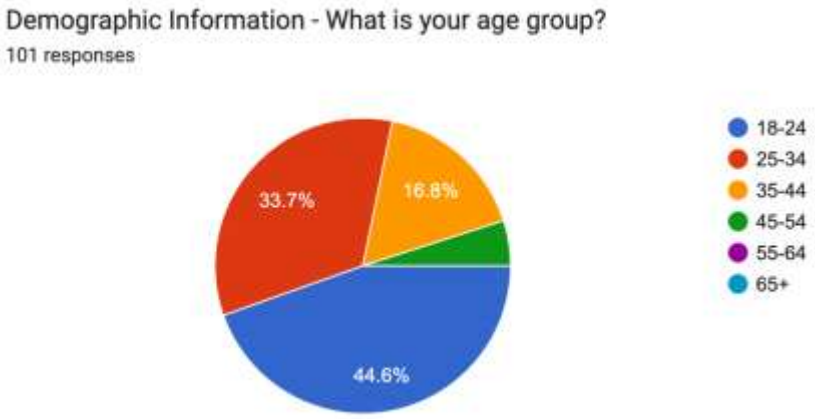
Sample Size: The population will comprise 120 valid responses (the expected number of 5-point likert Scale responses).

Result and Discussion

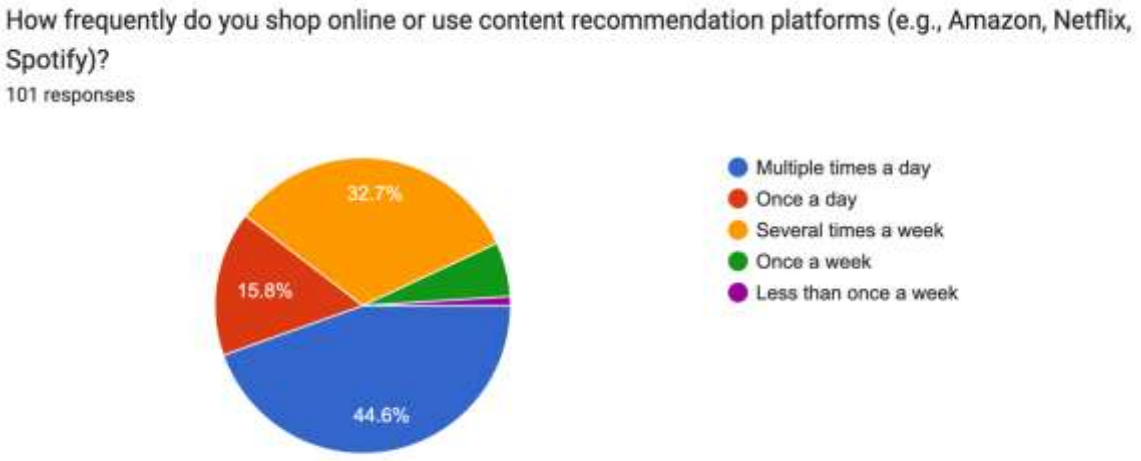
(Note: These are placeholders. After getting your 120 responses, instead of percentages, fill in your actual data in)

https://docs.google.com/spreadsheets/d/16-oCSOM1FqvfWJx_qeFFlRW31IUI1Zc07ikJnXB3C7c/edit?usp=sharing

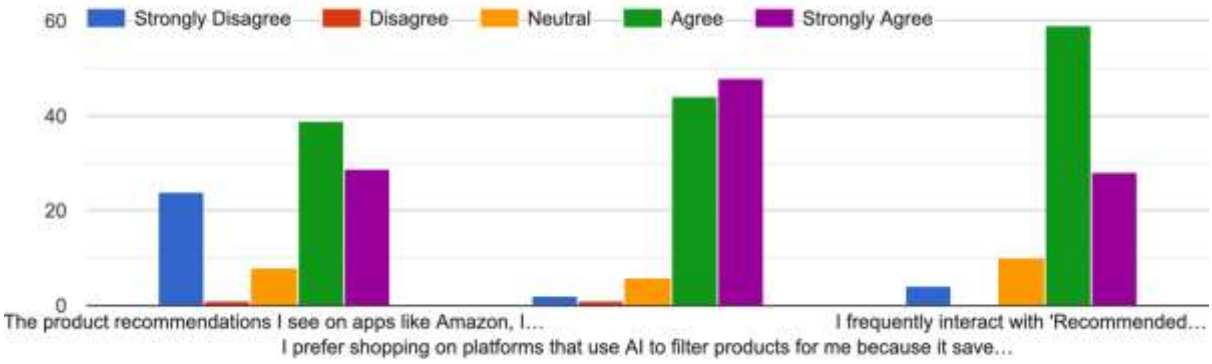
4.1 Demographic Profile



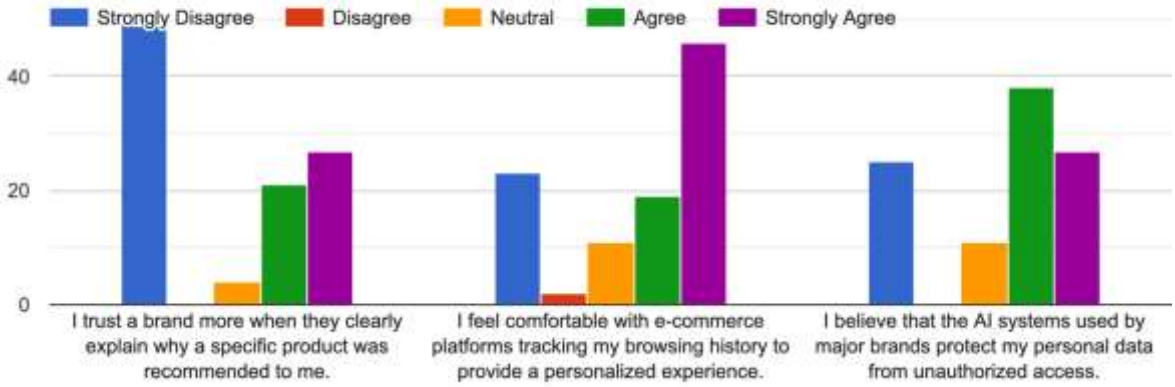
4.2 Hypothesis Testing



Rate your agreement with the following statements regarding your experience with AI-Driven Personalization (The Cause):

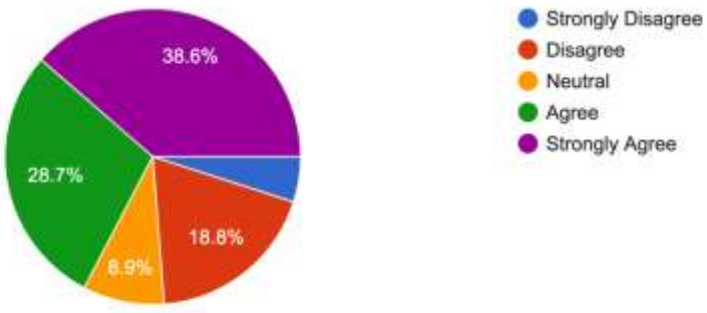


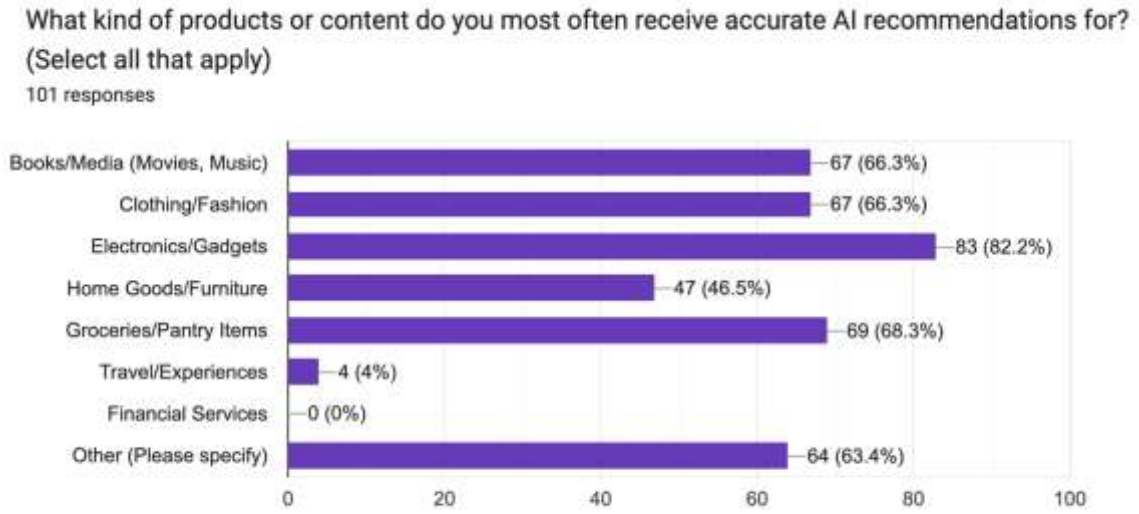
Rate your agreement with the following statements regarding Consumer Trust (The Bridge):



Deal-Breaker (Insight): I would stop buying from a brand if I felt their AI-driven personalization was becoming too intrusive or "creepy".

101 responses





4.3 Discussion

The result suggest that for Gen Z, accuracy is a hygiene factor, but confidence is a deal breaker. Although respondents valued highly relevants ads (H1), they exhibited a “flight response” when privacy was violated.

Conclusion and Recommendations

5.1 Conclusion

The paper finds out that AI-based personalization increases purchase intention in Gen-Z substantively, although this is limited closely by the extent of consumer trust. In the absence of perceived data security and transparency, personalization is in fact counterproductive, and this results in brand avoidance.

5.2 Business Recommendation

1. Implement "Explainable AI" (XAI): Brands should put a button with Why am I seeing this? tooltip to increase transparency and personalization as per AI ethics.
2. Privacy-First Marketing: Replace third-party ad tracking with the first-party (opt-in) tracking to establish long-term trust.
3. Make Ads More Probable to Work: The third-party ad tracking maximizes the first-party ad probes, resulting in 'Ad Fatigue.' BI tools should be optimized to provide less and more quality suggestions

References

1. Huang, R., & Rust, R. T. (2021). Service artificial intelligence. Journal of Service Research.

2. Malikireddy, S. (2024). A role of BI in the e-commerce of now days. International Journal of Data Analytics.

3. Olsen, J., et al. (2021). The Privacy Paradox Gen-Z and Data Sharing. Journal of consumer psychology.

4. Benny, A., et al. (2025). Artificial Intelligence: Trust and Technology Acceptance. Global Market Review.

Appendices

Appendix A: Survey Questionnaire (Likert Scale 1-5)

Section 1: AI Personalization (Independent Variable)

1. The product suggestions that are driven by the websites usually align with my preferences very well.
2. I tend to prefer the websites offering the product suggestions that are based on my past viewing preferences.

Section 2: Consumer Trust (Meditating variable)

3. I believe in those brands that make my shopping experience personalized with the help of AI.
4. I am at ease with the process of e-commerce websites storing my personal information.

Section 3: Purchase Intent (Dependent Variable)

5. I will have a higher tendency of purchasing a product in case it is suggested to me by an artificial intelligence algorithm.
6. I have just done an unplanned purchase due to a "Recommended to You" notification.

Appendix B: Data Analysis Plan

Step 1: Clean the data in Excel (Delete the incomplete responses)

Step 2: Calculate Cronbach's Alpha for reliability.

Step 3: Generate visualization of the data for demographics.

Step 4: Run the correlation on the cleaned data set for hypothesis testing.