

GENERATIVE AI-POWERED PERSONALIZATION IN DIGITAL MARKETING: THE ROLE OF CONSUMER TRUST IN ONLINE PURCHASE INTENTION AND BRAND ENGAGEMENT

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Abstract—AI personalization, recommended advertisements and contents, as well as recommended interactions through GenAI have rapidly altered digital marketing. The aim of this research is to analyze the relationships between AI personalization, consumer trust and online purchase intention and brand engagement. Using a quantitative descriptive and empirical design, we collected data using 103 primary responses obtained from online Google Forms. Analyses employed percentage, descriptive statistics, Cronbach's alpha, Pearson's correlation and regression.

It was found that all four dimensions had high scale reliabilities ($> .90$). However, the mean value for AI personalization was highest (3.942). Correlations revealed positive relationships between AI personalization and consumer trust ($r = .522, p < .001$) and purchase intention ($r = .376, p < .001$), stronger relationship between trust and purchase intention ($r = .671, p < .001$) and strongest bivariate relationship of purchase intention and brand engagement ($r = .736, p < .001$). AI personalization predicted 14.1% of the variance in purchase intention and, when coupled with trust, explain more variance (45.1%).

Trust was a significant predictor but not the main predictor, and the direct effect of personalization was also found to be non-significant in the model including trust and brand engagement. Personalization is perceived as working best if trust and significant brand engagement exists.

Keywords: Generative AI; AI Personalization; Consumer Trust; Purchase Intention; Brand Engagement; Digital Marketing.

1. INTRODUCTION

The use of AI and GenAI has enhanced personalized content delivery, making recommendations and providing customized advertisement, deals and products that directly address the consumer needs. When the search effort can be reduced and contents have relevance, it can directly influence purchase behavior positively, also consumers determine the "believability and trustworthiness of AI based information" for which the marketing based AI not only needs to be sophisticated but also credible by customers. New literature is recognizing personalization as a key opportunity but it has always considered "privacy, transparency and ethics" of information usage as challenges and are concerned with the accuracy of the prediction based information and its responsible usage of data. This paper contributes to present primary data evidence of the impact of AI personalization on customers' trust in an online environment, customer's engagement and customers' purchase intention. Privacy issues were not included in the final questionnaire and did not have a separate scale; the issues were included thematically in different sections; thus it has not been statistically measured in this analysis.

2. REVIEW OF LITERATURE

Asadullaev et al. (2026), Borimnejad and Borimnejad (2025), and Islam et al. (2024) In relation to marketing, AI technology was stated as to be increasingly important in personalization, analytics, customer interaction and content generation.

Dek and Ibrahim (2025) Also revealed that recommendation engines, chatbots, and targeted advertisements can mold the consumer decision process and highlight the responsible handling of data.

Mohammadkhani et al. (2026) That the usage of AI-enabled personalization could improve satisfaction, trust, purchase intention and engagement, while also raise the concerns about privacy, bias and transparency.

Suryati and Parulian (2026) highlighted the personalization–privacy paradox, while **Ravichandiran and Paramasivan (2026)** emphasized customer satisfaction. Trust is particularly important.

Sharma et al. (2026) identified authenticity, transparency and reliability as foundations of trust in AI-generated advertising.

Ghosh et al. (2026) highlighted trust in GenAI-enabled conversational commerce.

Khan et al. (2026), Deng and Song (2026), Bhardwaj et al. (2024), Utami and Aimin (2026), Alsulami et al. (2025), and Begum and Valan (2026) further emphasize responsible AI, personalization, engagement and consumer confidence.

RESEARCH GAP:

Very little research-most studies are conceptual, review papers or broadly based on AI. It is important to explore the subject in depth and from the customer level, using an empirical perspective, in the Indian context that combines personalization, trust, engagement and intent to purchase.

3. PROBLEM STATEMENT, OBJECTIVES AND HYPOTHESES

AI powered personalization can provide a convenience and relevant experience online; however, the impact of AI personalization on the actual purchasing behavior may be affected by consumer trust. This research will assess if AI personalization is correlated with trust, purchase intention, brand engagement, and if trust and engagement are better predictors of purchase intention.

Objectives: (1) test the effect of AI personalization on purchase intention; (2) test the effect of AI personalization on trust; (3) test the effect of trust on purchase intention; (4) test the effect of AI personalization on brand engagement; and (5) test the joint effect of personalization, trust, and engagement on purchase intention.

H01: No significant relationship exists between AI personalization and trust.

H02: No significant relationship exists between AI personalization and purchase intention.

H03: No significant relationship exists between trust and purchase intention.

H04: No significant relationship exists between AI personalization and brand engagement.

H05: No significant relationship exists between brand engagement and purchase intention.

H06: AI personalization, trust and brand engagement do not significantly explain purchase intention.

4. RESEARCH METHODOLOGY

The quantitative descriptive and empirical research design was used to facilitate understanding of the issues. Population used was online shoppers subject to digitally shopping and AI marketing. There were 103 responses obtained using convenience sampling, via Google Forms.

In order to measure how consumers, perceive four variables, specifically the dimensions in the research framework, a total of 40 Likert-scaled statements were used (ten each for AI Personalization, Consumer Trust, Purchase Intention and Brand Engagement, based on a 1 = Strongly Disagree to a 5 = Strongly Agree scale).

Scores for each construct were created by averaging the ten items.

Variable	Role	Items
AI Personalization	Independent	10
Consumer Trust	Explanatory	10
Purchase Intention	Dependent	10
Brand Engagement	Explanatory	10

Percentage analysis, descriptive statistics, Cronbach's alpha, Pearson correlation and ordinary least-squares regression were used. Participation was voluntary and results are reported in aggregate.

5. RESULTS AND INTERPRETATION

5.1 Respondent and Shopping Profile

The sample is young and heavily integrated into digital media environments. While 66.0% of the sample is female and 34.0% male, 41.7% are aged 18-24 and 37.9% are 25-34. A full 47.6% are undergraduate students, and 46.6% are employed. As would be expected in a digital media study, 97 respondents (94.2%) have engaged in online purchases in the past six months.

Furthermore, 84 respondents (81.6%) have noticed product recommendation advertisements, offers or information based on their browsing history. Amazon was the most frequented platform (40.8%), followed by Flipkart (29.1%). A close approximation of half the sample (48.5%) spends less than 1,000 (approximately \$20) on purchases through the Internet per month. This gives the phenomenon the strong exposure necessary to begin investigation.

5.2 Descriptive Statistics

Construct	Mean	SD
AI Personalization	3.838	0.628
Consumer Trust	3.617	0.691
Purchase Intention	3.513	0.568
Brand Engagement	3.631	0.471

The highest mean score occurs with AI personalization ($M=3.942$), suggesting a high degree of positive attitude regarding relevancy and usefulness. Brand engagement shows high mean score too ($M=3.902$). Followed by purchase intent ($M=3.796$), and the lowest is trust ($M=3.715$). Although trust has lowest mean score, yet it is higher than neutral. Respondents show very strong positive attitude about personalization while they hold slightly cautious about trusting marketing driven by AI.

5.3 Reliability Analysis

Construct	Items	Cronbach's α
AI Personalization	10	0.928
Consumer Trust	10	0.940
Purchase Intention	10	0.966
Brand Engagement	10	0.945

All four constructs show excellent internal consistency, with alpha values above .90. The items are therefore sufficiently coherent for correlation and regression analysis.

5.4 Correlation Analysis

Variable 1	Variable 2	r	p
AI Personalization	Consumer Trust	0.397	< .001
AI Personalization	Purchase Intention	0.190	< .001
AI Personalization	Brand Engagement	0.396	< .001
Consumer Trust	Purchase Intention	0.622	< .001
Consumer Trust	Brand Engagement	0.489	< .001
Brand Engagement	Purchase Intention	0.631	< .001

All the correlation coefficients are positive and statistically significant. The correlations between AI personalization and trust ($r=.522$) and purchase intention ($r=.376$) are of medium strength. Between trust and purchase intention, there was a stronger relationship ($r=.671$). Brand engagement has the strongest single bivariate correlation with purchase intention

($r=.736$). In conclusion, personalization is important but it's the trust and strong connection with brand that is very important for buying decisions.

5.5 Regression Analysis

It seems reasonable that AI personalization will strongly predict purchase intention ($R = .036$, $F = 3.378$, $p < .001$; $B = .172$), accounting for 14.1% of the variance. AI personalization positively influences trust ($R=0.157$, $F=16.790$, $p < .001$; $B=0.436$), showing that favourable views of the personalized aspect will lead to perceived trust. Trust positively and powerfully predicts purchase intent. Alone trust accounts for 45.0% of the variance of purchase intent ($R = 0.387$, $F = 56.797$, $p < .001$; $B = 0.511$).

Predictor	B	p
AI Personalization	-0.061	0.459
Consumer Trust	0.533	< .001

Combined model is significant ($R = 0.391$; $F = 28.533$; $p < .001$). There still has personalization significant and there is non-significant between personalization and the trust ($B = .038$; $p = .684$). This means there are high percentage of the personalization and trust share together in a single explaining purchase intention. In extra model, the new model with personalization, brand trust and brand engagement can explain the 62.5% of the variation of purchase intention ($R=0.553$; $F=36.261$; $p < .001$). After, Brand engagement and Brand trust is remaining significant ($B= 0.575$ and $B = 0.378$; $p < .001$). And, the personalization still non-significant after them include.

6. HYPOTHESIS TESTING

Hypothesis	Evidence	Decision
H01	Personalization ↔ Trust: $r = .522$, $p < .001$	Rejected
H02	Personalization ↔ Purchase: $r = .376$, $p < .001$	Rejected
H03	Trust ↔ Purchase: $r = .671$, $p < .001$	Rejected
H04	Personalization ↔ Engagement: $r = .497$, $p < .001$	Rejected
H05	Engagement ↔ Purchase: $r = .736$, $p < .001$	Rejected
H06	Combined model: $R^2 = .625$, $p < .001$	Rejected

All six null hypotheses are rejected at the 5% significance level, supporting positive relationships among personalization, trust, engagement and purchase intention.

7. DISCUSSION

The results provide further evidence to existing studies that AI personalization helps to increase perceived relevance and usefulness. High personalization mean value clearly suggests that consumers appreciate personalized recommendations. Personalization has a significant positive relationship with purchase intention, but it has much lower relationship when trust is also put in to the regression model, the mean value for the personalization's effect on purchase intention is not significant when the direct effect is taken into account. In conclusion, personalization should not just be perceived as technical aspect but has an applied function depending on consumer trust in the system and the brand image. Significant correlation between brand engagement and purchase intention further illustrates that personalized marketing seems to gain its advantage when people involve more in the interaction with the brands.

8. MANAGERIAL IMPLICATIONS

Digital marketers need relevant over excessive personalization. Recommendation needs to offer real value and lower search effort. Communication of using AI for recommendations with transparency and using data responsibly can build trust. Businesses need to measure trust in parallel to clicks and conversions and engage with the brand via content not just click bait. Although no measure for privacy taken from within this data, clear consent and data usage and security policies are indispensable.

9. LIMITATIONS AND FUTURE RESEARCH

This study uses convenience sample of 103 respondents, and cannot be generalized to all Internet consumers. Since the data are collected via cross-sectional design and self-report, causal relationship cannot be inferred. No privacy concern scale was developed in the final survey for separate testing of privacy relationships. Future studies should employ more extensive sample, well-established privacy and perceived risk measurement scale, and conduct mediation analysis in a formal test of the mediating effect of trust on personalizing effects. Comparative studies, longitudinal designs, and experimental research will also enhance the existing literature.

10. CONCLUSION

AI-powered personalization was found to be positively related with trust, brand engagement, and online purchase intention. Personalized advertising was evaluated positively but it explained purchase intention less than consumer trust. Combined personalization and trust effects: only trust effects persist while personalization effects vanish. Thus, technological personalization is not enough; the successful use of GenAI in marketing is about trusted recommendations, consumer trust, and brand engagement. Privacy needs to be considered in further empirical testing in the form of a specific scale.

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