
AI BASED INTENSE-CUSTOMIZATION AND ITS ADVERSE IMPACT ON CUSTOMER SATISFACTION.

Prof. Jitendra G. Alone

Nabira Mahavidyalaya, Katol.

Crossref DOI – <https://doi.org/10.63665/rh.v7i2.33>

Abstract :

AI Based Intense-customization has become a central strategy in contemporary marketing, promising enhanced customer experiences through personalized products and services. Advances in digital platforms, data analytics, and artificial intelligence have enabled firms to offer consumers unprecedented levels of choice. Despite its perceived benefits, a growing body of empirical research suggests that excessive customization can paradoxically reduce customer satisfaction. This paper systematically synthesizes findings from recent peer-reviewed studies published between 2017 and 2025 to examine the adverse effects of intense-customization on customer satisfaction. Drawing on theories of the paradox of choice, decision fatigue, maximizing mindset, and information processing, the study identifies key psychological mechanisms through which excessive choice undermines satisfaction. Evidence across industries such as e-commerce, hospitality, healthcare, and digital platforms reveals that intense-customization often leads to choice overload, increased cognitive burden, decision paralysis, regret, and abandonment behaviors. The findings demonstrate a consistent non-linear relationship in which moderate customization enhances satisfaction, while excessive customization diminishes it. This paper contributes to consumer behavior literature by integrating fragmented findings into a coherent framework and offers practical recommendations for designing optimal customization systems that balance personalization benefits with cognitive limits.

Introduction :

Digital transformation has enabled firms to provide highly personalized products and services across multiple industries. Intense-customization, also referred to as mass customization or advanced personalization, allows consumers to tailor offerings according to individual preferences. Marketing theory traditionally assumes that greater choice and control enhance satisfaction by improving preference matching. However, recent empirical evidence challenges this assumption, demonstrating that excessive customization may overwhelm consumers and reduce satisfaction. The paradox of choice literature suggests that beyond an optimal level, additional options increase cognitive effort, regret, and dissatisfaction. As firms increasingly rely on algorithmic personalization and AI-driven systems capable of generating vast choice sets, understanding the limits of customization has become critically important. This paper addresses this issue by synthesizing empirical research on the adverse effects of intense-customization on customer satisfaction.



Literature Review :

The paradox of choice provides the primary theoretical foundation for understanding negative outcomes of excessive customization. Research demonstrates that while consumers express a preference for greater variety, large choice sets often reduce satisfaction and decision confidence. In customization contexts, consumers must actively evaluate multiple attributes simultaneously, increasing cognitive load and decision complexity. Studies across online retail, hospitality, and digital platforms consistently show that excessive customization leads to choice overload, decision fatigue, and abandonment behaviors. Customization fatigue refers to the exhaustion consumers experience when required to make repeated, complex decisions. As cognitive resources are depleted, decision quality declines and reliance on simplifying heuristics increases. Additionally, customization interfaces often activate a maximizing mindset, encouraging consumers to seek the optimal choice rather than a satisfactory one. This orientation heightens sensitivity to trade-offs and anticipated regret, further reducing satisfaction. Together, these findings suggest that intense-customization can undermine the very benefits it aims to provide.

Objectives :

1. **Review and integrate empirical findings** that reveal how highly intensive customization can negatively affect consumer satisfaction across different industries and customer segments.
2. **Examine the psychological mechanisms** through which over-customization undermines satisfaction, focusing on phenomena such as choice overload, decision fatigue, increased maximizing behavior, and elevated cognitive strain.
3. **Analyze situational and consumer-specific factors** that shape whether customization leads to positive or negative satisfaction outcomes, including product characteristics, consumer expertise, perceived importance of the decision, and the design of the choice architecture.
4. **Evaluate the effectiveness of design-based and decision-support strategies** intended to reduce the detrimental effects of extensive customization, such as limiting choice complexity, adopting sequential decision processes, providing default configurations, and leveraging adaptive personalization technologies.
5. **Develop actionable, evidence-based recommendations for practitioners** to help them create customization systems that improve consumer satisfaction while minimizing cognitive burden.

Methodology :

This study employs a systematic literature synthesis methodology. Peer-reviewed articles were identified using academic databases, focusing on studies examining the negative effects of customization, personalization, choice overload, and decision fatigue on customer satisfaction. Inclusion criteria emphasized empirical rigor, relevance to consumer outcomes, and theoretical contribution. Thirty highly relevant studies published between 2017 and 2025 were selected for analysis. A thematic analysis was conducted to identify recurring



psychological mechanisms, contextual moderators, and industry-specific patterns. This approach allows for integration of findings across diverse methodologies and application domains.

Hypotheses Development :

Based on the theoretical foundations of the paradox of choice, decision fatigue, and maximizing mindset, as well as prior empirical findings on customization and consumer behavior, the following hypotheses are proposed to guide the analysis of the adverse effects of AI-based intense-customization on customer satisfaction:

H1: There is a non-linear (inverted U-shaped) relationship between the level of customization and customer satisfaction, such that moderate customization enhances satisfaction, while intense-customization reduces satisfaction.

H2: Intense-customization has a significant positive effect on choice overload, which in turn negatively influences customer satisfaction.

H3: Higher levels of customization complexity lead to increased decision fatigue, resulting in lower post-decision satisfaction.

H4: Intense-customization activates a maximizing mindset among consumers, which mediates the negative relationship between customization intensity and customer satisfaction.

Hypothesis Testing Methods :

Although the present study primarily adopts a systematic literature synthesis approach, the hypotheses are grounded in established empirical methodologies commonly used in customization and consumer behavior research. The testing of these hypotheses in future empirical studies may be conducted using the following methods:

Research Design :

A quantitative research design using experimental or survey-based methods is appropriate to test the proposed hypotheses. Experimental designs may manipulate levels of customization (low, moderate, high) to observe their effects on consumer responses, while surveys may capture perceived customization intensity and satisfaction outcomes in real-world settings.

Measurement of Variables :

Customization Intensity : Measured using multi-item Likert scales capturing perceived number of options, decision complexity, and customization effort.

Customer Satisfaction : Measured through established satisfaction scales assessing overall



satisfaction, confidence, and post-purchase contentment.

Choice Overload and Decision Fatigue : Assessed using validated cognitive load and fatigue scales.

Maximizing Mindset : Measured using standardized maximizing tendency scales.

Moderators : Consumer expertise and product complexity measured through self-reported experience levels and product involvement scales.

Statistical Techniques :

Regression Analysis : Used to test direct relationships between customization intensity and satisfaction (H1–H3).

Quadratic Regression Models : Applied to examine the inverted U-shaped relationship between customization and satisfaction (H1).

Mediation Analysis : Conducted using techniques such as the PROCESS macro or structural equation modeling (SEM) to test mediating effects of choice overload, decision fatigue, and maximizing mindset (H2–H4).

Structural Equation Modeling (SEM) : Enables simultaneous testing of multiple relationships and provides a comprehensive assessment of the proposed conceptual framework.

Validity and Reliability :

Reliability can be assessed using Cronbach's alpha, while construct validity may be established through confirmatory factor analysis (CFA). Model fit indices such as CFI, TLI, RMSEA, and SRMR are recommended for evaluating overall model adequacy.

Results and Discussion :

The synthesis reveals strong evidence that intense-customization negatively affects customer satisfaction through multiple mechanisms. Choice overload emerges as a dominant factor, with consumers experiencing difficulty evaluating extensive option sets. Empirical studies demonstrate a curvilinear relationship between customization and satisfaction, where moderate customization enhances satisfaction but excessive options reduce it. Decision fatigue further exacerbates these effects, particularly in sequential customization tasks. As consumers make multiple decisions, cognitive resources are depleted, leading to poorer decision quality and lower satisfaction. The activation of maximizing mindsets during customization intensifies dissatisfaction by increasing anticipated regret and counterfactual thinking. These effects are consistent across industries, though their magnitude varies depending on product complexity, decision importance, time pressure, and consumer expertise.



Conclusion :

This paper provides a comprehensive synthesis of research demonstrating that intense-customization can adversely impact customer satisfaction. Contrary to the assumption that more choice is always beneficial, the findings reveal clear limits to consumer decision-making capacity. Excessive customization leads to choice overload, decision fatigue, maximizing mindset activation, and reduced satisfaction. The relationship between customization and satisfaction is non-linear and moderated by individual, contextual, and product-related factors. These insights contribute to consumer behavior theory and highlight the need for more nuanced customization strategies.

Recommendations :

Firms should focus on optimizing rather than maximizing customization. Limiting choice sets, providing intelligent default options, and implementing adaptive customization systems can reduce cognitive burden. Sequential elimination approaches and effective decision support tools further enhance satisfaction. Customization strategies should be tailored to product type, consumer expertise, and decision context. By aligning customization complexity with consumer capabilities, organizations can deliver personalized experiences that enhance rather than impair customer satisfaction.

References :

- Park, J. Y., Bufquin, D., & Back, R. M. (2021). More is not always better: determinants of choice overload and satisfaction with customization in fast casual restaurants. *Journal of Hospitality Marketing & Management*, 30(7), 846-867.
- Nardini, G., Rank-Christman, T., Bublitz, M. G., Cross, S. N. N., & Peracchio, L. A. (2019). When self-customization backfires: The role of a maximizing mindset. *Psychology & Marketing*, 36(4), 339-351.
- Trivedi, J. (2025). Avoiding Personalization Fatigue: A Heuristics-Based Framework for Retail Digital Commerce. *Journal of Information Systems Engineering and Management*, 10(58s).
- Meza, R., Bhullar, N., & Ghorbani, M. (2024). User's Dilemma: A Qualitative Study on the Influence of Netflix Recommender Systems on Choice Overload. *Psychological Studies*, 69(3), 456-471.
- Furuhashi, T., Yanagisawa, H., & Aoki, H. (2024). Unraveling Factors of Decision Fatigue in Customization Services. In *Proceedings of the AHFE International Conference*.
- Krause, M., Franke, N., & Hader, M. (2023). EXPRESS: Understanding Consumer Self-Design Abandonment: A Dynamic Perspective. *Journal of Marketing*, 87(6), 891-910.
- Sharma, A., Dwivedi, R., Mariani, M. M., & Islam, T. (2023). Category ratio: A search for an optimal solution to reduce choice overload. *Journal of Consumer Behaviour*, 22(6), 1456-1473.

