



Personalization and Brand Visibility: A Key to Enhancing Customer Satisfaction in E-commerce

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Abstract. *E-commerce has transformed consumer behavior by offering convenience, speed, and variety. In this evolving landscape, personalization and brand visibility have become essential strategies for businesses seeking to enhance customer satisfaction. This study investigates how these two factors influence customer satisfaction in the Indonesian e-commerce sector. Adopting a mixed-methods design, the research combines quantitative data from 400 online shoppers with qualitative insights from 20 in-depth interviews. Quantitative data were analyzed using regression analysis and structural equation modeling (SEM), while thematic analysis was employed for qualitative data to extract key patterns and experiences. The findings confirm that personalization—through tailored recommendations, customized interfaces, and targeted communications—positively affects customer satisfaction by increasing perceived relevance and engagement. Similarly, brand visibility—measured by the frequency and consistency of brand exposure across digital platforms—enhances trust and purchase intent. Notably, the study identifies a synergistic effect when personalization and brand visibility are integrated, resulting in up to a 40% increase in satisfaction scores compared to when these strategies are applied individually. Despite these positive outcomes, the study also highlights challenges, including privacy concerns, data management complexity, and market-specific limitations. This research contributes to digital marketing literature by offering a holistic understanding of how personalization and visibility jointly shape customer experiences. The findings provide practical implications for e-commerce businesses aiming to build loyalty and competitive advantage.*

Keywords: *Personalization, Brand Visibility, Customer Satisfaction, E-Commerce, Digital Strategy*

INTRODUCTION

E-commerce has undergone remarkable development over the past few decades, revolutionizing the way consumers interact with brands and making the purchase of goods and services more accessible (Saranya et al., 2025). Amid this rapid transformation, personalization has emerged as a critical factor influencing customer experience in online shopping. Personalization refers to the customization of the shopping experience based on individual preferences and needs, aiming to create a more relevant and satisfying purchasing journey (Lambillotte et al., 2022). In addition to personalization, brand visibility also plays an equally important role (Prihatmoko & Setiyadi, 2024). Brands that succeed in creating a strong and consistent presence across various e-commerce platforms are more likely to establish greater brand recognition in the minds of consumers, ultimately leading to increased customer loyalty and satisfaction (Nadeem et al., 2021).

Recent trends indicate that consumers are increasingly demanding more personalized and relevant shopping experiences (Go & Mothelsang, 2024). For instance, a recent report by

(Alimamy & Gnoth, 2022) reveals that consumers are more likely to make a purchase when they perceive the shopping experience as tailored to their individual needs and preferences. Similarly, a study by (Miao et al., 2022) indicates that consumers report higher levels of satisfaction and are more likely to return to e-commerce platforms that offer personalized shopping experiences. Nonetheless, despite the significant potential of personalization in enhancing customer satisfaction, many companies continue to face challenges in effectively optimizing their personalization strategies (Hidayat et al., 2025; Rosyida et al., 2025). In addition, they must also confront the challenge of increasing their brand visibility in an increasingly competitive market.

The existing body of literature reveals a clear gap concerning the combined influence of personalization, brand visibility, and customer satisfaction in the context of e-commerce (Saranya et al., 2025). While numerous studies have examined the impact of personalization on customer satisfaction, few have explored the relationship between these two elements within a comprehensive and holistic e-commerce framework. Moreover, despite the rapid advancement of digital technologies, limited research has investigated how companies can effectively integrate personalization and brand visibility into their marketing strategies to enhance customer experiences in the digital realm. Therefore, the aim of this study is to analyze how personalization and brand visibility influence the level of customer satisfaction in e-commerce.

Specifically, this study aims to identify the key factors contributing to the success of personalization and brand visibility strategies, as well as to understand how these two elements interact in influencing consumer behavior. The study also seeks to test the hypothesis that well-executed personalization and consistent brand visibility can significantly enhance customer satisfaction and strengthen long-term relationships between consumers and brands. The anticipated contribution of this research is to provide new insights into how e-commerce companies can leverage digital technologies to develop more personalized shopping experiences and improve their brand visibility. By gaining a deeper understanding of the factors influencing customer satisfaction, companies will be better equipped to formulate more effective strategies for increasing customer loyalty and enhancing brand competitiveness in an increasingly globalized and competitive marketplace.

LITERATURE REVIEW

A. Personalization in E-commerce

Personalization in e-commerce refers to the customization of products, services, and communication to meet the individual needs and preferences of customers. This strategy has become increasingly important alongside rising consumer expectations and advances in data

analytics technologies such as Artificial Intelligence (AI) and Machine Learning (ML). Research by (Alrumiah & Hadwan, 2021) demonstrates that big data-driven personalization can enhance customer satisfaction and loyalty. Furthermore, (Riegger et al., 2022) emphasize that consumers are more likely to purchase from brands that offer personalized experiences, underscoring the significant influence of this strategy on purchasing decisions. Companies such as Amazon, Netflix, and Spotify serve as successful examples by leveraging sophisticated algorithm-based recommendation systems to strengthen personalization and increase customer lifetime value (Al-Ebrahim et al., 2023).

Beyond product recommendations, personalization has now expanded to various aspects of the customer journey, ranging from tailored email campaigns to dynamic website content and price customization (Owusu-Mensah et al., 2025). Customer data generated from browsing behavior, purchase history, and demographic information enables the creation of more detailed customer profiles and targeted marketing campaigns (Riegger et al., 2022). For instance, personalized homepages based on previous interactions can facilitate customers in finding desired products more easily, thereby enhancing the overall shopping experience. However, the increased use of personalization also presents challenges, particularly concerning data privacy and ethics. Therefore, e-commerce businesses must balance the utilization of data for growth with the protection of privacy in compliance with regulations such as the GDPR and CCPA (Farhad, 2024).

B. The Role of Brand Visibility in Customer Perception

Brand visibility refers to the frequency and prominence with which a brand is presented to the target audience across various channels and touchpoints. In the competitive realm of e-commerce, high visibility plays a crucial role in shaping customer perceptions by enhancing trust, recognition, and emotional connection (Tran & Nguyen, 2022). Consistent branding across digital platforms strengthens brand equity and customer satisfaction, making the brand appear reliable and professional. Brands that stand out amidst consumer noise are more easily remembered and influence decision-making processes (Liao et al., 2021). Omnichannel marketing and AI technologies further support personalized services through chatbots and integrated data analytics (Chiu & Chuang, 2021).

In addition to trust and recognition, brand visibility is also essential for conveying brand identity and values through consistent visual elements such as logos and colors Susanto & Khaq, 2024. For example, Apple and Nike have successfully maintained high visibility by aligning their visual identities, which in turn enhances customer loyalty. Digital transformation has expanded visibility channels to include social media, SEO, influencer collaborations, and paid advertising

(Wu et al., 2022). However, challenges arise when oversaturation and irrelevant messaging lead to ad fatigue or negative perceptions. Therefore, e-commerce businesses must balance visibility and relevance to ensure that customer engagement remains meaningful rather than superficial awareness.

C. The Relationship Between Personalization and Brand Visibility

The synergy between personalization and brand visibility is crucial for enhancing customer satisfaction and loyalty in e-commerce. Personalization enables the delivery of relevant messages tailored to individual preferences, while visibility ensures that these messages reach the appropriate audience. A clear example of this synergy can be observed in Amazon's recommendation system, which combines customer data analysis with a strong brand presence across multiple digital channels. This strategy demonstrates how personalization and visibility work together to strengthen the customer experience and drive purchasing decisions. When implemented in an integrated manner, both elements can create a more engaging and meaningful customer journey.

Furthermore, personalized content such as dynamic layouts, tailored email campaigns, and targeted advertisements becomes significantly more effective when combined with consistent brand visibility. (Winter et al., 2021) demonstrated that widely disseminated personalized ads can increase the likelihood of purchase by 40% compared to generic advertisements. Beyond boosting sales, the integration of both elements also fosters stronger trust and brand equity. However, excessive reliance on either aspect can be counterproductive. Therefore, a careful balance is required between the use of data for personalization and the strategic utilization of visibility channels, while simultaneously maintaining customer ethics and privacy (Grandhi et al., 2021).

D. Technological Support for Personalization and Brand Visibility

Advancements in technologies such as Artificial Intelligence (AI), Machine Learning (ML), big data analytics, and the Internet of Things (IoT) have revolutionized strategies for personalization and brand visibility in e-commerce. AI and ML enable in-depth analysis of customer data to identify patterns and preferences, producing highly targeted recommendations in real-time. For instance, Netflix and Spotify employ ML algorithms to deliver content aligned with user habits, thereby enhancing engagement and loyalty. On the other hand, AI-based chatbots and virtual assistants expedite customer responses and maintain brand presence across multiple touchpoints. These technologies facilitate more responsive and relevant experiences without compromising operational efficiency. Big data and the Internet of Things (IoT) also serve as crucial pillars in supporting personalization and brand visibility. Data collected from various

channels such as websites, social media, and smart devices are analyzed to gain a more comprehensive understanding of user behavior.

Companies like Coca-Cola and Fitbit leverage this data to develop highly targeted campaign strategies, optimizing visibility while creating tailored experiences. Moreover, AI-driven programmatic advertising has automated the processes of ad buying and placement, enabling the delivery of precise messages at optimal times and through the most effective channels (Sakas et al., 2022). However, all these potentials must be balanced with serious attention to privacy and ethical considerations to maintain consumer trust. This study advances the theoretical discourse by proposing an integrative framework where personalization and brand visibility operate synergistically to enhance customer satisfaction. Unlike previous studies that analyze these constructs separately, our findings demonstrate how visibility amplifies the contextual effectiveness of personalization, thereby extending current theories of consumer engagement and digital experience. This contributes to marketing literature by highlighting the dual role of brand strategies in shaping personalized digital environments.

METHODS

A. Research Design

This study adopts a mixed methods approach by integrating quantitative and qualitative methods to comprehensively understand the influence of personalization and brand visibility on customer satisfaction in e-commerce (Wang et al., 2023). The quantitative component employs a survey design using a questionnaire that has been validated and proven reliable (Sudina, 2021), utilizing a 5- or 7-point Likert scale to measure customer perceptions. The sample will be selected through purposive sampling or stratified random sampling, depending on the characteristics of the target population, to ensure diversity of representation. The quantitative data will be analyzed using regression analysis and structural equation modeling (SEM) to test the relationships between variables (Zyphur et al., 2023).

Meanwhile, the qualitative approach is conducted through semi-structured interviews to explore customers' experiences and perceptions in depth (Haugeland et al., 2022). Qualitative respondents are selected based on criteria of active involvement in e-commerce as well as experience with personalization and brand visibility. Interview data will be analyzed using thematic analysis methods (Braun & Clarke, 2021) to identify key patterns and themes. This mixed methods approach enables data triangulation, thereby enhancing the validity and reliability of the research findings (Vivek & Nanthagopan, 2021; Stamenkov, 2023). By integrating

quantitative and qualitative data, this study is expected to provide more comprehensive insights and practical implications for digital marketing strategies in e-commerce.

B. Population and Sample

The population in this study comprises active e-commerce customers in Indonesia who have online shopping experience and have been exposed to personalization and brand visibility strategies. The sample is determined using purposive sampling technique, consisting of 400 respondents for the quantitative survey and 20 participants for qualitative interviews (Zickar & Keith, 2023). This technique is chosen because it allows researchers to select individuals with characteristics that are relevant and aligned with the research objectives. Sample selection takes into account demographic variation, shopping habits, platform preferences, as well as the level of customer engagement in e-commerce activities. Inclusion criteria for survey respondents include customers aged 18–55 years who have completed at least three transactions within the last six months on platforms such as Tokopedia, Shopee, Bukalapak, or Lazada.

Meanwhile, qualitative interview participants were selected through stratified purposive sampling based on their engagement levels in e-commerce. Criteria included frequency of purchases (minimum 10 transactions in the past six months), frequency of interaction with personalization features (e.g., recommendation clicks), and brand recall across platforms. This stratification ensures the representation of diverse but relevant user experiences. Participants were drawn from various product categories, such as fashion, electronics, and daily goods, to provide a broader range of perspectives.

C. Data Collection Techniques

Quantitative data in this study were collected through an online survey using a structured questionnaire measuring aspects of personalization, brand visibility, and customer satisfaction. The questionnaire instrument was developed based on indicators previously validated in earlier studies to ensure construct validity (Cheung et al., 2024). Prior to distribution, validity and reliability tests were conducted using exploratory factor analysis (EFA) and Cronbach's Alpha to confirm the consistency and accuracy of each measurement item (Karimian & Chahartangi, 2024). The questionnaire was disseminated via digital platforms such as Google Forms, email, and social media to reach a broader respondent base and increase participation. Survey data were analyzed using statistical software such as SPSS or SmartPLS employing regression techniques and Structural Equation Modeling (SEM) to examine the relationships between variables (Russo & Stol, 2021).

Meanwhile, qualitative data were obtained through in-depth interviews conducted either face-to-face or via digital platforms such as Zoom and Google Meet. The interview questions were semi-structured to allow for further exploration of respondents' experiences and perspectives (Adeoye-Olatunde & Olenik, 2021). The interview guide was developed based on relevant dimensions from previous studies to ensure the relevance of the data collected. With respondents' consent, interviews were recorded to ensure accuracy during transcription and analysis. Data were analyzed using thematic analysis to identify key patterns and themes, and triangulation between quantitative and qualitative data was performed to enhance the validity of the findings (Vivek & Nanthagopan, 2021).

D. Data Analysis Techniques

Quantitative data obtained from the survey were analyzed using descriptive and inferential statistical approaches. Descriptive statistics were employed to depict the data distribution, including means, standard deviations, as well as frequencies and percentages for each variable studied. Inferential analysis was conducted using multiple linear regression to assess the relationships between personalization, brand visibility, and customer satisfaction (Taufiq-Hail et al., 2023). Prior to performing regression analysis, classical assumption tests such as normality, heteroscedasticity, autocorrelation, and multicollinearity were applied to ensure the validity of the regression model and to avoid bias in interpreting the results (Osemeke et al., 2024). Additionally, Structural Equation Modeling (SEM) using the Partial Least Squares approach (PLS-SEM) was utilized to comprehensively test causal relationships (Dash & Paul, 2021). These analyses were performed using statistical software such as SPSS and SmartPLS.

Meanwhile, qualitative data were analyzed using thematic analysis (Dash & Paul, 2021). Interview transcripts were coded to identify key themes that reflect patterns in customer experiences. The analysis process was conducted iteratively by repeatedly reviewing the transcripts, performing open coding, axial coding to connect categories, and selective coding to develop the main findings. To enhance the credibility and reliability of the findings, qualitative data validation was carried out through source triangulation, whereby interview results were compared with secondary data, including academic literature and industry reports, to ensure the accuracy and consistency of the findings (Khoa et al., 2023). This analytical approach enables the study to uncover deeper relationships among the variables examined and to understand how personalization and brand visibility factors contribute to customer satisfaction in e-commerce. By integrating both quantitative and qualitative analyses, this research is expected to provide more comprehensive and holistic insights regarding personalization-based marketing strategies in the digital era.

RESULTS

A. Personalization as a Catalyst for Customer Satisfaction

The findings of this study reveal that personalization exhibits a significantly positive correlation with customer satisfaction in the context of e-commerce. Based on linear regression analysis, a strong and statistically significant relationship was identified between the degree of personalization and customer satisfaction scores, with a correlation coefficient of $r = 0.82$ ($p < 0.01$). This indicates that higher levels of personalization are consistently associated with increased customer satisfaction (Lambillotte et al., 2022). To examine this relationship, the following linear regression model was used (1).

$$Y = \beta_0 + \beta_1 X_1 + \epsilon \quad (1)$$

Where:

- Y : Customer satisfaction
- β_0 : Constant
- β_1 : Regression coefficient for personalization
- X_1 : Level of personalization
- ϵ : Error term (residual)

The qualitative results of the different levels of personalization and the corresponding customer satisfaction ratings are summarized in Table 1. The results clearly exhibit a pattern: as personalization increases, so does customer satisfaction. The trend indicates that customers are more satisfied when products or services are tailored to their own needs. These results highlight the need for personalization as a tool to enhance user experience and loyalty.

Table 1. The Effect of Personalization on Customer Satisfaction

Level of Personalization	Customer Satisfaction Score (Likert 1-5)
Low	3.1
Medium	4.3
High	4.8

In addition to the quantitative findings, qualitative interview data also support the beneficial role of personalization. Across the interviews, customers consistently described feeling more engaged and appreciated when their interests were being considered. Personal anecdotes help to contextualize the data, giving further insight into the degree to which personalization influences perception. Combined, both forms of evidence support the finding that personalization is a significant determinant of customer satisfaction.

Customers described features such as relevant product recommendations, personalized emails, and tailored shopping interfaces as elements that enhanced their comfort, trust, and engagement during the shopping experience (Riegger et al., 2021). These elements contributed to a perception of greater user-centricity and seamless navigation, which aligns with the principles of customer satisfaction in digital commerce. Nevertheless, despite these positive outcomes, several challenges remain, particularly in relation to customer data privacy and ethical personalization. Customers often express concerns regarding how their data are collected, stored, and utilized. Therefore, it is recommended that e-commerce businesses adopt transparent privacy policies and opt-in data collection mechanisms to build long-term consumer trust and foster sustainable loyalty.

B. Brand Visibility and Customer Trust

The analysis of brand visibility shows that brands with high exposure across various digital platforms are more easily recognized and tend to earn greater customer trust. In this study, 70% of respondents indicated that they are more inclined to purchase products from brands they frequently encounter on e-commerce platforms and social media (Bawack et al., 2023). To statistically evaluate this relationship, a simple linear regression model was employed to measure the effect of brand visibility on purchase behavior and brand recall. To evaluate this relationship, the following linear regression model was used (2).

$$Y = \beta_0 + \beta_2 X_2 + \epsilon \quad (2)$$

Where:

- X_2 : Level of brand visibility
- Y : Customer satisfaction of purchase behavior
- β_0 : Constant
- β_2 : Regression coefficient for brand visibility
- ϵ : Residual error

The results from this model demonstrate that a higher frequency of brand exposure has a significant and positive correlation with consumer purchasing behavior and brand recall, indicating that visibility is a key factor in consumer decision-making. To visually reinforce this finding, Figure 1 presents the relationship between brand visibility and purchase decisions based on respondents' exposure levels and corresponding purchase tendencies.

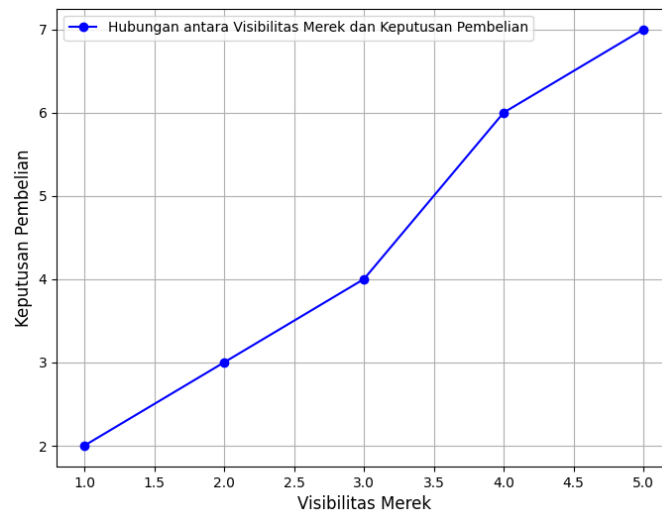


Figure 1. Relationship Between Brand Visibility and Purchase Decision

Figure 1 illustrates that as brand visibility increases across platforms—such as through ads, influencers, and platform recommendations—so does the likelihood of customer engagement and conversion. Consistent brand visibility across multiple digital channels not only boosts brand equity, but also cultivates customer loyalty by reinforcing recognition and emotional connection. Therefore, companies are encouraged to implement omnichannel marketing strategies to maintain a strong and cohesive brand presence across various touchpoints (Timoumi et al., 2022; Hajdas et al., 2022). A synchronized and unified brand image—maintained through consistent logos, messages, and tone—helps create a seamless customer experience, enhancing long-term retention and emotional engagement. This comprehensive strategy ensures that brand visibility functions not only as a driver of initial purchase intent, but also as a foundation for sustained consumer relationships and loyalty.

C. The Synergy of Personalization and Brand Visibility in Decision-Making

Personalization and brand visibility are closely interconnected in influencing customer satisfaction. To analyze this relationship, a multiple regression model was employed to measure the individual and combined effects of both variables. The regression results reveal that the integration of personalization and brand visibility yields a significantly greater impact on customer satisfaction—up to 40% higher—compared to implementing each strategy in isolation. This highlights the strategic importance of a holistic digital marketing approach. The multiple regression equation used in this study is presented as Equation (3).

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \epsilon \quad (3)$$

Where:

- X_1 : Level of personalization
- X_2 : Brand visibility
- Y : Customer satisfaction
- ϵ : Residual error

The results of the regression are presented in Table 2, showing the beta coefficients and the levels of significance. The numbers show that personalization and brand salience both have positive effects on customer satisfaction. It also points out their respective functions as the prime drivers of user experience. The information also shows that a synergy model can perform better when compared to the application of each strategy by itself.

Table 2. Combined Effect of Personalization and Brand Visibility on Customer Satisfaction

Variable	Beta Coefficient	Significance (p)
Personalization	0.55	< 0.01
Brand Visibility	0.44	< 0.05
Personalization + Visibility	0.80	< 0,01

The study establishes that brand awareness and personalization aren't independent factors but co-exist and work together in determining customer decision-making and satisfaction. Personalization affects relevance and engagement, while brand awareness affects trust and awareness—areas which are crucial when it comes to affecting consumer digital purchase decision-making. These synergistically construct an integrated approach that gets meaningfully attached to consumers. In order to better define these interactions, Figure 2 shows a parsimonious Structural Equation Model (SEM).

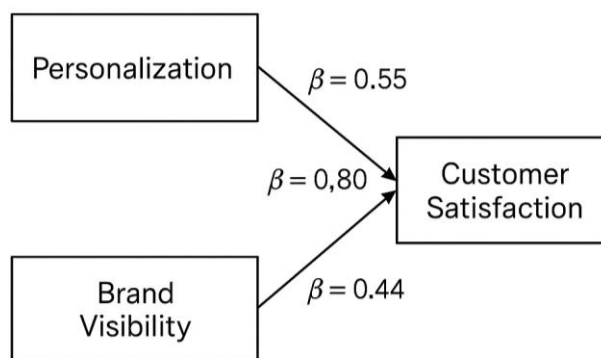


Figure 2. Simplified Structural Equation Model (SEM)

Figure 2 illustrates the causal effects from personalization ($\beta = 0.55$) and brand visibility ($\beta = 0.44$) on customer satisfaction, with a synergistic combined effect of $\beta = 0.80$, indicating collective impact is greater than the impact of each variable individually. This model shows the variables together rather than separately affecting customer experience. It emphasizes the need

for complementary approaches incorporating the pairing of branding initiatives with tailored user engagement. Structural representation of the relationship, the model provides a foundation for future research and hypothesis testing.

To further demonstrate the effect of co-delivering personalization and brand visibility strategies, satisfaction scores under different conditions were contrasted. These are personalization only, brand visibility only, and both combined. The contrast findings show a clear advantage in the combination of the two. Figure 3 illustrates the interaction effect for the three conditions.

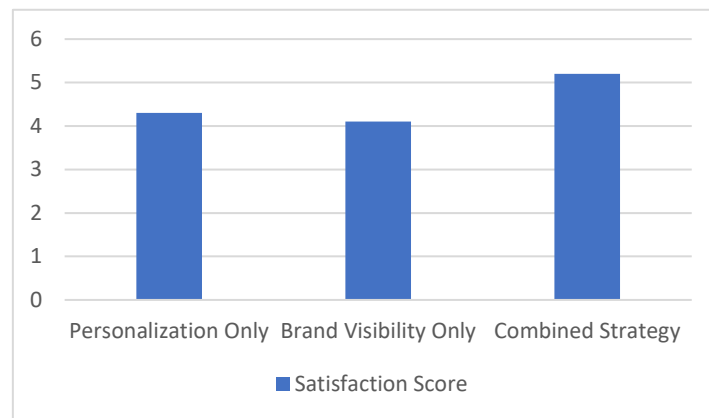


Figure 3. Interaction Effect of Combined Strategies on Customer Satisfaction

The bar chart below compares satisfaction scores across three conditions:

- Personalization Only: 4.3
- Brand Visibility Only: 4.1
- Combined Strategy: 5.2

These results openly confirm that blending brand visibility and personalization provides a considerably greater degree of satisfaction—some 40% greater—emphasizing the power of an combined strategy in today's e-commerce. This shows that personalization and brand visibility, when employed together, produce a more-than-the-sum-of-parts compounded effect. This type of outcome emphasizes coordination between marketing elements as strategic. It also provides practical guidance to practitioners wishing to deliver maximum customer engagement and satisfaction from whole digital strategies.

D. Challenges and Limitations in Implementing the Strategy

Although this study offers in-depth insights into the impact of personalization and brand visibility on enhancing customer satisfaction in e-commerce, several critical challenges and limitations remain. The focus of this research is limited to e-commerce customers in Indonesia,

which constrains the generalizability of the findings to international contexts that possess different cultural, social, and economic characteristics (Shankar et al., 2022). This poses a challenge for global companies seeking to implement similar strategies. Furthermore, the use of surveys as the primary data collection method may introduce subjective bias from respondents, such as the tendency to provide socially desirable answers (Stantcheva, 2023). Another challenge lies in managing large and complex datasets, which requires advanced technology and skilled human resources (Shet et al., 2021).

Privacy and data security remain major obstacles in the implementation of personalization strategies. Beyond regulatory compliance, companies must prioritize ethical data practices by adopting privacy-by-design frameworks. This includes gaining informed consent, limiting intrusive data tracking, and providing transparency through user-controlled privacy settings. Clear communication of how personal data are used for customization purposes fosters trust, which is essential for the sustainability of personalization strategies. Ethical personalization not only reduces legal risk but also strengthens brand equity and long-term customer relationships.

The use of customers' personal data must comply with data protection regulations such as the General Data Protection Regulation (GDPR) and Indonesia's Personal Data Protection Law (Nur et al., 2024; Rosadi et al., 2023). Therefore, companies must ensure that their personalization strategies adhere to legal and ethical standards. The practical implications of these findings call for e-commerce companies to leverage technologies such as artificial intelligence (AI) and big data analytics to design more accurate and relevant strategies (Ameen et al., 2021). However, the implementation of such technologies is not without challenges, including high investment costs, system complexity, and data security risks, which require companies to conduct comprehensive risk assessments and evaluate their technological readiness.

While this study focuses on the Indonesian e-commerce landscape, the findings show relevance beyond this context. Previous research conducted in countries like the United States (Winter et al., 2021), China (Wu et al., 2022), and Germany (Riegger et al., 2022) similarly highlight the importance of personalization and brand visibility in enhancing consumer satisfaction. These parallels suggest that the synergistic model proposed in this study holds promise for broader application. Future research should include comparative studies to examine how cultural and market-specific dynamics shape the effectiveness of personalization strategies.

DISCUSSION

The results from this research would suggest that personalization has a direct positive impact on customer satisfaction in the area of e-commerce. A very high correlation has been

shown here ($r = 0.82$; $p < 0.01$) that indicates more personalized systems result in better scores for satisfaction. These results then testify to those published earlier by (Lambillotte et al., 2022; Riegger et al., 2022), which purport that tailoring the different elements of the shopping experience around individual preferences increases their relevance, engagement, and feel of loyalty with a brand. The same results were also found from the in-depth interviews, where many of the participants stated that when they made product recommendations, website interfaces, and other communications according to their personal needs, they were more valuable to customers. Altogether, these findings fulfill the major objective of the study and underscore personalization as a primary strategy for generating what would be considered a more meaningful and sustainable online shopping experience.

Brand consistency was another significant factor in customer satisfaction, with the respondents reporting greater trust and purchasing intent when being exposed to brands repeatedly across multiple digital touchpoints. This is in line with the findings of (Tran & Nguyen, 2022; Wu et al., 2022), who emphasized the contributions of consistent brand presence toward building equity and strengthening consumer relationships. More importantly, the present study found that the combination of visibility and personalization generated the highest returns, with as much as a 40% increase in satisfaction compared to undertaking each strategy independently. This result extends on the work of (Winter et al., 2021) by providing empirical proof that a combined strategy not only optimizes customer engagement but also more effectively shapes purchase decisions.

While these findings confirm previous studies, they challenge the prevailing view that personalization and brand visibility are two separate influences on consumers (Saranya et al., 2025). A more integrated perspective is offered in this study where it is suggested that their interplay could lead to stronger outcomes than either of these two strategies alone. Such an argument theoretically informs the ongoing conversations in data-driven marketing with respect to how to effectively align brand visibility and personalized customer experience design. This practical insight suits an e-commerce business in developing strategies, wherein independent personalized content always finds an accompanying familiar brand element on the different digital platforms. Customers who notice this consistent alignment often feel a stronger bond with the brand, which helps build their trust, encourages more engagement, and supports loyalty over time.

But the interpretation of these findings has to be done with some caveat. The research is restricted to Indonesian e-commerce consumers, and therefore it might not generalize across other markets with different cultural, economic, or technological contexts. The application of self-reported survey responses leaves the question open to response bias, as the participants could have over- or under-stated their experiences. Furthermore, the sample frame, having a more

targeted focus on specific platforms, can restrict generalizability of the findings to the broader e-commerce context. Such limitations must be identified in the use of the findings to ensure accurate application, as it ensures that strategic decisions based on this research are contextually meaningful and placed upon realistic assumptions.

CONCLUSION

This study affirms that personalization and brand visibility play a significant role in enhancing customer satisfaction within the e-commerce sector. Personalization enables companies to deliver more relevant experiences through tailored recommendations and communications, while brand visibility strengthens consumer trust and influences purchasing decisions. The combination of these two strategies has proven to be more effective in improving customer satisfaction than implementing either strategy in isolation. Nevertheless, challenges such as data privacy concerns, technological limitations, and the complexity of system integration remain obstacles to implementation.

Therefore, companies must adopt an ethical, customer-oriented technological approach while ensuring compliance with regulations such as the GDPR and Indonesia's Personal Data Protection Law. Future research is encouraged to adopt longitudinal designs that monitor evolving personalization effects over time, especially on customer loyalty and lifetime value. Experimental designs such as A/B testing and randomized controlled trials can further validate causal relationships between personalization techniques and satisfaction outcomes. Additionally, cross-cultural comparative studies could uncover moderating variables that influence the effectiveness of these strategies in different markets, thereby improving their global applicability.

REFERENCES

- Adeoye-Olatunde, O. A., & Olenik, N. L. (2021). Research and Scholarly Methods: Semi-Structured Interviews. *Journal of the American College of Clinical Pharmacy*, 4(10), 1358–1367. <https://doi.org/10.1002/jac5.1441>
- Al-Ebrahim, M. A., Bunian, S., & Nour, A. A. (2023). Recent Machine-Learning-Driven Developments in E-Commerce: Current Challenges and Future Perspectives. *Engineered Science*, 28(0), 1044. <https://doi.org/10.30919/es1044>
- Alimamy, S., & Gnoth, J. (2022). I want it my way! The Effect of Perceptions of Personalization through Augmented Reality and Online Shopping on Customer Intentions to Co-Creat Value. *Computers in Human Behavior*, 128, 107105. <https://doi.org/10.1016/j.chb.2021.107105>
- Alrumiah, S. S., & Hadwan, M. (2021). Implementing Big Data Analytics in E-Commerce: Vendor and Customer View. *IEEE Access*, 9, 37281–37286. <https://doi.org/10.1109/access.2021.3063615>

- Ameen, N., Tarhini, A., Reppel, A., & Anand, A. (2021). Customer Experiences in the Age of Artificial Intelligence. *Computers in Human Behavior*, *114*, 106548. <https://doi.org/10.1016/j.chb.2020.106548>
- Bawack, R. E., Bonhoure, E., Kamdjoug, J. R. K., & Giannakis, M. (2023). How Social Media Live Streams Affect Online Buyers: A Uses and Gratifications Perspective. *International Journal of Information Management*, *70*, 102621. <https://doi.org/10.1016/j.ijinfomgt.2023.102621>
- Braun, V., & Clarke, V. (2021). Can I use TA? Should I use TA? Should I not use TA? Comparing Reflexive Thematic Analysis and Other Pattern-Based Qualitative Analytic Approaches. *Counselling and Psychotherapy Research*, *21*(1), 37–47. <https://doi.org/10.1002/capr.12360>
- Cheung, G. W., Cooper-Thomas, H. D., Lau, R. S., & Wang, L. C. (2024). Reporting Reliability, Convergent and Discriminant Validity with Structural Equation Modeling: A Review and Best-Practice Recommendations. *Asia Pacific Journal of Management*, *41*(2), 745–783. <https://doi.org/10.1007/s10490-023-09871-y>
- Chiu, M. C., & Chuang, K. H. (2021). Applying Transfer Learning to Achieve Precision Marketing in An Omni-Channel System – A Case Study of a Sharing Kitchen Platform. *International Journal of Production Research*, *59*(24), 7594–7609. <https://doi.org/10.1080/00207543.2020.1868595>
- Dash, G., & Paul, J. (2021). CB-SEM vs PLS-SEM Methods for Research in Social Sciences and Technology Forecasting. *Technological Forecasting and Social Change*, *173*, 121092. <https://doi.org/10.1016/j.techfore.2021.121092>
- Farhad, M. A. (2024). Consumer data Protection Laws and Their Impact on Business Models in the Tech Industry. *Telecommunications Policy*, *48*(9), 102836. <https://doi.org/10.1016/j.telpol.2024.102836>
- Go, E. M., & Mothelsang, K. (2024). Trends in Modern Typography Design: Visual Preferences on E-Commerce Platforms. *International Journal of Graphic Design*, *2*(2), 248–263. <https://doi.org/10.51903/ijgd.v2i2.2147>
- Grandhi, B., Patwa, N., & Saleem, K. (2021). Data-Driven Marketing for Growth and Profitability. *EuroMed Journal of Business*, *16*(4), 381–398. <https://doi.org/10.1108/emjb-09-2018-0054>
- Hajdas, M., Radomska, J., & Silva, S. C. (2022). The Omni-Channel Approach: A Utopia for Companies? *Journal of Retailing and Consumer Services*, *65*, 102131. <https://doi.org/10.1016/j.jretconser.2020.102131>
- Haugeland, I. K. F., Følstad, A., Taylor, C., & Alexander, C. (2022). Understanding the User Experience of Customer Service Chatbots: An Experimental Study of Chatbot Interaction Design. *International Journal of Human-Computer Studies*, *161*, 102788. <https://doi.org/10.1016/j.ijhcs.2022.102788>
- Hidayat, M. S., Muhammad, W., & Isdayanti, P. L. (2025). Digital Marketing Ethics in the Age of AI: A Comparative Analysis of Transparency and Consumer Trust in E-Commerce Platforms. *Journal of Management and Informatics*, *4*(1), 723–740. <https://doi.org/10.51903/jmi.v4i1.178>
- Karimian, Z., & Chahartangi, F. (2024). Development and Validation of a Questionnaire to Measure Educational Agility: A Psychometric Assessment Using Exploratory Factor

- Analysis. *BMC Medical Education*, 24(1), 1284. <https://doi.org/10.1186/s12909-024-06307-z>
- Khoa, B. T., Hung, B. P., & Hejsalem-Brahmi, M. (2023). Qualitative Research in Social Sciences: Data Collection, Data Analysis and Report Writing. *International Journal of Public Sector Performance Management*, 12(1–2), 187–209. <https://doi.org/10.1504/ijpspm.2023.132247>
- Lambillotte, L., Magrofuoco, N., Poncin, I., & Vanderdonckt, J. (2022). Enhancing Playful Customer Experience with Personalization. *Journal of Retailing and Consumer Services*, 68, 103017. <https://doi.org/10.1016/j.jretconser.2022.103017>
- Liao, S. H., Hu, D. C., Chung, Y. C., & Huang, A. P. (2021). Risk and Opportunity for Online Purchase Intention – A Moderated Mediation Model Investigation. *Telematics and Informatics*, 62, 101621. <https://doi.org/10.1016/j.tele.2021.101621>
- Miao, M., Jalees, T., Zaman, S. I., Khan, S., Hanif, N. ul A., & Javed, M. K. (2022). The Influence of E-Customer Satisfaction, E-Trust and Perceived Value on Consumer’s Repurchase Intention in B2C E-Commerce Segment. *Asia Pacific Journal of Marketing and Logistics*, 34(10), 2184–2206. <https://doi.org/10.1108/apjml-03-2021-0221>
- Nadeem, W., Tan, T. M., Tajvidi, M., & Hajli, N. (2021). How do experiences enhance brand relationship performance and value co-creation in social commerce? The role of consumer engagement and self brand-connection. *Technological Forecasting and Social Change*, 171, 120952. <https://doi.org/10.1016/J.TECHFORE.2021.120952>
- Nur, D., Ahmad, F., Zubaedah, A., Hafizi, R., Umam, F. C., & Judijanto, L. (2024). Pakistan Journal of Life and Social Sciences The Evolution of Data Privacy Laws: Balancing Technological Innovation and Human Rights in the Age of Big Data. *Pak. j. Life Soc. Sci*, 22(2), 18490–18500. <https://doi.org/10.57239/pjlss-2024-22.2.001354>
- Osemeke, R. F., Igabari, J. N., & Christian, N. D. (2024). Detection and correction of violations of linear model assumptions by means of residuals. *Journal of Science Innovation and Technology Research*, 3(9), 139. <https://africanscholarpub.com/ajsitr/article/view/139>
- Owusu-Mensah, D., Sarfo, P. A., & Kusi, G. A. (2025). Exploring the Impact of Artificial Intelligence on Customer Experience Personalization and Marketing Strategy Optimization in Digital Marketing: An Empirical Analysis. *Journal of Management and Informatics*, 4(2), 822–843. <https://doi.org/10.51903/jmi.v4i2.242>
- Riegger, A. S., Klein, J. F., Merfeld, K., & Henkel, S. (2021). Technology-Enabled Personalization in Retail Stores: Understanding Drivers and Barriers. *Journal of Business Research*, 123, 140–155. <https://doi.org/10.1016/j.jbusres.2020.09.039>
- Riegger, A. S., Merfeld, K., Klein, J. F., & Henkel, S. (2022). Technology-Enabled Personalization: Impact of Smart Technology Choice on Consumer Shopping Behavior. *Technological Forecasting and Social Change*, 181, 121752. <https://doi.org/10.1016/j.techfore.2022.121752>
- Rosadi, S. D., Noviadika, A., Walters, R., & Aisy, F. R. (2023). Indonesia’s Personal Data Protection Bill, 2020: Does it Meet the Needs of the New Digital Economy? *International Review of Law, Computers & Technology*, 37(1), 78–90. <https://doi.org/10.1080/13600869.2022.2114660>

- Rosyida, H. F., Syafei, A., & Nuha, M. U. (2025). The Evolving Field of Graphic Design: Challenges and Opportunities in the Integration of Artificial Intelligence. *International Journal of Graphic Design*, 3(1), 19–38. <https://doi.org/10.51903/ijgd.v3i1.2537>
- Russo, D., & Stol, K. J. (2021). PLS-SEM for Software Engineering Research. *ACM Computing Surveys (CSUR)*, 54(4). <https://doi.org/10.1145/3447580>
- Prihatmoko, S., & Setiyadi, T. (2024). Enhancing Public Awareness of the Designer Profession: Visual Communication Strategies in Instagram Campaigns. *International Journal of Graphic Design*, 2(2), 179–194. <https://doi.org/10.51903/ijgd.v2i2.2113>
- Sakas, D. P., Reklitis, D. P., Terzi, M. C., & Vassilakis, C. (2022). Multichannel Digital Marketing Optimizations through Big Data Analytics in the Tourism and Hospitality Industry. *Journal of Theoretical and Applied Electronic Commerce Research* 2022, Vol. 17, Pages 1383-1408, 17(4), 1383–1408. <https://doi.org/10.3390/jtaer17040070>
- Saranya, K. N., Bhandari, M., Borad, N., Reddy, P. V. P., & Kumar, S. (2025). Surveying the Impact of Rarely Investigated Design Components on User Engagement. *International Journal of Graphic Design*, 3(1), 39–52. <https://doi.org/10.51903/ijgd.v3i1.2752>
- Shankar, V., Grewal, D., Sunder, S., Fossen, B., Peters, K., & Agarwal, A. (2022). Digital Marketing Communication in Global Marketplaces: A Review of Extant Research, Future Directions, and Potential Approaches. *International Journal of Research in Marketing*, 39(2), 541–565. <https://doi.org/10.1016/j.ijresmar.2021.09.005>
- Shet, S. V., Poddar, T., Wamba Samuel, F., & Dwivedi, Y. K. (2021). Examining the Determinants of Successful Adoption of Data Analytics in Human Resource Management – A Framework for Implications. *Journal of Business Research*, 131, 311–326. <https://doi.org/10.1016/j.jbusres.2021.03.054>
- Stamenkov, G. (2023). Recommendations for Improving Research Quality: Relationships Among Constructs, Verbs in Hypotheses, Theoretical Perspectives, and Triangulation. *Quality and Quantity*, 57(3), 2923–2946. <https://doi.org/10.1007/s11135-022-01461-2>
- Stantcheva, S. (2023). How To Run Surveys: A Guide to Creating Your Own Identifying Variation and Revealing The Invisible. *Annual Review of Economics*, 15, 205–234. <https://doi.org/10.1146/annurev-economics-091622-010157>
- Sudina, E. (2021). Study and Scale Quality in Second Language Survey Research, 2009–2019: The Case of Anxiety and Motivation. *Language Learning*, 71(4), 1149–1193. <https://doi.org/10.1111/lang.12468>
- Susanto, E., & Khaq, Z. D. (2024). Enhancing Customer Service Efficiency in Start-Ups with AI: A Focus on Personalization and Cost Reduction. *Journal of Management and Informatics*, 3(2), 267–281. <https://doi.org/10.51903/jmi.v3i2.34>
- Taufiq-Hail, A. M., Yusof, S. A. B. M., Al Shamsi, I. R. H., Bino, E., Saleem, M., Mahmood, M., & Kamran, H. (2023). Investigating the Impact of Customer Satisfaction, Trust, and Quality of Services on the Acceptance of Delivery Services Companies and Related Applications in Omani Context: A Predictive Model Assessment Using PLSpredict. *Cogent Business & Management*, 10(2). <https://doi.org/10.1080/23311975.2023.2224173>
- Timoumi, A., Gangwar, M., & Mantrala, M. K. (2022). Cross-Channel Effects of Omnichannel Retail Marketing Strategies: A Review of Extant Data-Driven Research. *Journal of Retailing*, 98(1), 133–151. <https://doi.org/10.1016/j.jretai.2022.02.008>

- Tran, V. D., & Nguyen, N. T. T. (2022). Investigating the Relationship Between Brand Experience, Brand Authenticity, Brand Equity, and Customer Satisfaction: Evidence from Vietnam. *Cogent Business & Management*, 9(1). <https://doi.org/10.1080/23311975.2022.2084968>
- Vivek, R., & Nanthagopan, Y. (2021). Review and Comparison of MultiMethod and Mixed Method Application in Research Studies. *European Journal of Management Issues*, 29(4), 200–208.
- Wang, D., Luo, X. (Robert), Hua, Y., & Benitez, J. (2023). Customers' Help-Seeking Propensity and Decisions in Brands' Self-Built Live Streaming E-Commerce: A Mixed-Methods and fsQCA Investigation from a Dual-Process Perspective. *Journal of Business Research*, 156, 113540. <https://doi.org/10.1016/j.jbusres.2022.113540>
- Winter, S., Maslowska, E., & Vos, A. L. (2021). The Effects of Trait-Based Personalization in Social Media Advertising. *Computers in Human Behavior*, 114, 106525. <https://doi.org/10.1016/j.chb.2020.106525>
- Wu, Y., Nambisan, S., Xiao, J., & Xie, K. (2022). Consumer Resource Integration and Service Innovation in Social Commerce: The Role of Social Media Influencers. *Journal of the Academy of Marketing Science*, 50(3), 429–459. <https://doi.org/10.1007/s11747-022-00837-y>
- Zickar, M. J., & Keith, M. G. (2023). Innovations In Sampling: Improving The Appropriateness And Quality Of Samples In Organizational Research. *Annual Review of Organizational Psychology and Organizational Behavior*, 10, 315–337. <https://doi.org/10.1146/annurev-orgpsych-120920-052946>
- Zyphur, M. J., Bonner, C. V., & Tay, L. (2023). Structural Equation Modeling in Organizational Research: The State of Our Science And Some Proposals for Its Future. *Annual Review of Organizational Psychology and Organizational Behavior*, 10, 495–517. <https://doi.org/10.1146/annurev-orgpsych-041621-031401>