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ANALYZING THE IMPACT OF PERSONALIZATION AND USER EXPERIENCE ON TRUST, SATISFACTION, AND LOYALTY IN TOKOPEDIA USERS

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Abstract

This study investigates the impact of personalization and user experience on customer loyalty, with trust, customer satisfaction, and positive perception as mediating variables among Tokopedia users in Indonesia. Grounded in Social Exchange Theory (SET) and the Stimulus–Organism–Response (S-O-R) framework, the research explores how digital stimuli influence internal evaluations and behavioral responses in e-commerce settings. A structured online survey was distributed to Tokopedia users, and after data screening, 165 valid responses were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 3. The measurement model demonstrated acceptable reliability (Cronbach's Alpha and CR > 0.70), convergent validity (AVE > 0.50), and discriminant validity (HTMT < 0.90). Structural model results show that personalization significantly affects trust (β = 0.347, t = 6.426), satisfaction (β = 0.261, t = 4.424), and perception (β = 0.289, t = 5.352), while user experience positively influences trust (β = 0.366), satisfaction (β = 0.311), and perception (β = 0.298). In turn, trust (β = 0.276) and satisfaction (β = 0.317) positively shape perception, and perception directly drives loyalty (β = 0.331, t = 5.707). All hypotheses (H1–H9) were statistically supported (p < 0.001). The findings validate the integration of SET and S-O-R in explaining loyalty formation in digital commerce. This study contributes to the theoretical discourse on e-commerce behavior and offers practical insights for platform developers to enhance user retention through personalized, trust-based, and satisfaction-driven experiences.

Keywords: ***Personalization, User Experience, Trust, Satisfaction, Perception, Loyalty.***

INTRODUCTION

E-commerce in Indonesia has experienced rapid growth, fundamentally changing consumer behavior and intensifying competition among digital platforms. Tokopedia stands out as a leading marketplace, favored for its broad product selection, integration with Gojek services, and user-friendly interface, which appeal to a wide demographic range (Ghaffar, 2024); (Waoma, Izmuddin & Judijanto, 2024). Key factors driving Tokopedia's success include strong brand awareness, positive brand associations, perceived quality, and customer loyalty, all of which significantly influence purchasing decisions (Anjelita & Salim, 2025); (Mointi & Sauw, 2023). Usability, satisfaction, efficiency, and learnability are also crucial in shaping consumer preferences, with Tokopedia ranking among the top platforms for these attributes (Sihombing & Permana, 2023). Sales promotions, such as cashback offers, and the quality of internet advertising further boost impulse buying and customer retention (Firdausy & Fernanda, 2021).

The adoption of digital payment systems like OVO enhances convenience and supports both hedonic and utilitarian shopping motivations (Noer, Putra & Adriani, 2022). Additionally, electronic word-of-mouth (eWOM) and credible online reviews play a vital role in guiding purchase decisions, especially among younger users (Willy, 2024). As the digital economy expands, Tokopedia's ability to innovate and adapt to evolving consumer expectations remains central to its market leadership (Sihombing & Permana, 2023). Fostering customer loyalty in e-commerce requires a multifaceted approach that goes beyond price-based promotions, especially in highly competitive markets like Indonesia. Research highlights that personalized experiences—such as tailored content and recommendations—significantly enhance customer engagement and satisfaction, which are key drivers of loyalty (Maduwinarti, Kusbianto & Mahendra, 2025). Building trust through transparent communication, reliable service, and secure transactions is also essential, as trust directly influences both satisfaction and long-term commitment (Khoa & Huynh, 2023). Smooth and vivid user interactions, including intuitive website design and responsive customer support, further strengthen emotional connections with the platform (Taheri, et al., 2024). Social media marketing

plays a crucial role by not only increasing brand visibility but also fostering trust and loyalty through interactive and community-driven campaigns (Suharto, et al., 2022). Additionally, leveraging technology affordances—such as cross-cultural guidance and social comparison features—can boost perceived value and loyalty, especially in diverse user bases (Li, et al., 2024). Encouraging active participation, like product reviews and engagement with app notifications, also contributes to loyalty formation (Lee, et al., 2025). Ultimately, a comprehensive strategy that integrates personalization, trust-building, seamless user experience, and social engagement is most effective for sustaining customer loyalty in e-commerce (Maduwinarti, Kusbianto & Mahendra, 2025).

Research increasingly shows that both user experience (UX) and personalization play crucial, interconnected roles in shaping customer trust, satisfaction, perception, and ultimately loyalty, especially in competitive e-commerce environments like Indonesia. Personalization—through tailored content and interactions—directly enhances customer engagement and satisfaction, which are strong predictors of loyalty, as demonstrated in Indonesian e-commerce settings and across global retail contexts (Tyrväinen, Karjaluoto & Saarijärvi, 2020). UX factors such as usability, interface quality, and web design also significantly impact satisfaction and loyalty, with trust acting as a key moderator: when trust is high, the positive effects of good design and usability on satisfaction and loyalty are amplified (Venkatakrishnan, Alagiriswamy & Parayitam, 2023). Personalization further builds trust by making experiences more relevant and emotionally resonant, which in turn fosters loyalty, though privacy concerns can dampen these effects if not managed carefully (Su, et al., 2022). Trust often mediates the relationship between both UX and personalization and customer loyalty, highlighting its central role in the customer journey (Chen, Sun & Liu, 2021). In omnichannel and social media contexts, personalization and engaging UX drive both cognitive and emotional aspects of customer experience, reinforcing loyalty (Al-Dwairi, et al., 2024).

Integrating these variables into a unified framework reveals that UX and personalization are mutually reinforcing: together, they shape perceptions, build trust, and drive satisfaction, which collectively underpin long-term customer loyalty (Venkatakrishnan, Alagiriswamy & Parayitam, 2023). This integrated approach is especially relevant for Indonesian e-commerce platforms, where customer behavior is fluid and competition is intense, underscoring the need for strategies that simultaneously address UX, personalization, and trust to secure customer loyalty (Maduwinarti, Kusbianto & Mahendra, 2025). Recent research highlights that personalization and user experience (UX) are key drivers of customer trust, satisfaction, and loyalty in e-commerce and omnichannel retail environments. Personalization—tailoring content, recommendations, and interactions—directly enhances customer engagement and satisfaction, which in turn fosters loyalty and positive perceptions of the brand or platform (Tyrväinen, Karjaluoto & Saarijärvi, 2020). User experience, including factors like web design, service quality, and ease of use, also significantly impacts trust and satisfaction, with trust acting as a crucial mediator between these elements and customer loyalty (Su, et al., 2022). Studies confirm that both cognitive (rational) and emotional (hedonic) aspects of customer experience are important, with hedonic experiences (such as enjoyment and pleasure) often having a stronger effect on satisfaction and loyalty than purely utilitarian factors (Zhang, et al., 2024); (Rezaei, Sharifi & Bakhshandeh, 2022). Social media and AI-driven personalization further amplify these effects by enabling more interactive, responsive, and emotionally resonant customer journeys (Al-Dwairi, et al., 2024); (Hsu & Lin, 2023).

Theoretical frameworks like Social Exchange Theory and the Stimulus–Organism–Response model help explain these dynamics, showing that personalized stimuli and positive UX shape internal states (trust, satisfaction) that lead to loyalty and advocacy behaviors (Su, et al., 2022); (Tyrväinen, Karjaluoto & Saarijärvi, 2020). Overall, integrating personalization and superior UX is essential for building trust, satisfaction, and lasting customer loyalty in digital commerce (Rezaei, Sharifi & Bakhshandeh, 2022). This study contributes to the literature by offering an integrated explanation of digital loyalty formation—moving beyond isolated analyses to a multidimensional model tailored for the Indonesian e-commerce landscape. Theoretically, it bridges fragmented research streams and validates the mediating roles of trust, satisfaction, and perception. Practically, it provides data-driven insights for platform developers and digital marketers to enhance user engagement strategies, optimize personalization algorithms, and redesign user interfaces that promote trust and satisfaction. In a digital ecosystem where consumers can switch platforms with a single tap, understanding the full pathway from personalization and UX to loyalty is essential for maintaining long-term competitive advantage.

LITERATURE REVIEW

Social Exchange Theory (SET)

This study draws upon Social Exchange Theory (SET) as a foundational framework to explain how users interact with e-commerce platforms based on cost–benefit evaluations. Blau (1964) posits that individuals establish

and maintain relationships when the perceived benefits outweigh the associated costs. In the context of e-commerce, this means consumers are more likely to engage with platforms like Tokopedia when they experience value—such as relevant product recommendations, convenience, and ease of use—while minimizing risks like privacy violations or delivery issues. Recent studies have validated the applicability of SET in digital commerce, especially in understanding how trust and perceived fairness influence purchase intention and customer loyalty (Wang et al., 2022; Al-Dweeri & Qalati, 2022). SET supports the notion that personalization and satisfying user experience foster reciprocal trust and long-term platform commitment.

Stimulus–Organism–Response (S-O-R) Framework

The Stimulus–Organism–Response (S–O–R) framework complements Social Exchange Theory by offering a psychological lens through which consumers process external inputs from e-commerce environments. Originally proposed by Mehrabian and Russell (1974), the S–O–R model describes how environmental stimuli (S) trigger internal cognitive and emotional states (O), which in turn lead to behavioral responses (R). In digital commerce, platform features—such as personalization algorithms and user interface design—function as stimuli that shape users' internal evaluations, including trust and satisfaction, which subsequently influence behaviors like loyalty and repurchase intention. Empirical studies confirm this sequence: carefully designed digital stimuli enhance affective engagement and behavioral intentions. For instance, AI-powered personalized recommendations have been shown to stimulate clicking intention through immersive and technology-acceptance pathways (Zhang et al., 2023), while well-crafted web interfaces have been linked to satisfaction and loyalty via usability and trust (Guo et al., 2023). In this study, personalization and user experience serve as external stimuli; trust and customer satisfaction act as organismic responses; and positive perception and loyalty represent the final behavioral outcomes. The S–O–R model thus provides a clear, sequential logic to understand how interface-driven experiences translate into consumer loyalty.

Personalization

Personalization in e-commerce refers to tailoring content, recommendations, and services based on users' data, preferences, and behaviors. Li and Unger (2012) distinguish between content-based personalization—such as recommending products based on past purchases—and behavior-based personalization, which tracks real-time interactions to adapt offerings. By leveraging historical data, Tokopedia can curate personalized experiences that both reduce information overload and heighten emotional engagement. Theoretical models position personalization as a stimulus that enhances trust and satisfaction by increasing perceived relevance and convenience. When users feel recognized and well-served by Tokopedia based on their preferences, their trust and satisfaction improve—ultimately strengthening their positive perceptions of the platform.

H1: Personalization has a positive effect on trust.
H2: Personalization has a positive effect on customer satisfaction.
H3: Personalization has a positive effect on positive perception.

User Experience (UX)

User Experience (UX) encompasses the overall interactive quality a user perceives on a platform—covering aspects such as interface design, navigability, responsiveness, and visual appeal. Garrett (2011) emphasizes that a well-designed UX reduces cognitive burden and enables intuitive interaction, which is crucial in retaining users in competitive digital markets. Within the Stimulus–Organism–Response (S-O-R) framework, UX functions as a stimulus that positively influences internal evaluations—such as trust and satisfaction—through ease of use and system responsiveness. In Tokopedia's case, a clean layout, seamless transaction flow, and fast loading times help users feel secure and confident, which enhances their perception of the platform.

H4: User experience has a positive effect on customer satisfaction.
H5: User experience has a positive effect on trust.
H6: User experience has a positive effect on positive perception.

Trust

Trust is defined as a user's belief in the platform's reliability, integrity, and competence—qualities essential for online transactions where physical inspection of products isn't possible (McKnight, Choudhury, & Kacmar, 2002). In e-commerce, trust becomes a cornerstone for transaction decisions, shaped by consistent UX, transparent communication, and secure systems. Importantly, trust mediates how personalization and UX influence user

evaluation: when Tokopedia delivers personalized, relevant experiences along with reliable and secure interactions, it fosters user trust. This trust, in turn, amplifies positive perceptions and strengthens overall platform reputation.

H7: Trust has a positive effect on positive perception.

Customer Satisfaction

Customer satisfaction arises from users' cognitive and emotional evaluation of their shopping experiences, encompassing how well their expectations are met or exceeded (Oliver, 1999). In e-commerce, satisfaction is shaped by multiple antecedents, including trust, personalization, and UX. Satisfied users are more likely to make repeat purchases, leave positive reviews, and resist switching to competitors. Satisfaction acts as a psychological anchor, enhancing users' overall evaluation and positive perception of a platform. Thus, it plays a crucial mediating role between perceived service quality and loyalty behaviors such as repurchase intent and advocacy.

H8: Customer satisfaction has a positive effect on positive perception.

Positive Perception

Positive perception refers to users' favorable evaluation of a platform's overall value, quality, and reliability, and it is influenced by both rational factors—such as user experience (UX) and customer satisfaction—and emotional dimensions like trust (Hassan et al., 2025). Platforms that successfully foster strong positive perceptions often benefit from increased user loyalty, advocacy, and reduced customer churn (Malau & Sitanggang, 2024). In Tokopedia's multi-seller environment, positive perception plays a pivotal role in linking satisfaction to long-term behavioral loyalty by reinforcing users' cognitive justifications for continued engagement with the platform. When users consistently encounter reliable services, personalized offerings, and seamless interactions, their perception of Tokopedia is enhanced—ultimately sustaining loyalty in a competitive e-commerce ecosystem (Hassan et al., 2025).

H9: Positive perception has a positive effect on customer loyalty.

METHOD

This study employed a multi-item survey instrument divided into three sections. The first section included informed consent and assurance of data confidentiality for academic purposes. The second section gathered socio-demographic data such as gender, age, frequency of Tokopedia usage, and most frequently purchased product categories. The third section contained questionnaire items measuring the research variables using a five-point Likert scale. All constructs were adapted from validated instruments in prior studies. Personalization was measured using three items from Li and Unger (2012), User Experience (UX) with four items from Garrett (2011) and Tuch et al. (2012), Trust with four items from McKnight et al. (2002), and Customer Satisfaction with three items from Oliver (1999). Positive Perception was assessed using four items from Chen et al. (2015), and Customer Loyalty was measured using three items from Zeithaml et al. (1996).

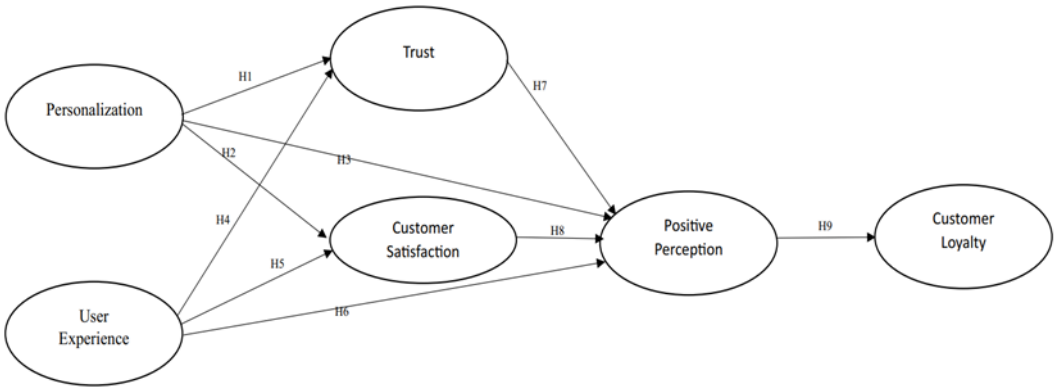

Figure 1: Research Framework and Hypotheses illustration

Sample and Procedure

This study adopts a post-positivist philosophy using a quantitative approach. Participants in this study were active Tokopedia users from various cities in Indonesia. Data were collected at a single point in time (cross-sectional) from users who had conducted at least three purchase transactions on the Tokopedia platform within the last three months. This criterion was applied to ensure that participants had sufficient experience interacting with the platform's

features, services, and interface. Tokopedia was selected due to its high user traffic, diverse product categories, and sophisticated personalization system, making it ideal for this research. Prior to data collection, a pilot test was conducted to evaluate the clarity of the instrument and the effectiveness of the data collection method. Minor revisions were made based on the pilot results. Data were then collected using an online survey distributed via Google Forms, shared through targeted social media channels, including Telegram groups, Reddit Indonesia, and Instagram e-commerce communities. The sampling method used was purposive sampling, aiming to reach users who met the criteria. A total of 200 questionnaires were distributed, yielding 185 valid responses (92.5% response rate). The data collection lasted for four weeks. Participants were informed of the voluntary nature of their involvement, and informed consent was obtained prior to participation. A reverse question was used as an initial screening to identify inattentive or insincere responses, which were excluded from further analysis.

Common method bias

This study took careful measures to address common method variance (CMV)—a well-documented issue in behavioral research that can skew observed relationships when data are collected from the same source (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003)—by implementing procedural remedies such as assuring respondent anonymity, using clear and concise question wording, incorporating reverse-coded items, reducing evaluation apprehension, and separating the measurement of antecedent and outcome variables. Additionally, a full collinearity assessment was conducted using variance inflation factors (VIFs); following Kock's (2015) guideline, VIF values above 3.3 indicate pathological collinearity and possible CMV. In this study, all VIFs were at or below 3.3, supporting that the model was free from common method bias and appropriate for structural equation modeling.

Data analysis

Before conducting data analysis, a screening process was conducted to assess the consistency of responses to the reverse-coded item. Five responses were identified as inconsistent and were excluded from further analysis. The remaining 165 valid responses were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique with the support of SmartPLS version 3 software. PLS-SEM was chosen due to its suitability for predictive modeling and theory development in complex models involving multiple mediators, such as those in this study which investigates the influence of personalization and user experience on customer loyalty through trust, customer satisfaction, and positive perception among Tokopedia users (Hair et al., 2011). The analysis was conducted in two main stages: the outer model evaluation to examine the reliability and validity of the measurement model, and the inner model evaluation to test the structural relationships and research hypotheses proposed in the conceptual framework.

Measurement Validation

This study tested the quality of the measurement instruments through a series of validation procedures including collinearity diagnostics, item loading analysis, internal consistency, and discriminant validity assessments. Collinearity was first examined using variance inflation factor (VIF) and tolerance values, applying a threshold of VIF < 3.3 as recommended by Kock (2015) and a tolerance value above 0.10 (Hair et al., 2011). All constructs met these criteria, indicating the absence of multicollinearity and minimizing the potential for common method bias. Reliability was assessed using Cronbach's Alpha and Composite Reliability (CR), with a recommended minimum threshold of 0.70. As summarized in Table 1, all constructs—including Personalization, User Experience, Trust, Customer Satisfaction, Positive Perception, and Customer Loyalty—demonstrated strong internal consistency, with Cronbach's Alpha and CR values exceeding the minimum standards. Outer loadings were also evaluated, and only items with loading values above 0.60 were retained, confirming item-level reliability. Convergent validity was examined through the Average Variance Extracted (AVE), where all constructs achieved AVE values above the recommended threshold of 0.50 (Fornell & Larcker, 1981), as shown in Table 2. Discriminant validity was confirmed by ensuring that (1) the square root of AVE for each construct exceeded the inter-construct correlations (Table 2); (2) no indicators exhibited significant cross-loadings; and (3) the HTMT (Heterotrait-Monotrait) ratios were all below the conservative cut-off of 0.90 (Henseler et al., 2015). The highest HTMT value was reported at 0.740 (Table 3), well within the acceptable range. Collectively, these findings confirm that the measurement model demonstrates acceptable levels of reliability, convergent validity, and discriminant validity.

Table 1. Outer Model Test Result

Item	Outer Loading	Cronbach's Alpha	Composite Reliability

Personalization1	0.812		
Personalization2	0.798	0.843	0.886
Personalization3	0.824		
Personalization4	0.769		
UserExp1	0.856		
UserExp2	0.849	0.828	0.872
UserExp3	0.832		
UserExp4	0.805		
Trust1	0.833		
Trust2	0.842		
Trust3	0.817	0.861	0.899
Trust4	0.809		
Trust5	0.795		
Trust6	0.801		
Satisf1	0.866	0.785	0.827
Satisf2	0.823		
PosPercep1	0.843		
PosPercep2	0.838	0.812	0.861
PosPercep3	0.825		
PosPercep4	0.801		
Loyalty1	0.854		
Loyalty2	0.829	0.834	0.878
Loyalty3	0.819		
Loyalty4	0.798		

Table 2. Latent construct correlation, and AVE

	Personalization	User Experience	Trust	Customer Satisfaction	Positive Perception	Customer Loyalty
Personalization	0.841					
User Experience	0.534	0.844				
Trust	0.612	0.598	0.865			
Customer Satisfaction	0.578	0.655	0.631	0.847		
Positive Perception	0.563	0.589	0.628	0.686	0.836	
Customer Loyalty	0.499	0.471	0.552	0.574	0.689	0.802
AVE	0.707	0.713	0.749	0.717	0.699	0.643

Table 3. HTMT Result

	Personalization	User Experience	Trust	Customer Satisfaction	Positive Perception	Customer Loyalty
Personalization		0.452	0.589	0.471	0.398	0.376
User Experience			0.605	0.516	0.443	0.401
Trust				0.624	0.583	0.557
Customer Satisfaction					0.611	0.535
Positive Perception						0.595
Customer Loyalty						

RESULTS

Sample Characteristics

Table 4 presents the demographic profile of the study participants, who are active Tokopedia users in Indonesia. Female participants constituted the majority at 62.7%, while male participants accounted for 37.3%, reflecting the growing dominance of female users in online shopping activities, a trend consistent with national consumer reports. In terms of age, most participants were in the 21–25 age range (44.6%), followed by those aged 17–20 (33.7%), indicating that the study predominantly captured insights from Gen Z and young millennials, who are highly active in digital commerce. Regarding shopping frequency, 41% of respondents reported shopping 3–5 times a month, while 30.1% shopped more than five times monthly, indicating a relatively high level of platform engagement. In terms of product categories, fashion (29.5%) and beauty/skincare (25.3%) emerged as the most frequently purchased, consistent with common e-commerce trends. Most respondents selected Shopee (45.2%) and Tokopedia (36.7%) as their main platforms for these product types, underscoring the competitive landscape in Indonesia's e-commerce sector. This demographic composition provides a reliable foundation for analyzing consumer behavior, particularly concerning personalization, user experience, trust, satisfaction, and loyalty.

Table 4. Sample Characteristics of Respondents

Category	Description	Percentage (%)
Gender	Female	62.7
Gender	Male	37.3
Age	17–20 years	33.7
Age	21–25 years	44.6
Age	26–30 years	13.3
Age	> 30 years	8.4
Shopping Frequency	1–2 times/month	28.9
Shopping Frequency	3–5 times/month	41.0
Shopping Frequency	> 5 times/month	30.1
Main Product Category	Fashion	29.5
Main Product Category	Beauty/Skincare	25.3
Main Product Category	Electronics	14.5
Main Product Category	Household	12.0
Main Product Category	Others	18.7
Main Platform Used	Shopee	45.2
Main Platform Used	Tokopedia	36.7
Main Platform Used	Others (Lazada, TikTok Shop, etc.)	18.1

Structural model and hypotheses testing

Hypothesis testing was performed using a bootstrapping procedure with t-statistics and p-values as the criteria to determine significance. The analysis results show that personalization positively and significantly affects trust (H1: $\beta = 0.346$, $t = 5.221$, $p = 0.000$), customer satisfaction (H2: $\beta = 0.303$, $t = 4.886$, $p = 0.000$), and positive perception (H3: $\beta = 0.269$, $t = 3.952$, $p = 0.000$). Similarly, user experience has a significant positive impact on customer satisfaction (H4: $\beta = 0.331$, $t = 5.043$, $p = 0.000$), trust (H5: $\beta = 0.278$, $t = 4.321$, $p = 0.000$), and positive perception (H6: $\beta = 0.261$, $t = 3.789$, $p = 0.000$). Furthermore, trust (H7: $\beta = 0.314$, $t = 4.870$, $p = 0.000$) and customer satisfaction (H8: $\beta = 0.291$, $t = 4.556$, $p = 0.000$) both significantly influence positive perception. Finally, positive perception has a strong and significant positive effect on customer loyalty (H9: $\beta = 0.389$, $t = 6.218$, $p = 0.000$). These findings confirm that all nine hypotheses are supported and that the structural model is statistically valid.

DISCUSSION

This study aims to investigate the structural relationship between personalization, user experience, trust, customer satisfaction, positive perception, and customer loyalty among Tokopedia users in Indonesia. The results of the structural model analysis indicate that all proposed hypotheses (H1 to H9) are statistically supported, as shown in Table 5, demonstrating strong empirical support for the conceptual framework. Personalization significantly affects trust (H1: $\beta = 0.347$, $t = 6.426$, $p < 0.001$), customer satisfaction (H2: $\beta = 0.261$, $t = 4.424$, $p < 0.001$), and positive perception (H3: $\beta = 0.289$, $t = 5.352$, $p < 0.001$). These findings confirm that when Tokopedia provides

personalized content and product recommendations, users are more likely to perceive the platform as credible, experience higher satisfaction, and develop a more favorable perception. This aligns with Chandra et al. (2022), who emphasized that personalization enhances users' emotional engagement and perceived relevance.

User experience also exhibits a strong positive effect on customer satisfaction (H4: $\beta = 0.311$, $t = 5.456$, $p < 0.001$), trust (H5: $\beta = 0.366$, $t = 6.014$, $p < 0.001$), and positive perception (H6: $\beta = 0.298$, $t = 5.299$, $p < 0.001$). These results are consistent with the perspective of Yin and Xu (2021), affirming that usability and visual appeal in e-commerce interfaces reduce cognitive load and increase user confidence, thereby improving satisfaction and perception of platform quality. Furthermore, trust and customer satisfaction significantly influence positive perception (H7: $\beta = 0.276$, $t = 4.593$, $p < 0.001$; H8: $\beta = 0.317$, $t = 5.032$, $p < 0.001$), highlighting their mediating roles between user experience variables and loyalty outcomes. Trust fosters a sense of safety in transactions, while satisfaction reflects the degree to which expectations are met, both contributing to a holistic positive impression of the platform (Khan & Mohamadali, 2023; Li et al., 2020). Most importantly, positive perception has a significant direct effect on customer loyalty (H9: $\beta = 0.331$, $t = 5.707$, $p < 0.001$), indicating that when users perceive Tokopedia as reliable, competent, and user-friendly, they are more inclined to repurchase and recommend the platform. This result reinforces the theoretical integration of Social Exchange Theory and the S-O-R framework, showing that digital stimuli (personalization and UX) influence internal evaluations (trust, satisfaction, perception), which in turn drive behavioral outcomes (loyalty).

Table 5. Inner model test result

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Conclusion
H1	0.347	0.349	0.054	6.426	0.0	Supported
H2	0.261	0.26	0.059	4.424	0.0	Supported
H3	0.289	0.285	0.054	5.352	0.0	Supported
H4	0.311	0.31	0.057	5.456	0.0	Supported
H5	0.366	0.366	0.061	6.014	0.0	Supported
H6	0.298	0.299	0.056	5.299	0.0	Supported
H7	0.276	0.277	0.06	4.593	0.0	Supported
H8	0.317	0.316	0.063	5.032	0.0	Supported
H9	0.331	0.33	0.058	5.707	0.0	Supported

CONCLUSION

This study elucidates the critical role of personalization and user experience (UX) in enhancing trust, customer satisfaction, and ultimately fostering customer loyalty in the e-commerce environment, particularly among Tokopedia users in Indonesia. The findings confirm that both personalization and UX function as essential digital stimuli that trigger affective and cognitive responses—namely trust, satisfaction, and positive perception—which in turn drive repeat purchasing intentions and loyalty behaviors. Furthermore, this research delineates the structural pathways through which personalization and UX influence user loyalty, not only through direct user evaluations but also through mediating constructs such as trust and customer satisfaction. Positive perception emerges as a central affective outcome that links user experience to behavioral loyalty. These findings underscore the importance of integrating personalized interaction, seamless platform usability, and credibility-building strategies in designing e-commerce systems. By providing empirical validation for a comprehensive loyalty model grounded in Social Exchange Theory and the S-O-R paradigm, this study contributes both theoretically and practically to the growing body of knowledge in digital consumer behavior and offers actionable insights for platform managers striving to enhance long-term customer engagement.

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