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THE EFFECT OF GAMIFICATION ON PURCHASE DECISIONS: MEDIATION OF CUSTOMER EXPERIENCE AND CUSTOMER BRAND ENGAGEMENT

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Abstract

This study aims to analyze the effect of gamification on purchase decisions, mediated by customer experience and customer brand engagement, among users of the "Indomaret Saku" platform in Yogyakarta. This research adopts a quantitative approach with primary data collected through a comprehensive

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questionnaire using a 5-point Likert scale. The population comprises users of the Indomaret Saku application in Yogyakarta, with a final sample of 166 respondents selected through purposive sampling techniques based on specific criteria including age range, application usage frequency, and geographical location. Data analysis was performed using the Partial Least Squares (PLS) method with SmartPLS 3.0 software, enabling rigorous testing of the proposed structural model. The results demonstrate that gamification exerts a positive and significant effect on both customer experience and customer brand engagement. Furthermore, the analysis confirms that customer experience and customer brand engagement significantly mediate the relationship between gamification and purchase decisions, highlighting the complex psychological mechanisms through which game elements influence consumer behavior in digital platforms.

Keywords: Gamification, Customer Experience, Customer Brand Engagement, Purchase Decision, Indomaret Saku

INTRODUCTION

The industrial revolution 4.0 and the massive penetration of digital technology have transformed conventional marketing paradigms toward more interactive and immersive strategies. In this context, gamification has emerged as a disruptive approach widely adopted by companies to modify consumer behavior. Gamification is defined as the integration of game elements—such as points, badges, leaderboards, and challenges—into non-game environments to drive engagement, motivation, and loyalty (Huotari & Hamari, 2017; Putri & Syah, 2024). The "Indomaret Saku" platform is a tangible example of this strategy, where gamified features like "Spin & Win," quizzes, and reward systems are embedded within its digital wallet ecosystem.

The effectiveness of gamification in influencing consumer behavior largely depends on its ability to create an excellent customer experience. Customer experience represents the entire subjective journey of customer interactions with a brand, encompassing cognitive, affective, sensory, physical, and social dimensions (Lemon & Verhoef, 2016). A positive and consistent customer experience then becomes a catalyst for the formation of deeper customer brand engagement. This concept refers to the intensity of psychological, cognitive, emotional, and behavioral connections initiated by customers toward a brand (Hollebeek et al., 2021).

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At the endpoint of this process lies the purchase decision, which is the most desired behavioral outcome for companies (Suleman et al, 2025). Recent research by Islam & Rahman (2021) confirms that gamification does not have a strong direct effect on purchase decisions but works indirectly by shaping profound experiences and engagement. Therefore, this study hypothesizes that gamification on the "Indomaret Saku" platform will influence consumer purchase decisions in Yogyakarta only if it can create a unique customer experience and ultimately trigger a high level of customer brand engagement (Omar et al, 2025).

Based on this background, the research is structured to address several critical questions. Firstly, it seeks to determine whether gamification has a significant effect on customer experience. Secondly, it examines if gamification influences customer brand engagement. Furthermore, the study investigates the direct impacts of both customer experience and customer brand engagement on consumers' purchase decisions. Ultimately, the core research question explores whether customer experience and customer brand engagement act as mediating variables, thereby serving as the underlying mechanisms through which gamification indirectly influences final purchase decisions. This comprehensive approach allows the research to analyze not only the direct relationships but also the intricate mediating pathways that explain how gamification ultimately translates into commercial outcomes.

LITERATURE REVIEW

Gamification in the Digital Marketing Context

Gamification represents the systematic application of game design elements within non-game contexts to enhance user engagement and motivation (Huotari & Hamari, 2017). This concept fundamentally leverages inherent human psychological tendencies toward competition, achievement, and social recognition to encourage desirable behaviors. Within digital marketing domains, gamification has evolved into an essential strategy for amplifying consumer interactions with brands. Research by Xi & Hamari (2019) demonstrates that gamification mechanisms, including immediate rewards, point systems, and achievement challenges, provide potent rational incentives for users to complete transactions. Recent Indonesia-specific studies by Pratama & Susanto (2022) corroborate that younger generations in Yogyakarta exhibit particularly high responsiveness to gamification, attributable to their tech-savvy characteristics and openness to digital innovations. Based on this theoretical foundation, the study proposes that:

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H1: Gamification has a positive effect on customer experience among Indomaret Saku users

Customer Experience Dimensions and Behavioral Outcomes

Customer experience encompasses the holistic perceptions and emotional responses generated through customer interactions with a brand throughout its entire lifecycle (Lemon & Verhoef, 2016). Schmitt (1999) developed a comprehensive conceptual framework categorizing customer experience into five distinct dimensions: sense (sensory experiences), feel (emotional responses), think (cognitive engagement), act (physical behaviors), and relate (social connections). In gamification contexts, research by Poncin et al. (2017) reveals that game elements effectively stimulate all five dimensions to create immersive and memorable experiences. Contemporary studies by Liu et al. (2022) further elaborate that in digital environments, customer experience is influenced not only by functional factors but also by emotional and social elements enhanced through gamification mechanics. This theoretical background supports the following hypotheses:

H2: Gamification has a positive effect on customer brand engagement among Indomaret Saku users

H3: Customer experience has a positive effect on purchase decisions among Indomaret Saku users

Customer Brand Engagement (CBE) Construct and Behavioral Consequences

Customer Brand Engagement denotes the level of cognitive, emotional, and behavioral investment that consumers direct toward a brand (Hollebeek et al., 2021). This construct has evolved into a critical element in modern marketing, particularly within digital contexts. Pansari & Kumar (2017) emphasize that CBE constitutes a vital factor driving long-term profitability through increased purchase intensity and brand advocacy. In digital environments, gamification plays a pivotal role in building CBE through mechanisms that encourage active participation and foster psychological ownership (Setiawan & Rahayu, 2021). Recent investigations by Kumar & Pansari (2022) indicate that platforms successfully integrating gamification elements achieve up to 40% higher CBE compared to conventional platforms. Building upon this theoretical framework, the study hypothesizes:

H4: Customer brand engagement has a positive effect on purchase decisions among Indomaret Saku users

Purchase Decisions in Digital Environments and Gamification Pathways

Purchase decisions represent the complex integrative outcome of cognitive, affective, and conative factors (Kotler & Keller, 2016). In digital

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contexts, decision-making processes have undergone significant transformation where traditional factors like price and quality are now strongly influenced by experiential and emotional attachment elements (Lemon & Verhoef, 2016). Research by Wibowo et al. (2023) on digital wallet users in Yogyakarta reveals that modern consumers simultaneously consider both rational and emotional aspects in decision-making. These findings align with recent studies by Chen et al. (2022) indicating that in digital retail environments, purchase decisions are 60% more influenced by user experience compared to price factors. Contemporary research by Islam & Rahman (2021) compellingly argues that gamification does not exert strong direct effects on purchase decisions, but rather operates through indirect pathways by shaping profound experiences and sustained engagement. Complementary findings by Hsiao & Chen (2018) establish that customer brand engagement functions as a full mediator between gamification and repurchase intentions. This comprehensive theoretical integration leads to the final hypotheses:

H5: Gamification has a positive direct effect on purchase decisions among Indomaret Saku users

H6: Customer experience and customer brand engagement significantly mediate the effect of gamification on purchase decisions

Conceptual Framework Integration

The conceptual framework illustrates gamification as the independent variable, customer experience and customer brand engagement as parallel mediating variables, and purchase decisions as the dependent variable, forming a comprehensive structural model examining both direct and indirect effect pathways. This integrated model acknowledges the complex psychological mechanisms through which game elements influence consumer behavior, while simultaneously accounting for both experiential and emotional pathways that ultimately drive purchase decisions in digital retail environments.

RESEARCH METHOD

This study employed a quantitative approach with a cross-sectional survey design to examine the proposed relationships between variables, following established methodological frameworks in business research (Sekaran & Bougie, 2016). Primary data were collected through an online questionnaire distributed to active users of the Indomaret Saku platform in the Yogyakarta Special Region. The research instrument utilized a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), with measurement items adapted from

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established scales in previous literature (Huotari & Hamari, 2017; Lemon & Verhoef, 2016; Hollebeek et al., 2021). The questionnaire was structured into four main sections measuring gamification features, customer experience dimensions, customer brand engagement components, and purchase decision factors.

The target population consisted of active Indomaret Saku users in Yogyakarta who had conducted at least one transaction within the previous three months. Using purposive sampling technique with specific criteria including age range (17-45 years), active gamification feature usage, and geographical location within Yogyakarta (Hair et al., 2018), the study obtained 166 valid responses. This sample size exceeded the minimum requirement for partial least squares (PLS) analysis and provided adequate statistical power for testing the proposed model, consistent with sample size recommendations for structural equation modeling (Hair et al., 2018). The sampling approach ensured that respondents possessed relevant experience with the research context, thereby enhancing the validity of their responses regarding gamification effects and behavioral outcomes.

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 3.0 software, following methodological guidelines for variance-based SEM (Hair et al., 2018). This analytical approach was selected due to its capability to handle complex models with multiple mediating variables and its suitability for predictive research objectives (Hair et al., 2018). The analysis followed a two-stage approach: first, assessing the measurement model for reliability and validity, and second, evaluating the structural model for hypothesis testing. Key metrics including factor loadings, Average Variance Extracted (AVE), Composite Reliability, R-squared values, and path coefficients were examined to validate the measurement model and test the hypothesized relationships. The bootstrap procedure with 5000 subsamples was employed to determine the statistical significance of the path coefficients, following established resampling techniques in PLS-SEM (Hair et al., 2018).

RESULTS AND DISCUSSION

Descriptive Statistical Analysis

Table 1.
Descriptive Statistical Analysis

Question	Mean	Median	Min Value	Min Value	Std. dev	Excess kurtosis	Skewness
G1	3.880	4.000	1.000	5.000	0,67986111	0,38888889	-0.875
G2	3.913	4.000	1.000	5.000	0,67083333	0,60902778	-0.991

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G3	3.920	4.000	1.000	5.000	1.017	0,47569444	-0.991
G4	3.887	4.000	1.000	5.000	1.017	0,38125	-0.923
CE1	4.293	5.000	1.000	5.000	0,66875	2.322	-1.570
CE2	3.727	4.000	1.000	5.000	0,66527778	0,66527778	-0.940
CE3	3.847	4.000	1.000	5.000	1.025	0,46388889	-0.964
CE4	4.120	4.000	1.000	5.000	0,66111111	1.233	-1.181
CBE1	3.627	4.000	1.000	5.000	0,67847222	0,62222222	-0.925
CBE2	4.393	5.000	1.000	5.000	0,63055556	3.611	-1.888
CBE3	4.107	4.000	1.000	5.000	0,67638889	1.589	-1.310
CBE4	3.900	4.000	1.000	5.000	1.031	0,48194444	-0.977
KP1	3.680	4.000	1.000	5.000	0,69097222	0,28194444	-0.754
KP2	3.973	4.000	1.000	5.000	0,68958333	0,65	-1.019
KP3	4.133	4.000	1.000	5.000	0,67430556	1.130	-1.199
KP4	4.287	5.000	1.000	5.000	0,64791667	1.412	-1.349

The comprehensive descriptive analysis revealed that from an initial target of 150 respondents, the study successfully recruited 166 participants. Notably, 97% confirmed prior usage of the Indomaret Saku platform, fulfilling the essential criteria for continued questionnaire participation. Demographic analysis indicated respondent dominance by younger age groups, with 37.3% aged 17-25 years, 34.9% aged 26-35 years, and 27.7% within the 36-45 years range. Gender distribution showed higher female representation (56%) compared to males (44%). Regarding application usage frequency, data indicated that 37.3% of respondents used Indomaret Saku 1-3 times within the previous three months, 33.7% used it 3-6 times, and 28.9% reported usage exceeding six times. Geographical distribution covered five major regions within Yogyakarta Special Region: Bantul (19.9%), Gunungkidul (19.3%), Kulon Progo (19.9%), Sleman (18.7%), and Yogyakarta City (23.3%). This demographic profile, dominated by younger generations and active users, proves particularly relevant for gamification research, as this cohort typically demonstrates higher responsiveness to interactive and game-based features within digital applications. The balanced geographical distribution further enhances sample representativeness and supports findings validity within the regional Yogyakarta context.

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Measurement Model Evaluation (Outer Model)

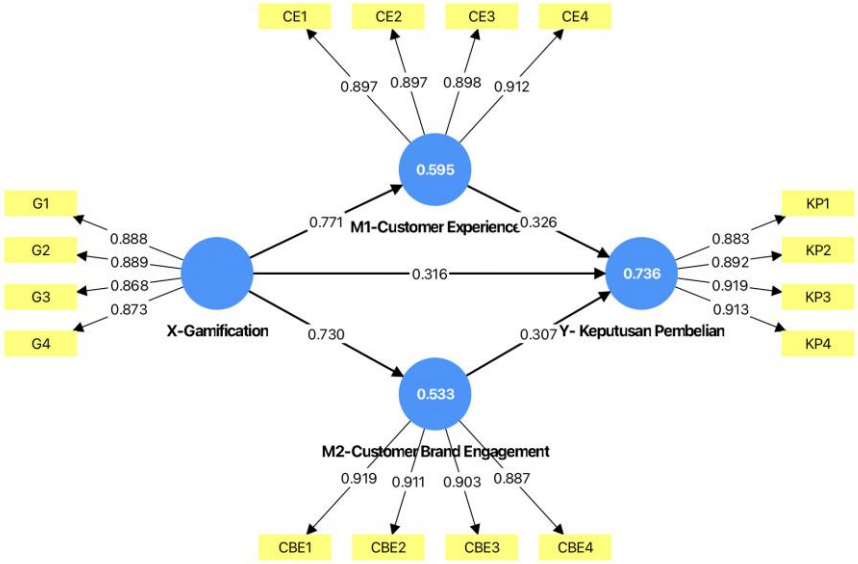

Figure 1.
Convergent Validity Test Results

The measurement model assessment encompassed convergent validity, discriminant validity, and reliability testing. Convergent validity evaluation demonstrated that all indicator loadings exceeded the 0.70 threshold, confirming that all questionnaire items effectively measured their intended constructs. Discriminant validity examination through the Fornell-Larcker criterion revealed that Average Variance Extracted (AVE) values for each construct surpassed inter-construct correlations, verifying that each construct was distinct and empirically unique. Reliability analysis produced Cronbach's Alpha and Composite Reliability values exceeding 0.90 for all constructs, indicating excellent internal consistency and measurement reliability. These comprehensive tests confirmed that the measurement model exhibited sufficient validity and reliability for subsequent structural model analysis.

Structural Model Analysis (Inner Model)

Table 2.
Results of Regression Analysis

	R-square	R-square adjusted
M1-Customer Experience	0.595	0.592
M2-Customer Brand Engagement	0.533	0.530
Y- Purchase Decisions	0.736	0.731

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The structural model evaluation examined the coefficient of determination (R^2), effect size (f^2), and path coefficients. The R^2 values demonstrated that gamification explained 59.5% of the variance in customer experience ($R^2 = 0.595$) and 53.3% of the variance in customer brand engagement ($R^2 = 0.533$). For the ultimate dependent variable, the combination of gamification, customer experience, and customer brand engagement collectively explained 73.6% of variance in purchase decisions ($R^2 = 0.736$). These substantial R^2 values indicate that the proposed models possess strong predictive power in describing the hypothesized relationships between variables.

Table 3
Results of Effect Size Analysis

	f-square
M1-Customer Experience -> Y- Purchase Decisions	0.152
M2-Customer Brand Engagement -> Y- Purchase Decisions	0.156
X-Gamification -> M1-Customer Experience	1.470
X-Gamification -> M2-Customer Brand Engagement	1.143
X-Gamification -> Y- Purchase Decisions	0.123

Effect size analysis (f^2) revealed that gamification exerted large effects on customer experience ($f^2 = 1.470$) and customer brand engagement ($f^2 = 1.143$). Conversely, the direct effect of gamification on purchase decisions demonstrated a small effect size ($f^2 = 0.123$). Meanwhile, customer experience and customer brand engagement displayed small-to-medium effects on purchase decisions ($f^2 = 0.152$ and $f^2 = 0.156$ respectively). These findings emphasize that while gamification's direct influence on purchase decisions is relatively modest, its role becomes crucially significant indirectly through the formation of customer experience and customer brand engagement, which function as substantial mediators.

Hypothesis Testing Results

Table 4
Hypothesis Test Results

	Path Koefisien	T statistics (|O/STDEV|)	P values
M1-Customer Experience -> Y- Purchase Decisions	0.326	4.879	0.000

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M2-Customer Brand Engagement -> Y- Purchase Decisions	0.307	5.177	0.000
X-Gamification -> M1-Customer Experience	0.771	15.931	0.000
X-Gamification -> M2-Customer Brand Engagement	0.730	11.814	0.000
X-Gamification -> Y-Purchase Decisions	0.316	4.588	0.000

Comprehensive hypothesis testing confirmed that all proposed variable relationships within this research demonstrated statistical significance and empirical support. The path coefficient values for gamification's influence on customer experience reached 0.771 and on customer brand engagement attained 0.730, indicating strong positive and significant effects. Additionally, gamification proved to directly and significantly affect purchase decisions with a path coefficient of 0.316. Simultaneously, both customer experience and customer brand engagement significantly influenced purchase decisions with path coefficients of 0.326 and 0.307 respectively. The statistical significance of all relationships was confirmed through T-statistic values exceeding 1.96 and p-values below 0.05. Consequently, all hypotheses proposed within the research model received empirical support from the collected data.

Table 5
Results of Goodness of Fit Analysis

	Average Variance Extracted (AVE)	R-square
X-Gamification	0.774	
M1-Customer Experience	0.812	0.595
M2-Customer Brand Engagement	0.820	0.533
Y- Purchase Decisions	0.813	0.736
Average	0.804	0.621

$$\text{Value GOF} = \sqrt{\text{mean" AVE x mean" R Square}}$$
$$\text{Value GOF} = \sqrt{0.804 \text{ x } 0.621}$$
$$\text{Value GOF} = 0.795$$

The overall model quality assessment produced a Goodness of Fit (GOF) value of 0.795, substantially exceeding the 0.36 threshold established for large effect size categories. This confirms that the research model possesses

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exceptionally high fit quality and falls within large performance classification. This demonstrates that the proposed model is not only statistically significant in its variable relationships but also excels in representing the observed empirical data. Thus, the model can be considered robust and appropriate for explaining the operational mechanisms between gamification, customer experience, customer brand engagement, and purchase decisions.

Theoretical and Practical Implications

The research findings carry significant theoretical implications by validating the complex mediating mechanisms through which gamification influences purchase decisions. The results substantiate that gamification's impact operates through dual pathways of experiential and engagement dimensions, enriching the theoretical understanding of consumer behavior in digital environments. From practical perspectives, these findings provide actionable insights for marketers and application developers in designing effective gamification strategies that prioritize experiential quality and emotional connection rather than merely focusing on transactional incentives. For Indomaret specifically, the research offers empirical guidance for optimizing the Saku platform's gamification elements to enhance customer loyalty and purchase frequency.

CONCLUSION

Based on comprehensive data analysis and theoretical discussion, this study concludes that all proposed hypotheses receive significant empirical support. Gamification demonstrates powerfully strong direct effects on both customer experience and customer brand engagement, while simultaneously maintaining significant direct influence on purchase decisions. These findings validate gamification implementation as an exceptionally effective marketing strategy, particularly for younger urban populations in Yogyakarta Special Region who demonstrate active participation in digital ecosystems.

Theoretically, this research strengthens and enriches existing literature by providing empirical evidence regarding the dualistic mechanisms connecting gamification with purchase decisions through experiential and engagement pathways. The discovery that both mediating pathways exert nearly equivalent influence reinforces the complexity of modern consumer behavior simultaneously shaped by rational and emotional considerations. The research successfully extends theoretical frameworks by contextualizing gamification effects within Indonesia's distinctive digital retail environment.

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Practically, this research offers highly relevant implications for application developers, marketing practitioners, and business operators within digital wallet and fintech industries. Strategic investments in developing gamification features designed to create personalized, immersive, and satisfying experiences, while simultaneously building community and emotional connections, will significantly contribute to increased purchase intention and customer loyalty. For Indomaret management specifically, these findings provide empirical foundations for refining Saku platform's gamification elements, particularly emphasizing experiential quality and engagement depth rather than merely transactional rewards.

Despite comprehensive analysis, this study acknowledges certain limitations regarding its geographical focus on Yogyakarta Special Region. Future research should replicate this investigation across more diverse geographical regions and demographic segments within Indonesia. Additional research could explore other potential mediating variables such as perceived value, trust, or social influence to develop more holistic understanding of gamification's psychological mechanisms. Longitudinal studies examining the evolution of gamification effects over time would also valuable contribute to understanding its long-term impact on consumer behavior and brand relationships.

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