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Determinants of Skin Purchase Decisions in PUBG Mobile: Moderated by Perceived Value among Generation Z

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Abstract: This study aims to analyze the determinants of purchase decisions for PUBG Mobile skins among Generation Z, focusing on the roles of user experience, scarcity, and gamification, with perceived value as a moderating variable. Using a quantitative approach, data were collected from 220 respondents through an online survey and analyzed with SmartPLS 4.0. The results demonstrate that user experience, scarcity, and gamification each have a positive and significant effect on purchase decisions. Specifically, higher user experience, increased scarcity of skins, and stronger gamification features significantly encourage players to make purchasing decisions. In addition, the findings reveal that perceived value successfully moderates the relationships between user experience, scarcity, and gamification with purchase decisions. When players perceive greater value in the skins offered, the influence of these three variables on purchase decisions is further strengthened. This highlights that perceived value not only acts as an independent factor but also enhances the impact of other determinants in shaping consumer behavior. Overall, the study contributes to the understanding of digital consumer behavior, especially within the mobile gaming industry. The implications suggest that developers and marketers should emphasize optimizing user experience, designing scarcity strategies, and implementing engaging gamification features while enhancing the perceived value to maximize in-game purchases.

Keywords: Skin Purchase Decisions, PUBG Mobile Moderated, Perceived Value, Generation Z

INTRODUCTION

The rapid advancement of digital technology has significantly influenced human activities, transforming how people work, communicate, and conduct transactions. The COVID-19 pandemic accelerated this digital transformation, increasing reliance on online platforms for both entertainment and social interaction. Online games such as PUBG Mobile gained remarkable popularity, not only as a source of entertainment but also as a social space where users could maintain connections during physical isolation. For Generation Z, who are considered digital natives, online games represent an integral part of their lifestyle, serving both recreational and social purposes.

PUBG Mobile, a battle royale multiplayer game, has become one of the most popular mobile games worldwide, especially in Indonesia, where it is highly favored by Gen Z users. Data shows a consistent increase in Gen Z players, from 45% in 2020 to 60% in 2024, highlighting their dominance in the player base. Despite this growth, revenue from in-game purchases, particularly skins, has fluctuated and even declined in recent years. This indicates that although player engagement remains high, purchase decisions largely depend on perceived value. Skins function not only as aesthetic features but also as symbols of status, exclusivity, and identity within the gaming community, creating both social and psychological motivations for purchase.

Several factors influence Gen Z's decision to purchase in-game skins, including user experience, scarcity, and gamification. A positive gaming experience encourages purchases, while scarcity through limited-time or exclusive items generates urgency and a fear of missing out. Gamification elements, such as rewards and challenges, also foster emotional attachment to the game. However, prior studies show inconsistent findings regarding their direct impact on purchase decisions. This research therefore examines the moderating role of perceived value in determining whether these factors strengthen or weaken purchase intentions. By exploring this interaction, the study aims to provide deeper insights into how Gen Z evaluates and makes purchasing decisions in the context of virtual items in PUBG Mobile.

METHOD

This study employs a quantitative research design to investigate the determinants of skin purchase decisions in PUBG Mobile moderated by perceived value among Generation Z. Data were collected online across various Indonesian regions using social media platforms and gaming communities (e.g., Facebook groups and online forums). Indonesia was chosen as the research setting because it has over 100 million gamers, most of whom are mobile game players, making it a strategic location for studying digital purchase behavior. The research subjects are Generation Z (aged 12–27 years), who represent the majority of PUBG Mobile players in Indonesia.\

The population of this study consists of Generation Z in Indonesia, selected due to their high level of technology adoption and dominant presence in the PUBG Mobile user base. Since the population is too large to be fully studied, a purposive sampling method was applied to select respondents who meet specific criteria: (1) aged 12–27 years and (2) have purchased skins in PUBG Mobile. Following the rule of thumb suggested by Hair et al. (2018), the minimum sample size was determined using 22 indicators across five variables (User Experience, Scarcity, Gamification, Perceived Value, and Purchase Decision), resulting in a total sample size of 220 respondents.

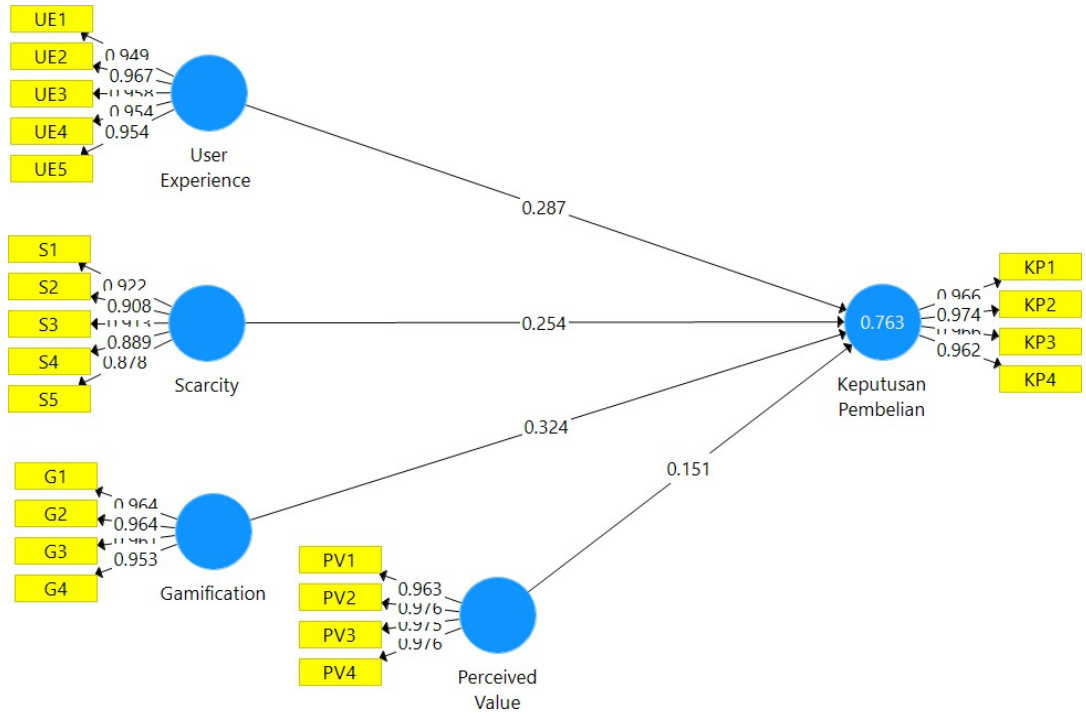
The study variables were operationalized as follows: User Experience, measured by ease of learning, efficiency, memorability, error frequency, and satisfaction; Scarcity, including product limitation, time restriction, exclusivity, high perceived value, and social pressure; Gamification, represented by points, badges, leaderboards, and challenges; Perceived Value, including emotional, social, quality, and monetary value; and Purchase Decision, measured by product choice, brand choice, timing, and payment method. Data were collected through questionnaires using a Likert scale and tested for validity and reliability with SPSS 24.0. For hypothesis testing, Partial Least Squares Structural Equation Modeling (PLS-SEM) was applied via SmartPLS 3.0, enabling the analysis of complex relationships between variables, including moderation effects.

RESULTS AND DISCUSSION

Outer Model Test or Measurement Model

The analysis of the outer model defines how each indicator relates to its latent variable. There are two criteria in using the SmartPLS data analysis technique to assess the outer model,

namely discriminant validity and composite reliability. The initial decision can determine whether the questionnaire instrument is appropriate in representing its latent variable. The requirement for the loading factor value is >0.7. If the loading factor does not meet this criterion, an outlier process will be conducted. The outlier procedure is applied so that an indicator or instrument fulfills the assumptions in the outer model test. This is done by removing one or more indicators that do not have a strong relationship with their latent variable. The results of the model evaluation in this study are presented as follows:



Source: Processed data, 2025
Figure 1. PLS Algorithm Output

Based on the PLS Algorithm output shown above, it appears that the values obtained for each indicator used to measure each construct are sufficient, namely greater than 0.7. The test of convergent validity of the indicators is reflected in the factor loading values.

Convergent Validity

Convergent validity refers to the loading factor values between a latent variable and its indicators. The expected value is >0.7. In assessing each construct, the evaluation is based on convergent validity. Convergent validity is measured using the parameters of outer loading and AVE (Average Variance Extracted). Individual reflective measures are considered to be correlated if their value exceeds 0.7 with the construct being measured (Hair et al., 2022).

The purpose of convergent validity is to determine the validity of each relationship between indicators and their corresponding construct or latent variable. The convergent validity of the measurement model with reflective indicators is assessed based on the correlation between the item scores or Component Scores and the latent variable scores or Construct Scores estimated by the SmartPLS program (Hair et al., 2022). The results of the convergent validity test in this study are presented as follows:

Table 4.6 Convergent Validity Test Results

Variable	Indicator	*Outer Loading*	Requirement	Description
User Experience (UE)	UE1	0.949	>7	Valid
	UE2	0.967	>7	Valid

	UE3	0.958	>7	Valid
	UE4	0.954	>7	Valid
	UE5	0.954	>7	Valid
Scarcity (S)	S1	0.922	>7	Valid
	S2	0.908	>7	Valid
	S3	0.913	>7	Valid
	S4	0.889	>7	Valid
	S5	0.878	>7	Valid
Gamification (G)	G1	0.964	>7	Valid
	G2	0.964	>7	Valid
	G3	0.961	>7	Valid
	G4	0.953	>7	Valid
Perceived Value (PV)	PV1	0.963	>7	Valid
	PV2	0.976	>7	Valid
	PV3	0.975	>7	Valid
	PV4	0.976	>7	Valid
Purchase Decision (PD)	KP1	0.966	>7	Valid
	KP2	0.974	>7	Valid
	KP3	0.966	>7	Valid
	KP4	0.962	>7	Valid

Source: Processed using SmartPLS (2025)

Based on the table above, it can be stated that all indicators in this study are valid. This is indicated by all indicators of the three variables having outer loading values greater than 0.7. Thus, in the Convergent Validity test, all data are considered valid.

Discriminant Validity Test

Discriminant validity is used to test the validity of a model. The discriminant validity value is assessed through the cross-loading values, which show the correlation between a construct and its indicators compared to the indicators of other constructs (Hair et al., 2022). The standard criterion for cross-loading is that it must be greater than 0.7, or by comparing the square root of the Average Variance Extracted (AVE) of each construct with the correlations between that construct and other constructs in the model. If the square root of the AVE of each construct is greater than the correlations between that construct and the others, then it can be said to have good discriminant validity (Ghozali & Latan, 2015). The results of the cross-loading in the discriminant validity analysis can be seen in the table below. In testing discriminant validity, reflective indicators are assessed by examining the cross-loading between the indicators and their constructs. The following table presents the results.:

Table 4. 1 ***Discriminant Validity (Cross Loading)***

	User Experience	**Scarcity**	**Gamification**	**Perceived Value**	**PD**
UE1	0.949	0.817	0.759	0.302	0.802
UE2	0.967	0.838	0.757	0.246	0.777
UE3	0.958	0.847	0.790	0.245	0.794
UE4	0.954	0.825	0.744	0.230	0.732
UE5	0.954	0.842	0.767	0.219	0.750
S1	0.831	0.922	0.793	0.304	0.769
S2	0.837	0.908	0.784	0.273	0.756
S3	0.767	0.913	0.775	0.249	0.763
S4	0.721	0.889	0.754	0.191	0.721
S5	0.773	0.878	0.759	0.298	0.718
G1	0.757	0.817	0.964	0.231	0.772

G2	0.778	0.831	0.964	0.259	0.773
G3	0.769	0.811	0.961	0.229	0.777
G4	0.763	0.832	0.953	0.276	0.791
PV1	0.263	0.281	0.249	0.963	0.364
PV2	0.258	0.286	0.258	0.976	0.376
PV3	0.230	0.264	0.231	0.975	0.359
PV4	0.262	0.303	0.268	0.976	0.393
KP1	0.780	0.806	0.789	0.362	0.966
KP2	0.776	0.806	0.809	0.397	0.974
KP3	0.782	0.793	0.775	0.358	0.966
KP4	0.783	0.791	0.762	0.367	0.962

Source: Processed using SmartPLS (2025)

From the table above, it can be concluded that the cross-loading values for each intended construct are greater than the loading values with other constructs on either side. This indicates that all indicators are valid and that there are no issues with discriminant validity.

Furthermore, discriminant validity testing can also be conducted by examining the square root of the AVE for each construct, which must be greater than its correlation with other constructs (Ghozali & Latan, 2015). This can be observed in the Fornell-Larcker Criterion table:

Table 4.2 Discriminant Validity (Fornell-Lacker Criterion)

	User Experience	**Scarcity**	**Gamification**	**Perceived Value**	**PD**
User Experience	0.957				
Scarcity	0.872	0.902			
Gamification	0.798	0.857	0.960		
Perceived Value	0.261	0.292	0.259	0.972	
Purchase Decision (PD)	0.807	0.826	0.810	0.384	0.967

Source: Processed using SmartPLS (2025)

Based on the results of the discriminant validity test shown in the table above, it is evident that the square root values of the AVE, as seen in the cross-loading of each variable, are greater than the correlations between constructs. This indicates that each questionnaire indicator item is valid.

Another method to assess discriminant validity is by comparing the square root of the Average Variance Extracted (AVE) of each construct with the correlations between that construct and other constructs in the model. The AVE values for all constructs exceed 0.5, indicating no convergent validity issues in the tested model. Therefore, the constructs in this research model demonstrate good discriminant validity (Hair et al., 2022).

Table 4.3 AVE

Variable	**Requirement**	**AVE**
User Experience	>0.5	0.915
Scarcity	>0.5	0.814
Gamification	>0.5	0.922
Perceived Value	>0.5	0.945
Purchase Decision (PD)	>0.5	0.935

Source: Processed using SmartPLS (2025)

Based on the table above, it can be seen that the Square Root of the Average Variance Extracted (AVE) values for all variables are greater than 0.5. Thus, it can be concluded that each variable in this study has a satisfactory AVE value.

Model Fit Test

The Goodness of Fit Index (GFI) is a descriptive test of model fit. The model fit test includes fit summary indices such as SRMR, Chi-Square, NFI, and RMStheta. An SRMR value of < 0.08 indicates a good fit measure. A model can be said to have a perfect fit if the Chi-Square value equals 0. The model is considered a good fit if the NFI value > 0.9, and marginal fit if the NFI value lies between 0.7 < NFI < 0.9 (Ghozali & Latan, 2015). The results of the Goodness of Fit test are as follows:

Table 4.15 Results of the Goodness of Fit Test

	Saturated Model	Estimated Model
SRMR	0.027	0.027
d_ULS	0.184	0.184
d_G	0.391	0.391
Chi-Square	511.946	511.946
NFI	0.835	0.835

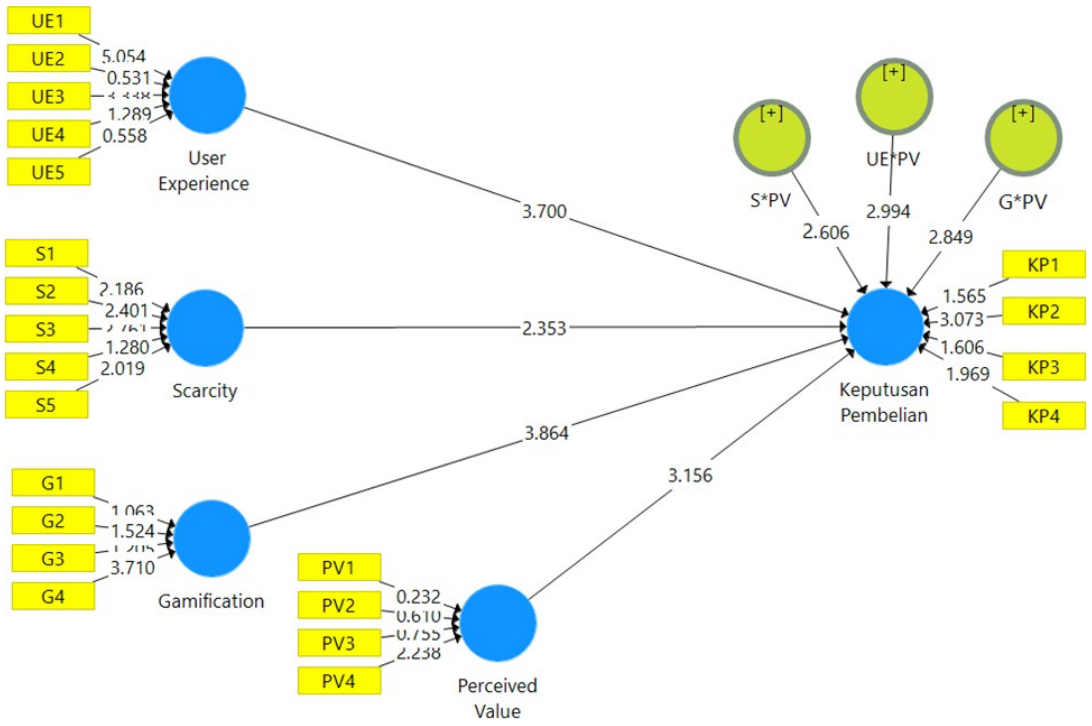
Source: Processed using SmartPLS (2024)

According to the model fit results above, the SRMR value indicates a good fit, with 0.027 < 0.08. However, the Chi-Square value does not indicate fit because it is greater than 0. For NFI, the value is considered marginal fit since it lies between 0.7 < NFI < 0.9.

Hypothesis Testing

A hypothesis is a temporary conclusion that must be proven true, or it can be described as a tentative proposition regarding the relationship between two or more variables. Before conducting hypothesis testing, it is necessary to define the Null Hypothesis (H0) and the Alternative Hypothesis (Ha).

In hypothesis testing, the evaluation is based on the T-statistic and probability (Ghozali & Latan, 2015). For hypothesis testing using statistical values, with an alpha of 5% and a sample of 220 respondents, the T-statistic threshold is 1.653. Thus, the criterion for accepting a hypothesis is T-statistic > 1.653. For probability, the hypothesis is accepted if the p-value < 0.05. In SmartPLS, each relationship is tested using a bootstrapping simulation on the sample.



Source: Processed data, 2025

Figure 2. Model for Hypothesis Testing

The results of the hypothesis testing in this study aim to examine the direct effects and the mediating effect of the perceived value variable. The hypothesis testing results are presented in the following table:

Table 4.16 Hypothesis Testing Results

H1	User Experience (UE) → Purchase Decision (KP)	3.700 > 1.653	0.000 < 0.05	Accepted	UE has a positive and significant effect on Purchase Decision.
H2	Scarcity (S) → Purchase Decision (KP)	2.353 > 1.653	0.019 < 0.05	Accepted	S has a positive and significant effect on Purchase Decision.
H3	Gamification (G) → Purchase Decision (KP)	3.864 > 1.653	0.000 < 0.05	Accepted	G has a positive and significant effect on Purchase Decision.
H4	UE → KP moderated by Perceived Value (PV)	2.994 > 1.653	0.003 < 0.05	Accepted	PV strengthens the positive effect of UE on Purchase Decision.
H5	S → KP moderated by Perceived Value (PV)	2.606 > 1.653	0.009 < 0.05	Accepted	PV strengthens the positive effect of Scarcity on Purchase Decision.
H6	G → KP moderated by Perceived Value (PV)	2.849 > 1.653	0.005 < 0.05	Accepted	PV strengthens the positive effect of Gamification on Purchase Decision.

Source: Processed using SmartPLS (2024)

The table above presents the direct hypothesis testing between exogenous and endogenous variables, which can be summarized in the following points:

1. The effect of user experience (UE) on purchase decision (PD) shows a T-statistic of 3.700 > 1.653 and a p-value of 0.000 < 0.05. Thus, H1 is accepted and H0 is rejected. This study concludes that user experience has a positive and significant effect on purchase decisions for PUBG Mobile skins. The more positive the user experience, the greater the likelihood of purchasing PUBG Mobile skins.
2. The effect of scarcity (S) on purchase decision (PD) shows a T-statistic of 2.353 > 1.653 and a p-value of 0.019 < 0.05. Thus, H2 is accepted and H0 is rejected. This indicates that scarcity has a positive and significant effect on purchase decisions for PUBG Mobile skins. The higher the perceived scarcity, the stronger the decision to purchase.

3. The effect of gamification (G) on purchase decision (PD) shows a T-statistic of 3.864 > 1.653 and a p-value of 0.000 < 0.05. Thus, H3 is accepted and H0 is rejected. This indicates that gamification has a positive and significant effect on purchase decisions for PUBG Mobile skins. The higher the gamification features, the stronger the decision to purchase.
4. The effect of user experience (UE) on purchase decision (PD), moderated by perceived value (PV), shows a T-statistic of 2.994 > 1.653 and a p-value of 0.003 < 0.05. Thus, H4 is accepted and H0 is rejected. This indicates that perceived value strengthens the relationship between user experience and purchase decisions for PUBG Mobile skins.
5. The effect of scarcity (S) on purchase decision (PD), moderated by perceived value (PV), shows a T-statistic of 2.606 > 1.653 and a p-value of 0.009 < 0.05. Thus, H5 is accepted and H0 is rejected. This indicates that perceived value strengthens the relationship between scarcity and purchase decisions for PUBG Mobile skins.
6. The effect of gamification (G) on purchase decision (PD), moderated by perceived value (PV), shows a T-statistic of 2.849 > 1.653 and a p-value of 0.005 < 0.05. Thus, H6 is accepted and H0 is rejected. This indicates that perceived value strengthens the relationship between gamification and purchase decisions for PUBG Mobile skins.

Discussion

The Influence of User Experience on Purchase Decision

The results indicate that User Experience (UE) has a positive and significant effect on Purchase Decisions (KP) in PUBG Mobile skins, with t-statistics of 3.700 > 1.653 and p-value 0.000 < 0.05. This supports H1 and rejects H0, showing that better user experience increases the likelihood of purchasing skins. Prior studies (Chen et al., 2022; Wang et al., 2024) also confirm that positive online experiences and service quality strongly influence consumer trust and buying decisions. However, some research suggests that factors like trust may outweigh user experience, especially in e-commerce contexts.

Theoretically, these findings align with the Technology Acceptance Model (TAM) and hedonic consumption theory, emphasizing that digital purchase behavior involves both functional and emotional components, which highlight that digital purchase decisions are shaped not only by functional utility but also by emotional enjoyment. In PUBG Mobile, user experience involves interface ease, system responsiveness, visual aesthetics, and overall immersion, all of which foster satisfaction and increase willingness to purchase additional content. Skins, while not affecting gameplay, carry symbolic and aesthetic value that enhances perceived enjoyment.

Practically, user experience builds emotional attachment and loyalty, encouraging long-term engagement and in-app purchases. For developers, optimizing interface design and interactivity is crucial to convert players into buyers within the freemium business model. Thus, user experience is a key driver of digital purchase behavior, as it shapes both satisfaction and economic interaction in gaming ecosystems.

The Influence of Gamification on Purchase Decision

The study reveals that Gamification (G) has a positive and significant impact on Purchase Decisions (KP) for PUBG Mobile skins, with t-statistics of 3.864 > 1.653 and p-value 0.000 < 0.05. This validates H3, suggesting that higher levels of gamification increase purchasing tendencies. Supporting studies (Xu et al., 2020; Tobon et al., 2020) show that rewards, challenges, and competition enhance consumer enjoyment, thereby boosting purchase intention. However, other research (Gao & Zhao, 2023) notes that gamification sometimes only increases engagement without necessarily leading to purchases.

Gamification in PUBG Mobile extends beyond gameplay mechanics into marketing strategies, such as limited-time events, loot boxes, battle passes, and achievement-based skins. These features generate psychological drivers like curiosity, competition, and reward

anticipation. According to intrinsic and extrinsic motivation theories, gamification enhances engagement and a sense of accomplishment, making purchases more meaningful.

In practice, gamification builds habitual behavior and consumer loyalty, reinforcing purchases as part of ongoing interaction. Exclusive skins tied to gamified systems motivate users to spend for status and recognition in the gaming community. This highlights the importance of designing enjoyable, rewarding gamified systems not only as entertainment but also as a monetization strategy.

The Influence of User Experience on Purchase Decision Moderated by Perceived Value

The findings show that Perceived Value (PV) strengthens the positive relationship between User Experience (UE) and Purchase Decision (KP), with t-statistics of 2.994 > 1.653 and p-value 0.003 < 0.05. This confirms H4, demonstrating that when users perceive higher value, the influence of UE on purchasing becomes stronger. Prior research (Wardani et al., 2024; DAM, 2020; Akram, 2023) also highlights the moderating role of perceived value, particularly in luxury or digital product purchases. However, some studies (Rodrigues & Lopes, 2021) argue that good user experience alone does not guarantee purchase decisions without strong perceived value.

Conceptually, perceived value reflects players' subjective evaluation of benefits and worth from skins in PUBG Mobile. Even with a good user experience, if players do not see skins as valuable whether aesthetically, socially, or symbolically the likelihood of purchase remains low. Conversely, when UX is combined with high perceived value, purchase intention rises sharply. Thus, PV acts as a catalyst, intensifying the effect of user experience on purchase behavior.

These insights stress that digital consumer behavior depends on the synergy between subjective experience and value perception. Developers should not only optimize user interfaces but also enhance perceived value through storytelling, exclusivity, and unique features. Skins must be presented as identity markers or prestige symbols to increase emotional justification for purchase.

The Influence of Gamification on Purchase Decision Moderated by Perceived Value

The study confirms that Perceived Value (PV) moderates the relationship between Gamification (G) and Purchase Decision (KP), with t-statistics of 2.849 > 1.653 and p-value 0.005 < 0.05, thus supporting H6. This means that gamification impacts purchases more strongly when users perceive higher value in the offered skins. Research (Hamari et al., 2020; Terlutter & Capella, 2021) similarly suggests that PV amplifies gamification's role in driving purchases. However, some findings (Putri & Zulfa, 2023) show PV's moderating role may not always be significant in certain platforms.

Gamification elements such as challenges, rewards, battle passes, and loot boxes create engagement and psychological triggers like progress and achievement. Yet, their impact on purchasing depends heavily on perceived value. Players who view skins as exclusive, symbolic, or socially prestigious are more motivated to purchase within gamified systems. From a Cognitive Appraisal Theory perspective, perceived value provides the emotional foundation that turns gamification into real purchase action.

In practical terms, gamification must be paired with strong value perception through premium design, exclusivity, or narrative background to maximize purchase impact. When players believe that the rewards gained are meaningful, they willingly invest in digital items. This highlights PV not only as a direct predictor but also as a crucial moderator that amplifies gamification's effect on consumer behavior in freemium games like PUBG Mobile.

CONCLUSION

Based on the findings and discussion, this study concludes that user experience, scarcity, and gamification each have a positive and significant influence on purchase decisions of PUBG Mobile skins. The better the user experience, the higher the level of scarcity, and the stronger the gamification elements, the greater the tendency of players to decide on purchasing skins. These results highlight the crucial role of digital experience, product availability, and gamified features in shaping consumer behavior within the mobile gaming context.

Furthermore, perceived value is proven to moderate the relationships between user experience, scarcity, and gamification with purchase decisions. This indicates that when players perceive higher value in PUBG Mobile skins, the influence of these three variables on purchase decisions becomes stronger. Thus, perceived value acts both as a direct determinant of consumer choice and as a reinforcing factor that amplifies the effects of experiential and gamified features in driving purchase intentions.

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