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If Aesthetics Don't Drive Gamer Enjoyment, What Does? Insight from Valorant Skin Purchases

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Abstract

The Free-to-Play (F2P) business model in the digital gaming market, exemplified by Valorant, relies primarily on a monetization strategy centered on In-App Purchases (IAP) of non-functional cosmetic goods and battle passes. Unlike functional microtransactions, these IAPs are defined as virtual assets that offer aesthetic or symbolic value without providing direct mechanical advantages to gameplay. This explanatory quantitative study adopts the Stimulus-Organism-Response (S-O-R) theory to test the influence of four primary stimuli, Competitive Edge, Aesthetic Dominance Effect, Perceived Scarcity, and Peer Validation Expectancy, on purchase intention through the mediating role of Perceived Enjoyment. Data were collected from 180 active Valorant players in Indonesia and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that Competitive Edge ($\beta = 0.163$, $p = 0.039$), Perceived Scarcity ($\beta = 0.200$, $p = 0.018$), and Peer Validation Expectancy ($\beta = 0.362$, $p < 0.001$) contribute significantly and positively to Perceived Enjoyment. However, the Aesthetic Dominance Effect was found to be non-significant ($\beta = 0.111$, $p = 0.118$), suggesting that visual complexity alone does not drive enjoyment in a competitive FPS context. Perceived Enjoyment was confirmed as a significant mediator, effectively converting psychological and social stimuli into Purchase Intention ($\beta = 0.611$, $p < 0.001$). This research contributes to the S-O-R framework by demonstrating the dominance of social signaling and mastery over pure aesthetics in the competitive gaming ecosystem. Managerially, developers are advised to implement responsible monetization by prioritizing social recognition systems and transparent scarcity triggers that enhance, rather than disrupt, the player's hedonic experience.

KEYWORDS

in-app purchase; perceived enjoyment; stimulus-organism-response; purchase intention.

Introduction

The global gaming market is experiencing unprecedented growth, with total revenue projected to reach USD 188.8 billion by 2025. This expansion is primarily driven by the Free-to-Play (F2P) revenue model, where core titles are accessible at no upfront cost and are monetized through In-App Purchases (IAP) known as microtransactions. A free-to-play (F2P) revenue model like the one that lets consumers play games for free and be monetized through in-app purchases is the norm (Groeschel & Schäfer, 2020). By 2024, IAPs accounted for approximately 58% of total PC game revenue, highlighting a strategic shift toward long-term player retention in live-service ecosystems. Within this framework, non-functional virtual items such as weapon skins and character cosmetics have emerged as significant revenue streams. These items serve as status symbols and markers of social differentiation, fulfilling players' desires for visual gratification and self-expression rather than functional utility (Bleize & Anthéunis, 2019).

Despite their commercial success, these purchases create a major academic paradox: consumers are willing to pay significant prices for digital assets that offer no direct mechanical advantage or gameplay benefits. While the Stimulus-Organism-Response (S-O-R) framework and Perceived Enjoyment mediation are well-established in general e-commerce, prior work lacks a comprehensive integration in the competitive First-Person Shooter (FPS) context (Marder et al., 2019). Valorant serves as a unique case for identifying pure non-functional drivers because it strictly separates cosmetics

from gameplay performance. This study addresses existing research gaps by testing a simultaneous 4-stimuli model and investigating the unexpected non-significant path of aesthetics a phenomenon where excessive visual dominance may disrupt the "flow" and enjoyment in high-stakes competitive environments (Tyrväinen & Karjaluo, 2024). In order to identify and experiment with pure non-functional value drivers, the study selects Valorant as a case in point. As a popular tactical first-person shooter (FPS) live service, Valorant strictly separates cosmetics from gameplay performance, making it a particularly attractive case to illustrate behaviors that are based only on their psychological value in consumer behavior.

In tactical games like Valorant, the drive to acquire skins is often associated with Competitive Edge, defined as a competence-based drive where players perceive a psychological advantage or "placebo effect" from owning items that enhance their sense of mastery. This perception, alongside scarcity manipulation and peer validation expectancy, functions as a stimulus that evokes Perceived Enjoyment (Zendle et al., 2020). Competitive players are likely to purchase cosmetic items in order to portray themselves as being the best players on the field, and the aesthetic quality and scarcity of items attract customers through appearance as a mode of identity and visual gratification (Wu & Hsu, 2018). By testing these direct relationships and the mediating role of enjoyment, this study aims to enrich the theoretical knowledge of affective marketing in the competitive digital gaming sector.

Hypothesis Development

Stimulus-Organism-Response (SOR) Theory

This research works from what is called the Stimulus-Organism-Response (S-O-R) theory. Mehrabian and Russell (1974) described this theory and stated that an external stimulus (Stimulus) on the individual could influence an internal state (Organism), which in turn can lead to a response or action (Response). In the same way, competitive edge, aesthetic dominance effect, perceived scarcity, and peer validation expectancy are all part of the Stimulus in the game Valorant. All of these factors can evoke feelings of enjoyment or satisfaction in playing (Perceived Enjoyment), which then drives the player's intention to purchase items such as skins.

The S-O-R approach is selected as its model can be used to show the manner in which items that appear purely "non-functional" (like in-game skins) may encourage purchase intent (Lee & Chen, 2021). There is a process occurring in which purchasing can be not only determined by needs, but also the emotions and social experiences felt by the player (C.-H. Chen et al., 2019). Put differently, the S-O-R model is useful for examining how pleasant feelings from the game can become a genuine tendency to buy something.

Competitive Edge

Competitive Edge in the context of this study is defined as a player's perceived competitive advantage and performance enhancement derived from the ownership of specific in-game skins. Rather than reflecting innate trait competitive edge, this construct operationalizes the 'cosmetic placebo effect,' where the multisensory quality of skins reinforces a player's subjective belief in their own abilities and confidence. This drive generates Perceived Enjoyment by fulfilling the basic needs for competence and a sense of mastery, so the process of achieving advantage provides a pleasurable feeling of success (Huhtiniemi et al., 2019). E-sport research shows that a structured competitive environment is a primary driver of entertainment, as increased competition fosters excitement and pride that enhance the enjoyment of playing (Satish, 2023). Thus, a higher competitive drive is assumed to positively correlate with the level of enjoyment experienced

by players.

H1: Competitive Edge has a positive effect on perceived enjoyment

Aesthetic Dominance Effect

The Aesthetic Dominance Effect refers to the extent to which the visual and multisensory qualities of in-game items drive player engagement. In the context of non-functional items like Valorant skins, aesthetics increase hedonic value and provide a platform for self-expression, as players utilize visual elements to represent their digital identity (Jiang et al., 2016). According to the Aesthetic Dominance Effect, skins possessing rich and multisensory properties including unique visual effects, animations, and audio have the power to elicit strong positive emotions by enhancing the player's sense of sensory pleasure (Bhandari et al., 2019a). Aesthetic attractiveness has been shown to yield both emotional and psychological benefits, leading to perceived value and a more fulfilling gaming experience (Datta Gupta et al., 2016). Thus, while excessive complexity may potentially lead to cognitive overload, aesthetic appeal is hypothesized as a primary stimulus that increases enjoyment of play.

H2: Aesthetic Dominance Effect has a positive effect on perceived Enjoyment.

Perceived Scarcity

Perceived Scarcity is a strategic marketing tactic used to limit product availability through mechanisms such as daily store rotations and limited-time offers for Valorant skins. This perceived scarcity functions as a double-edged stimulus; while it creates time pressure and Fear of Missing Out (FOMO), it simultaneously enhances perceived exclusivity and urgency (Duman & Ozkara, 2021). In this context, the 'pressure' to acquire a rare item is distinguished from the 'enjoyment' derived from the anticipation and successful collection of exclusive digital assets. When players overcome the obstacle of scarcity, the experience of 'hunting' for rare items provides a sense of achievement and sensory gratification that outweighs the initial pressure. According to Commodity Theory, the increased subjective value of scarce objects leads to higher levels of intrinsic satisfaction during the pursuit and eventual ownership. Therefore, greater perceived scarcity is hypothesized to lead to a higher level of Perceived Enjoyment as it validates the player's status and hobby-related investment.

H3: Perceived Scarcity has a positive effect on Perceived Enjoyment.

Peer Validation

Peer Validation Expectancy refers to the player's expectation to gain recognition and respect from the community through ownership of certain items, where rare skins serve as social status markers (social signaling). The expectation of social validation affects the level of enjoyment in playing, as every individual has a basic need to be acknowledged and accepted by their group (Esteves et al., 2021). Positive feedback from peers or opponents, such as praise for the owned skin, generates a feeling of being valued that strengthens positive emotions and enhances Perceived Enjoyment (Trewick et al., 2022). Thus, the greater the player's expectation to receive validation from their social environment, the higher the enjoyment experienced in playing (A. Chen et al., 2016).

H4: Peer Validation Expectancy has a positive effect on Perceived Enjoyment.

Perceived Enjoyment

Perceived Enjoyment is one of the key affective variables of the S-O-R model, which describes the level of pleasure and

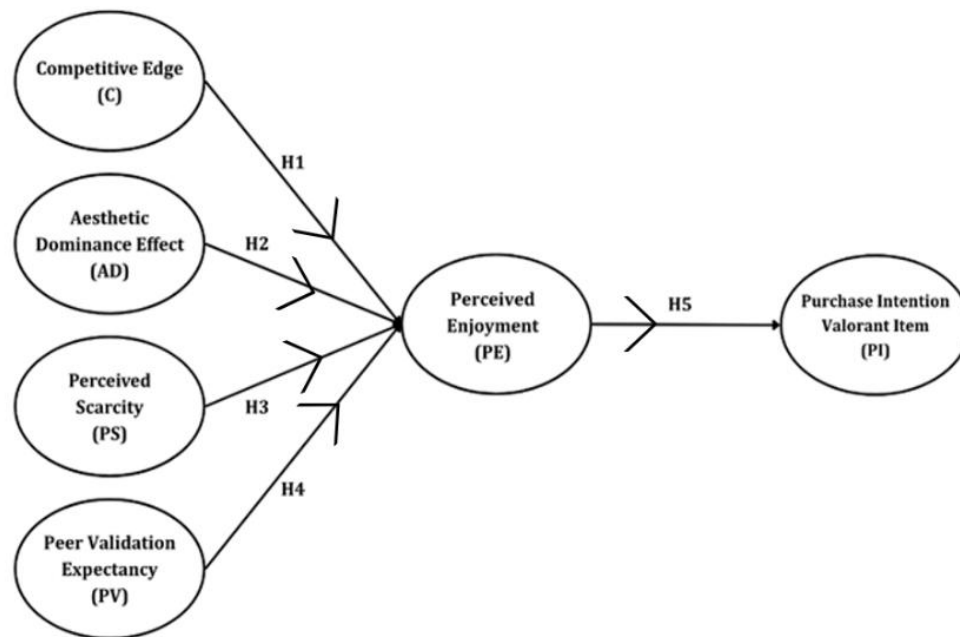


Figure 1. Study Model

intrinsic satisfaction experienced from interaction with a game or items contained in that game (Shi et al., 2025). Enjoyment serves as a major internal motivation, as players tend to want to extend or repeat that enjoyable experience, which ultimately drives the intention to purchase (Ghazali et al., 2023). In terms of online games, if people have a great deal of fun while playing them or from using the items, they will want to purchase those items to enhance their hedonic experience.

H5: Perceived Enjoyment has a positive effect on Purchase Intention Valorous Items (see Figure 1).

Methods

This study adopts an explanatory quantitative approach to examine the causal relationships and mediating effects within the Stimulus-Organism-Response (S-O-R) framework. The study tests the impact of four stimuli (Competitive Edge, Aesthetic Dominance Effect, Perceived Scarcity, and Peer Validation Expectancy) on Purchase Intention, with Perceived Enjoyment as the mediating organism. All constructs in this model are defined as reflective, as the indicators are manifestations of the underlying constructs and are expected to be highly correlated.

Respondents and Sampling Procedures

The target population consists of active Valorant players in Indonesia who have either made or intend to make in-game purchases. Data were collected using a combination of purposive and snowball sampling techniques to reach specific gaming cohorts. Recruitment was conducted through major Indonesian Valorant community hubs on Discord, Facebook, and WhatsApp groups. To ensure data quality, screening questions were implemented to verify that participants were active players and met the purchase criteria. Duplicate responses were controlled via unique IP address tracking and email verification. While snowball sampling was effective in accessing this niche population, the authors acknowledge a potential for selection bias, which is addressed by diversifying the initial recruitment channels across different platform types.

Instrument Development and Pre-test

The primary instrument was an online questionnaire utilizing a 7-point Likert scale. Since the original scales were in English, a translation and back-translation procedure was performed by bilingual experts to ensure linguistic and functional equivalence in the Indonesian context. A pilot study (pre-test) was conducted with 30 respondents to assess content validity and initial reliability. Based on the pre-test feedback, several items in the 'Competitive Edge' and 'Aesthetic Dominance' constructs were rephrased to improve clarity for the local gaming community. Secondary data were utilized strictly for background industry context and were not included in the statistical modeling.

Data Analysis Path

Data analysis was performed using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 4. The measurement model was assessed for convergent validity, with Average Variance Extracted (AVE) values ranging from 0.687 to 0.773, and internal reliability, with Composite Reliability (CR) between 0.929 and 0.947. Discriminant validity was evaluated using the Heterotrait-Monotrait (HTMT) ratio, which is preferred for its superior sensitivity in variance-based SEM. For the structural model, the bootstrapping technique was employed with 5,000 resamples at a 5% significance level using a consistent PLS weighting scheme. Model fit was assessed through the Standardized Root Mean Square Residual (SRMR), while the predictive relevance was measured using the Q^2 value. Multicollinearity was monitored through Variance Inflation Factor (VIF) values, ensuring all were within the acceptable threshold.

Population and Respondents

Demographic details for each of the four categories of the respondents' profiles (Gender, Age, Estimated Income, Occupation) include 180 participants in the study. All 180 are shown in the descriptive statistics in Table 1. The gender demographics indicate that the sample mostly consisted of 113 males (62.8%), while 67 females made up 37.2%. This ratio matches the typical demographics of people who play competitive tactical FPS games like Valorant. Looking more closely at age, the sample is young and mainly in the productive age groups. The largest group is aged 18 to 25, with 103

Table 1. Profile of Respondents

Respondent's Demography	Frequency	Percent
Gender		
Male	113	62.8
Female	67	37.2
Age		
<17 years	9	5
18-25 years	103	57
26-35 years	34	19
36-45 years	20	11.2
46-55 years	10	5.6
>56 years	4	2.2
Estimated Income		
<Rp.1.000.000	27	15
Rp1.000.000 – Rp3.000.000	55	30.6
Rp3.000.000 – Rp5.000.000	71	39.4
>Rp5.000.000	27	15
Work		
Student / College Student	103	56.1
Civil Servants	5	2.8
Private Employees	15	8.3
Entrepreneur	14	7.8
Freelancer	37	20.6
Housewife	7	3.9
Businessman	1	0.6

Source: Data Processing Result, 2025

Table 2. Validity and Reliability Test

Variables & Indicator	Outer Loading	AVE	Composite Reliability	Cronbach Alpha
Competitive Edge		0.745	0.936	0.914
• Exclusive Self-Confidence	0.850			
• Competitive Spirit Stimulation	0.841			
• Comparative Superiority Perception	0.886			
• Peer Status Compensation Need	0.875			
• Subjective Performance Enhancement	0.863			
Aesthetic Dominance Effect		0.687	0.929	0.909
• Unique Visual Appeal	0.836			
• Personal Aesthetic Gratification	0.841			
• Aesthetic Confidence Boost	0.826			
• Audio-Visual Multisensory Quality	0.797			
• Animative Domination Expression	0.828			
• Superior Value Perception	0.845			
Perceived Scarcity		0.741	0.945	0.930
• Temporal Urgency	0.833			
• Selling Out Expectancy	0.855			
• Quick Action Propensity	0.877			
• Worry About Missing Opportunities	0.823			
• Time Desire Correlation	0.891			
• Exclusivity Value Perception	0.884			
Peer Validation Expectancy		0.773	0.945	0.927
• Compliment Gratification	0.874			
• Coolness Appearance Signaling	0.892			
• Initial Competence Perception Impact	0.878			
• Affiliation & Community Validation	0.872			
• Status & Exclusivity Expression	0.881			
Perceived Enjoyment		0.719	0.947	0.935
• Gaming Experience Enjoyment	0.854			
• Exploration Pleasure	0.825			
• Premium Item Excitement	0.828			
• Item Attractiveness for Continuance	0.886			
• Visual Display Satisfaction	0.824			
• Gaming Time Value	0.872			
• Entertainment Investment Validity	0.846			

Variables & Indicator	Outer Loading	AVE	Composite Reliability	Cronbach Alpha
Purchase Intention		0.702	0.943	0.929
• Attractiveness Based Buying Plan	0.819			
• Release Timing Buying Plan	0.840			
• Price Inelasticity to Quality	0.829			
• Spontaneous Purchase Consideration	0.848			
• Promotion-Driven Desire Intensification	0.832			
• Digital Entertainment Budget Priority	0.850			
• Budget Allocation Readiness	0.846			

Source: Author's survey data; SmartPLS output (2025)

participants (57.0%). The next largest group is 26 to 35, which includes 34 respondents (19.0%). This highlights a significant share of the target market consisting of millennials and early Gen Z. These generations are known as active users of the digital live-service ecosystem and, based on the evidence, are driving the purchase of virtual items. The very small number of respondents above 36 years old (36 to 45, 46 to 55, and over 56) further emphasizes the study's focus on core e-sports consumers.

Viewed from the Employment variable, most respondents are Students, totaling 103 people or 56.1%. This high number shows the importance of the 18 to 25 age group, which suggests that the sample is closely tied to academic life and early careers. The Freelancer category is the second largest, with 37 respondents or 20.6%. Many freelancers have the time flexibility to engage deeply with live-service games, and they likely have a sufficient income to spend on microtransactions. The remaining respondents are split into Private Employees (8.3%), Entrepreneurs (7.8%), Housewives (3.9%), Civil Servants (2.8%), and Businesspeople (0.6%).

The Estimated Income Distribution gives valuable insights into the financial ability of the sample to make purchase intentions. Most respondents fall within the middle income range. The Rp3,000,000 to Rp5,000,000 category represents the largest share, with 71 respondents or 39.4%. Following that is the Rp1,000,000 to Rp3,000,000 category at 30.6%. This shows that although many respondents are students, a good number have part-time jobs, allowances, or steady incomes as young workers. This situation allows them to invest in cosmetic products. Notably, both extreme income groups those earning less than Rp1,000,000 and those earning more than Rp5,000,000 are equal at 15.0%. Overall, the main demographic of the sample includes males who are young, active in academic or freelance work, and have purchasing power in the mid-to-upper range. This profile accurately reflects the target audience of microtransaction consumers in Indonesia.

Data Analysis

The measurement model assessment shows that all constructs meet the required thresholds for validity and reliability. The outer loadings for all indicators range from 0.797 to 0.892, well above the minimum threshold of 0.70. Convergent validity is confirmed by the Average Variance Extracted (AVE) values, which range from 0.687 to 0.773, exceeding the 0.50 requirement. Furthermore, internal consistency reliability is demonstrated by Composite Reliability (CR) values ranging from 0.929 to 0.947 and Cronbach's Alpha values between 0.909 and 0.935, all of which surpass the 0.70 benchmark. As shown in Table 2, these results indicate a robust measurement model suitable for testing the structural relationships.

Result and Discussion

The structural model results are presented in Table 3 (Direct Effects) and Table 4 (Specific Indirect Effects).

Hypothesis testing indicates that four out of five direct paths are significant. Notably, the Aesthetic Dominance Effect on Perceived Enjoyment (H2) was found to be non-significant ($\beta = 0.111$, $p = 0.118$), contrary to initial expectations. Mediation analysis in Table 4 confirms significant indirect effects for Competitive Edge, Peer Validation, and Perceived Scarcity on Purchase Intention through Perceived Enjoyment. Consistent with the corrected results, Perceived Enjoyment serves as a bridge for these psychological and social stimuli, supporting the S-O-R framework (see Table 5).

The positive influence of competitive edge on players' perceived enjoyment

Competitive Edge has a strong and meaningful favorable impact on players' Perceived Enjoyment in games according to the results of the statistical analysis. With respect to Competitive Edge and Perceived Enjoyment the path coefficient is positive with alpha value of $p < 0.05$ in value. Consequently, H1 hypothesis is confirmed. This is consistent with the literature on the value of competition in enhancing the overall experience within a game. Competition significantly contributes to game enjoyment from a players' perspective. Furthermore, observed that players experience a greater sense enjoyment when clinching victories against less skilled opponents rather than when engaging in tied matches. This enhances empirical evidence on the impact of enjoyment on players that is directly derived from the presence of the competitive edge that includes a sense of victory or control within a game. Individuals perceive a competitive advantage when they feel they possess superior skills or better position compared to others and this ultimately leads to the feeling of mastery and control (Hart & Rodgers, 2024). Such emotions are indicative of intrinsic motivation, which refers to the enjoyment received from an activity.

The fulfillment of the competence requirement triggers intrinsic motivation, which results in more enjoyment during the activity (Ryan & Deci, 2020). An study by Ryan et al. (2020) concluded that when players' competence and autonomy needs are satisfied, this strongly predicts sustained motivation and enjoyment. Conducted research on MMORPG and reported the fulfillment of players' competence needs promoted enjoyment and a will to continue playing the game (Wang & Hang, 2021). Moreover, demonstrated that well-matched and superior opponents stimulate game satisfaction and enjoyment considerably more than optimal challenges. Such findings imply that competitive elements in challenges and construction opportunities for winning will result in an enjoyment of the game when a flow state is achieved (Chen et al., 2019). Competitive advantage can also explain enjoyment from a slightly different perspective, players evaluate their performance, realize they are better than their opponents (downward social comparison), and feel a boost in self-esteem and enjoyment. Although competition can diminish intrinsic motivation if one's focus is overly on the external outcomes (Ryan & Reeve, 2021), having a competitive edge, capturing the essence of mastery and internal success, helps alleviate the problem. The victory or sense of superiority that one feels

Table 3. Direct Effect

Hypothesis Testing	Estimate	P-value	Result
H1 Competitive on Perceived Enjoyment	0.163	0.039	Supported
H2 Aesthetic Dominance Effect on Perceived Enjoyment	0.111	0.118	Not Supported
H3 Perceived Scarcity on Perceived Enjoyment	0.200	0.018	Supported
H4 Peer Validation Expectancy on Perceived Enjoyment	0.362	0.000	Supported
H5 Perceived Enjoyment on Purchase Intention	0.611	0.000	Supported

Source: Processed by the author (SEM-PLS processing result)

Table 4. Specific Indirect Effect

Specific Indirect Effect	
Aesthetic Dominance Effect - > Perceived Enjoyment -> Purchase Intention	0.068
Competitive -> Perceived Enjoyment -> Purchase Intention	0.099
Peer Validation Expectation - > Perceived Enjoyment -> Purchase Intention	0.222
Perceived Scarcity -> Perceived Enjoyment -> Purchase Intention	0.122

Source: Processed by the author (SEM-PLS processing result)

from having a competitive advantage increases one's sense of competence, and is a strong predictor of enjoyment. These findings depict the increase in intrinsic motivation, and the enhancement in player experience, confirming the positive relationship Competitive Edge has on Perceived Enjoyment.

The non-significant relationship between aesthetic dominance effect and perceived enjoyment

The results of the second hypothesis test indicate that the aesthetic dominance effect is associated with perceived enjoyment, but this relationship is non-significant. This suggests that the prominence of aesthetic elements, such as complex visual effects and animations, does not necessarily enhance the gaming experience in a tactical FPS context.. This finding can be understood through the idea of cognitive load. When aesthetics are too dominant or excessive, they can distract players from the main gameplay (Peng & Bai, 2025). A plausible explanation for this finding is the functional focus required in competitive games like Valorant. Players in this environment primarily prioritize quick reactions, smooth gameplay, and tactical clarity over visual ornamentation. When aesthetics become too dominant or excessive, they may lead to cognitive overload, potentially distracting players from core gameplay cues and disrupting the state of 'flow'. While aesthetics can drive initial interest, our findings suggest that in high-stakes competitive settings, visual complexity does not translate into a statistically significant increase in enjoyment.

The positive influence of perceived scarcity on perceived enjoyment

While the relationship between perceived scarcity and

enjoyment is well-established, this study advances the literature by demonstrating how scarcity operates uniquely within competitive e-sports ecosystems. In casual gaming contexts, scarcity often serves as a simple driver for collection or aesthetic variety. However, in a tactical FPS like Valorant, scarcity functions as a marker of competitive tenure and skill validation. Owning a scarce item from a previous 'Act' or 'Episode' is not merely about rarity; it signals the player's long-term participation and status within the competitive hierarchy. This context-specific scarcity heightens the 'hunting' pleasure and sense of exclusivity, as the acquisition represents a successful navigation of the game's rotating store system a high-stakes environment where items are not always available for direct purchase. By explicitly differentiating these competitive drivers from casual consumption, this study reinforces its disciplinary relevance in the professionalized digital gaming sector. The Scarcity Effect phenomenon psychologically prioritizes objects or experiences when individuals feel that they should quickly achieve or work harder for rare items, content, or accomplishments (Barton et al., 2022a). In gaming, perceived scarcity stimulates a sense of challenge and offers exclusivity, a rare psychological reward. Obstructions that increase challenge in acquiring something rare heighten flow (Yu et al., 2023). Players circumvent scarcity obstacles and feel heightened levels of competence, a core intrinsic motivator (Deterding et al., 2022). Hence, perceived scarcity psychologically motivates participation and augments positive post-achievement feelings, reinforced by the social positioning of rare items as status markers and proof of validated skill. Commodity theory explains that scarcity makes objects or experiences more valuable because they become harder to access.

This increased value changes how consumers view the experience. Buying or interacting with scarce objects becomes more satisfying and enjoyable, leading to a rise in emotional value, rather than just instrumental value. When a freedom, like the ability to obtain an item anytime, is threatened by scarcity, people feel the urge to confirm their freedom by acquiring the scarce object. Successfully overcoming scarcity leads to greater satisfaction than when the object is easily available. In digital marketing and video game studies, artificial scarcity, such as limited-time events or limited edition items, has been shown to boost engagement and create a sense of urgency. The enjoyment that comes from scarcity is not just about the item's value but also about emotional and social factors. Having an edge, where you think you're in a top spot or can do better, gives a sense of being skilled and in charge. This feeling is key to liking what you do for its own fun. Talking more about this links it to why we get motivated, as seen in studies. The theory called Self-Determination says that meeting needs for skill drives the fun from inside that makes us enjoy playing. A study by (Sailer et al., 2017) shows that when a game meets our needs for skill and free will, it greatly tells how much and how long we stay motivated.

The positive influence of peer validation expectancy on perceived enjoyment

This is a very crucial finding, indicating that the drive to seek recognition, status, and acceptance from teammates or the community is the strongest external stimulus that triggers the enjoyment of playing. The coefficient value, which is much higher compared to other stimuli, underscores the social nature of Valorant as a competitive multiplayer game. Players do not just buy items for themselves but also as social signals and status markers within the online community. Rare or expensive cosmetic items purchased serve as social currency. The enjoyment they gain is not only from seeing the skin itself but also from the social interactions triggered by the skin, such as praise, respect from opponents, or enhanced perception of group affiliation (T. Tripp) Liu et al., 2025). The satisfaction of

Table 5. Fornell-Larcker Criterion

	ADE	CP	PV	PE	PS	PI
Aesthetic Dominance Effect	0.829					
Competitive	0.709	0.863				
Peer Validation Expectation	0.732	0.746	0.879			
Perceived Enjoyment	0.620	0.638	0.705	0.848		
Perceived Scarcity	0.647	0.636	0.702	0.629	0.861	
Purchase Intention	0.695	0.668	0.738	0.611	0.781	0.838

Source: Processed by the author (SEM-PLS processing result).

the need for relatedness is one of the three basic psychological needs in Self-Determination Theory (SDT), alongside competence and autonomy. When players expect to receive validation (for example, praise on social media, recognition in a guild or team, or increased status), their playing activity becomes more socially meaningful. The resulting enjoyment goes beyond the satisfaction of the task itself (intrinsic) to become extrinsic and social-intrinsic, where pleasure comes from successfully interacting and being recognized in a social environment (social play). This finding is supported by research on motivation for playing online games, which shows that social factors, including recognition from peers, are strong drivers of engagement and long-term satisfaction (Martucci et al., 2023).

In highly social or competitive environments, getting recognition and support from peers essentially serves as tangible, external proof of a player's competence and worth. This very anticipation of being recognized drives players to willingly commit more time and effort. Crucially, this heightened effort then feeds back into the activity's enjoyment because it becomes linked to highly valued social rewards. When players meet these expectations perhaps by receiving a compliment or a cluster of likes for a major achievement it strongly reinforces their self-esteem and their social self-efficacy, sparking the positive emotions that contribute directly to perceived enjoyment (Cruz et al., 2017). Validation coming from within the peer group often feels far more authentic and meaningful than internal self-validation or praise from external sources, making it a particularly powerful engine for enjoyment. Consequently, the desire for peer validation elevates the game from a simple individual diversion into a significant social arena for gaining recognition and strengthening relationships, thereby dramatically enhancing the entire playing experience.

The positive influence of perceived enjoyment on purchase intention

The hypothesis asserting the positive influence of perceived enjoyment on purchase intention is highly consistent with consumer psychology literature, especially in the context of products with high experiential or entertainment value, such as video games, premium applications, or luxury goods (Caroux et al., 2021). Perceived enjoyment, as a positive and intrinsic emotional response to using a product, serves as an indicator of instant satisfaction and a strong predictor of an overall positive attitude toward the product. Enjoyment is often considered an important driving factor similar to perceived usefulness and perceived ease of use, which ultimately influence behavioral intentions, including purchase intention. When consumers genuinely enjoy the experience of using a product or service, they instinctively associate the product with happy emotions and positive memories (Muzdalifa & Taufik, 2023). This strong emotional association is crucial in building purchase intention because consumers tend to want to repeat or extend that positive experience, which is manifested through purchasing decisions (Meng et al., 2021). In the context of non-functional virtual goods in Valorant, the value sought by players has completely shifted from functional utility to hedonic and

emotional value. In other words, the greater the enjoyment players feel from visuals, shooting sound effects, animations, or exclusive skin finishers, the stronger the urge to purchase to convert that feeling of pleasure into a transaction. In the digital domain, enjoyment is the main intrinsic reward of playing or interacting activities, if this reward is high, then the probability that players are willing to spend resources (money) to maintain or enhance that experience will also increase.

This phenomenon is also supported by research on brand experience, where enjoyable and exciting experiences significantly increase consumers' emotional attachment to the brand, which then translates into the intention to purchase products in the future or buy in-game items (X. Wu & Santana, 2022). The enjoyment felt becomes a kind of emotional justification for consumers to spend their money, especially when the purchase is discretionary, such as buying additional content (DLC) or virtual items that do not have a fundamental function other than enhancing the fun of playing. Enjoyment shapes a positive attitude and increases purchase intention. Consumers who enjoy a product see lower risks when buying it because they have good experiences from past use. In experiential marketing, genuine enjoyment lowers price sensitivity and raises willingness to pay. Consumers value the experience more than the cost (Kaur et al., 2023). Thus, your hypothesis results are supported and play a key role in understanding how emotional satisfaction from using digital products drives purchase decisions.

Limitations and Cautions

1. Methodological Consideration, The use of self-reported survey data captures participants' perceived experiences and intentions, which is appropriate for examining psychological constructs. However, perceptual responses may differ from observed behavioral data in real purchasing situations.
2. Sample Characteristics, The sample was predominantly younger and male, reflecting the core demographic of competitive FPS players. While this strengthens contextual relevance, it may limit broader generalization to more diverse gaming populations.
3. Research Scope and Design, The focus on competitive First-Person Shooter (FPS) environments allows for contextual depth, yet motivational dynamics may differ across other game genres. Additionally, the cross-sectional design captures relationships at a single point in time; future longitudinal studies could further enhance causal interpretation and theoretical robustness.

Recommendations for Future Research

Future research should seek to replicate this model across more diverse and heterogeneous samples, including older players, female gamers, and players from various cultural backgrounds. Expanding the study to other game genres would also help determine whether psychological and social value similarly dominate in non-competitive environments. Researchers are encouraged to incorporate additional control variables such as game engagement intensity, emotional resilience, competitive traits, and prior spending behavior to enhance explanatory power. Longitudinal designs may also

provide stronger causal insights into how enjoyment evolves over time and influences purchasing decisions. Moreover, qualitative research methods such as in-depth interviews or focus groups are recommended to explore the nuanced psychological reasoning behind cosmetic purchases and to better understand the unexpected findings related to aesthetic dominance and complexity. Such approaches could clarify whether visual saturation truly disrupts flow or whether certain player segments interpret elaborate aesthetics as a positive signal of exclusivity and prestige.

Conclusion

This study outlines the enjoyment attributed to psychological enjoyment as the foremost binding mechanism connecting extrinsic factors to the intent to acquire non-functional items in competitive video gaming environments. Moreover, factors such as competitive psychological states, manipulations of scarcity, and anticipated peer validation were enjoyed and subsequently positively correlated to enjoyment and purchase intention, confirming the hypothesis. For developers, this indicates that the purchase of cosmetic items hinges more on the psychological, social, and emotional utility rather than the functional utility of the items. On the other hand, while the study initially hypothesized a negative impact of excessive aesthetics, the results show this relationship to be non-significant ($\beta = 0.111$, $p = 0.118$), suggesting that visual complexity must be balanced with functional clarity to maintain game flow. For managers and developers, the findings suggest that monetization efforts should prioritize social recognition and player well-being. Instead of relying on manipulative psychological triggers, developers should implement responsible design frameworks, such as transparent scarcity systems with clear disclosure, spending limits, and cooldown periods. Furthermore, social systems should focus on authentic community-building features that provide meaningful validation without resorting to intrusive automated signaling. By ensuring an aesthetic and ethical balance, developers can foster a sustainable live-service ecosystem that respects the player's hedonic experience and financial autonomy.

Author contributions

All authors contributed substantially to the intellectual development and completion of this research. M.S.T. conceptualized the research framework by integrating the S-O-R theory with a specific focus on non-functional virtual

goods, addressing the unique purchase paradox in tactical FPS environments. E.A. provided methodological innovation by applying a simultaneous 4-stimuli explanatory model and interpreting the unexpected non-significant path of aesthetics through the lens of cognitive load theory. Both authors collaboratively performed the data analysis via PLS-SEM and contributed to drafting the manuscript to ensure academic rigor and clarity. Each author has read and approved the final version of the manuscript and agrees to be accountable for all aspects of the intellectual work.

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Conflict of interest

The authors declare that there are no financial, personal, or professional relationships that could have influenced the objectivity or integrity of this research. No competing interests exist that may have affected the study design, data collection, analysis, interpretation, or reporting of the findings. The research process was conducted independently and transparently in accordance with academic standards. Furthermore, all stages of the study were carried out smoothly due to constructive collaboration, institutional support, and cooperative participation from all involved parties, ensuring the credibility and trustworthiness of the research outcomes.

References

- Barton, B., Zlatevska, N., & Oppewal, H. (2022a). Scarcity tactics in marketing: A meta-analysis of product scarcity effects on consumer purchase intentions. *Journal of Retailing*, 98(4), 741–758. <https://doi.org/10.1016/j.jretai.2022.06.003>
- Bhandari, U., Chang, K., & Neben, T. (2019a). Understanding the impact of perceived visual aesthetics on user evaluations: An emotional perspective. *Information and Management*, 56(1), 85–93. <https://doi.org/10.1016/j.im.2018.07.003>
- Bhandari, U., Chang, K., & Neben, T. (2019b). Understanding the impact of perceived visual aesthetics on user evaluations: An emotional perspective. *Information and Management*, 56(1), 85–93. <https://doi.org/10.1016/j.im.2018.07.003>
- Bleize, D. N. M., & Antheunis, M. L. (2019). Factors influencing purchase intent in virtual worlds: a review of the literature. *Journal of Marketing Communications*, 25(4), 403–420. <https://doi.org/10.1080/13527266.2016.1278028>
- Candi, M., Jae, H., Makarem, S., & Mohan, M. (2017). Consumer responses to functional, aesthetic and symbolic product design in online reviews. *Journal of Business Research*, 81, 31–39. <https://doi.org/10.1016/j.jbusres.2017.08.006>
- Caroux, L., & Mougine, A. (2021). Influence of visual background complexity and task difficulty on action video game players' performance.
- Chen, A., Lu, Y., & Wang, B. (2016). Enhancing perceived enjoyment in social games through social and gaming factors. *Information Technology & People*, 29(1), 99–119. <https://doi.org/10.1108/ITP-07-2014-0156>
- Chen, C.-H., Law, V., & Huang, K. (2019). The roles of engagement and competition on learner's performance and motivation in game-based science learning. *Educational Technology Research and Development*, 67(4), 1003–1024. <https://doi.org/10.1007/s11423-019-09670-7>
- Cruz, C., Hanus, M. D., & Fox, J. (2017). The need to achieve: Players' perceptions and uses of extrinsic meta-game reward systems for video game consoles. *Computers in Human Behavior*, 71, 516–524. <https://doi.org/10.1016/j.chb.2015.08.017>
- Datta Gupta, N., Etcoff, N. L., & Jaeger, M. M. (2016). Beauty in Mind: The Effects of Physical Attractiveness on Psychological Well-Being and Distress. *Journal of Happiness Studies*, 17(3), 1313–1325. <https://doi.org/10.1007/s10902-015-9644-6>
- Deterding, S., Andersen, M. M., Kiverstein, J., & Miller, M. (2022). Mastering uncertainty: A predictive processing account of enjoying uncertain success in video game play. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.924953>
- Duman, H., & Ozkara, B. Y. (2021). The impact of social identity on online game addiction: the mediating role of the fear of missing out (FoMO) and the moderating role of the need to belong. *Current Psychology*, 40(9), 4571–

4580. <https://doi.org/10.1007/s12144-019-00392-w>
- Esteves, J., Valogianni, K., & Greenhill, A. (2021). Online social games: The effect of social comparison elements on continuance behaviour. *Information and Management*, 58(4). <https://doi.org/10.1016/j.im.2021.103452>
- Eytam, E., Lowengart, O., & Tractinsky, N. (2021). Effects of visual simplicity in product design and individual differences in preference of interactive products. *Review of Managerial Science*, 15(5), 1347–1389. <https://doi.org/10.1007/s11846-020-00391-3>
- Ghazali, E. M., Al Halbusi, H., Abdel Fattah, F. A. M., Hossain Uzir, Md. U., Mutum, D. S., & Tan, F.-L. (2023). A study of player behavior and motivation to purchase Dota 2 virtual in game items. *Kybernetes*, 52(6), 1937–1961. <https://doi.org/10.1108/K-08-2021-0678>
- Groeschel, M., & Schäfer, T. (2020). Analysis of Mobile App Revenue Models Used in the Most Popular Games of the Tower Defense Genre on Google Play. In *Asian Journal of Computer and Information Systems*. www.ajouronline.com
- Hart, P. F., & Rodgers, W. (2024). Competition, competitiveness, and competitive advantage in higher education institutions: a systematic literature review. *Studies in Higher Education*, 49(11), 2153–2177. <https://doi.org/10.1080/03075079.2023.2293926>
- Hicks, K., Gerling, K., Dickinson, P., & Vanden Abeele, V. (2019). Juicy Game Design. *Proceedings of the Annual Symposium on Computer-Human Interaction in Play*, 185–197. <https://doi.org/10.1145/3311350.3347171>
- Huhtiniemi, M., Sääkslahti, A., Watt, A., & Jaakkola, T. (2019). Basic Psychological Needs, Motivation and Enjoyment within Finnish Physical Education Students. In *Journal of Sports Science and Medicine* (Vol. 18). <http://www.jssm.org>
- Jiang, Z. (Jack), Wang, W., Tan, B. C. Y., & Yu, J. (2016). The Determinants and Impacts of Aesthetics in Users' First Interaction with Websites. *Journal of Management Information Systems*, 33(1), 229–259. <https://doi.org/10.1080/07421222.2016.1172443>
- Kaur, J., Lavuri, R., Parida, R., & Singh, S. V. (2023). Exploring the Impact of Gamification Elements in Brand Apps on the Purchase Intention of Consumers. *Journal of Global Information Management*, 31(1), 1–30. <https://doi.org/10.4018/JGIM.317216>
- Lee, C. H., & Chen, C. W. (2021). Impulse buying behaviors in live streaming commerce based on the stimulus-organism-response framework. *Information (Switzerland)*, 12(6). <https://doi.org/10.3390/info12060241>
- Liu, J., Ang, M. C., Chaw, J. K., Kor, A.-L., & Ng, K. W. (2023). Emotion assessment and application in human-computer interaction interface based on backpropagation neural network and artificial bee colony algorithm. *Expert Systems with Applications*, 232, 120857. <https://doi.org/10.1016/j.eswa.2023.120857>
- Liu, T. (Tripp), Tan, C. S. L., & Quintero Rodríguez, C. (2025). Virtual consumption in luxury brands: consumer purchase motivations of virtual luxury fashion in virtual worlds. *Journal of Fashion Marketing and Management: An International Journal*, 29(5), 844–862. <https://doi.org/10.1108/JFMM-05-2024-0175>
- Marder, B., Gattig, D., Collins, E., Pitt, L., Kietzmann, J., & Erz, A. (2019). The Avatar's new clothes: Understanding why players purchase non-functional items in free-to-play games. *Computers in Human Behavior*, 91, 72–83. <https://doi.org/10.1016/j.chb.2018.09.006>
- Martucci, A., Gursesli, M. C., Duradoni, M., & Guazzini, A. (2023). Overlooking Gaming Motivation and Its Associated Psychological and Sociodemographic Variables: A PRISMA Systematic Review. *Human Behavior and Emerging Technologies*, 2023, 1–156. <https://doi.org/10.1155/2023/5640258>
- Meng, L. (Monroe), Duan, S., Zhao, Y., Lü, K., & Chen, S. (2021). The impact of online celebrity in livestreaming E-commerce on purchase intention from the perspective of emotional contagion. *Journal of Retailing and Consumer Services*, 63, 102733. <https://doi.org/10.1016/j.jretconser.2021.102733>
- Muzdalifa, D., & Taufik, E. R. (2023). Meningkatkan Repurchase Intention Melalui Perceived Ease Of Use dan Perceived Enjoyment. *Tirtayasa Ekonomika*, 18(1), 89. <https://doi.org/10.35448/jte.v18i1.19907>
- Peng, L. H., & Bai, M. H. (2025). Examining the Mediating Effects of Game User Experience Satisfaction on Continuance Intention: A Case Study of League of Legends. *IEEE Access*, 13, 63792–63814. <https://doi.org/10.1109/ACCESS.2025.3559632>
- Redlinger, E., Glas, B., & Rong, Y. (2022). Impact of Visual Game-Like Features on Cognitive Performance in a Virtual Reality Working Memory Task: Within-Subjects Experiment. *JMIR Serious Games*, 10(2), e35295. <https://doi.org/10.2196/35295>
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61. <https://doi.org/10.1016/j.cedpsych.2020.101860>
- Sailer, M., Hense, J. U., Mayr, S. K., & Mandl, H. (2017). How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction. *Computers in Human Behavior*, 69, 371–380. <https://doi.org/10.1016/j.chb.2016.12.033>
- Satish, N. (2023). INVESTIGATING THE GROWTH AND FUTURE POTENTIAL OF E-SPORTS INDUSTRY. *INTERANTIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING AND MANAGEMENT*, 07(08). <https://doi.org/10.55041/IJSREM25366>
- Schneider, S., Nebel, S., Beege, M., & Rey, G. D. (2020). The retrieval-enhancing effects of decorative pictures as memory cues in multimedia learning videos and subsequent performance tests. *Journal of Educational Psychology*, 112(6), 1111–1127. <https://doi.org/10.1037/edu0000432>
- Shi, M., Deng, L., Zhang, M., & Long, Y. (2025). How telepresence and perceived enjoyment mediate the relationship between interaction quality and continuance intention: Evidence from China Zisha-ware Digital Museum. *PLoS ONE*, 20(1 January). <https://doi.org/10.1371/journal.pone.0317784>
- Trewick, N., Neumann, D. L., & Hamilton, K. (2022). Effect of affective feedback and competitiveness on performance and the psychological experience of exercise within a virtual reality environment. *PLoS ONE*, 17(6 June). <https://doi.org/10.1371/journal.pone.0268460>
- Tsai, M.-J., Huang, L.-J., Hou, H.-T., Hsu, C.-Y., & Chiou, G.-L. (2016). Visual behavior, flow and achievement in game-based learning. *Computers & Education*, 98, 115–129. <https://doi.org/10.1016/j.compedu.2016.03.011>
- Tyrväinen, O., & Karjalainen, H. (2024). Willingness to pay for freemium services: Addressing the differences between monetization strategies. *International Journal of Information Management*, 77. <https://doi.org/10.1016/j.ijinfomgt.2024.102787>
- Wang, W., & Hang, H. (2021). Exploring the eudaimonic game experience through purchasing functional and nonfunctional items in MMORPGs. *Psychology and Marketing*, 38(10), 1847–1862. <https://doi.org/10.1002/mar.21503>
- Wu, S. L., & Hsu, C. P. (2018). Role of authenticity in massively multiplayer online role playing games (MMORPGs): Determinants of virtual item purchase intention. *Journal of Business Research*, 92, 242–249. <https://doi.org/10.1016/j.jbusres.2018.07.035>
- Yu, D., Wang, S., Song, F., Liu, Y., Zhang, S., Wang, Y., Xie, X., & Zhang, Z. (2023). Research on user experience of the video game difficulty based on flow theory and fNIRS. *Behaviour & Information Technology*, 42(6), 789–805. <https://doi.org/10.1080/0144929X.2022.2043442>
- Zendle, D., Meyer, R., & Ballou, N. (2020). The changing face of desktop video game monetisation: An exploration of exposure to loot boxes, pay to win, and cosmetic microtransactions in the most-played Steam games of 2010-2019. *PLoS ONE*, 15(5). <https://doi.org/10.1371/journal.pone.0232780>
- Zimmermann, D., Wehler, A., & Kaspar, K. (2023). Self-representation through avatars in digital environments. *Current Psychology*, 42(25), 21775–21789. <https://doi.org/10.1007/s12144-022-03232-6>