Study on the Willingness to Consume and Marketing Strategies of Online Game Consumers

Shize Lin[1, *]

[1]College of the Liberal Arts, The Pennsylvania State University, State College, Pennsylvania, PA16802-1294, United State

*Corresponding author: svl6301@psu.edu

Abstract:

This paper delves into the critical factors influencing players' willingness to pay in online games, examining the impact of marketing strategies such as season passes, limited-time promotions, loot boxes, and brand collaborations. These strategies have proven effective in driving consumer behavior by fostering greater player engagement, instilling a sense of urgency, and tapping into psychological motivators like fear of missing out (FOMO). However, while such techniques often boost short-term revenue, they can also lead to unintended consequences. For instance, the frequent introduction of new season content, although exciting, may result in player fatigue, diminishing long-term engagement. Additionally, loot boxes have sparked ethical and legal debates due to their resemblance to gambling mechanics, which may negatively affect players' willingness to pay. Brand collaborations, while lucrative, often lack the personalized touch that resonates deeply with players. To address these challenges, the paper proposes several optimization strategies. Extending season cycles could help mitigate burnout, while increasing transparency in loot box systems may restore player trust. Furthermore, enhancing creativity and personalization in brand collaborations and in-game activities can foster deeper emotional connections with players. By refining these marketing strategies within ethical and legal boundaries, game developers can not only increase revenue but also improve player satisfaction and retention. This study offers valuable insights into balancing profitability with player well-being.

Keywords: Willingness; Consume and Marketing Strategies; Online Game Consumers

1. Introduction

1.1 Research Background

With the rapid proliferation of internet technology and smart devices, the global online gaming market has gradually developed over the past decade, becoming one of the major sectors of the global entertainment industry. According to data from the market research firm Newzoo, the global gaming market's annual revenue reached nearly $200 billion in 2023, with the number of global players hitting 3.4 billion [1]. This data fully demonstrates the coverage and influence of the online gaming industry on a global scale. Additionally, globally renowned gaming platforms such as Steam and Epic Games have seen a steady increase in daily active users, especially during the COVID-19 pandemic, when the growth trend became even more pronounced [2, 3]. At the same time, as the scale of the online gaming market continues to expand, how to enhance players' willingness to pay has become a key focus for the industry.

Currently, most game companies have shifted their profit model from traditional paid downloads to a "free-to-play + in-app purchases" model, where game developers generate revenue through in-game virtual items, value-added services, advertisements, and subscriptions [4]. According to statistics, the global gaming market's annual revenue in 2023 was nearly $200 billion [1]. This figure highlights the importance of studying players' willingness to pay in online games. Understanding consumer payment behavior not only helps game companies formulate more effective marketing strategies but also supports revenue growth. Therefore, researching how to stimulate and enhance players' willingness to pay in online games has significant commercial value and provides deeper insights into players' in-game consumption habits.

1.2 Literature Review

Ho and Wu's research focuses on the theory of consumer value in online games, specifically its influence on players' intent to purchase virtual goods. Through a survey of 523 users, they found that game genre moderates purchasing behavior. Role-playing game (RPG) players are more influenced by functional quality, fun, and social support, while strategy game players focus more on game satisfaction and character identification. The study suggests that RPG players tend to purchase decorative items to enhance their social image, while strategy game players prioritize the practicality of the items, indicating that game design and interaction modes play a significant role in purchasing behavior [5].

Hamari et al. further explored the specific purchasing mo-tivations of players in free-to-play games. Through a questionnaire survey, they categorized the motivations into six types: barrier-free gaming, social interaction, competition, economic rationality, providing support for children, and unlocking content. Among these, barrier-free gaming and social interaction were the primary factors influencing players' spending. Artificial barriers in game design, such as waiting times or repetitive tasks, and increased social interaction raise the likelihood of players purchasing virtual items, especially personalized items [6].

Tan and Yang's research focuses on the effect of psychological ownership of virtual items on game enjoyment, specifically comparing two acquisition methods—direct purchase and "loot boxes"—in MMORPGs. The study found that direct purchases, due to their transparency, enhance players' sense of psychological ownership, thereby improving their gaming experience. Although loot boxes are characterized by uncertainty and excitement and result in weaker psychological ownership, they still contribute to game enjoyment for some players [7].

1.3 Research Gap

Most academic research primarily focuses on singular motivations for spending in online games, such as social interaction, personalization of virtual goods, satisfaction from direct purchases, and the different objectives of players. While existing studies have thoroughly explored consumer purchasing behavior and its influencing factors, there is limited research on the combined effects of various marketing strategies. Therefore, this paper aims to address this gap by analyzing how these marketing strategies can enhance player willingness to pay through personalization and ultimately propose an optimized marketing strategy framework.

1.4 Research Framework

This study aims to analyze common marketing strategies in the online gaming market to provide optimized solutions for increasing player willingness to pay, thereby filling gaps in existing research. The research logic is outlined as follows:

Firstly, this paper will conduct a detailed analysis of four primary marketing strategies used in online games: season pass systems, limited-time promotions, loot boxes (Gacha mechanisms), and collaborations with well-known brands or IPs. These strategies are widely used in today's gaming market with the goal of enhancing players' willingness to spend by offering rewards, creating scarcity, and fostering cultural relevance. By analyzing each of these strategies, this paper will explore their impact on players' willingness to spend.

Secondly, this paper will explore how these marketing strategies meet the personalized needs of different types of players. For instance, the season pass system motivates active players through continuous task rewards, while limited-time promotions attract more occasional spenders by creating a sense of urgency.

Furthermore, this paper will incorporate consumer behavior concepts such as the "loss aversion" effect and "psychological ownership" theory to explain why these strategies successfully increase players' willingness to spend. Through the introduction of these concepts, this paper will further clarify the relationship between marketing strategies and player spending behavior, providing academic support for optimizing these strategies.

Finally, this paper will offer recommendations for optimizing these marketing strategies, for example, extending the season pass duration to prevent player fatigue, increasing the transparency of loot box mechanisms to address ethical and legal concerns, offering more personalized options in brand collaborations, and introducing dynamic in-game events. These optimized strategies will allow game companies to maintain player engagement better and increase in-game spending.

2. Case Description: Factors Influencing the Willingness to Pay in Online Games

This section explores the main factors affecting consumers' willingness to pay in online games, analyzing how the season passes, limited-time items, loot box mechanisms, and brand collaborations influence player spending behavior.

2.1 The Season Pass System: Creating Continuous Incentives for Engagement

The season pass system was introduced by Valve Corporation in the game Dota 2 in 2013, and since then, various games have adopted different forms of battle or activity pass systems [8]. The season pass system divides game time into periods, such as quarterly or semi-annually, offering players specific rewards such as exclusive skins, virtual currency, or experience boosts. By regularly updating the pass, the system provides players with ongoing goals and rewards, encouraging them to continue spending to acquire higher-value rewards.

Players pay a certain fee to participate in the pass system and unlock rewards by completing in-game tasks, which enhances their sense of achievement and satisfaction—psychologist B.F. Skinner's theory of operant conditioning suggests that intermittent rewards can effectively maintain

ongoing behavior [9]. In games, this is reflected in players progressively earning rewards, delaying their full satisfaction, which motivates them to keep playing to pursue higher-value items. This gradual unlocking of rewards not only stimulates players' demand for virtual goods but also maintains their activity within the game.

2.2 Limited-Time Items and Promotional Offers: Driving Urgency-Based Purchases

Limited-time virtual items and promotional events effectively trigger players' impulse purchases through the scarcity principle. Research shows that scarcity marketing strategies create a sense of limited availability, prompting consumers to feel urgency and act quickly to purchase [10]. This "fear of missing out" is especially evident in limited-time promotions. Furthermore, the loss aversion effect explains why players make quick purchasing decisions during these events. People tend to react more strongly to losses than to gains, and promotional activities emphasize the risk of "missing out on a deal," which effectively stimulates consumer spending motivation.

This strategy also lowers the purchasing threshold through discounts and bundle offers, increasing the perceived value of virtual goods and encouraging players to make more in-game purchases. Promotions such as "double rewards on first purchase" or "limited-time discounted skin packs" use a combination of scarcity and added value to significantly boost players' willingness to spend in a short period.

2.3 Loot Boxes and the "Gacha" Mechanism: Random Rewards as Psychological Triggers

Loot boxes or the "Gacha" mechanism offer random rewards, such as rare items or high-level gear, capitalizing on players' anticipation of unknown outcomes to entice them to spend repeatedly on draws. Studies have found that this mechanism is closely linked to the sunk cost effect, where players, after investing significant time and money, develop emotional attachments and continue to participate in the hope of obtaining desired items. The unpredictability of the mechanism increases excitement and induces "just one more try" behavior, akin to gambling, making loot box systems a major revenue source for gaming companies [11]. In the game CS2, players can purchase keys to open "weapon cases," which contain randomly dropped skins for guns, knives, and other virtual items. Unlike most other games, the items in CS2 can be traded with other players via the Steam Community or other apps, allowing players to exchange them for real currency. This significantly increases players' motivation to open loot boxes, as they can potentially earn real mon-

ey by selling rare items, encouraging more loot box purchases and increasing the game's overall revenue.

2.4 In-Game Items and Collaborations with Brands or IPs: Enhancing Value through Cultural Relevance

Collaborations between brands and popular IPs (Intellectual Properties) can significantly enhance the cultural value and appeal of in-game virtual items. These collaborations introduce limited-edition virtual items from well-known brands or IPs, such as movies, anime, or sports, leveraging brand influence to attract fans. Such cross-industry partnerships add cultural symbolism to virtual items, fulfilling players' emotional needs tied to specific cultures and expanding the player base through the fan appeal of the brand or IP. "Cultural identity not only influences what consumers buy but also why they buy it" [12]. By associating brands with cultural symbols, companies can effectively evoke emotional resonance in consumers.

For example, Honor of Kings successfully collaborated with the classic game brand SNK. SNK, known for iconic fighting games like The King of Fighters and Samurai Shodown, introduced characters such as Mai Shiranui, Nakoruru, and Ukyo Tachibana into Honor of Kings. These characters retained their original skills and features and came with exclusive skins and animations. This collaboration not only attracted the attention of SNK fans but also elevated the cultural impact of Honor of Kings. "Through brand collaborations, especially those closely tied to fan culture, brands can stimulate cultural identity and increase consumers' emotional investment" [12].

Through such cultural relevance, in-game virtual items transcend simple, functional consumption and become a form of cultural expression, strengthening emotional connections and enhancing players' desire to spend.

3. Analysis of the Problem

3.1 Oversaturation of Seasonal Content Leading to Player Fatigue

Although the season pass system can stimulate players' willingness to pay, if the updates are too frequent or the rewards are not attractive enough, it may lead to player fatigue, reducing their engagement and willingness to pay. Specifically, when the rewards lack novelty or provide little improvement to the gaming experience, players may become bored with repeated pay-to-play activities. Research has shown that in highly competitive environments, players may feel tired of monotonous rewards when engagement is tied to rewards, leading to decreased

participation [13].

3.2 Ethical and Regulatory Concerns Around Loot Boxes

Research has shown that loot boxes or the "Gacha" mechanism are often criticized for their similarity to gambling. Players need to spend real money to receive random virtual rewards, and this randomization process closely resembles gambling behavior[14]. Minors are particularly prone to overspending in this system, and research shows that the annual prevalence rate of 13-14-year-old players purchasing weapon crates is 24.9%, raising numerous ethical concerns [15]. To address these issues, some countries have enacted legal measures to limit such mechanisms. For instance, Belgium and the Netherlands have completely banned in-game loot boxes, while China requires game companies to disclose loot box probabilities and restricts underage players from participating [14]. These legal restrictions present challenges for game companies looking to expand their markets, forcing some to adjust their game designs or exit specific markets.

3.3 Limited Customization Options in Brand Collaborations

Although collaborations with brands or IPs can enhance players' willingness to spend, a lack of creativity or freshness in the associated items may lead players to lose interest in repetitive content. Furthermore, if a game overly relies on collaborations with well-known IPs while neglecting innovation and optimization within the game itself, this could diminish the game's appeal and weaken player loyalty over the long term.

4. Suggestions

4.1 Strategy 1: Optimizing Season Pass Systems to Prevent Player Fatigue

To address the issue of player fatigue caused by frequent season pass updates, it's important for developers to consider extending the duration of the season pass and offering more diverse rewards. By lengthening the season duration, players will have more time to complete tasks, reducing the pressure from limited time constraints. Additionally, diversifying the types of rewards available, such as introducing tools that enhance gameplay or offering unique interactive experiences, can make the season pass rewards feel more valuable to players. Furthermore, innovating the way rewards are unlocked, such as through social interactions or completing personal achievements, can enhance the gaming experience and prevent the monotony

of repetitive tasks. This approach can increase long-term player engagement and willingness to pay.

4.2 Strategy 2: Balancing Loot Box Mechanics with Transparency and Ethical Standards

To address the ethical and legal issues associated with loot box mechanics, game companies can improve transparency by disclosing the probabilities of item drops. This would help build trust with players by addressing concerns about randomness and potentially reducing legal risks. Some countries and platforms already require the disclosure of loot box probabilities, and this practice could be implemented globally. Additionally, game companies could consider implementing a "pity" mechanism, where players are guaranteed to receive a high-value reward after multiple unsuccessful attempts. This not only addresses ethical concerns about overspending but also helps maintain player motivation.

4.3 Strategy 3: Introducing Dynamic In-Game Events to Maintain Long-Term Player Engagement

While partnerships with well-known brands or IPs can boost players' willingness to spend, it's crucial to remember that player feedback is invaluable. If the collaborative items lack creativity, players may become bored with repetitive content, hurting player loyalty and the game's long-term appeal. To address this issue, developers could introduce more personalized virtual items and unique social interaction features to enhance the gaming experience, taking into account the feedback from the player community. For example, giving characters various customization options, similar to how Honor of Kings allows players to combine different weapons and outfits for a single skin, could increase engagement. Additionally, developers can use player behavior data to create tailored in-game events for different types of players, again guided by player feedback. Casual players could enjoy relaxed social activities, while competitive players might prefer to tackle more challenging tasks. Personalized designs like these make players feel more valued and increase the appeal of paid content aimed at different player groups. Moreover, developing different types of in-game events can give game companies more time to focus on creating high-quality branded items rather than rushing to release new skins. This approach allows developers to infuse creativity into brand collaboration items while ensuring players remain engaged through various activities.

5. Conclusion

5.1 Key Findings

This paper thoroughly examined how various marketing strategies—such as season pass systems, limited-time promotions, loot box mechanics, and brand collaborations—influence players' willingness to pay in online games. It was found that season passes, with ongoing reward systems, effectively increase player engagement. Limited-time promotions create urgency that drives purchases, while loot boxes use random rewards to trigger gambling-like psychological motivations, encouraging players to keep spending. Brand collaborations, by integrating cultural symbols, enhance the appeal and value of in-game items. To address potential issues arising from these strategies, this paper proposes several optimization strategies, including adjusting season pass cycles to reduce player fatigue, increasing transparency in loot box mechanics, offering more personalized virtual items, and creating exclusive events for different player types to sustain long-term engagement and novelty.

5.2 Research Significance

This study highlights several critical issues in current online game marketing strategies and provides a deeper understanding of how these strategies influence players' willingness to pay. Rather than simply offering solutions, this paper uncovers the mechanisms behind these strategies and how they impact legal, ethical, and player satisfaction concerns. While pointing out the advantages and challenges of strategies such as season passes, limited-time promotions, and loot boxes, it also sheds light on the potential risks these strategies pose in areas like law, ethics, and player satisfaction. Ultimately, this paper aims to raise awareness within the industry and offer suggestions for future improvements, helping game companies better navigate market dynamics and evolving consumer demands.

5.3 Limitations and Future Research

This paper focuses on how existing marketing strategies influence player spending behavior but does not cover how emerging technologies or new game modes could impact players' willingness to pay. Additionally, it mainly discusses mainstream marketing strategies, leaving out indie games with paid downloads or player groups from specific cultural backgrounds. Future research could explore various game types and player communities to understand consumer behavior across different contexts better. Furthermore, quantitative and qualitative methods,

such as surveys or focus groups, could gather insights from various cultures, regions, and player groups, helping to develop more targeted and effective marketing strategies.

References

[1] Newzoo. Explore the Global Games Market in 2023 [EB/OL]. (2023-09-07) [2024-09-10]. Available at: https://newzoo.com/resources/blog/explore-the-global-games-market-in-2023.

[2] World Metrics. Steam Usage Statistics: Market Data Report 2024 [EB/OL]. (2024-09-09). Available at: https://www.worldmetrics.org/steam-usage-statistics.

[3] TweakTown. Epic Games Store surpasses 75 million monthly active users, gave away 586 million games in 2023 [EB/OL]. (2024-09-09). Available at: https://www.tweaktown.com/news/epic-games-monthly-active-users-2023.

[4] FourWeekMBA. The Freemium Business Model Complete Guide [EB/OL]. (2024-09-09). Available at: https://fourweekmba.com/freemium-business-model-guide/.

[5] Ching-Wen Ho, Shu-Ing Wu. Factors affecting intent to purchase virtual goods in online games. Internet Research, 2012, 22(1): 67-88. DOI:10.1108/10662241211199992.

[6] Juho Hamari, Niko Hanner, Jonna Koivisto. Why do players buy in-game content? An empirical study on concrete purchase motivations. Computers in Human Behavior, 2017, 68: 538-546. DOI: 10.1016/j.chb.2016.11.045.

[7] Ding Tan, Yang Yang. An exploration of MMORPG in-game virtual-item contribution to game enjoyment from the perspectives of purchase behavior and psychological ownership [J]. Computers in Human Behavior, 2022, 131: 107211. DOI: 10.1016/j.chb.2022.107211.

[8] Daniel Joseph. Battle pass capitalism. Journal of Consumer Culture, 2021, 21(1): 68-83. DOI: 10.1177/1469540521993930.

[9] Burrhus Frederic Skinner. Science and Human Behavior. The B. F. Skinner Foundation, 2014.

[10] Louis Sebastian. Unraveling Scarcity Bias: The Evolutionary Influence on Consumer Behavior [EB/OL]. The Unconscious Consumer, 2023. [2024-09-09]. Available at: https://www.theunconsciousconsumer.com.

[11] Bai-Chuan Chen, Li-Lin Chin. Reflections on Gacha Mechanism and Its Impact on Spending in Mobile Games. China Media Journal, 2021, 40: 83-114. DOI: https://doi.org/10.3966/172635812021120040003.

[12] Linda Ann Peracchio, Melissa Gail Bublitz, Dulce Luna. Cultural Diversity and Marketing: The Multicultural Consumer // Veronica Benet-Martínez, Ying-Yi Hong. The Oxford Handbook of Multicultural Identity. Oxford University Press, 2014: 438-461.

[13] Xiuqing Li, Yingnan Zhang, Zhaoyuan Liu. Rethinking incentives in recommender systems: are monotone rewards always beneficial? [C]//NeurIPS 2023. San Diego, CA, USA: Neural Information Processing Systems, 2023: 123-130.

[14] Leon Yin Xiao, Laura Li Henderson, Rune Kristian Leander Nielsen, Philip William Schofield Newall. Regulating Gambling-Like Video Game Loot Boxes: A Public Health Framework Comparing Industry Self-Regulation, Existing National Legal Approaches, and Other Potential Approaches. Current Addiction Reports, 2022, 9: 163-178. DOI: https://doi.org/10.1007/s40429-022-00424-9.

[15] Iker Montiel, Ainize Basterra-González, Juan Manuel Machimbarrena, Juan Ortega-Barón, José González-Cabrera. Loot box engagement: A scoping review of primary studies on prevalence and association with problematic gaming and gambling. PLoS ONE, 2022, 17(1): e0263177. DOI: https://doi.org/10.1371/journal.pone.0263177.