

Beyond the Purchase: Exploring the Dynamics of Microtransactions Among Swedish Gamers

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ABSTRACT

This study explores the behavior of Swedish gamers regarding microtransactions in the Free-To-Play model. It focuses on their attitudes towards in-game purchases and explores the psychological, ethical, and social factors influencing their engagement. The study used qualitative research methods, including semi-structured interviews with nine Swedish gamers. The findings reveal that community norms and peer pressure significantly impact microtransaction engagement, especially among younger players. The study also identifies a psychological barrier that, once crossed, triggers increased spending. Furthermore, the research highlights the controversial role of loot boxes, their association with gambling, and the psychological effects they have on players. The results from this study suggest the need for regulatory oversight and ethical monetization practices. Additionally, the study reveals that premium in-game currencies obscure real-world costs, which can impact spending behavior and raise ethical concerns about transparency. The research suggests that game developers and policymakers should prioritize fair and transparent strategies that uphold player autonomy and well-being by considering the complex interplay between player experience, microtransaction design, and ethical considerations.

CCS Concepts

- Human-centered computing~Interaction design~Empirical studies in interaction design

Keywords

Microtransaction, Descriptive Normative Beliefs, Perceived Value, In-game Currency, Loot box, In-game Purchases, Peer Pressure, User Experience

1 INTRODUCTION

In the immersive digital gaming world, where the lines between virtual economies and real-world finances increasingly blur, microtransactions have become a pivotal element of game development [1, 2]. Players can run out of lives after an intense session of a Free-To-Play game and being very close to completing a difficult level. As frustration builds up for the player, an offer pops up: a chance to continue to progress for a real-world

monetary fee. This scenario is not just a common experience for millions of gamers worldwide; it represents a fundamental shift in the gaming industry's revenue models from traditional Pay-To-Play (P2P) to the increasingly widespread Free-To-Play (F2P) model reliant on microtransactions [3, 4].

This research paper focuses on the Swedish gaming community's engagement with aesthetic-focused and functional microtransactions in the form of loot boxes and in-game currencies. It aims to illuminate the interplay between gamers and microtransaction purchases. While microtransactions contribute significantly to developers' revenues, they also raise ethical, psychological, and design-related questions [2, 3, 4, 5, 6, 7].

Despite a vast array of previous research on the subject, Swedish gamers' specific attitudes and behaviors toward microtransactions still need to be explored [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14]. This study seeks to fill this gap by examining the cultural and economic influences on Swedish gamers' interactions with microtransactions, guided by questions on community norms, the impact of premium in-game currencies, and the perceived value of in-game purchases. By delving into Swedish gamers' perspectives on microtransactions, this study aims to foster a more ethical and player-centric gaming environment that balances profitability with respect for player well-being and enjoyment.

1.1 Research Questions

This research project has three guiding research questions explored in this article through semi-structured interviews and relevant literature.

- RQ1: How do descriptive normative beliefs within gaming communities influence players' decisions to purchase microtransactions?
- RQ2: How do premium in-game currencies affect players' spending behavior, and how do ethical concerns impact these effects?
- RQ3: How do aspects of the Perceived Value framework affect players' perception of value in microtransactions and their willingness to purchase?

2. THEORETICAL BACKGROUND

This section investigates the existing and relevant research on microtransactions. The literature overview was structured using different databases and search terms related to the topic, such as microtransactions, loot boxes, free-to-play, pay-to-play, pay-to-win, and similar and relevant search terms. After finding the core related research, the snowball method aided in finding additional relevant and more nuanced perspectives. The sub-chapters of the theoretical background lay the foundation of the interview guide for qualitative data collection.

2.1 What are Microtransactions?

Microtransactions are small, digital transactions that allow users to purchase virtual goods or services within a digital platform or application [3]. In the past decade, online games have increasingly adopted microtransactions as a revenue model [5]. Microtransactions typically involve the exchange of real currency for virtual goods, such as in-game currency, cosmetic items, or additional content. Microtransactions can typically be classified into several types, including direct purchases for specific items, random chance purchases such as loot boxes, and season or battle passes offering rewards for completing certain activities [6]. Microtransaction purchases can result in receiving a range from cosmetic items, enhancing aesthetic appeal without affecting gameplay, to functional items that may offer competitive advantages, significantly impacting the player's experience and game dynamics [8].

An integral part of microtransactions is the F2P business model, which offers games at no upfront cost to players and generates revenue through in-game purchases. The F2P approach lets players download and start playing a game without an initial purchase, distinguishing F2P from traditional P2P models. As elucidated across multiple studies, microtransactions, a cornerstone revenue model within the F2P gaming sector, enable players to purchase virtual items, bridge digital media convergence with gaming, and introduce gambling-like mechanics into digital games [3, 5, 8]. The adoption of microtransactions and by extension, the F2P business model has shifted the economic paradigm of the gaming industry [3]. Microtransactions leverage psychological and behavioral aspects of gaming to drive revenue while raising concerns about ethics and socio-economic impacts [3]. Further research delineates the attributes driving purchase decisions in virtual item sales, underscoring the complexity of player engagement and satisfaction in monetization strategies [8].

2.2 Microtransactions: Player Distrust and Gambling Risks

A prominent negative aspect of microtransactions in digital games is the absence of transparency and confusing pricing structures, which creates distrust for the players towards the game developers [10]. The mentioned issue has thus far been studied from multiple perspectives, and various complications arising from partitioning game pricing models have been pointed out [1, 5]. Such models, where the total cost of engagement is unclear and reveals itself progressively, for example, games labeled as F2P, can lead to player nervousness. Studies have found that when players are presented with segmented prices for different game items instead

of single, all-inclusive prices, the seemingly small, incremental costs can make them wary [1]. This carefulness is further compounded by the difficulty of foreseeing the cumulative expense of their continued exposure to the game [1]. The uncertainty about the total financial commitment undermines the player's ability to make informed decisions and fosters mistrust towards the game's mechanics and, consequently, the developers behind the game [1, 3]. Thus, how microtransactions are structured and presented can significantly impact player perceptions, which, as described in related research, often leads to negative experiences characterized by distrust and financial apprehension [1, 3, 5].

Loot boxes are a type of virtual item that can be purchased through microtransactions in digital games where players can purchase virtual containers [3]. These containers, when opened, reveal a random assortment of virtual items. Loot boxes allow players to acquire various in-game products, from cosmetic enhancements to functional game elements, without knowing what each loot box contains. Still, the rare items are displayed as an advertisement for the specific loot box. It is described that loot boxes are connected with problem gambling in the form of the addictive nature of slot machines by revealing the items won [3]. Upon opening the loot box, it is often visualized as a 'near miss' for the player to win something rare or exclusive to the player (see Figure 1). Gibson et al. [3] describe that these 'near misses' in gambling could increase the players' desire and motivation to continue rolling the dice to the player's perception that they were close to a win. This, depending on the player, could create a positive feedback loop of continued reinforcement, leading to excessive and problematic gambling [3].

Figure removed from digital version due to copyright.

Figure 1: Counter Strike loot box, photo taken by the author of this paper.

2.3 Microtransactions: Insights from Industry Professionals

Alha et al. [4] examined how industry professionals perceive and craft F2P games by examining the inner workings of the game development industry. Alha et al. [4] show that the developers aim to design the game to be sufficient to encourage users to install and spend their time playing the game. However, Lassila [2] argues that there is a close relationship between customer retention and monetization. Retention metrics aim to explain how satisfied players are and how likely they are to keep playing the game for a long time. Lassila [2] shows that the relationship between customer retention and monetization could become problematic if game designers were incentivized to maximize monetary profits over player enjoyment. Research has identified a significant issue in F2P games: the Pay-To-Win (P2W) elements. The P2W elements link to the functional attributes of purchasable items with real money. Such purchases lead to an imbalance,

giving players who spend more a significant and unfair advantage over those who spend less [4, 9, 15].

However, there is a flip side of the coin in this matter. The F2P model with microtransactions in games, according to Alha et al. [4], incentivizes the developers to continue to develop the game and make the whole experience enjoyable to keep the user interacting with the game and paying for it, which makes the game more of a continued developed service instead of a product that does not get any further development. Hamari et al. [13] posit that it is imperative to differentiate elements deemed valuable by players within the game and the factors that may motivate in-game purchases. Alha et al. [4] describe another perspective from industry professionals regarding the development process of F2P games. The professionals highlighted a substantial audience preference for P2P games.

Moreover, they emphasized that critics of F2P games are not exclusive recipients of criticism [4]. Alha et al. [4] argue that the high price of P2P games is sometimes even a bigger target of complaints than F2P monetized games. Alha et al. [4] bring forward that game industry professionals want to fight the reputation connected to F2P games over the years by showing how good these games can be. These research gaps call for further studies to develop the knowledge base of perceived value in F2P games [9].

2.4 Positive Aspects of Microtransactions for Players

One of the notable positive aspects of microtransactions, particularly in F2P games, is their role in lowering players' entry barriers because they require no initial monetary transaction to experience [4]. Alha et al. [4] show that players are more inclined to try F2P games since no initial cost is involved. This feature of F2P games stands in contrast to P2P games, where a financial commitment is required upfront. The significance of this distinction lies in the opportunity it provides players to thoroughly evaluate a game before deciding to invest real money into it. Significantly, the F2P approach democratizes access to gaming experiences, allowing players to base their spending decisions on personal satisfaction and game quality rather than on financial constraints or upfront costs [4]. However, Alha et al.'s [4] perspective of the F2P business model would lower the barrier to entry and can be perceived as fairer from the player's perspective.

2.5 Ethics and Transparency in In-Game Purchases

The negative aspects of microtransactions are highlighted in the ethical concerns they raise [16]. As Xiao and Hendersen [16] discuss, a noteworthy issue arises when players must purchase a premium in-game currency before acquiring the virtual item they aim to purchase. The ethical problem is the complex and obscure exchange rate between real-world and in-game premium currencies [16]. The system can be intentionally designed to make it difficult for players to understand the actual monetary cost of their purchases, leading to accidental overspending [16]. One example found by the author of this paper is the complex and

obscure exchange rate in the mobile phone game *Valor Legends: Nuts & Bolts*, where the player is required first to buy the premium in-game currency to be then able to buy the loot box. One loot box costs 1000 in-game currency, and there is no option to buy that exact amount (see Figure 2); the player must buy either too little or too much. A calculator is most likely needed for the player to comprehend how much one loot box costs in real-life currency. The cost for a loot box using the 1280 option is, for example, 299 SEK / 1.28 \approx 233 SEK. For the player to be able to understand the financial cost of the loot box, in this case, it is not easily accessible without a third-party tool, and there are several steps for the players to be able to grasp the financial cost of the item.

Figure removed from digital version due to copyright.

Figure 2: Valor legends: Nuts & Bolts shop for their premium in-game currency, photo taken by the author of this paper.

Such practices can be seen as deceptive, exploiting players' inability to quickly understand the actual cost of their in-game purchases. The manipulation raises significant ethical questions about the transparency and fairness of such monetization strategies [16].

2.6 The Impact of Ethical Monetization on User Experience and Industry Trends

Freeman et al. [6] explain that perceived fairness in in-game purchases stems from in-game equitable and transparent purchases. It is further elaborated that satisfaction encompasses various facets, including the sense of value for money spent, the absence of exploitative tactics, and the overall perception that the systems within the game respect the player's interests [6]. Flunger et al. [17] add another perspective on the implication that the development of the F2P model in digital games has moved from making games more inclusive by removing the necessity to pay a price to access games to make games more exclusive in terms of accessibility because of paywalls.

Nandita's [18] research adopts a philosophical lens, explicitly using a framework centered around duty and the idea that morality is based on rationality. In Nandita's [18] case, the study aims to assess the morality of various monetization strategies in the video game industry. Nandita's [18] innovative approach broadens the discussion from focusing mainly on the financial aspects to encompass broader ethical issues. The ethical problems notably impact the industry by emphasizing the importance of usability and accessibility in User Experience (UX). Similarly, Petrovskaya and Zendle's [10] study investigates video game monetization

from the player's viewpoint. Their research identifies and sheds light on predatory monetization tactics, thus increasing awareness of such exploitative practices. Petrovskaya and Zendle's [10] results heightened awareness, which is vital for protecting player welfare and trust and promoting a more morally sound gaming environment. The studies by Nandita [18], Petrovskaya, and Zendle [10] stress the significant influence of ethical considerations and the avoidance of predatory practices on UX. Both studies highlight the necessity for introspection within the game industry and the development of ethically designed games to ensure that players have enjoyable and positive gaming experiences.

The literature on ethical monetization in mobile gaming elucidates the substantial influence of microtransactions on UX, highlighting the necessity of ethical considerations in their implementation [6, 8, 10, 17, 18]. The findings from various studies underscore that transparency and fairness in microtransaction practices are critical for maintaining player trust and engagement [6, 8, 10, 17, 18]. Ethically structured microtransactions foster a fair and transparent gaming environment, which is advantageous for players [6, 10, 17, 18]. Players must be adequately informed of the actual costs and implications associated with in-game purchases, advocating for a more player-centric approach within the game development industry. Adherence to these ethical principles is likely to result in higher player retention and increased financial investment, as players are more inclined to remain engaged and support the game financially when they perceive the system as equitable and transparent [6, 8, 10, 17, 18]

2.7 Descriptive Normative Beliefs

Normative beliefs are about how people's actions and decisions are influenced by social norms [20, 21]. These beliefs are based on an ever-changing subjective norm and how an individual, faced with various choices, perceives others' expectations of their actions. A vital aspect is how normative beliefs can change people's behaviors through peer pressure - a social pressure to perform or avoid a specific action. When faced with a decision, people often consider how others might act in the same situation and base their choices on these perceptions to avoid social alienation [20, 21]. McDonald and Crandall [20] state that norms define what the group does and who the group is. Deviating from the social group norms leads to loss of status or exclusion in most cases [20]. According to Cialdini, Reno, and Kallgren [19], normative beliefs include prescriptive norms, which dictate behavior that is considered morally correct; descriptive norms refer to typical patterns of behavior that are generally expected to be followed.

In the context of microtransactions in digital games, descriptive norms play a crucial role. For instance, if the majority of a gaming community purchases microtransactions, this behavior becomes a descriptive norm. New or existing community members observing this trend might feel pressured to purchase microtransactions. The perceived pressure is firm if the in-game purchases are visibly displayed extravagantly by other players, creating, as described by Lehdonvirta [8], a social value of the item rather than an objective state of quality. The social value creates expectations or standards

within the community. Hence, the decision to purchase microtransactions is not merely a matter of personal preference but is significantly influenced by these observed descriptive norms. While the impact of descriptive norms on purchasing microtransactions is significant, it is essential to acknowledge that not all players in every community are equally affected by these norms. Factors such as individual differences in values and level of engagement with the community can lead to varying degrees of susceptibility to peer pressure. Related research also describes that further research on norms and how they influence fundamental behavior is a necessary target of continued research [20].

2.8 Reward Systems and Dopamine

The intersection of reward systems in digital games, mainly through microtransactions and loot boxes, has emerged as a significant study area, shedding light on players' psychological and behavioral effects [2, 23]. Related research has demonstrated that loot boxes can profoundly impact player behavior, invoking psychological responses like those observed in gambling. The neurotransmitter dopamine plays a pivotal role in this matter, being centrally involved in the pleasure and motivation systems of the brain, and its release during activities is associated with addictive behaviors [24].

Loot boxes, in particular, represent a blurring of lines between gaming and gambling. The intersection is noteworthy, not only for the psychological arousal they provoke which is akin to the thrills of gambling but also for their risk of fostering gambling behaviors among gamers, especially younger individuals who are familiar with digital-based transactions [5, 23]. The phenomenon is underpinned by the engagement in gaming activities being positively correlated with a propensity towards gambling. This correlation is particularly pronounced among males [23].

Psychological arousal and dopamine-driven reward systems in gambling and gaming can lead to reinforcement patterns similar to those seen in substance use disorders [2, 23]. More research is needed to understand how digital games, including loot boxes, may contribute to problematic gaming behaviors. This calls for a broader discussion on the implications of gambling-like game mechanics, including regulatory and developmental practices within the industry. We must reevaluate current game design approaches and policies to protect vulnerable populations from potential harm.

3. THEORY

This section examines the Perceived Value (PERVAL) framework, which will guide the study, detailing its four dimensions: Emotional, perceived quality, social, and economic value, within the context of consumer behavior, especially in digital games and freemium services. The chapter merges theory with empirical findings to highlight the complex interplay of these dimensions in shaping consumer perceptions and decisions.

3.1 Perceived Value

The PERVAL framework consists of four dimensions: Emotional value, perceived quality, social value, and economic value, which are used to study and understand the players' underlying perceived

value [25]. Utilizing the PERVAL framework allows for a more in-depth understanding of consumers' value formation and, consequently, of the effects of perceived value on customer behavior. Over the years, numerous research studies using the PERVAL framework have been conducted, focusing on various aspects. These studies have solidified the four dimensions of PERVAL as fundamental measures of perceived value. Currently, these dimensions are widely acknowledged as the primary indicators of the concept [9].

The PERVAL framework includes emotional, quality, social, and economic dimensions, offering a more nuanced and comprehensive perspective than traditional models that primarily focus on economic value [25]. This broader approach challenges the oversimplified economic perspective and provides a deeper insight into the multifaceted nature of value perception. It underlines the framework's significance in advancing our understanding of how consumers assess and derive value from products and services. By doing so, PERVAL contributes significantly to the evolving discourse in consumer behavior research, emphasizing the diversity of value sources that influence customer decisions.

3.1.1 Emotional Value

In the context of the PERVAL model, emotional value refers to the affective states and emotions elicited when using a service or product [25].

Previous research has characterized emotional value as enjoyment, which is explained to be the primary motivator for using hedonically oriented systems [25]. Hedonically oriented systems are based on hedonism, which involves engaging in activities that provide pleasure or sensory satisfaction [25]. Examples of such systems include games, which trigger intrinsic motivations because users interact with them primarily for entertainment and to have fun [26, 27].

However, related research has argued and observed that when a service or product has paid services within it, and the user is already enjoying and using it as free, they are less inclined to pay for the service or product [17]. When users are satisfied with a free service, they may be less likely to pay for it. The observed satisfaction suggests a negative relationship between how much users enjoy a service (and thus use it for free) and their willingness to pay for it [2, 9]. Flunger et al. [17] explore methods to motivate in-game purchases, including implementing intentionally mildly frustrating gameplay mechanics. Nevertheless, it is vital to keep in mind that it is crucial to keep the frustration within specific limits. Otherwise, the user could feel that progress would only advance by paying [17]. Thus, research needs to uncover a balance that creates a sense of frustration without demoralizing the player.

3.1.2 Perceived Quality

Perceived quality is the second dimension of the PERVAL framework [25]. In the context of the PERVAL model, perceived

quality refers to the functional value of the product or service and the utility derived from its expected performance [9].

Related research has explored the relationship between perceived quality and user behavior, particularly regarding premium content's continued use and purchase intentions [9]. In the context of F2P games, the quality of these products is critically discussed, especially since players often perceive F2P games as being of lesser quality than P2P games [9]. The perception of F2P games as lesser quality than P2P games reflects a broader psychological trend where price influences perceived quality. This is similar to a general observation in the second-hand market, not drawn from specific empirical research. In the second-hand market, items listed as free or very cheap often raise suspicion that something is wrong with the product, such as if the product has been stolen. The example highlights F2P game developers' challenge: they must overcome the inherent skepticism of free products. Game designers face the task of delivering a game that meets quality expectations and engages players enough to consider in-app purchases while combating the bias that equates 'free' with 'inferior quality.' However, F2P game developers need help; the service has to be high enough quality to retain players but still have quality gaps that paid premium services can solve within the game [9].

Hamari, Hanner, and Koivisto's [9] results indicate that even products that are not free but have aggressive monetization design incorporated may negatively affect the product's perceived quality. Aggressive monetization can create issues of inequality between users [4]. Previous research proposed that any differential treatment may affect users' perception of fairness in the service, which reduces the perceived quality of the product by the user [9]. Perceived quality can strongly affect users' willingness to continue using the product or service, especially in a situation that perceives the received treatment as inferior to the preferred treatment [9].

Perceived quality, specifically aggressive monetization, will be investigated further and be a dimension of the interview guide, where a theme in the interview guide aims to study the perceived value of microtransactions for the participants.

3.1.3 Social Value

Perceived social value is the third dimension of the PERVAL framework [25]. The concept emphasizes the role of social content and networks in influencing user engagement. This approach notably effectively enhances revenue through premium sales within freemium services [9, 25]. Freemium is a business model combining "free" and "premium." It offers a basic free version with additional or advanced features, often enhanced functionality or benefits. Users can typically upgrade to the premium version to access these extra features.

Perceived social value is an essential determinant for users transferring from freemium to premium services [9]. Hamari, Hanner, and Koivisto [9] provide an example of social networks

where social value is a solid reason to improve perceived value and increase users' intention to purchase virtual items [11].

Perceived social value also correlates positively with active and intense community participation in freemium services. The heightened engagement increases the likelihood of users converting to paying customers [12]. However, in the context of games, the importance of perceived social value has been acknowledged by several related research, and it has been shown that social value can manifest in diverse ways [13, 14].

If one were to focus on the game industry, many games are considered inherently social experiences designed to be played with others. The social value of these games extends beyond mere direct social interactions [27]. The social value of these games is also constructed through other means in the given context. Games allow users to show an extended or even an enhanced self in a digital world [27]. To illustrate the notion, consider how perceived social value influences the value of in-game items. Virtual items carry socially constructed meanings and cultural implications, similar to real-world items [29]. Owning or displaying such items can impact a person's self-image, either positively or negatively [29].

Highlighting status, virtual items in games often act as status symbols. Sometimes, they are sought after to elevate one's social status within the gaming community [7]. Research has indicated that virtual items generating social value are easily integrated into games, making them a favored theme of premium products among publishers [8]. The notion extends to purchasing decisions in virtual worlds, where social values significantly influence user choices [27].

To conclude, perceived social value in digital games is an influential factor. If users perceive the social components of the games they play as valuable, they are more inclined to spend money to enhance those social aspects. This insight could be crucial for game developers, who must understand how to leverage social dynamics to increase user engagement and revenue in digital games.

3.1.4 Economic Value

Perceived economic value, the final component of the PERVAL framework, is crucial in understanding the freemium business model's role in user retention and conversion [9]. This model, offering essential services for free while charging for premium features, raises questions about its ability to deliver sufficient value to justify the purchase of these features [12].

Dynamic pricing is a significant aspect of the freemium strategy, particularly in online games where premium content is frequently divided into multiple purchasable components. Dynamic pricing allows for flexible pricing and targeted marketing based on user spending behavior [9]. However, research often needs to look more into the overall value perception of these services, focusing primarily on the economic factors driving the purchase of premium content [8, 9].

The success of the freemium model hinges on maintaining user engagement, as continuous use is a crucial predecessor to purchasing premium content [9]. It relies on solid user acquisition and retention strategies to convert users into paying customers for its premium offerings. Therefore, understanding the balance between the free and premium aspects of the service is essential for the model's effectiveness.

4. METHODOLOGY

This section covers the methodology for the study, including the use of semi-structured interviews for data collection and thematic analysis for data analysis. It will also provide details on the participants' recruitment process, such as selection criteria and the basis of the data collection through the interview guide.

4.1 Qualitative Research Approach

Qualitative research, with its holistic and in-depth approach, offers a unique lens to explore social phenomena. Qualitative research complements quantitative approaches by delving deeper into individuals' meanings, perspectives, and experiences. In this research project, the researcher has chosen this approach to allow for an off-topic, in-depth exploration [30]. The choice of semi-structured interviews, a qualitative research method, was made because it enables the collection of nuanced information about the participants' experiences and opinions [30]. This depth of understanding is crucial in comprehending the complex intrigues of the participants' perceived value of microtransactions, including positive and negative feelings. The semi-structured interview method and the qualitative research approach offer flexibility, reassuring us that we can adapt our approach to delve deeper into areas that prove to be intriguing during the interview [30].

The flexibility is crucial for uncovering the multifaceted impacts of microtransactions, as it allows for exploring unexpected topics or themes related to the participant's positive and negative experiences [30]. Additionally, semi-structured interviews facilitate a personal connection between the researcher and the participant, promoting a more open and honest dialogue [30]. Personal connection is essential for discussing potentially sensitive topics like spending behavior and the psychological effects of microtransactions. The trust built between the researcher and the participant through the method can lead to more robust, more authentic insights into the participants' subjective experiences [30]. One way to make the participant open up more to the researcher was to include warm-up questions and adapt questions to what the participants had said earlier. For example, if the participants stated that they played a particular game or if something had happened, the researcher kept that in mind and adjusted the questions later.

4.1.1 Interview Guide

The study's research methodology is rooted in a semi-structured interview format designed to explore player perceptions and experiences with microtransactions in digital games. The interview guide was organized into distinct themes, each to uncover various dimensions of player interaction with in-game purchasing systems.

The first theme of warm-up questions to ease participants into the conversation is allowing them to reflect on their broader gaming experiences and cultural engagement [30]. The last question in this theme aimed to confirm if the participants have ever been involved in purchasing microtransactions. The question aimed to filter out further anyone who does not fit within the study. The warm-up questions were essential for the rest of the study because they allowed the researcher to ask about specific events and things relevant to the game the participants had experienced. It was also observed that the participants kept referring to the game they discussed during the warm-up section if they had difficulty answering a question later.

The interview guide is divided into thematic areas, starting with “Player Perceptions of Microtransactions”, where the question design was to elicit subjective reflections on participants' personal experiences with microtransactions, their impact on the gaming experience, and perceptions of cost and value. This theme aimed to probe the emotional and psychological dimensions of in-game purchases, exploring how microtransactions can enhance or detract from the enjoyment of a game. Additionally, the guide includes intentionally repeated but rephrased questions later in the interview that participants might initially offer shallow reactions due to being new to the interview environment or needing more time to consider their answers deeply [31]. As the interview continues and the participants become more comfortable or have had more time to think, asking the same question again can elicit more thoughtful, detailed, or reflective answers [31].

Progressing to the “Psychological Impact of Microtransactions,” the thematic area examines how microtransactions influence gaming behavior and decision-making. The theme seeks to uncover how microtransactions can affect a player's engagement with a game, including the potential for changing how players allocate their gaming budget or time.

The third theme, “Ethical Concerns and Transparency,” consists of showing pictures of an in-game store and prompting the participant to perform tasks. This hands-on approach facilitates a more dynamic exploration of the ethical considerations and transparency issues surrounding microtransactions and in-game premium currency. The themes aim to encourage participants to articulate their thought processes and decision-making in real-time while enabling the researcher to observe any confusion and how the participant perceives that given in-game store.

The subsequent themes, “Influences on User Experience” and “Descriptive Normative Beliefs”, expand the inquiry to consider the broader social and community context within which microtransactions occur. These themes aim to capture the complex interplay between individual preferences, community descriptive norms, and the social dynamics of the gaming communities the participants are within. The themes focus on the influence of peer pressure and social visibility on purchasing decisions.

The last theme that is the most difficult for the participants to answer is the theme of questions directly relating to the

components of the PERVAL framework. Several of the earlier questions are asked again regarding how the participant judges the quality-, social- and economic value of items in in-game stores. The comprehensive approach highlights the multifaceted nature of player engagement with microtransactions. It highlights the importance of considering factors, from personal sentiment to social influence, in understanding the phenomenon.

4.2 Participants

Nine interviews were conducted between the 2nd and 14th of February, 2024 (See Table 1). The interviews were between 62 minutes and 95 minutes. Five interviews were conducted using Discord's digital communication software, and four were conducted face-to-face. During the recruitment process, it was necessary to ensure a comprehensive selection of participants for the semi-structured interview sessions; the researcher established four essential criteria. Participants must be over 18 and engaged in at least part-time employment.

Additionally, it was necessary for individuals to have participated in gaming during their childhood and to engage in the activity at least weekly currently. These criteria aimed to identify participants whose insights aligned with the study's objective. The research aimed to investigate descriptive normative shifts in the perception of microtransactions among individuals with prolonged gaming experiences since childhood. Researching descriptive normative beliefs necessitates an examination of participants' prior gaming experiences juxtaposed with their contemporary perceptions and microtransaction-related behavioral patterns. Moreover, the employment criterion aims to encourage discussions around the ability to compare past and present lifestyles. This aspect was particularly relevant for examining attitudes towards microtransactions and the impact of personal earnings on these views. All participant recruitment was through the chat software *Discord's* various game-related channels. Related research and the Swedish Public Health Authorities' current endeavors were considered to further decide on the homogeneity level of the participants. Related research shows that males have a higher propensity toward problematic gambling and gaming [23]. However, the researcher still aimed to have as many females and males as study subjects to avoid leaving out interesting and nuanced perspectives from both genders.

Participant ID	Age	Gender
P#1	30	Female
P#2	38	Female
P#3	26	Male
P#4	31	Male
P#5	23	Male
P#6	24	Female
P#7	28	Male
P#8	25	Male
P#9	23	Female

Table 1. Interview Participants

4.2.1 Ethical Implications

The ethical components in social science research are mainly related to how the researcher views his role toward the study participants. Pitkänen [32] addresses the need for researchers to strive to defend the participants' rights, dignity, integrity, and well-being. Therefore, the purpose of the study is explained in detail to each participant, including why it was necessary to record the interview session. Before scheduling the interview with each participant, the researcher received consent from the participant. They could ask questions regarding the document and the study before affirming their consent. However, measures were taken to ensure the participants knew what they agreed to, as it was explained several times during the interview, and the researcher asked if the participants understood. There is the possibility that some of the participants may not have fully understood what they agreed to.

At the beginning of each interview session, the researcher reminded participants that they had the right to withdraw from the study at any time or to decline to answer any specific question without needing to justify their decision. After each interview, the researcher reiterated this assurance, affirming the participants' ongoing right to withdraw and committing to deleting all related interview data should this option be exercised.

4.3 Data Analysis Method

This section explains and argues for the data analysis method. Next, the approach of the chosen data analysis method is explained step by step.

4.3.1 Choice of Data Analysis Method

When choosing thematic analysis over other qualitative methods, such as content analysis or discourse analysis, the researcher carefully evaluated the nature of the data and insights aimed to extract. Thematic analysis stands out for its flexibility and nuanced approach to identifying patterns and themes within qualitative data [33]. Content analysis primarily focuses on quantifying the presence of certain words or content [34], and thematic analysis examines deeper into the meanings and implications of the data, which is necessary to investigate the underlying components of the phenomenon.

Similarly, discourse analysis was another option for the data analysis method. It is a method that examines language, tone, syntax, and broader social and cultural contexts [35]. Discourse analysis is advantageous for understanding how language constructs social validities and power dynamics [35]. However, discourse analysis specializes in language and needs to provide the broad thematic insights that thematic analysis offers. It is worth noting that thematic analysis, with its advantages, best aligns with the research objective, enabling a rich, detailed exploration of player perspectives and behaviors and understanding a wide range of experiences and perceptions beyond language use alone. This reaffirms the confidence in thematic analysis as the most suitable method for this research.

Nevertheless, one of the issues with analyzing qualitative data is that it is very costly in terms of time for the researcher, which led

the study, in this case, to utilize a theoretical approach, where the themes created are guided by the researcher's theoretical interest in the topic [33]. Using a theoretical thematic analysis means that data not deemed relevant to the research topic will be filtered out, and the focus will be on the research topic. Also, a semantic approach was chosen for the data analysis method, meaning that the analysis will focus on what the participants say within the explicit meaning and will not look for anything beyond [33]. To summarize, the thematic analysis will have a theoretical semantic approach.

4.3.2 Thematic Analysis

The data for this study was gathered through interviews with participants from various age groups, occupations, and gaming experiences. The analysis employed a structured approach, drawing upon the model proposed by Gioia et al. [36], which combines theoretical insights with semantic analysis. This methodological approach facilitated a thorough and iterative examination of the interview data.

Initially, the researcher distilled the raw data into a preliminary set based on the observed codes gathered from related research. This step was crucial for identifying and summarizing the main themes and concepts embedded within the data. The researcher created an organized framework that captured the essence of the participants' experiences and perspectives [37]. These initial categories were flexible, allowing for further refinement and integration as new themes emerged during the analysis.

The second cycle of the coding process consists of refining and clarifying the initial codes. It also involves recoding data and reorganizing the previously defined categories. This cycle aims to ensure that the codes are reliable and accurately represent themes or concepts in the data [38].

Upon completing the second coding cycle, the researcher moved to the aggregate dimension phase. The final step of the thematic analysis was instrumental in synthesizing the findings into a coherent model. It allowed the researcher to juxtapose the emergent categories with the broader related literature, align them with the theoretical framework, and uncover patterns and trends within the data [38].

5. RESULTS

This chapter outlines the results and analysis derived from the thematic analysis of participants' perceptions of microtransactions in digital games based on interviews conducted for the study.

5.1 Peer Pressure and Descriptive Normative Beliefs: Influence on Microtransactions Engagement

P#8: In League of Legends, buying microtransactions is encouraged and feels normal due to community support. In contrast, World of Warcraft players often judge others for making such purchases, making me hesitant to buy microtransactions. This difference in community

attitudes significantly influences my willingness to buy in-game items.

Six participants expressed that they were influenced by how their playgroup and the general gaming community perceive microtransactions in the game. In games where the participants view it as not the norm, they buy fewer microtransactions to avoid losing social status among their peers.

P#7: When I play a hero using the default skin, I would say that makes me look like a beginner at the game. To not be judged as a newbie, you need to use a paid skin for the hero because it makes you look like you have more experience playing the hero.

P#8: Seeing others buy microtransactions makes me assume they have high incomes, leading me to admire their spending. I value in-game purchases over real-world ones, as real-world extravagance can reveal unaffordability.

Five male participants mentioned that they view microtransaction cosmetic items as associated with how they and others perceive their experience in the game character. Three participants even mentioned that microtransaction cosmetic items make them assume that the players with such items have high income and higher status in the real world because they can afford such things. It is even the case that having these cosmetic items in games makes them not question the player's income or status because they can not see the person. On the contrary, in the real world, they can easily judge if someone wears something they can not afford.

P#2: I do not care what other people in my gaming community buy or do with their money. I do not care what other people do with their money. I compared myself to others and their actions when I was younger, but I no longer care. I have more important things to care about.

Even when they are just a couple of years older than the others, the three oldest participants mentioned that they do not compare themselves with others anymore. Still, they noted an increase in how much they compared themselves to others during their younger years, with speculation suggesting heightened concern due to lesser economic pressure.

5.2 The Barrier To Microtransaction Purchases: Initial Resistance and Subsequent Spending

P#6: I spend more in stores using premium currency than real currency because it feels less tangible, leading to more impulse buys.

When pictures with tasks regarding calculating the real-life cost of items in a game store are shown, none of the participants could calculate how much the item costs in their real-life currency. While investigating their feelings and thoughts about the premium in-game currency, all participants stated that they spend more on

games when the store lists the prices with another currency than real-life currency.

P#1: I feel that it is easy to fight against the strive to purchase things in in-game stores, but when I have broken the barrier and purchased one thing, it is substantially harder not to buy more.

Four participants expressed that there is a perceived barrier to purchasing things in games. Still, when they have made the first purchase, it becomes harder to fight against it, which makes them buy repeatedly after the initial purchase. Participants described that their time investment in the game made them increasingly more motivated to purchase things in games, for example, buying quality-of-life items such as additional inventory spaces or changing the appearance of the character they play most. All but one participant expressed that the store's in-game advertisements substantially reduced their motivation to purchase things in the store. The participants expressed that their agency of when to buy things and not feeling forced to buy things increased their motivation to purchase things in-game.

5.3 Premium In-Game Currencies: Obscured Costs and Ethical Implications

P#2: In-game stores should remove the premium currency and list it, for example, in SEK. At least, the currency within the game should have an easier-to-understand proportion to real-life money.

All participants expressed that they prefer to avoid the idea of games with premium in-game currencies with a hard-to-understand exchange rate compared to real-life currency. Half of the participants mentioned that they are losing their ability to understand the actual cost of the items with the abnormal exchange rate, which makes them buy more in these in-game stores.

P#3: Premium currencies detach purchases from reality, affecting my impulse control, unlike real money, towards which I've developed strong feelings and discipline over time.

The participants mentioned that their impulse control is negatively impacted in the games and that the in-game premium currency has an abnormal exchange rate compared to real-life currency. Also, participants mentioned that their relationship with money has been built up their whole lives, which makes them think more before spending. However, the participants do not have any relationship with these in-game currencies, which makes them spend them more easily. The habit gets exaggerated when the value of the premium in-game currency is not easily converted to real-life currency.

5.4 Perception of Loot Boxes and Gambling: Evaluating Psychological and Behavioral Impacts

P#4: I want to be able to purchase game items directly rather than relying on luck with loot boxes. For example, if this were the case in real life, you

would not choose the clothes or food you bought; you would buy a lottery ticket. I would not like that either.

Participants expressed that they do not want to rely on something other than luck when buying things in games for real-life money. They want to choose what they want. They compared it with their real-life purchases, where this business model would not satisfy them.

P#2: It is not fun; in loot boxes, what you get is random, and in the pool of potential items, there are cases where you only want one of those items, but you get all the items except the one you want. I want to choose what to buy. If I could choose directly, I would feel more trust in the game company, which would not motivate me to buy more. Still, as of right now, I am motivated to buy less when they do not respect me.

Several participants mentioned that loot boxes demotivated them to purchase additional microtransactions in the game. At the same time, if they could choose what to buy, they would not get motivated to buy more but at least not less. The participants indicate that trust is connected to keeping the motivation of additional purchases, and distrust demotivates them to continue spending. Participants did not suggest that trust is associated with building additional trust but with maintaining trust.

P#3: I gambled with CS: GO skins as a minor, leading to real-money gambling issues as an adult. Kid's early exposure to gambling should be addressed with in-game disclaimers, similar to tobacco warnings, to protect them from potential harm.

One participant mentioned that they used to buy loot boxes in a game when participant number one was younger and inserted the items they received from the loot boxes into third-party gambling sites to gamble with the items. There was no background control on the person to check if the participant was above a certain age. The participant continued to explain that gambling addiction occurred because of this when the participant was a minor, and it continued and compounded through adulthood. It was expressed by most of the participants that clear disclaimers should exist when a player is about to buy loot boxes, just like on other dangerous real-life goods, which can cause addiction. Four participants even expressed that there should be tighter regulations and that games with loot boxes should have a higher age requirement.

P#5: Initially, buying a skin for a character feels rewarding, offering a momentary sense of belonging and novelty. However, this satisfaction is fleeting, similar to a brief thrill from gambling. Over time, the excitement fades, and the skin becomes just another part of the game, not enhancing the overall enjoyment of playing. But I buy it repeatedly to experience that same rush.

Participants expressed that buying cosmetic goods in games makes them excited about the game. Still, the excitement gets reduced until it is just a regular part of the game, and their overall

enjoyment still needs to be changed. Participants expressed that they receive a momentary dopamine rush from buying microtransactions, which fades rapidly, but they continue buying and experiencing that rush repeatedly.

5.5 Evaluating Quality: Perceived Value and Functional Attributes of In-Game Items

P#6: The quality of an in-game item increases with the number of visual aspects it alters, such as both animations and voice. Additionally, the uniqueness of a hero's appearance, seen less frequently among players, enhances its perceived quality.

Five participants below the age of 30 described that they derive perceived quality from game items from their appearance. Primarily, these participants also derive quality from the number of cosmetic components altered by the item. This item only alters the character's animation, which was viewed as having lower quality than an item that alters the appearance and animation.

P#1: I derive quality from in-game items based on how much I can progress after buying them or how much time I could save in the long term.

All three participants over 30 derived quality from the functional perspective regarding how much time they could save by having the item. A repeated example from these participants was buying additional inventory space in a game to be able to play for longer before being required to go back to town to sell their goods.

P#4: I believe item scarcity boosts perceived quality in real life and games. Limited edition game items are considered higher quality, regardless of their looks or functionality, with rarity outweighing aesthetic or practical value.

The overarching theme for all participants was how scarcity impacted their perceived quality. Even though the participants differed on how they derived the quality of items, the scarcity of an item made their alignment toward aesthetic or functional functionality less critical. The more scarce the item is, the more important scarcity becomes on how the participant derives quality.

5.6 Evaluating Economic Value: Transparency and Player Investment

Participants discussed their views on the economic values of in-game items, emphasizing the importance of transparency and their personal investment in the game.

P#3: I am more inclined to purchase items with a high percentage value. Still, clarity on what this value entails, like a breakdown of discounted prices per item in a package, would enhance my decision-making. They also prefer transparency about whether the percentage value is based on inflated past prices.

Two participants mentioned that they derive economic value from an item's sale amount. In-game stores usually list sales as a percentage value compared to when the item is unavailable. However, these two participants also mentioned that they only sometimes trust these value texts and control the value themselves. They would like more transparency to be able to control and ensure that it is correct more easily.

P#4: When considering economic value, I am more willing to spend more on skins for characters I frequently play versus those I seldom play.

An overarching theme between all participants derives economic value from their interpretation of how much they have played a particular character and how much they will continue playing that specific character. The participants are willing to spend more on cosmetic and functional items to alternate or enhance characters the more they play it; if they never play a character, they are not willing to spend anything on it.

P#1: I only buy in-game items on sale to minimize spending, viewing them as practical, similar to real-life purchases. Unlike transient real-life buys like food, in-game consumables offer a momentary pleasure.

Economic value was occasionally compared to real-life transient goods consumed similarly to game items. Some participants mentioned that game items are just pixels on a screen that are worth very little to them. However, some participants compared game items to real-life items, expressing no difference in economic value between real-life transient items and game items because they are all consumed.

6. DISCUSSION

In this chapter, the interview results are discussed, and previous studies and research support the arguments and discussion. The researcher investigates whether the research questions are answered. Method criticism is then dealt with: how was the study affected by the limitations of the chosen method, how were the participants affected by the researcher's presence during the interview, and how might the interview questions have affected the study's results?

6.1 Peer Pressure and Descriptive Normative Beliefs: Influence on Microtransactions Engagement

Most participants expressed that their perception of the community's acceptance of microtransactions in each game affects their willingness to purchase them. The results suggest the importance of what the participants perceive the social norm to be and how it impacts the participants. In some cases, the social norm increases their willingness to purchase microtransactions substantially and, in some cases, the other way around. The importance of descriptive normative beliefs for the participants can be correlated to how norms define groups and how deviating from these norms leads to exclusion [20].

Peer pressure to purchase microtransactions was also strongly related to how primarily the male participants judged other players' knowledge in the game. The interview data revealed that younger participants, mainly males, tended to compare themselves with others more regarding their gaming capabilities and in-game aesthetic appearance, increasing their willingness to purchase microtransactions. In contrast, the three oldest participants were shown not to be as influenced by descriptive normative beliefs as they do not compare themselves with others as much as the younger participants. The younger participants amplified Lehdonvirta's [8] results, which indicated that perceived social pressure would increase players' willingness to purchase microtransactions. However, these results also show that it is more nuanced that some people are not as strongly influenced by social pressure as others. The participants who expressed that they were affected by descriptive normative beliefs were the participants who mainly repeatedly buy cosmetic items.

6.2 The Barrier To Microtransaction Purchases: Initial Resistance and Subsequent Spending

The study participants indicated the presence of a perceived obstacle to engaging in microtransactions. Once this obstacle is overcome, they described a significant perceived increase in the difficulty of managing impulse purchases within the game. This study amplifies Lassila's [2] findings correlating customer retention and monetization. The findings indicate that players value a variety of elements within games, including in-game items, gameplay features, and social interaction opportunities. However, the importance of these elements varies significantly across player groups. For instance, some players prioritize acquiring rare in-game items as a critical aspect of their gaming experience. In contrast, others found more value in gameplay features that enhance competitiveness or social interactions that facilitate community building. Given the diversity in player preferences, further quantitative research could broaden the understanding with generalizable findings. Research could quantify the significance of these specific elements to different player segments. This would allow for a more precise understanding of how game designers can effectively cater to the varied interests of their player base, thereby supporting more targeted strategies for customer retention and monetization. But in some cases, as Hamari et al. [9] results also showed, players are vastly different with various priorities and value segmentations. However, the similarity between the participants was the perceived obstacle in microtransactions.

6.3 Premium In-Game Currencies: Obscured Costs and Ethical Implications

As shown in this study, the exploration of premium in-game currencies intersects significantly with the broader discourse on ethical concerns and financial transparency within the realm of in-game purchases. Participants in the study unanimously highlighted discomfort with opaque exchange rates of premium currencies, echoing the ethical dilemma that was accentuated by Xiao and Hendersen [16]. Xiao and Hendersen [16] notably

critiqued the confusion inherent in converting real-world money into premium in-game currencies, a system that can obscure the actual monetary value of player purchases. The findings of this research resonate with these concerns, demonstrating that such practices not only muddy the perception of value but also actively erode the psychological barriers to spending, leading to the risk of overspending.

The participants' discomfort was shown to be amplified by intentionally complex systems, such as premium in-game currencies, which compel players to purchase currency in amounts that do not directly correspond to item costs, necessitating calculations to discern real-world expenditures. The participants' experiences in this study mirror these frustrations, indicating a widespread industry practice of exploiting player engagement through intentionally complex currency systems. The complexity challenges players' ability to make informed purchasing decisions and raises ethical questions regarding the intentionality behind making monetary conversions difficult.

This study found that premium currencies reduce impulse control among gamers, aligning with Freeman et al.'s [6] concerns about the need for fair and transparent in-game purchases. These currencies can make financial decisions feel disconnected from real-world consequences, contradicting players' usual careful spending habits. This issue is further explored in Nandita's [18] article, suggesting that current monetization practices may treat players more as sources of profit than as individuals with rights and dignity. The findings of this study highlight a call for more transparent and straightforward financial transactions in digital games, respecting players as ends in themselves.

This study's findings highlight the need for game developers to adopt ethical and transparent monetization practices in response to growing player demand for fairness and a better UX. It echoes Petrovskaya and Zendle's [10] call against predatory monetization, emphasizing the importance of ethical practices as both a moral duty and a business necessity. Future research could explore the psychological effects of premium currencies to guide ethical monetization. Such efforts could lead to industry standards that favor transparent, player-centric monetization, helping to build a more trustworthy and sustainable relationship between the game industry and its audience.

6.4 Perception of Loot Boxes and Gambling: Evaluating Psychological and Behavioral Impacts

The opinions shared by the participants regarding the use of loot boxes in gaming can be better understood within a larger context of discussion regarding the psychological and behavioral effects of these game mechanics. The dissatisfaction expressed by the players with loot boxes and their preference for direct purchases aligns with scientific findings that describe loot boxes as a mechanism that blurs the lines between gaming and gambling. This blurring effect can lead to psychological responses similar to those observed in gambling addiction. Such an intersection can significantly impact player behavior, utilizing the dopamine-driven reward systems essential to the brain's pleasure

and motivation systems associated with addictive behaviors [2, 23, 24].

The participants' emphasis on trust and their preference for transparency in transactions aligns with the concerns raised by research about psychological arousal and the problematic aspects of gaming and gambling. The literature indicates that such arousal, coupled with dopamine-driven reward systems, can lead to reinforcement patterns similar to those seen in substance use disorders [22]. This scientific backdrop suggests the participants' experiences and concerns, highlighting the need for a gaming environment that prioritizes the players' well-being and minimizes the risks associated with these psychologically manipulative game mechanics.

Moreover, the anecdotal evidence from a participant regarding the transition from in-game loot box purchases to real-money gambling suggests the research findings about the risk of fostering gambling behaviors among gamers, specifically younger individuals who are already familiar with digital transactions. This study's findings imply the positive correlation between gaming activities and a propensity towards gambling, particularly pronounced among males. This personal narrative reinforces the call for more explicit warnings, stricter regulations, and higher age restrictions for games featuring loot boxes, echoing the research's emphasis on the necessity for a comprehensive understanding of digital games' contribution to problematic gaming behaviors and the development of protective policies for vulnerable players.

The momentary satisfaction described by participants when purchasing in-game items, which parallels the brief thrills of gambling, further highlights the role of dopamine-driven reward systems in these experiences. The reflection aligns with the discussion on the significance of psychological arousal in both the engagement with the problematic aspects of gambling and gaming, suggesting a need for game design and microtransaction practices that avoid reinforcing addictive behaviors.

In summary, when examined through the lens of the discussed literature and research, the participant's notions elucidate the necessity for the game industry to balance profitability and ethical responsibility carefully. The research on reward systems and dopamine, along with the highlighted problems associated with loot boxes and microtransactions, calls for a critical reassessment of current practices.

6.5 Perceived Value

Only the PERVAL components of social value, perceived quality, and economic value had enough data to draw qualitative conclusions. Further research is needed to explore the emotional value further. Empirical findings indicate various factors influence players' perceptions of quality and economic value in in-game items. The factors affecting players' perceptions reflect a complex relationship between aesthetics, functionality, scarcity, and personal time investment in the game.

Participants' evaluations of the quality of in-game items revealed a divergence in the criteria used by different age groups to assess

quality. Younger participants (below 30) valued the aesthetic and cosmetic enhancements they bring to their game characters, such as animations and voice alterations. They perceive items that affect multiple visual aspects as higher quality, with the rarity of such appearances adding to their perceived value. In contrast, the older participants over 30 prioritized functional benefits that save time or enhance game progression, such as additional inventory spaces. The findings suggest a shift from aesthetic to practical quality evaluations with age. Investing in the change could be an avenue for future research to explore if this is a generalizable finding and show the underlying factors behind this seeming change of priorities over age. Moreover, all participants, regardless of age, agree on the value of item scarcity, indicating that rarity significantly impacts perceived quality, transcending the aesthetic-functional divide.

The participants evaluated economic value as similarly multifaceted as quality. Some participants value transparency and detailed breakdowns of costs and benefits, indicating a desire for informed decision-making based on the actual monetary value offered by the items. The importance of character personalization emerged, with participants willing to invest more in characters they frequently play, highlighting a direct link between in-game time investment and economic expenditure; this amplifies the results by Lassila [2] that customer retention and monetization have a positive correlation. Furthermore, the comparison of in-game items to real-life purchases reveals an interesting dichotomy: While some view in-game items as trivial (“just pixels on a screen”), others draw parallels between the momentary pleasures provided by both virtual and physical goods, suggesting that the perceived economic value of in-game items could be as nuanced and personal as that of real-world objects.

In summary, the findings relating to the PERVAL framework indicate that players vastly differ in terms of what components influence their valuation of items in games. This complexity suggests that game designers and marketers must consider a broad spectrum of player motivations and preferences when creating and promoting in-game items.

6.6 Limitations

The study examined the motivations driving microtransactions among Swedish gamers, emphasizing the significance of understanding player behavior and monetization strategies in the digital gaming sector. This subsection acknowledges inherent limitations shaping the study's scope and proposes avenues for further investigation. It will address limitations related to psychological and ethical aspects, qualitative research, and challenges related to sample size and selection.

The study explored microtransactions' psychological impacts and raised ethical problems surrounding these practices. However, future research could investigate the psychological aspects more deeply for a more comprehensive psychological analysis of this topic. The proposed future research could employ a robust psychological framework to examine the intricate ways microtransactions can influence player behavior, potentially

leading to problematic gaming. A thorough ethical analysis could also evaluate game developers' responsibilities in designing monetization strategies that respect player well-being.

The qualitative insights derived from this study offer a nuanced understanding of individual player motivations. However, quantitative data is needed to generalize these findings across the broader gamer population. The study incorporated only qualitative methods, which restricts its capacity to quantify the prevalence of specific motivations or identify patterns in microtransaction behavior among different gaming community segments. Future research could focus on quantitative research methods to validate the qualitative findings of this study and provide a more comprehensive overview of player behaviors on a larger scale.

Finally, it is essential to note that this study's sample size and selection criteria were limited to only nine Swedish gamers who had played games since childhood. As a result, the findings may not represent the broader population of gamers. While it was deemed helpful to focus on a smaller group in this study, future qualitative research could benefit from exploring another population group to obtain a more diverse range of perspectives.

7. CONCLUSION

This chapter aims to conclude the research paper and unpack the dynamics of microtransactions within the Swedish gaming community by listing each research question one by one and concretely answering them. Lastly, developers and regulators are called to action.

RQ1: How do descriptive normative beliefs within gaming communities influence players' decisions to purchase microtransactions?

The findings of the first research question indicate that peer pressure and community norms significantly affect the participants' engagement with microtransactions, dictating their willingness to participate in such practices. The findings suggest that community acceptance, peer pressure, and descriptive normative beliefs either encourage or deter participants, especially those below 30, from engaging in microtransactions. The researcher found that descriptive normative beliefs manifested in varying degrees across different gaming communities, with some environments fostering a more accepting attitude towards microtransactions and encouraging spending. In contrast, others maintain a more critical stance, potentially deterring such expenditures. Nevertheless, the participants over 30 were not as affected as those below 30; the older participants did not compare themselves with others as much as the younger participants. How descriptive normative beliefs influenced an individual also determined the type of microtransactions that individual was most likely to purchase. The individuals not influenced by descriptive normative beliefs aligned more towards functional items, while the others had a higher propensity towards aesthetical items. The mentioned interaction is not generalizable. Further quantitative research would be required to determine if there is a statistically significant correlation.

Furthermore, this study's results highlight the psychological barrier gamers encounter before their first microtransaction purchase, a threshold whose crossing often leads to increased spending.

RQ2: How do premium in-game currencies affect players' spending behavior, and how do ethical concerns impact these effects?

This study's findings on the second research question demonstrated how premium in-game currencies obscure the real-world value and cost of purchases, creating confusion for users and leading to more impulsive spending among players. This confusion emerged as ethically crucial, as the findings of this research indicate that it exploits players' cognitive biases, potentially encouraging problematic spending behaviors for vulnerable people such as younger gamers. Participants' discomfort with these practices calls for reevaluating these mechanisms. The empirical findings found loot box mechanisms comparable to gambling and perceived discomfort. This comparison highlights the urgent need for regulatory oversight and ethical guidelines to safeguard player interest and emphasizes the importance of developing fair and transparent monetization models.

This research points out that the gaming industry should prioritize ethical practices and ensure monetization strategies that respect player autonomy and well-being. Future research efforts should quantitatively assess the effects of these practices and explore ethical monetization frameworks to foster a more sustainable and player-friendly gaming environment.

RQ3: How do aspects of PERVAL affect players' perception of value in microtransactions and their willingness to purchase?

This study's findings related to the third research question investigated the intersection between the PERVAL framework's aspects, players' perceptions of value in microtransactions, and their willingness to engage in such purchases. The investigation into the emotional, quality, social, and economic dimensions of perceived value formation unveils that these factors influence gamers' decision-making processes regarding microtransactions. Players' assessments of in-game purchases are not solely based on the functionality or aesthetic appeal of virtual items but are also significantly shaped by their social environment, the rarity of items, and their values towards gaming expenditures. Notably, the social value derived from gaming communities and the perceived quality and economic value of virtual items emerged as potent influences on purchasing behavior, underscoring the complexity of the factors that game developers must navigate to foster positive UX and ethical monetization practices. The insights into the PERVAL framework's role in shaping microtransaction behaviors highlight game developers' need to craft business model strategies that align with diverse player values, ensuring a fair and engaging gaming environment that respects players' perceptions of value. However, additional research is required to focus on the PERVAL component of emotional value.

This study has unveiled the nuanced relationship between microtransactions and player behavior in the Swedish gaming community. It has highlighted the importance of social norms, ethical practices, and perceived value. The findings suggest that the gaming industry should adopt ethical monetization strategies that balance commercial objectives with the well-being and satisfaction of players. The findings emphasize the need for collaboration among developers, regulators, and gamers to ensure that microtransactions enhance the gaming experience without compromising ethical standards. The findings of this research advance the field's understanding of digital game monetization and urge a collective move toward a more moral, player-centric gaming environment and monetization.

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