Developer and Player Views on Sustainable and Ethical Monetization Strategies

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Abstract

The games are forms of entertainment, in which the users spend money for a preferred user experience one way or another. With different monetization models, this can be done for example by buying the product before using it, paying for a subscription, or watching commercials while using the product. These monetization models can also be controversial, or even considered form of gambling, if there is a randomized elements involved. In this study these controversial models are examined with a purpose of how the game monetization could be done in ways that are ethical and sustainable. Our findings indicate that players do recognize exploitative and unethical monetization models, and that while game developers often prioritize player expectations, the monetization models are frequently driven by profitability rather than ethical considerations. The study highlights the importance of balancing revenue generation with fairness and long-term player relationships. Ethical and predictable models are shown to enhance player satisfaction and may support the long-term viability of the video game industry.

Keywords

game industry, monetization, gambling mechanics, loot boxes, consumer protection

1. Introduction

Software and games development share similar features in the technical side of product development and quality assurance. However, if we consider the monetization and business, there is one major difference in the way the product design and monetization works: The video games are a form of entertainment in which the users pay for a user experience, which usually includes forms of competition with the other players, against AI, or general problem solving [1]. In games, there usually is no inherent practical reason or purpose beyond entertainment, and the ways to monetize the games revolve around the concept of user experience.

Video game monetization is a complex topic that includes a variety of strategies and practices. Over time, developers have integrated many features into games to generate revenue streams, some of them more controversial than others. Recent discussions about these monetization methods have focused on issues of transparency, fairness, and potential economic and psychological exploitation of consumers. Stakeholders, including players, developers, industry investors, and regulators, each have their own views on what methods are sustainable both ethically and commercially.

Stakeholders, particularly players and policymakers, have called for greater transparency and regulatory oversight in areas such as the use of virtual currencies, in-game purchases and rewards that resemble gambling. The EU Internal Market and Consumer Protection Committee report suggested that loot boxes should be tackled through existing consumer protection laws that focus on addressing "problematic game designs" [2]. The report stated that loot boxes qualify as gambling and are illegal in some member states, while in others, they have not been classified as gambling, yet. Many member states are now looking to introduce legislation to restrict loot boxes [3]. It is increasingly important to explore alternatives to 'loot box' -mechanics and to examine the factors that influence players' willingness to spend on games.

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Despite growing criticism and the risk of stricter regulation, many companies continue to use loot boxes in ways that appear to target players' psychological triggers, and virtual currencies in a way where the real value is masked. Questions remain about how these approaches affect consumer trust, player satisfaction, and the long-term viability of the industry.

This study explores the rationale behind current monetization models and examines how these models intersect with player consumption behaviour and investor expectations. The goal of this study is to find sustainable monetization models that are long-term profitable, ethically and socially sound, while adapting to consumer needs and potential regulatory developments. In this context, sustainability refers to long-term viability from a business, ethical and regulatory perspective, and ensuring that monetization models foster sustainable player relationships and comply with evolving consumer protection laws and standards. To support this objective, the following three research questions were formulated: 1) What are the current alternatives in video game monetization, and how do they differ from each other?, 2) What are the main methods how players are spending in video games? and 3) What kind of sustainable monetization strategies are game developers and gamers looking for in the video game industry?

2. Background

There are several core monetization models available for digital products such as video games [4]. A product can be sold as a one-time purchase, offered for free, or there can be a subscription where the user pays a recurring fee. It is common for games to have multiple monetization strategies, regardless of whether the core model is Free-to-Play (F2P) or requires an upfront-payment. A common way to generate extra revenue is to implement supplementary monetization models such as expansion packs, in-app purchases, subscriptions, advertisements, or battle passes.

2.1. Core models for monetization

The advance payment, outright purchase, or Pay-to-Play (P2P) -model is comparable to the traditional retail business model. It is the easiest model to implement and support because it does not require continuous updates or services to maintain, but it may limit revenue potential by not offering additional monetization opportunities to existing customers [5, 6]. One-time purchase is also easy and transparent for the players to understand. Outright purchase model has additional monetization models through downloadable content (DLC) or expansion packs, that are offered for players who already own the base game and are interested in extending its lifespan or accessing new features. DLC and expansion packs also have a one-time purchase payment model. Such extra content allows developers to keep monetizing with products that are well liked and have a strong player base.

Subscription-based model provides access to games in exchange for a recurring fee, which is typically charged on a monthly or yearly basis [5, 7]. Subscription model can be combined with one-time purchase. For example, if a game has both offline and online modes, the offline mode could be story-driven single-player experience, and the online mode could be a multiplayer game with recurring subscription. Subscription models are also used for game libraries, especially for game consoles. Services such as Xbox Game Pass and PlayStation Plus offer subscribers' access to hundreds of games for a monthly fee [8].

F2P model is currently the most common monetization model in mobile games. In this model, players can download and play the game without paying money upfront to the developers or to the publishers [4]. The game may include advertisement that players have to watch, which generate revenue for the developers, or there can be option for players to, for example, purchase virtual items, premium features, within the game through in-app purchases (IAPs) [4, 9].

In-app purchases and microtransactions refer to transactions within the digital product, in this case, a video game. In-app purchases can basically be any form of payment to unlock new features, content, or items within the game. Microtransactions typically refer to specific kind, smaller-scale and low-cost purchases. The range of items that can be purchased within the game is wide, for example these may include cosmetic items for a player's character, temporary boost for game, quality-of-life enhancement, virtual currency that have internal value within the game's internal economy. Games with an up-front purchase model can also have IAPs or microtransactions [10, 7, 11].

Ads were the first revenue generating monetization model for F2P model [12, 4]. In this model the player is required to watch ads in-between the gameplay to be able to continue the game. Advertisement service providers deliver the ads for the players by auctioning the impression that the game has. Ads are tracked and analysed for view duration, whether the ad was completed, if the ads were clicked by viewer and if the ad provided a sale for the advertiser. These metrics determine how developers or publishers are compensated [13].

2.2. General monetization methods for any type of core monetization models

Popular way to add value for players and revenue for developers is by offering extra content for the game. This additional content can be basically any kind of in-game item or benefit. Cosmetic items could include skins, avatars, items with only visual benefits, meaning that cosmetics allow players to personalize existing in-game experience without affecting gameplay balance [10, 7, 11]. Other types of content could include items that support progression in the game "boosts, quality-of-life enhancement, or pay-for-progress", or items that provide competitive advantage against other players [6, 11]. These kinds of boosts are called Pay-to-Win (P2W) mechanisms [14, 15]. Games usually have internal virtual currencies that are used to purchase these items. Currencies are divided into two types: Soft currencies which are earned through gameplay, and hard or premium currencies, which are purchased with real money [12, 10, 6, 2]. Games can have multiple currencies that have different purposes in the game and also different values in-game and in real life currency [10, 16]. There is also a play-to-earn (P2E) model, in which the players receive more and better rewards the more they engage with the product [17].

Battle pass, or event pass, is described as an "opt-in paid progression system" for games. Battle passes offer players the opportunity to unlock in-game content by completing challenges in a defined time-line called season, which normally lasts from a month to several months. Battle passes often provide special content for players, or content that they normally would need to purchase separately [18, 19].

2.3. Random reward systems

Some in-game purchase mechanics use randomness, so players do not know exactly what they are buying. The item they receive is determined by chance, much like a slot machine. Random rewards are often called loot boxes. A loot box refers to an in-game transaction system where players can repeatedly pay real money to receive a randomly chosen set of virtual items [10]. Loot boxes can have internal systems that increase the probabilities for players to obtain the rare-item they are looking for from a loot box. This mechanism is called 'pity timer', it is designed to guarantee the reward after a certain number of purchases, at which point the odds reset [20, 21].

2.4. Ethics and possible regulatory development

According to Petrovskaya and Zendle [16], video games employ a variety of problematic monetization strategies, including game dynamics designed to drive spending, monetization of basic quality of life, predatory advertising, in-game currency, pay to win, and general presence of microtransactions. BEUC, the European Consumer Organisation states "harmful commercial practices are bursting into the sector: from loot boxes to deceptive designs, and from aggressive marketing to direct exhortation of children for in-game spending. One type of in-game purchase that is especially problematic to consumers, is the so-called in-game or in-app premium currency". F2P model has created a financial incentive for game developers to encourage players to spend money in games. With the immersive environment and addictive nature of video games, some monetization designs try to maximize the player spending making players, especially children and teenagers, forget that they use real money when they use virtual currencies [16, 2]. There are also concerns about how players who are in a vulnerable position can overspend in the games [10, 16, 2]. Predatory monetization refers to in-game purchase strategy that masks the players actual spending until players are psychologically, emotionally or financially committed or invested in the game. According to Neely [11], “players cannot make informed judgments about whether to play the game, which can easily lead to exploiting players by trading on the sunk cost fallacy”. Predatory techniques can use manipulative ways for drawing in-game rewards and it can even have optimized microtransactions that are based on tailored user behavioral data [10, 11, 16].

BEUC is proposing the European Commission to examine the possibility of banning the use of in-game virtual currencies. They state that virtual currencies are artificially created to mask the use of real money with no real benefit for consumers, and the in-game purchases could very well be made with real money [2]. The digital products should have better consumer protection “by design”, and “game and app developers and platforms should have stricter obligations to protect consumers”. They state that if banning is not possible, stricter transparency and regulatory requirements should be introduced. The EU law states that the real price of virtual items should be presented in a clear and transparent manner. Consumers should have the same rights when purchasing virtual items as they do when purchasing real-life items. BEUC proposes that the equivalence of the real money should be right next to the price that is shown in virtual-currency in the same size and format, and the virtual item prices should be shown similarly when bought with virtual currencies. [2].

3. Research Methods

There were two methods to gather data for this research. First method was one-to-one interviews with professional game developers from different game companies. To support or challenge the interview findings and to slightly broaden the data to identify possible trends and common views, a survey was conducted among game professionals. Additionally, an alternative survey was conducted to gather perspectives from the people who consume the game products, the gamers, to confirm whether the thoughts of game developers are in line with gamers, and whether current monetization models are ethically acceptable in the opinion of players. No specific process or methods were used during the data analysis phase.

The interviews were conducted in English via Microsoft Teams meeting. The meetings were recorded and transcribed to ensure accurate notes from the discussions. All data were anonymised to protect any privileged or confidential information that may have been revealed. The transcripts were then summarized, and irrelevant parts were removed using a ChatGPT 4o –based AI tool, to make the extracted data more manageable and comparable to other data sets.

Surveys were conducted in English online using Webropol Survey & Reporting tool between 28th January and 1st of April 2025. The links for the surveys were shared on LinkedIn, Discord servers, by email directly to personal connections to various gaming companies, and to students of various courses. Both surveys explicitly requested participant consent for the collection and use of data. This consent form clarified that the participants were legal adults, that they understood the purpose of the research, and that they were participating voluntarily. All proceeded respondents confirmed their agreement as there was no option not to. Neither survey gathered any personal data from the respondents.

Both surveys were designed to collect both qualitative and quantitative data on people’s experiences with game monetization models, who are involved with games in a way or another. The survey for gamers focused more about the respondent’s behaviour towards in-game purchases and their ethical views and concerns. The survey for game developers on the other hand focused on game developers’ view on how they feel about current monetization models and if there are any alternatives available. By combining closed-ended questions like multiple choice, select all that apply, and Likert scales, with open-ended free-text responses, the survey provided a picture of participants’ attitudes.

The questions for gamers included gaming frequency, game genres, spending habits, ethical scepticism regarding gambling-like mechanics, and open-ended suggestions, allowing a holistic view of how gamers experience and react to different game monetization models. The questions for game developers covered current monetization practices, challenges, and ethical considerations about monetization models. The survey also sought to understand whether developers believe alternative approaches could align with both player expectations and business viability, especially in the face of increasing regulatory scrutiny.

Table 1
Information of the companies of the game developers that were interviewed.

	Founded	Employees	Ownership	Target market	Platform
Company 1	2007	80-100	Publicly owned, Public Limited Company	U.S. / males	Mobile
Company 2	2024	3	Independent Limited company, venture capital-funded	U.S. / families & friends	Console first
Company 3	2017	11	Independent Limited company, venture capital-funded	U.S. / males	Mobile
Company 4	2014	250	Independent Limited company, venture capital-funded	U.S. / females	Mobile

4. Results

This chapter presents the data captured from the interviews with game developers and the surveys conducted with both industry professionals and gamers. The results aim to provide a comprehensive understanding of how monetization models are perceived, their ethical aspects, and the extent to which they meet gamer expectations and industry goals.

4.1. Interviews

Four one-on-one interviews were conducted with four seasoned game developers from Finland between October 2024 and January 2025. The interviewees were contacted through industrial contacts and the length of each interview was between 45 and 60 minutes.

4.1.1. Background and company profiles

All interviewees have extensive careers in the gaming sector. Person A from Company 1 has six and a half years of experience as a game designer, currently working as a senior game designer. Person B from Company 2 is currently working as a chief technology officer and co-founder. Person C from Company 3 is currently working as a product manager and co-founder with over 10 years of experience working in basically all roles in the gaming sector. Person D from Company 4 is currently working as a producer and has over 10 years of experience working in the game sector as a producer and also as an artist. The companies that the interviewed persons currently work with were all different sizes in matter of employees, ownership, revenue and game genres as seen on the Table 1.

4.1.2. Monetization models

Companies 1, 3 and 4 have a F2P approach with a multi-currency system as the main monetization model. All of these companies also have in-app purchases for example bundles or cosmetics, and the companies that make mobile games also utilize rewarded ads in their products. Company 2 is experimenting with a unique free-to-join concept, where one player, the host, buys a licence and invites friends to play in the same session for free. Their aim is to have a balance between premium, buy once, and F2P. The in-game currencies are seen as a design norm rather than predatory or misleading tactics. Person D would personally prefer direct transparency with the currencies, for example, pay xx euros for item y, where players see exactly what they are buying.

None of these companies use loot boxes, in the way where they think it resembles gambling. But there are mentions of random rewards, pity timers or pity systems that are in use in some of the games made by these companies. All of the companies know about potential regulation in the EU around loot boxes and gambling-like mechanics, but as the main market is in the U.S., that does not really raise any concerns. None of the companies are altering their monetization beforehand or even thinking about what the outcome of the new legislation might be. Company 2 sees an opportunity in the ethical strategies if they operate transparently.

4.1.3. Loot boxes, random rewards and ethical concerns

All of the interviewees want to avoid predatory monetization models and think that the current F2P models are a good compromise of enjoying good quality entertainment for a fair price, even for free for most of the players. The games are free to play and enjoy and the gamers who want to progress faster, get better gear, or look different in the game have a choice to do that with paying for the playing. All interviewees highlighted the importance of providing value for the gamers. Personally, the interviewees A & D thought that the monetization should be fair and transparent. They believed that if game companies provide enough free content, non-paying gamers could still participate meaningfully in the gaming experience, while paying players would gain additional benefits. Person C sees the standard F2P model with in-app purchases as “not inherently unethical” if it respects players’ well-being and leaves them in control. Premium mobile games, buy-once, would be the perfect solution for most of the interviewees but they all acknowledge the market resistance, especially in mobile game category, those games rarely capture large enough market share.

4.1.4. Social and psychological aspects of Free-To-Play model

Person C mentioned that non-paying players are valuable players to gaming companies by attracting friends, sharing gaming experiences in social media and by generating word of mouth. The social value of the game is one way to add value to the game by a sense of belonging. It is okay to spend on the game play to get more value for the experience. Person A mentions that some players have spent hundreds of hours in the game and may have also spent a lot of money on the content like cosmetics or progression because the game holds substantial personal meaning for them. They do not feel regret doing so. Persons A & D believed that F2P model with optional purchases can be sustainable if it was designed responsibly e.g., pity systems where player is guaranteed to be rewarded a high-value reward after number of unsuccessful attempts, clear probabilities or fair progression where player can progress in the game without spending money. Person B & D thought that EU’s concerns about gambling-like mechanics potentially push game companies toward clearer pricing. They also personally supported more transparency in pricing. Person B also sees regulation as an opportunity to stand out and also by proactively avoiding predatory designs they believe to face fewer ethical “challenges”.

4.2. Survey for game developers

The survey targeted game professionals. It aimed to gather insights into current monetization practices, alternative practices or strategies, ethical and regulatory concerns. It was also designed to backup or challenge one-on-one interviews. There were 16 respondents in this survey. All respondents confirmed consent, since there was no option not to, unless they did not want to participate. There were mainly multiple-choice questions with single or multiple selections allowed, and open-text questions to gather personal opinions and explanations.

4.2.1. Demographics and Background

The purpose of this part of the survey was to explore the participants professional background and roles in the game development, size and location of the game companies they work for, what kind of products, games, they are developing and for what platforms, and what is their target market.

Some of the respondents had multiple roles currently, since the question “What is your role in the company?” was open to multiple selections. Ten of the respondents worked as a game developer,seven as a designer, five as an artist, one as a producer, and quality assurance. In the open question “Something else” there were two answers: “indie, hobbyist”, and “project leadership roles”. No investors, C-level, or support personnel were found.

Seven respondents worked in a micro sized company with less than 10 employees,seven respondents worked in a large sized company with more than 100 employees, one respondent worked in a small sized company with between 10-49 employees and one respondent worked in a medium sized company with between 50-99 employees. 87.5% of the respondents were from Europe, one was from North America and one from Australia and Oceania.

All respondents answered the question "How many games have you, or the company you work for... 1) Developed, 2) Published". All respondents had developed at least one game. The maximum games developed was 100. Meaning that all respondents have had experience of game development, some more than others with an average number of six games developed. Minimum number of games published was 0 and maximum 13. Meaning that some respondents had not published any games and some had published several. This data also show that not all games get to be published if the maximum number of developed games were 100, but the maximum number of published games was only 13. Average number of games published was 3.8. On average respondents have developed more games than published. The fact that some developers reported 0 published games could indicate that the companies often provide game development services to other game companies.

The target market got 50 answers, meaning that the games the developers make have similarly important markets across the globe. Europe was the most important market with 93.8%, the second most important market was North America 81.3%. Third most important market was Australia and Oceania with 50%. The fourth most important market was Asia 43.8%, leaving South America 25% and Africa 18.8% the least important market.

4.2.2. Monetization practices

The respondents have used a lot of different monetization models. The question "Which monetization models do you currently use in your games or have used in the past?". The question got 51 selected answers. The most popular model is the F2P (68.8%) followed by Microtransactions (31.3%), In-game purchases (31.3%), Battle pass (31.3%), P2P – One-time purchase (25.0%), Ads (25.0%), Subscription-based (25.0%), Loot boxes (18.8%), Cosmetics and bundles (18.8%), Rewarded Ads (18.8%), Other, please specify: (18.8%), and P2E(6.3%). There was also DLC mentioned in the optional open-text field.

"Do you use in-game currencies in the games you develop?"-question got 28 answers. There were nine answers that stated that they do not use any currency in games they develop. That means that at least some of the other seven developers use multiple currencies in their games. Soft currencies (earned through gameplay and can be purchased; used for basic progression) were used by 31.3%, hard / premium currencies (mainly acquired through real-money purchases; sometimes earned through special events) were used by 37.5%, additional currencies (specific to game mechanics, such as points for upgrades or tickets for event access) were used by 31.3%, and other currencies that can't be bought with real money were used by 18.8%.

Four (25%) of the respondents are not directly involved in monetization strategies. The majority of respondents, 12 (68.7%), have explored alternative monetization strategies at least to some extent, though only a small portion of respondents, two (12.5%) have done so extensively and one (6.3%) respondent said that they have not explored alternative strategies. Five out of 16 (31%) respondents have tested different monetization models with players.

4.2.3. Regulations and possible impact on monetization

Most respondents, 10 out of 16, were not aware of the European Consumer Organizations, BEUC, publication on regulating in-game currencies "Monetising Play: Regulating in-game and in-app premium currencies". Only two respondents stated that they have reviewed it. Most respondents, seven out of 16, were concerned that regulations might affect the income, while an equal number (7), were unsure about the potential impact. Only two respondents were not concerned about regulations affecting income. Three out of 16 respondents think that the studio they work for has the opportunity to influence new EU regulations on monetization. Three out of 14 respondents have contingency plans if the regulations make their monetization strategy redundant. Two respondents did not answer this question.

4.2.4. Measuring monetization and ethical concerns

Nine out of 16 thought that their current monetization strategy is sustainable, seven thought that it is not. Respondents provided optional explanations for "no" answers: "If BEUC proposals pass through in the EU, changes will be required", "Maybe stock marketwise some companies have figured it out but, in my opinion, it is not actually sustainable and definitely not for everyone. The industry needs to constantly adapt". Two respondents gave optional explanations for "yes" answers: "We need to sell more copies though", and "We're now mostly working on traditional monetization, i.e. pay once and play forever.". Most respondents, 62.5%, don't have ethical concerns regarding their monetization strategy, but 37.5% do have. Two of the respondents who have ethical concerns gave optional explanations about their concerns: "Whales are sometimes kids playing with daddy's credit card, but if so, they violate the rules to get to the position to play/spend in our game", and "promoting gambling definitely raises ethical concerns". 14 respondents out of 16 answered the question "Have you had ethical concerns raised by players or the community?". Most of them, 10, have not had ethical concerns raised by players or the community, but four respondents have had from where one respondent gave optional answers "nothing too substantial but mostly just frustrations". Same number of answers was given to questions "Have you measured player satisfaction with your monetization strategy?" from which 10 respondents had selected answers "no" and four "yes". That may indicate the reason for the previous questions answers that there has not been a lot of ethical concerns by players or the community, if the developers are not actively measuring the satisfaction.

The data show that eight of the 13 respondents, have not got feedback from players that their monetization strategy affects game play outcomes e.g., P2W concerns. three have had frequent feedback and two have had rarely feedback.

For the question about regional spending habits, there were 14 answers. Half of the respondents had not seen any noticeable difference between player spending behaviour in different regions, 35.7% had seen significant difference and 14.3% had seen only minor difference. Six of the 13 respondents, have noticed decreased spending in the past few years. Four respondents have not noticed significant change and three have noticed that spending has increased.

4.2.5. Future of game monetization practices

The open-ended question "What would be your ideal 'perfect world' monetization model if constraints like regulations or investor expectations were not a factor? Why?" received nine answers. The "traditional" single purchase or monthly subscription without microtransactions or post-sale monetization, was the preferred method. F2P was also an acceptable monetization method but only if it was done in a non-exploitative or non-predatory way, "Perfect model would be a sustainable F2P model that lets anyone enjoy gaming and monetises through perceived player value in comparison to perceived company value". There were also signs that game developers don't like monetization mechanics that interfere with game mechanics, such as loot boxes or microtransactions, as that could affect the game experiences. One developer criticized all post-sale monetization by stating: "Every post-sale monetization model introduces a perverse incentive on the studio to intentionally make the game worse."

Some developers preferred early funding models like Kickstarter-style financial or early access models to secure the development. One developer stated: "You know before you start developing how many copies you would approximately sell. Then you could scope the game for that...". There was also an idea of dynamic pricing for players based on their spending habits, that would maximise the income without hurting the gameplay of those players who don't spend much or anything "My hunch is it revolves around monetizing users according to their spending behaviours and capabilities dynamically". Some respondents viewed subscriptions as a favourable middle-ground between sustainable revenue and a consumer-friendly model, stating: "Subscription is a lot of times hitting the sweet spot of sustainable revenues... and being easy to understand as consumer." The responses indicate a preference for simpler, more transparent monetization models that prioritize gameplay quality over financial incentives.

For the last open-ended question "Do you have any comments or ideas on how to improve game monetization?", there were seven responses. Two responses preferred fair and minimal monetization, suggesting that the extra content should be offered in tasteful and non-intrusive manner. One respondent said: "No other than above. I think those are the most fair considering the gaming communities and should provide good enough cashflow for publishers/developers.". Another added: "Less money grab stores in games that you've bought for dozens of euros would be nice. I don't want to be spammed with all kind of extra unnecessary stuff when I'm playing a story game. Advertising the developers' other games or DLC in the main menu I think is fine and tasteful.". There was also mentioned the importance of delivering solid and enjoyable products, building trust with players. The idea is that if the product is genuinely fun and well made, people will be naturally interested in buying or subscripting without the need of excessive monetization strategies.

4.3. Developers view compared

Both survey respondents and interviewees mentioned F2P models and the survey data supported the interviewees perspective that F2P models are acceptable if the model is fair, transparent and non-predatory. A single-purchase or subscription model also received strong support in both sets of data, being seen as simpler and more transparent. There were concerns about gambling-like mechanics in both data sets. All four interviewees emphasized a desire to avoid "predatory" practices and about 38% from survey respondents expressed some ethical concerns.

Most survey respondents and interviewees had not reviewed the European Consumer Organization's publication on regulating in-game currencies. None of the four interviewees expressed concerns about possible upcoming regulations in the EU. Their primary focus is on the U.S. market. They all indicated readiness to adapt if regulations come into effect. Among survey respondents, opinions were more mixed: seven had concerns about potential regulations might reduce income, while another seven were unsure the regulations have any impact. Only two were not concerned.

Interviewees typically did not label their random rewards as loot boxes in the gambling sense, and they acknowledge random rewards or pity systems and believe that these features can be fair if they are transparent. Two of the interviewees emphasized transparency that it should be transparent to players to know what they are buying. Although they see no major ethical issues with well-designed F2P, they recognize some players can spend large sums. In the survey, 18.8% reported using loot boxes, while 37.5% expressed having some ethical concerns about monetization. Only four respondents said players had raised ethical concerns about their strategies. None of the interviewees reported direct conflict with players over P2W, though they recognized the potential risk of such monetization strategy in the long term. Survey responses from developers provided insight into actual spending behaviours they've observed. Some developers have witnessed decreasing spending; others saw increases or no major shifts. Half observed no regional differences, while a third believed there were significant differences in how players spend around the world.

Interviewees recognized that while buy-once or subscription models might be more transparent and simpler, the mobile market often resists upfront payments. Survey respondents backed this up, when asked about their ideal "perfect world" model, the answer was often single-purchase or subscription-based model without post-sale monetization. Both groups found F2P models acceptable as long as they are implemented fairly and transparently, without predatory mechanics. When it comes to regulations, interviewees generally expect the industry to adapt to any new regulations, while none would prioritize preventive measures with possible EU rules.

4.4. Survey for gamers

The survey was targeted to all kinds of people who enjoy playing games. There were 73 respondents in this survey. All respondents confirmed consent, since there was no option not to, unless they did not want to participate. There were mainly multiple-choice questions with single or multiple selections allowed, and open-text questions to gather personal opinions and explanations.

4.4.1. Demographics and background of player

The majority of respondents, 58.9%, play video games every day. 30.1% play a few times a week and 9.6% play a few times a month and only one respondent plays video games rarely. PC was the most dominant platform for video games among the respondents. Next most popular choice was Console playing (43.8%), third was Mobile gaming (32.9%). Since there were 124 answers from 73 respondents, that indicates that many gamers engage with multiple platforms and enjoy cross-platform gaming. Almost all respondents were from Europe with the exception of one gamer from North America. The question "What types of games do you play?" got a total of 626 answers from 73 respondents. Most popular genres were action, adventure, FPS, RPG, shooter, survival, strategy, simulation, puzzle and casual. They all got mentions from more than 30% of the respondents.

4.4.2. Spending habits

360 answers from 72 respondents were received for the question "Which of the following monetization models do you encounter most often in the games you play?". The majority of respondents have encountered in-game purchases 76.4%, P2P – one-time purchase 75%, and F2P 68.1%. microtransactions (58.3%), cosmetics and bundles (54.2%), battle passes (54.2%), and loot boxes (44.4%) were also frequently encountered as well as subscription-based monetization models (25.0%) and ads (20.8%). The rarest monetization models were rewarded ads (11.1%) and P2E (9.8%).

There were 225 answers from 71 respondents making each respondent typically make three different style in-game purchases on average. DLC or Expansion packs, 84.5%, were the most popular in-game purchases by respondents. The next popular types were season or battle passes 57.7%, and cosmetic items 54.9%. Coins and currencies had 40.8% responses, and the rest had under 20% on responses.

The respondents do not spend much money for the games. There were two respondents who spend over 50€ per month for games, from which one spends more than 100€ a month. Majority, 76.7%, of the respondents spend less than 10€ per month, from which 19.2% never spend money on games. The middle ground, spending between 10€ to 49€ had 20.5% answers. All the respondents know how much if any they spend on games. This could mean that the high spenders, the whales, are a small segment of players and most of the players are budget-conscious or select carefully what they spend their money on. From the previous questions the most popular in-game purchase type was DLC, which might offer best value for the game, because DLC and season/battle -passes often bring more longevity and new content for the game the player already enjoys.

4.4.3. Opinions on the current monetization models

The most liked monetization model among the respondents was one-time purchase, with an average score of 4.7. P2E had an average score of 2.6. battle pass and one virtual currency had an average score of 2.5. 76.4% of respondents rated one-time purchase to 5.0 "I Love it".

The most hated monetization models were ads during gameplay, multiple currencies, microtransactions, loot boxes, and subscription services. Nearly 80% of respondents gave 1 "I don't like at all" for the ads during gameplay, 64% rated multiple currencies to 1 "I don't like at all", 51.5% gave microtransactions 1 "I don't like at all", and 50% gave Loot boxes 1 "I don't like at all" rating. The data can be seen in Table 2.

Most of the respondents, 63 out of 73, think that loot boxes resemble gambling. A total of 61.6% of the respondents have felt pressured to spend money in games to stay competitive or keep up with others. Of these, 49.3% reported feeling this pressure "sometimes" and 12.3% "often". 38.4% have never felt any pressure to spend money on games.

A total of 71 of 73 respondents answered the question "Do you prefer games with cosmetic-only purchases (no gameplay advantages)?". Most of the respondents, 56.3%, preferred games with cosmetic-only purchases that do not have advantages on the gameplay. These players are maybe seeking fairness and balance in the gameplay. 26.8% thought that it depends on the game and 16.9% answered that they prefer in-game purchases that do have gameplay advantage.

Table 2
How do you feel about the following monetization models? Most liked and disliked values are bolded.

Rate 1–5: 1 = I don't like at all, 5 = I Love it							
	1	**2**	**3**	**4**	**5**	**Average**	**Median**
Microtransactions	51.5%	19.1%	25.0%	2.9%	1.5%	1.8	1.0
Loot boxes	50.0%	19.4%	16.7%	12.5%	1.4%	2.0	1.5
Battle passes	28.2%	23.9%	26.8%	15.5%	5.6%	2.5	2.0
Ads during gameplay	**78.9%**	16.9%	2.8%	1.4%	0.0%	1.3	1.0
P2E models	42.6%	6.6%	18.0%	18.0%	14.8%	2.6	3.0
One-time purchase games	2.8%	0.0%	2.8%	18.0%	**76.4%**	4.7	5.0
Subscription services	31.0%	32.4%	21.1%	14.1%	1.4%	2.2	2.0
One currency (coins, diamonds, stars etc.)	31.9%	20.3%	24.6%	14.5%	8.7%	2.5	2.0
Multiple currencies for different actions (coins, diamonds, stars etc.)	63.6%	24.3%	9.1%	3.0%	0.0%	1.5	1.0

Forty three (58.9%) of the respondents have stopped playing a game because of its monetization practices. The additional question "Why have you stopped playing a game because of its monetization practices?" was asked from respondents who answered "yes" in that question. This question got 138 answers. The biggest reason for stopping to play games was "The game felt P2W", 74.4%, the second highest reason was "I don't support unethical monetization practices", 53.5%, third highest reason was "The game required constant spending to progress" 46.5%. Only three answers were saying that "I don't want to pay for the games", 10 said that "The in-game purchases were too expensive". There are five additional reasons in the open-ended question, like "Time-gated battle pass rewards prey on fear of missing out and creating an artificial compulsion to keep playing" and "I no longer play FPS online games because the gameplay mechanics and loot box type rewards and skins etc ruined the experience.". Some players also mentioned geopolitical reasons for boycotting certain products.

The majority of respondents, 52 (74.3%), said that in-game purchases should impact only purely cosmetic items. Two (2.8%) of the respondents felt that in-game purchases should impact gameplay performance and the rest, 16 (22.9%) thought a mix of both would be the perfect solution.

4.4.4. Ethical considerations

Most, 68.5%, of the respondents think that the monetization strategies in games are transparent, from all respondents 4.1% think that the strategies are very transparent. 31.5% feel like the monetization strategies are not transparent at all. Open-ended answers gave insights that some players have not seen how the odds are calculated: "[I] don't remember seeing percentages for odds for example" and "None of the games clearly and easily give accurate odds for rewards", some players feel that the content value is close to zero "9-10 times out of 10 the content for the money is close to zero.", and some are feeling that game companies try to cheat the money out of players "They all feel like they try nickel and dime, cheat my money away".

A total of 78.1% of respondents have ethical concerns about in-game monetization. Four highest and most ethical issues gamers feel are "loot boxes resemble gambling" 75.4% of answers, "lack of 'spending limits' for young players" 73.7%, "P2W models" 71.9%, and 52.9% of answers concerned the "high costs for premium content".

Thirteen open-ended answers showed that there are a lot of ethical concerns about in-game monetization that go further than just loot-boxes and P2W models. The respondents were concerned that the business models are designed to maximize profit at the expense of the user's well-being by using psychological exploitation (predatory monetization models) and systemic pressure to keep paying.

The majority of respondents, 84.9%, believe that game companies should have more sustainable and ethical monetization strategies. There were additional open-end questions "why" for the respondents who selected "Yes" for the answer in the question "Do you believe game companies should adopt more sustainable and ethical monetization strategies?", which received eight answers. The players felt that the one-time purchase with DLC's would be highly valued and probably also transparent and ethical option: "I prefer one-time purchases, or F2P models with cosmetic microtransactions", "Pay once and play is what I want". There were also ethical concerns: "many in-game monetization mechanics are designed to milk every single last possible penny they can", and frustration "Just sell the fokken games, like it is supposed to work".

Sixty out of seventy three (82.2%) of respondents think that transparent and ethical monetization would affect their decision to play a game. From the open text answers many respondents said that it is essential to know what they are paying for, and it is ok to pay for that kind of product, even at higher prices. One respondent stated, "If I know exactly what I'm paying for and what I get is ok", and another wrote, "I would absolutely pay a higher initial price for a game if it means I have less or no in-game purchases". The players would also want to support developers who have ethical monetization models, which means that ethical decision is not only something that can be tolerated but it is also wanted. One respondent mentioned, "I would be more inclined to try it", while another added, "Definitely would help if devs could show how that monetization would help them". The players are also motivated and sensitive to fair monetization models, as it was commented, "I don't pay in-game anymore, but ethical practices would give a company a better image in general".

4.4.5. Preferences and future monetization models

Most of the respondents, 53 (72.6%), would prefer to pay-once for a complete game that does not have in-game purchases. Fifteen (20.5%) of respondents would prefer smaller upfront payment with optional purchases. Two respondents would prefer a monthly subscription to the game library. Two respondents would prefer F2P games, one with in-game purchases that provide competitive advantage, and one would prefer to see ads. One respondent would prefer "Cheap or free base game with expansions or purchasable content".

The additional open-end question "why they would prefer this model" got 38 answers and comments. There were comments from the players that see the buy-once model honest and non-manipulative: "Classic pay and play.", "It's straightforward and honest, and it does not leave room for exploitation of addictions", "You choose to buy game and then you get it all" or "It's fair. I know how much I pay and what I get". There were also comments on why some features make the model not that good: "In-game purchases make games feel 'cheap' and ruin experience in console or pc gaming.", "I hate it when companies try to create profit from enshittification of everything.".

4.5. Developers view data compared to players view data

The majority of the players spend little, less than 10€, or no money at all on games or in-game purchases. When the players spend, they tend to spend money on "transparent" purchases such as DLC's, season passes and cosmetic items, while randomized rewards were favoured in just over a third of the responses. This players' preference for transparent and non-predatory monetization models aligns with the developers' view that fair and transparent monetization models are more acceptable.

Single-purchase or subscription-based models received strong support from both sides for their transparency and simplicity. Many gamers think that subscription models or a one-time purchase option are fairer because the cost is transparent. Interviewed developers shared this view and saw these approaches are simpler to communicate to players. Both developers and players think that the F2P model is acceptable when it is non-predatory, transparent, and does not push P2W features, or have ads during the gameplay. Ads during the gameplay is a feature which were the least liked of all monetization models.

Interviewed developers do not view their random reward systems to resemble gambling, because they think that transparency and pity systems that they prefer, guarantee certain outcomes over time. They believe that clearly displaying odds and offering pity mechanics addresses core ethical concerns. Surveyed gamers are more critical, viewing loot boxes as gambling-like if players have to pay for a random reward, and if the payment process is not transparent. Players also stated that monetization strategies are rarely transparent, except for one-time purchases or DLC's. Players also worry about the psychological impact of spending money on unpredictable outcomes. Ethical concerns about monetization practices were noted by approximately a third of surveyed developers, including issues with high-spending players, "whales", and concerns about promoting gambling-like mechanics in games.

The players believed in the importance of regulatory oversight to prevent exploitative reading of F2P or random reward mechanics. Some players placed high importance on potential consumer protection rules. Some players have stopped playing games if they feel that the titles have unethical monetization mechanics. None of the interviewed developers expressed urgency about possible EU regulations, mainly because their primary focus was on the U.S. market, but showed readiness to adapt if regulations eventually arrived.

5. Discussion

In the beginning three research questions were set: *What are the current alternatives in video game monetization, and how do they differ from one another?*, *What are the main methods how players are spending in video games?* and *What kind of sustainable monetization strategies are game developers and gamers looking for in the video game industry?* The first question was covered in Section 2 and the second question in Section 4.4. Section 4.3 discussed the third question. Next we round up the ideas that were found from the data.

The comparisons of data from the interviews and surveys reveal how game monetization is perceived from multiple perspectives. This comparison highlights the rationale behind developers' monetization decisions and how these strategies impact players. By comparing the views of gamers and game developers, we have been able to explore the gap between those who create games and those who interact with them as consumers and spend money on them. Understanding the relationship between gaming industry and consumers is essential as discrepancies can impact on the success of the game. If the consumer response is negative, the developing party may not get money for further development and vice versa. Since monetization strategies often vary between platforms, the data gathered in this research gives a good starting point for comparing how developers and players see monetization.

A strong preference for single-purchase or subscription models is clear across both surveys and interviews, with developers acknowledging a difficulty in applying these models to mobile games. Similarly to the findings reported by [10], both sides identify F2P as a viable monetization model, as long as it remains fair, transparent, avoids P2W, and avoids use of psychological vulnerabilities against players. This could be a consensus on the importance of fairness and transparency in F2P experiences. As [10] point out, loot boxes or other random reward systems can remain viable when their odds are clearly disclosed, or a "pity system" guarantees certain valuable rewards after a number of attempts.

Both groups see advantages in the upfront communication of costs, allowing players to understand exactly what they are paying for before committing. These models are also personal favourites of surveyed developers, single-purchase or subscription models emerged as the ideal "perfect world" approach. This is also inline with the previous research speculating P2P might make a comeback [4]. This suggests that the absence of post-sale monetization can build trust with players. Similarly, players like to spend on DLCs, or season passes because of their transparent nature. The results suggest that there is a clear industry-wide need to move from the loot box concept to alternatives that offer greater transparency, fairness, and predictability in the monetization process. Interviewed developers generally aim to maintain a trustworthy reputation by avoiding revenue models that appear deceptive or manipulative. They also think that the models they use, even the loot-boxes, do not resemble gambling, and have fair odds for the players that use money on the gameplay.

Different perspectives can influence the success or failure of any monetization strategy. Developers, including those with external funding, emphasize profitability and revenue growth while trying to stay within their own ethical boundaries, and gamers on the other hand want practices that feel non-manipulative and transparent, and offer good value for the money. The long-term success for any game product is likely to depend on the balance between return expectations and player fairness, transparency, and ethically sound design and good value propositions.

The main limitations of this study relate to the sample size and geographical distribution of participants, and the self-selection inherent in the recruitment method, which affects the generalizability of the results. Most participants were based in Europe, meaning that the findings primarily reflect European perspectives on how the games are monetized and how players feel about the monetization models. Cultural, economic and regulatory differences in other regions may result in differing views, suggesting that these findings may be limited to the European market. Also the modest sample sizes limit the diversity of perspectives and may introduce selection bias, limiting the ability to generalize the findings across the industry or broader player base, while the lack of a formal analysis framework and reliance on researcher interpretation may further affect the reliability of the results. The results present a starting point for a broader discussion and research.

None of the professional participants in the survey or interviews stated that they were stakeholders or the decision makers on monetization practices. The data rely on participants' own accounts of monetization practices and ethical concerns, so the findings may be influenced by social desirability bias or incomplete knowledge.

Because the survey required respondents to be legal adults, over 18 years of age, there are no direct perspectives from minors or 'vulnerable' players regarding how they feel about loot boxes, virtual currencies, or other mechanics that were discussed in this study. Collaboration with youth organizations or educational institutions could provide ethically approved access and age-appropriate surveys to enable research with younger participants in the future.

6. Conclusion and future aims

This study explored alternative monetization strategies, models and trends for video games, focusing on sustainable alternatives to loot boxes. The research findings highlight that transparency and fairness are essential foundations for developing ethical, sustainable, and commercially successful monetization strategies. The findings revealed common goals for transparent, fair and non-exploitative models across game developers and gamers. It became clear that to have ethical and commercially viable products the transparency of payments and fairness are essential.

The continuation to this study would be a bigger sample size with different geographical area and with wider spectrum of gamers and game developers.

Declaration on Generative AI

During the preparation of this work, the authors used ChatGPT in order to: help of analysis of questionnaire and interview results and Grammar and spelling check. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the publication's content.

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