Exploring the Role of Microtransactions in the Video Game Industry

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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Introduction

In 2022, the video game industry was valued at $320 billion (USD), worth over three times as much as the film industry at $90 billion and over ten times more valuable than the music industry at $30 billion (Read, 2022). Video games themselves have undergone a remarkable evolution, transforming from rudimentary pixelated graphics into immersive visual worlds. As video games have evolved, companies have poured tremendous amounts of time and money into researching what makes games better and how to better tailor experiences towards the player. In 2019, Electronic Arts, a major video game company, spent over $1 billion on research and development alone (Team, 2019). Exponential growth in recent years has transformed video games into one of the largest media industries in the world, and it is important to understand how these large corporations work as well as future trends that may be arising.

As video games publishers have sought to generate more income to keep up with rising costs of game development, one business model that has seen immense success recently involves small, in-game purchases called microtransactions. Simply put, a microtransaction is any instance of being able to pay real money for a minor in-game enhancement. This does not include any kind of downloadable content (DLC) that adds to the game by providing new modes, quests, or gameplay. Only 10% of video game players had played games that used microtransactions in 2010, however that number has jumped to over 80% of players in 2019 (Zendle et al., 2020). This recent boom has led to the advent of specific microtransaction techniques that game designers use to generate revenue. This paper will be focusing on the different techniques that video game designers use in the development of microtransactions as well as analyzing the effect that they have had on the game industry and development process.

Background

For game creators and publishers, the primary goal of video games is profitability. This idea has been around since the late 20th century, where the main two methods for playing video games were home game consoles (typically requiring physical cartridges) and arcade games. Consider arcade games, where players pay a small amount of money (typically quarters) for a game and continue adding funds for additional attempts or lives. These games are cheap to play but have no upper bound in terms of a spending limit (Van Roessel & Švelch, 2021, p. 199). This idea is like the microtransaction market in today's games, where users are free to continue buying new items or accessories to enhance their experience. For example, Fortnite, a game that is free to play, reported upwards of $4.4 billion in revenue in 2022, the vast majority coming from microtransactions (Business of Apps, 2024).

Additionally, public policy worldwide is in development to limit the effect that microtransactions can have on consumers. Countries like Belgium and France have begun regulating certain types of microtransactions labeling them as gambling, and thus age restricted under federal law (Zendle & Cairns, 2018). However, other rulings have determined that in-game items are virtual and have no inherent value, and thus incomparable to gambling. The Entertainment Software Ratings Board (ESRB) is responsible for assigning age restrictions and content warnings on video games in the United States. In 2017, the ESRB has stated that they do not consider microtransactions to be a form of gambling because "the player is always guaranteed to receive in-game content" (Schrier, 2017). Similarly, other industry advocates argue that certain microtransactions are akin to baseball cards packs, where the content is hidden, but rare items could be worth more than their common counterparts. (Azin, 2020, p. 1577).

When considering the video game market, it is important to consider the various social groups that are involved in this dynamic relationship. Video games are (typically) created by a team of game designers, who spend months or years on a single game. These games are bought by consumers (gamers), who will play games, recommend them to their friends, review them online, and more. Game designers are typically motivated twofold. Firstly, many game designers are gamers themselves and want to create games to showcase their skills, tell a story, create a platform for expression, the list goes on. Secondly, however, designers are motivated by industry executives, who typically only care about the amount of revenue a game can produce. While the ethics of microtransactions and the effect it is having on game players is debatable, the current video game industry growth is only incentivizing designers to continue down this path. This paper will look at specific techniques and trends used by designers to generate the most possible revenue for their games.

Methods

This research paper will utilize many different sources in this discussion to fully understand the effect to which microtransactions have affected the video game industry, from the perspectives of players, designers, and executives. Primarily, to understand microtransactions holistically and to review scholarly opinions, I researched academic journal articles written specifically about microtransactions and their implementation in video games. To understand the scope to which this business model has affected the industry and personal spending, various economic reports were also analyzed, specifically relating to microtransactions and video games over the last 10 years. This paper will also look at quotes and testimonials, found through online research, from gamers and industry executives to understand possible motivations from both

sides of the situation. It is important to note that these personal stories may not be representative of the general population but serve to better understand a few specific opinions. In my research, I chose sources using articles that were peer reviewed or that actively conducted research into the topic. I also searched for articles relating specifically links between gambling and usage of microtransactions, as well as searching for economic reports regarding industry trends.

Results

A common thread among most forms of microtransactions in video games is the utilization of a virtual currency, including gems, bucks, points, that can be acquired through real-money purchases. The primary goal that this accomplishes is a level of abstraction (King & Delfabbro, 2019). By using a fake currency, the true cost of in-game items is hidden from users. In a study conducted at the BI Norwegian Business School, researchers proved that users 1) spend more money on in-game purchases when using a virtual currency and 2) were three times more likely to make errors when calculating the financial effect of purchases (Zhirkova & Saric, 2020). Researchers noted that users likely "lose focus regarding the relationship and exchange rate between the virtual currency… overestimating the value of the virtual currencies" (59). By creating a layer of abstraction between real currency and in-game items, game designers conceal the true cost of an item or perk from the purchaser.

With more and more video games incorporating microtransactions in their business model, several different specific techniques have seen immense success. These different models can overlap with each other but serve as a good foundation for understanding the majority of microtransactions. The first are "loot crate" style transactions, where the player purchases a pack that contains a randomized object or set or objects. The name stems from the

popularization of this type of transaction involving a mystery box that contains items of differing rarities. As written about before, there are implications specifically linking loot-crate style transactions to gambling, due to the idea of paying for an opportunity to generate a profit. It is estimated that the current revenue solely from loot crates is over $30 billion annually (Zendle & Cairns, 2018). In this same article, a study showed that the severity of someone's gambling tendencies were directly correlated with the amount spent on video game loot crates. Whether there is any causation between these two factors remains unclear, as they could both be stemming from some third variable regarding a person's addictive tendencies or similar. Nevertheless, it is important to recognize the implications that loot-crates can have in a video game, especially when considering the effect on minors who have not had experience with gambling before.

The second type of microtransaction is called "pay-to-win". These types of purchases give the player a noticeable boost when playing the game to help win through various means. Pay-to-win transactions take many forms, including new abilities, weapons, benefits, and more. There is a growing disdain from users towards purchases that give some perceived benefit over other players in an online capacity, as it allows users economic status to determine their online competitiveness (Marder et al., 2019, p. 73). Some academics have provided critiques of pay-to-win transactions, claiming that "it is cheating in an institutionalized form… [and] changes the game from a competition where the best player wins to a question of who wants to and can pay the most" (Heimo et al., 2019, p. 100).

The third type of microtransaction are cosmetic items. Cosmetic microtransactions don't affect any part of the game in terms of advantages or mechanics, but instead give players options to customize how the game or their character looks. It was noted

earlier that Fortnite generated $4.4 billion in revenue in 2022, the vast majority of this simply coming from cosmetic purchases through new skins or accessories that allowed players to use prefabricated player design appearances. For a purchase to be purely cosmetic, all items or appearances have identical functions, and there is no competitive advantage gained by users for buying a particular one. Similarly, games like Minecraft use cosmetic purchases to allow users to change the look of the environment around them, while still having the same game mechanics and physics, allowing for a customization of the game environment to best fit the player.

It is important to note that these three types of transactions serve as just a baseline for understanding the complexity, as many games will incorporate any number of these mechanics into their microtransaction model. For example, Counter-Strike: Global Offensive allows players to purchase keys (layer of abstraction) that can be used to open mystery boxes (loot crates) that contain new apparel or weapon appearances (cosmetic).

Analysis

When considering microtransactions in video games, it is important to understand why players purchase them and what effect this has on the player. People only purchase goods and services if they perceive some value from it (Marder et al., 2019, p. 73). Based on this research, there are two definitive ways of categorizing microtransactions and the subsequent rationale that players use when making purchases. The first reason that users purchase transactions is to gain a competitive advantage over other players. For example, FIFA Ultimate Team (FUT) is a popular online soccer game where users build all-star teams of soccer players to compete with against other players online. In FUT, users can buy points which allow them to purchase new packs containing players of varying rarity and ability. If users are lucky, they can unlock a player who

is better (faster, stronger, more accurate) and play them in their team. FUT has been subject to large amounts of criticism recently; in 2021, Twitter user ScudzTV, calculated that to purchase the best (most competitive) team, users would have to spend a staggering 22,000 hours simply playing the game, or by purchasing enough packs to get lucky eventually (Hughes, 2021). In criticism of the game, ScudzTV addresses the developers on Twitter, writing "You have put the high end content behind an extreme paywall or an unachievable time wall" (2021). Situations like this incentive users to spend money on the game, fearing that they will be taken advantage of. Petrovskaya and Zendle discuss how users who choose not to spend may feel they are at an unfair disadvantage by being matched up against other users who have purchased items, leading them to have an unpleasant experience with the game (2022, p. 1). One article tells the story of Stephen Barnes, a man who spent over $2 million on a video game, claiming that "I started getting my ass kicked. I figured I had to spend money real quick" (Takahasi, 2016).

The other reason that users purchase microtransactions is to express themselves. Most notably seen with cosmetic microtransactions, having different appearances or movements in game can allow users to express themselves more accurately to people around them in the game. In games where cosmetic purchases are prevalent, typically users experience a higher sense of appeal towards the game due to the new items providing some form of hedonic value to the users. By allowing users to customize their appearance, they can connect more with the game as well as other people who are playing the game. Social value emerges from feelings of belonging or a shared identity within a group of users and can create distinctions from other groups through the idea of "visual authority" (Marder et al., 2019, p. 74). For example, Rocket League, a physics-based vehicular soccer video game, allows users to create groups where all players have a similar color scheme on their cars while continuing to use their own preferred car style. This

allows users a sense of self-expression to showcase the items or accessories they have purchased, while also creating a feeling of community with other members of their team. One specific technique that has seen success recently lies in artificial scarcity. Lots of games will implement a rotating item shop where cosmetic items are discontinued, allowing users to visually display their dedication to a game by equipping an item that has not been available to purchase for a long amount of time. Fortnite is an example of a game that has implemented a rotating item shop and has seen immense success with it. A typical video game will cost around $60-70, but the average Fortnite player in 2020 has spent $107 over their lifetime, demonstrating just how popular cosmetic transactions can become (Brown, 2020).

While considering the effect that microtransactions have had on the player experience, it is also important to understand how they have affected the game development process and business model. As the game files have increased in storage size, it is no longer feasible to store and sell games on discs or cartridges, due to hardware restrictions. Instead, many game discs now simply contain a digital code that downloads the game to the user's device (Xbox Support, 2024). As a result, many games are now being licensed and delivered through the "game-as-a-service" model, akin to the "software-as-a-service" model (Vaudour & Heinze, 2019, p. 31). Some common examples include Netflix and Google which both use the internet as their primary method of delivery to consumers for ease of acess. In this model, games are built on a central server that is constantly updating and evolving, instead of a single disk download. While there are many benefits to this model from a development approach, one of the main proponents is this allows games to be continuously modified and updated both easily and frequently. This also allows games to be trialed quickly by users before deciding whether to play the game, often without spending too much (Vaudour & Heinze, 2019, p. 32). This also means that users are free

to leave, and so games need to draw in their users to engage them, to generate any revenue. As such, microtransactions can be a crucial part of game design, with developers needing to find ways to monetize their products. Some larger companies (Electronic Arts, Ubisoft, etc.) hire "monetization experts", who are professionals with dedicated experience of figuring out how to make money from a game (Van Roessel & Švelch, 2021, p. 202).

Given the impact of microtransactions on the gaming industry, it is also important to analyze new trends or models that are emerging. One type of game that has seen massive success in recent history are "freemium" games. Typically found on mobile devices, freemium games are free to download and play, but players can purchase in-game items which typically fast-track their progress by speeding up time-consuming actions or providing additional bonuses or resources that free players don't receive (Neely, 2021, p. 36). While microtransactions are subject to frequent controversy in $60 or $70 games, most users understand that some kind of payment should be necessary to cover labor and production costs of designing a game. However, Hamari and Keronen (2017, p. 66) highlight that a crucial element of freemium game design involves balancing gameplay to keep players engaged, while also making the game frustrating enough that they need to spend real money to progress. For example, in the popular mobile game Clash of Clans, upgrading one's base to the next level could cost over 1.0 billion gold and take over a year, unless players purchase gems that allow them to skip wait times (Clash Ninja, 2021). In this example, the primary objective for designers seems to be simply prolonging engagement so users are forced to pay to enjoy the game, generating revenue.

Conclusion

From the player's perspective, microtransactions offer a way of enhancing their gaming experience, whether through gaining a competitive advantage over other players or allowing for self-expression. However, pay-to-win mechanics and loot crates have raised concerns and ethical considerations regarding online fair play as well as potential harm to vulnerable demographics, such as minors or players with addictive tendencies. However, cosmetic microtransactions allow players the freedom of self-expression and fostering social interaction, without exploiting a player's competitiveness.

On the development side, the shift towards games-as-a-service model has changed the way games are developed and deployed, allowing for continuous updates and community engagement with developers. In this model, microtransactions are a crucial component, allowing developers a way to monetize their products consistently through updates. The emergence of freemium games demonstrates how developers may attempt to manipulate player satisfaction. While small one-time payments (such as removing advertisements) seem to strike a balance between user enjoyment and monetization, it is hard to ethically support developers who put in frustrations only to extract money from its users. While American policy regarding microtransactions is still very much non-existent, it's evident that microtransactions will continue to have a profound impact on the video game industry.

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