Different monetization models in the modern video game industry, their applications, and how they are applied successfully.
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In 2022, the worldwide gaming industry generated more than $300 billion in revenue (Clement). According to J. Clement, a research lead who specializes in tracking internet and gaming statistics, the global video game industry is a business worth hundreds of billions of dollars (Clement).
Among this popular section of digital entertainment, there are many big companies like GameFreak and Activision Blizzard that consistently produce video games that net them millions in profit with the *Pokemon* IP and *Overwatch* IP respectively. However, there are many successful independent, popularly shortened to indie game developers too. A notable instance of this is the recent indie success of *Palworld*, which sold over 8,000,000 units in less than 6 days (Beckwith and Baker). The methods in how video games are monetized can depend on the size of the developer or publisher and what they think is best for their team and their game. It also can depend on what genre the game is. This paper explores the successful methods of good ways to monetize a game.
There are three main platforms video gamers use. The first is a console. It is a hardware system that is specially designed for gaming, like an XBOX or a Nintendo Switch. Consoles mainly use two different ways to monetize their game: pay-to-play and subscriptions. Next is the phone. Users like to play mobile games because of its convenience, variety, and accessibility ("Why Do People Love Mobile Games?"). Because of a generally more casual audience, mobile game developers use free-to-play models. Last is a personal computer (or PC for short). A personal computer is big and expensive, but is by far the best way to play video games that have a variety of high quality graphics, increased frame rates, and many available peripherals (Peru). A balanced mixture of free-to-play, subscription, and pay-to-play models are present in top PC games.
This chart, supported with data from *Statista*, illustrates the breadth of the video game industry, how financially successful each gaming platform is, and what tactics they mainly employ. Consoles have a slight edge over PC gaming, with both not shying away from different popularizing pay-to-play models. Mobile gaming is by far the most valuable, and their intense focus on innovating how to get players to join and pay. Many game companies are standard household names, like Nintendo and their Mario IP and SEGA with their Sonic IP. For those unfamiliar with the gaming industry, some things are cleared up when taking a closer look at the following table:

	Console	Mobile	Computer
Revenue	$105 billion	$200 billion	$80 billion
Main monetization model	Mostly pay-to-play, with paid subscriptions for bonus features like free games	Free-to-play	Abundantly diverse mix of free-to-play, subscription, and pay-to-play

	and online multiplayer support		
Popular companies	Microsoft, SEGA, Nintendo, Sony, GameFreak	Tencent, TiMi, Riot Games, Supercell	Riot Games, Epic Games, Activision Blizzard, EA

(Clement; "Video Gaming & eSports").

1. Free-to-Play / Freemium

The free-to-play model, also known as F2P or FtP, is an extremely multifaceted model. Within the gaming community, discourse surrounds it. There are intense critics of the "predatory" model, staunch apologists who are grateful that a game is free to play, and many in between. It is by far the most controversial of the three models because a game does not instantly make money unlike a pay-to-play game. It resorts to different paid offers and tactics to get acquired consumers to spend. If utilized right, a freemium game has extreme potential.

1a. What do players spend money on?

The first one is the most basic: directly buying currency or characters with the goal of progressing gameplay. Sometimes, characters are objectively competitively more viable in a game, but they may come at a premium price. Also, most games contain some sort of currency in order to manage gameplay. The problem is when a free game bottlenecks the currency they provide to a player; in result, players are encouraged to pay for the currency they need. Predictably, the practice of enticing players to spend money on a "free" game is controversial. When prices seem unfair to a game's players, the community of that game questions the intent of the game developer. Some are here to make a fun game to enjoy with a like minded community. Some are trying to make a digital cash grab with "free-to-play" as a ploy to gain more customers and their trust, then utilizing psychological strategies to gain the most profit.

To make directly buying currency appealing, a game uses many different tricks to make people feel better about their purchase over time. Some have players purchase premium calendars which give currency every day for a certain amount of time, usually a month. The player feels good because their purchase's value lasts for more than just a split second, and the game gets a player who wants to log onto it for more days. Another way to get players to buy currency would be to introduce flash sales/limited time offers that give above-rate value. It accesses a player's FOMO (fear of missing out) and forces them to make a quick decision.

The second way that games can gain money from their players is by monetizing cosmetics. Character skins, player icons, weapon designs, and emoticons all offer a way to make a player feel unique; they can express themselves through different cosmetic options in battle. All they need to do is pay. This method is not nearly as despised as monetizing currency, but there has been discourse around certain cosmetic options being too expensive ("Sacred Alolan Ninetales"). *Fortnite*, a multi-platform shooter game with

400 million players, has been sued for $200 million for employing "deceptive interfaces" and tactics related to cosmetic monetization (Gerken).Typically, the pricing of a cosmetic is dependent on the amount of change from the base model.

One way to sell game cosmetics is by collaborations. Some games have collaborated with real-life musicians, toy companies, other games, movies, anime, and sports companies. The highest profile game is *Fortnite* which frequently utilizes collaborations ("Introducing LEGO® Fortnite").

The third way is a combination of first two. Offers in a game that give currency and cosmetics that are bundled together typically prioritize the cosmetic, and treat the addition of currency as a justification for the offer. Some games give bonus currency if players buy a cosmetic or character with real money. Although the battle pass system, a linear purchasable reward track recently employed by many games, counts as a combination too, its rewards are not wholly accessed from first purchase, and thus will be covered in the next section. Battle passes might include an additional exclusive character. Along with cosmetic and currency bundles, players can purchase a special membership or VIP program that gives some currency and cosmetic options every certain period.

The fourth way to earn money from users in a free-to-play game is by employing gacha mechanics. The word "gacha" comes from Japanese toy capsules called "gachapon." Inserting a coin into a gachapon machine gives the customer a capsule, but the customer does not know what is in the capsule. Video games label their mechanics "gacha" to tie the similarity between a player trying their luck to open an in-game capsule that contains characters, cosmetics, or currency. These games essentially use slot machines to gain money from their customers, except a reward is guaranteed every time, no matter how insignificant to the player. Another term for gacha mechanics is to call the game capsules "loot boxes." Games that primarily operate on gacha mechanics like *Genshin Impact* usually release new and powercrept (i.e. making a newer character objectively better in a competitive gameplay sense to generate interest and desire) characters available so players are inclined to pay money to test their luck every update. Gacha games like *Honkai: Star Rail* usually encourage its players to buy currency to pay for rolls/pulls (i.e. attempts at a character) by sometimes providing a fallback reward like currency to collect to outright buy the character when a player pulls a duplicate character. Also, these pulls usually have a low percentage chance at getting the desired character to tempt people to spend more (developers have players think *I'm so close!*). There is also the concept of "pity" which practically guarantees the most prized character after a certain number of rolls/pulls. Pity is either categorized as "hard pity," where the guarantee for the character is immediate and outright stated (i.e. attempts have to total 90 or more times) or "soft pity," where the percentage chance of pulling (obtaining) a character is greatly increased. The infamous use of certain psychological effects of gacha mechanics related to gambling ultimately distinguish it from a game that thrives on just buying currency directly like *Monopoly Go!*

1b. Ads

Some games make money by advertising other products and services. They make players watch ads, sometimes optional, for different products. Usually, the ads are for other games, and almost all games that earn money from other games' ads are mobile. Advertisement methods is almost always applied to mobile games, as the huge majority of mobile games are free to download, so advertising other games creates a cycle of

downloading a game for free but paying for it through exposure to other games that are downloaded for free.

The video game advertisement sphere sometimes contains a system of many low-quality mobile games that cleverly forces viewers to watch a simple puzzle. There is a paid actor who purposefully fails to solve the simple puzzle and at the end of the ad urges the viewer to download the puzzle game to solve it to prove themselves worthy. The downloaded game will then have two monetization methods: predatory microtransactions and watching ads for other similar games.

1c. Battle Pass

It would be impossible to talk about video game monetization without addressing the trendy battle pass (D'Anastasio). Mainly, multiplayer combat-focused games like *Apex Legends*, *Call of Duty: Black Ops 4*, *Destiny 2*, *Halo Infinite*, and *Rocket League* all have them ("What is a Battle Pass?"). Battle passes are a reward track that has both a paid and a free side. When users pay money for one, they unlock the opportunity to get exclusive cosmetics, currencies, and sometimes new playable characters. The free side offers less, and often excludes certain cosmetics and bonus currency to incentivize purchasing the paid side. Players progress along the battle pass by completing quests and missions given to them every few periods. People who buy the battle pass can gain additional quests and missions as an incentive ("What is a Battle Pass?").

The battle pass goes by many names. *Pokémon Café Mix* calls it the "Premium Pass." *Clash Royale* uses the term "Pass Royale." *Hearthstone* offers its players reward as they progress along the "Rewards Track."

Battle passes are present among many genres. They generate excitement after every major update by including cosmetics like skins and emotes and usually center around a unique theme, basing cosmetics around it.

For example, *Marvel Snap*'s "Season Pass" gives exclusive cosmetics and a card from the season theme. Their June 2023 theme was "Spider-Versus" which offered Ghost-Spider as soon as someone purchased the pass for $10. Other rewards included cosmetic variants (essentially card skins) for Miles Morales, Spider-Man, and Ghost Spider (Marvel Snap Zone). On theme for a season centered around the Spider-Man variants. Along with skins that matched the season theme, it offered above-rate currency that was distributed sporadically throughout the levels of the season pass. Basically, consumers buy *Marvel Snap*'s season pass to gain extra currency and cosmetics as they play and progress throughout the season ("Spider-Versus").

Looking at the benefits, the invention of the battle pass (from *Dota 2*) is simply genius. *Fortnite* popularized the monetization approach. *Marvel Snap*'s season pass is simply a great way to explain how the concept works. The battle pass is seemingly a win-win for players and game developers at first glance.

Players gain satisfaction from both the initial in-app purchase and the predictability of the rewards in the long run, spanning from new characters, special upgrades, or straight-up currency. For a player, getting battle pass rewards feel good because they complete quests to earn these rewards and also it is usually the best in-game value for a player's money because the purchaser still needs to complete quests to progress along the reward track.

Another aspect of the battle pass players often purchase for is (often exclusive) cosmetics. Games induce FOMO (Fear Of Missing Out) onto its players to get them to

spend immediately or before *this one time deal runs out, and you can NEVER get it again*! The benefit for the players is that they can show off their exclusive cosmetics to their friends. Usually, the cosmetics are high quality too.

Developers of free-to-play games also like battle passes. It acts as a steady source of income from players. They can additionally charge extra for different forms of a battle pass, giving the player who paid for a $10 battle pass more than a player who paid for a $7 battle pass. Sometimes, developers specially decorate a battle pass buyer's name tag. By giving players social value from buying a battle pass and providing exclusive cosmetics, other players will feel incentivized to purchase it too.

The quest system of the battle pass is also provides benefits for the developers: they can change the amount of progress completing a quest gives, not need to give out certain things to those who paid for the battle pass but never completed it, and charge additional premium paid currency to those who want to skip the tiers that act as roadblocks for a battle pass reward.

Furthermore, the battle pass is a generally accepted form of monetization in freemium games. According to senior reporter Cecilia D'Anastasio of the gaming website *Kotaku*, "the [battle] pass hasn't sparked lots of controversy" (D'Anastasio). Players know what to predict reward-wise, as they can see the whole battle pass track from day one, leaving room for no complaints about bad luck or misleading advertisements. The amount of transparency it provides is a key reason why players rarely complain about a pass inclusion. Lastly, there is no set standard or expectation to what a certain game's battle pass needs to yield; it is a concept that can be adapted into almost every game genre.

In contrast, those who oppose the battle pass also have substantial arguments. Some customers dislike how periodic payments could start to feel like a subscription. Adding up the price over time, people who purchase every battle pass in a freemium game end up spending more than a pay-to-play game. Once a player is finished with the battle pass reward track, it might make them less interested in playing the game until the next battle pass is released. Characters released in the battle pass might end up being overpowered ability-wise. The gameplay experience caused by new battle pass related characters are worsened even further if the character can only be obtained through paying money to obtain it through the paid track. Last but not least, since the battle pass operates in a seasonal/monthly basis, it can unnecessarily lock rewards by only allowing the track to be progressed for a finite amount of time. Currency and cosmetics not yet unlocked by the end of the battle pass duration (e.g. 2 months) might disappear forever.

Developers might have resource and time problems. Energy spent designing a battle pass every period will not be for any new features, gameplay, or quality of life changes for players. Also, batches of similarly-themed content is a constant demand, as artists need to stick with the battle pass visual theme. Some games even release playable characters every period!

Because of this form of monetization's famed consistency, game developers need to stick to both the pricing/rewards and the perfect, tight-knit schedules of a battle pass. Each is required to release back-to-back and does not really leave room for a break from development.

Last but not least, the battle pass is most prevalent in games focused on player-versus-player gameplay. Some benefits of the battle pass are weakened when not implemented in an online game, such as social status and quicker progression.

1d. Reflection

Overall, free-to-play is the best way to generate profits and engagement in the long run, judging by the mobile gaming platform's dominance in earning revenue globally ("Video Gaming & eSports"). The top earning mobile games are all free-to-play, adding pressure to all mobile gaming developers to offer a free experience for all players to maintain a competitive advantage (Chapple). This is especially true for player-versus-player games with live service features, a term used to describe a game that constantly updates new content with the goal to keep players engaged and purchasing the additions. In games like these, players face off against each other and use different weapons, abilities, and characters. To maintain a competitive advantage, players are either forced to dedicate time or money to unlock new and sometimes objectively better rewards, weapons, abilities, and characters. To contrast, games that are centered around a story usually do not use the free-to-play model, but free-to-play games *can* have a story as an important part of the game like *Genshin Impact*. Developers, usually backed-up by pre-established companies, like leaning towards free-to-play because of the money it makes in the long run. Alternatively, *League of Legends* is a great example of how profitable a free-to-play game mainly played on the computer can be: it made an estimated $1.8 billion just in 2022 (Bevan et al.).

On the other hand, *Gigantic*, a hero shooter that closed in 2017, failed with its initial free-to-play launch. The official team had to announce layoffs because of their "financial situation" ("Gigantic: What Went Wrong"). The game's competitor (*Overwatch*) was also free-to-play, leading to *Gigantic* not being able to afford development costs in the short run. So, some years later, *Gigantic* got re-released as a pay-to-play game (Brown). A quick comparison of the older *Gigantic*'s all-time player peak and the newer one's shows that going pay-to-play was definitely more successful. The free-to-play version had an all-time peak of 8,000 while the pay-to-play version had a peak of 6,000 ("Gigantic: Rampage Edition"; "Gigantic Steam Charts · SteamDB"). The paid version cost $30 each, so the calculated monetization model switch was worth it, even though the game massively dropped in daily players.

Indie game developers who need to get a lot of money from day one might not be able to afford to wait for the game to slowly rake in (paying) customers. Developing a game costs a lot of money in the first place, and those costs are mitigated by the later income from releasing a game. However, indie developers might not be able to afford such a high-risk high-reward strategy. Most settle for the pay-to-play model.

2. Pay-to-Play/One-time Purchase

The pay-to-play monetization model, or P2P, is in many ways the opposite of the F2P (free-to-play) model. F2P games are relatively new, popularized by the invention of smartphones and mobile gaming, whilst P2P has been here since the beginning of video games (see *Pong* and *Street Fighter*).

Funnily enough, the most downvoted comment on Reddit goes to a game company that talked about their microtransactions in *Star Wars: Battlefront II*, which is a P2P game. Looking at a P2P game is different from a F2P game, as the former gets money with every sale and the latter gets money through constant purchases from the acquired playerbase. When the heavy initial cost of the former is combined with the constant microtransactions of the latter, it does not go well.

Early on when gaming was confined to a console like a *GameBoy*, almost every single game was a one-time transaction. Since online communication was at most extremely limited, video game genres in the early-2000's were either story-driven games (*Pokemon*), simulation games (*The Sims*), or competitive arcade games (*Pac Man*). There is most certainly a correlation between genres and monetization models. Modern games like *Red Dead Redemption 2* (a story-based game that has sold 60 million units according to *Statista*), *Minecraft* (a sandbox and simulation game that is considered the best-selling game of all time according to *Forbes*), and *Tetris* (an arcade game that is the best selling game franchise of all time according to *IGN*) still use the P2P model to this day (Clement; Nguyen; Sirani).

Games with the aforementioned genres usually use the P2P model. Although the initial purchase price can be quite high (i.e. *Animal Crossing: New Horizons* is $60), games usually have a higher quality (like increased hours to complete, higher graphic standards, and refined mechanics and systems) and do not ask players to pay further, which is a lesson learned directly because of *Star Wars: Battlefront II* ("Nintendo Switch Online").

Story-driven games have a hefty up-front cost for development because it needs to pay for skilled writers, artists of many different kinds, sound design, etc. Companies need a way to gain those initial costs back, whereas games that center around PvP (player versus player) gameplay do not have to focus on writing or storytelling.

Sandbox games (like *Minecraft*) and simulation games (like *Totally Accurate Battle Simulator*) also prefer the pay-to-play model. In his article about the 15 best sandbox games of all time, Ritwik Mitra of GameRant, a video game writer who has been writing for over six years, every single game runs on a pay-to-play model (Mitra). Similar to story-based games. Sandbox and simulation games offer a whole world at the start. These games might emphasize exploring its world over completing or winning the game.

2a. How do developers make money after the initial purchase?

One-time purchases might not be the best model for long-term growth or sustainability for a gaming company, but there are many ways companies can make money after a customer's purchase. DLCs (downloadable content) or sequels can be an amazing way to capitalize off an established world and its characters, like *Hades II*, a sequel to the roguelike mythology-themed indie game *Hades*, for example. It features new characters but retains the general gameplay. For $30 compared to its predecessor's $25, *Hades II* is undoubtedly tied to the original game's vision, and Supergiant Games, the developer, did not hesitate to leverage *Hades'* popularity. Developers can also progressively build a whole world around the characters featured in one game.

For instance, *Cuphead* has managed to build a recognizable IP around two cartoon people with cups for heads with the iconic art-style of old 1920s cartoons (i.e. hand-drawn rubber-hose animation). Since the release of the original game, Studio MDHR, the development team behind *Cuphead*, has managed to collaborate with *Netflix* on three seasons of a *Cuphead* show and even release a DLC AKA downloadable content (cleverly named The Delicious Last Course, or the "DLC" for short). The team releases merchandise and sells their iconic game soundtracks to the general public as an extra way of making revenue.

Both *Hades* and *Cuphead* are an excellent example on how identifying different possibilities to strengthen a video game brand can lead to extra money made. The two

games similarly stem from an indie background which makes their mainstream success extra noteworthy and inspiring. When a pay-to-play game like *Cuphead* becomes successful, their revenue does not have to stop at the initial player purchase. The developers can branch out further, secure collaborations, create additional content, and reach other mediums to have a successful long-term revenue.

2b. Subscription

Subscription-based monetization models of video games can be summed up to two comparisons. The first is a store that offers multiple games for monthly payments, like Xbox Game Pass. This game library operates like Netflix, except each TV show and movie is a different game. The second is a game that is priced by monthly payments. *World of Warcraft* is the most famous example of this, and these types of games can be called subscription games. It operates like a Costco membership, except the Costco store is a video game.

The former model is much more common than the latter, and when someone mentions video game subscriptions, it is most certainly the one where people pay to access multiple games. Nintendo Switch Online takes the first model and innovates on it, locking many online services for their video games like *Super Smash Bros Ultimate* behind the monthly price tag of $4 ("Memberships | Nintendo Switch Online"). Also, *Statista's* survey results suggest that the Xbox Game Pass and PlayStation Plus are the most well known (Kunst). Video gaming subscription services are most commonly associated with game consoles like the Xbox and PlayStation. Since game consoles are inherently targeted towards those who are ready to commit a few hundred dollars to their hobby, offering subscriptions for more of that hobby can and have been very successful.

Games as a subscription are fairly diverse. The early 2000s introduced the MMOs *RuneScape* and *World of Warcraft*, both games as a needed to be subscribed to. Players had to pay to play their game every period. They were more pay-to-play. Not much later, children's virtual chat rooms like *Animal Jam*, *Club Penguin*, *Poptropica*, and *Webkinz* mainly earned their money from pushy V.I.P. advertisements. Virtual chat room games revolved around the player themselves and their in-game avatar or pet's interaction with others. They are inherently social games. Essentially, these games made their money through constant and pushy advertisements of their membership. Membership also gave tremendous social value, often including a noticeable change in cosmetics from a player's game nameplate to their avatar. Contrasting with *RuneScape* and *World of Warcraft*, they all were free-to-start. Applications of subscription games are not as far-reaching as most other tactics, but their dominance over the MMO and virtual chat room genre are considerable, especially for those looking to develop an MMO or virtual chat room.

Subscriptions in the gaming industry have many different applications. Millions of people are willing to subscribe to a game library because it lets them play multiple games. A few others are willing to buy into subscriptions because they are usually cheaper than full pay-to-play games but require less constant purchasing of microtransactions like free-to-play games do.

2c. Crowdfunding

Game developers who have a true vision but inadequate funds can use crowdfunding. *Hollow Knight*, an incredibly successful indie Metroidvania with more than 2.8 million units sold, started on *Kickstarter* (Walker). Crowdfunding, or the use of small amounts of money from many to fund a new business venture, is a viable way to raise

money for video games (Smith and Li). The main reason why all games crowdfund is to raise various amounts of money for the production of a video game. Often, the game shows a polished concept with art meant to convey the game's visual appeal. Posting that on a crowdfunding website can help with free marketing. Additionally, the act of posting a game can be seen as a quality assurance move, conveying a sense of confidence in the product. Those who participate in the crowdfunding may get to access the game early or receive rewards related to the game (i.e. merchandise, exclusive Discord communities, special and/or exclusive in-game rewards, or a mention in the game credits). There are usually several tiers within a crowdfunding campaign. Each tier costs money; the higher the cost and tier, the higher the value provided to the crowdfunding donator. Most crowdfunding campaigns provide the option to buy the game early.

There are many things that can go wrong with a crowdfunding project too. Every project has to have a clear and appealing vision and concept. A video game might not get engagement if they do not plan properly. Their fundraising goal has to be calculated: the amount of money should fund most of development and has to be realistic. Updating backers is also important too. If an audience is left in the dark, interest and trust would wane (Garcia).

Every game, from a cute mobile game to a horror board game or a pirate-themed card game, can become successful via crowdfunding sites like *Kickstarter*. Crowdfunding is not as popular as standard methods, but its ability to simultaneously raise funds and awareness is identified by gaming industries everywhere. Although it is a comparatively obscure way to fund and can only earn money once, crowdfunding is a reasonable option to help fund a game in development. Games still reach their goal and raise thousands of dollars daily ("Tako no Himitsu").

Conclusion

Video game monetization is crucial to a game's success, as game developers and their team need to make enough to be financially profitable, lest they risk not being able to survive and continue making such important forms of entertainment. Free-to-play games have proven to be the most successful, yet they have to be careful about how to make money and how those opportunities fare with players and their experience. Battle passes are a great free-to-play tool that seems to be growing in popularity (Kiiski). Pay-to-play games can range from different types of subscription services to games with DLCs for short. Depending on the game genre, pay-to-play is the way to go if development costs are very high upfront. Crowdfunding is another way to initially fund a game too.

By looking at what worked for previous games and why, monetizing a game is less intimidating. Pitfalls are very easy to fall into, and games like *Star Wars: Battlefront II* are cautionary tales on how to handle monetization in a way that does not make players upset. Even though most games are substantially different from each other, many of them have traits in common when it comes to making money to justify development costs and becoming profitable.

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