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Analysing the changes in monetization of games in the 21st century

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<p>Back in the day, buying a game was simple – buy a machine (PC, PlayStation etc.), buy a physical copy of a game, and you are set. This was the method of monetization for the most selling and the most played titles. During that time and age there was very little alternative ways of monetization available. Whereas many games still have a “price tag” price to pay, the most popular and most revenue generating games are using different kind of methods of monetization than just pay-to-play and the ratio from which games generate revenue is switching from initial purchase price, towards other means of monetization.</p> <p>This thesis aims to give the reader an understanding of the industry, and the concepts of different methods of monetization. The various monetization methods shall be explained and analysed, with examples. The thesis and its findings shall be presented in a way, that anyone even without prior knowledge of the industry will be able to understand the content.</p> <p>The research suggests that some of the most popular and revenue generating games utilize a mixture of different types of microtransactions instead of just one This has drastically changed from the past where the only method of monetization was the upfront payment. This development is a result of multiple things. Things like improvements in infrastructure have allowed better network connections and better bandwidth, which has led to services like Twitch.tv to rise in popularity. This rise of popularity has further accelerated the growth for the most popular titles – most of which use a variety of monetization methods.</p>	
Keywords	Video games, microtransactions, free-to-play

Contents

1	Research objective and methods	1
	1.1.1 Objective	1
	1.1.2 Method	1
2	Introduction	2
	2.1 Essential concepts & terms	2
	2.1.1 Game	2
	2.1.2 Platforms	3
	2.1.3 The gaming industry	3
	2.1.4 Microtransaction	4
3	Relevant literature	5
	3.1 Professional point of view	5
	3.1.1 “Free-to-Play Games: Professionals’ perspectives”	5
	3.2 Earlier point of view	6
	3.2.1 “Entertainment Software: suddenly huge, little understood”	6
	3.3 Legal point of view	6
	3.3.1 “Belgian gaming commission”	6
	3.3.2 “Activision publishing patent nr. 9,789,406.”	7
4	Discussion & Analysis	8
	4.1 PESTLE Analysis of the industry	8
	4.2 Different game monetization methods	14
	4.2.1 Subscription	14
	4.2.2 In-game currencies	15
	4.2.3 Loot box	15
	4.2.4 Direct purchases	17
	4.2.5 Analysis	17
	4.3 Pay-to-play	20
	4.3.1 Discussion	20
	4.3.2 Examples	20
	4.3.3 Analysis	22
	4.4 Free-to-play	22
	4.4.1 Discussion	22

4.4.2	Examples	24
4.4.3	Analysis	25
4.5	Both types of monetization	25
5	Conclusion	26
6	Recommendations for future research	27
	References	28
	Figures	33
	Tables	33

Research Proposal

Research Topic: Changes in monetization of games in the 21st century

Area of research: The thesis will analyse the change of the monetization of the industry has gone through after the year 2000 as well as the reasons behind the change.

Research question: What kind of monetization methods are used in games and how they differ from the methods used in the past?

Purpose: Identify and analyse what has changed, how and why? What has driven the industry to the place where it stands today?

Research methods: Research relies on secondary data. There is a lot of academic literature about the subject available. Many of the gaming companies are publicly traded, therefore they offer a good selection of data about their business providing a good picture of the situation.

Limitations: The emphasis of the research is on the development that has taken place in the 21st century, in the platforms: Consoles and PC. A big part of the gaming market is in mobile gaming, which has not been addressed in depth in this thesis. Most of the literature and data is from the western countries, even though the biggest market for games lies in China. The data produced in the west is still very much valid as the games developed in the western countries are very popular in China as well. The aspect of cloud computing is only mentioned briefly because of its depth as an area of research is rather large.

Preliminary conclusion: As suggested by previous literature and the selection of games available, the Free-to-play and freemium business models are growing in popularity for both the developers and the players. A player, a potential customer is not required to pay for the service, only voluntarily for certain extra features. Game developers and publishers on the other hand provide a very low threshold of entry to their products for new potential customers.

With the various freemium business models available, they seem to offer a good compromise for the players and developers. Part of the players choose to play the game without paying, with less features, and part of the players look to improve their experience with in-game purchases – the business model suits a larger demographic.

The increasing amount of microtransaction usage by the game developers may start to change the mentality of the games and how they are played as there has been very little governing/legislation to oppose this development. This development in the mentality of games is expected to change due to 3rd party resistance (e.g. legislation).

1 Research objective and methods

1.1.1 Objective

The objective of this thesis is to identify, analyze and explain the change the industry and the monetization methods have experienced during the years – what kind of monetization methods are used and what has acted in support and in opposition to the change that has taken place.

The industry and the methods of monetization have drastically changed during the last 20 years. The emphasis of the study is limited to the 21st century.

The thesis and its findings shall be presented in a way, that anyone even without prior knowledge of the industry will be able to understand the content.

1.1.2 Method

The research is based on secondary data. There is a lot of data available online which is easily accessible for anyone. Most of the research will be based on data and sources found online.

Since the industry is growing with such a rapid pace, the legislation and perception of the industry has started to adapt, resulting in various reports and research. Some of the reports have led to action against the companies creating the games.

2 Introduction

Back in the day, buying a game was simple – buy a machine (PC, PlayStation etc.), buy a physical copy of a game, and you are set. This was the method of monetization for the most selling and the most played titles. During that time and age there was very little alternative ways of monetization available. Whereas many games still have a “price tag” price to pay, the most popular and most revenue generating games are using different kind of methods of monetization than just pay-to-play and the ratio from which games generate revenue is switching from initial purchase price, towards other means of monetization. (Statista 2017)

Especially for PC, now some of the most played games (the most revenue generating one included) require no payment for players to start playing the game.

Consoles have many titles that have been throughout the years very popular, games which even to this day have an initial purchase price. Such games franchises have a long history of regular releases, which has helped the franchises to remain popular. Such franchises include for example Call of Duty, FIFA, Grand Theft Auto etc.

2.1 Essential concepts & terms

This chapter attempts to give the reader an understanding of the essential concepts and terms that will be discussed and analyzed in this thesis.

2.1.1 Game

Cambridge dictionary defines video games as follows: “a game in which the player controls moving pictures on a screen by pressing buttons”. (Cambridge dictionary 2021) A simple, yet well descriptive definition of the concept. In the context of this thesis, the definition of Cambridge dictionary is applicable.

The word “game” can refer to many things, depending on the context. As the industry and status of gaming has grown in significance, the word “game” has begun to mean different things than in the past. A representation of this shift in the meaning of the word

in spoken language can be seen in e.g., in web stores (physical stores likewise). Big stores such as “Verkkokauppa.com” have in their web page navigation under “Games and entertainment” solely video game related sections. Other, more traditional games such as chess are not found under the same section. (Verkkokauppa 2021) The word itself has had its meaning change during the years.

2.1.2 Platforms

In the context of this thesis, a platform is the medium on which the game is ran and played, such as Steam, Battle.net, Origin, Epic games launcher (for Windows and Mac operating systems, operated on a computer), PSN – PlayStation Network (operated on Sony PlayStations) and Xbox Live (operated on Xbox’s and in some cases also on PC). (Microsoft 2021)

Consoles are often bundled together since the availability and selection of games for the consoles is similar between each other.

Most of the games that are played with consoles, are however available for PC as well (Valve 2021b), excluding those titles that are exclusive for a certain platform e.g “Gran Turismo” racing simulator series, that are available for PlayStations exclusively. (Polyphony 2021) Consoles also share the means of controls - a specified controller whereas mostly PC games are played with a mouse and a keyboard.

Most of the popular online multiplayer games utilize “Cross-platform-play”. Cross-play enables the cross platform multiplayer play. Effectively it means that a player playing on a Sony PlayStation can be matched up against a player playing the same game on PC. (Kodera 2018)

2.1.3 The gaming industry

During its life span the gaming industry has grown from a niche to a multi-billion-dollar mainstream business. (Alpert 2007, pg. 87) The overall revenue from games in 2016 exceeded the \$100 billion landmark for the first time. From this figure, mobile games accounted for 37%. During its growth, the industry has seen various changes in its

dynamics with the growth of popularity across the board, especially in recent years the mobile gaming genre has seen a big surge in popularity. (Lanxton 2017)

One of the biggest differences compared to the past is that some of the most popular and most revenue generating titles are completely free to play. The price of the most played games used to be pretty much default as almost none of the games used be “free to play” (excluding “demos” which however only offered a fraction of a game, as a trial).

Currently the most played and highest grossing games are using free-to-play business model. The games offer other ways for the players to spend real money in the game, in terms of microtransactions. (Philips 2020)

One of the biggest markets for video games, the United States, the Entertainment Software Association (ESA) is a good source of data and information. The U.S. market is a good reference point, however there is some variance in comparison to other countries.

ESA reports the following figures - for U.S. market only:

- 65% of American adults play video games and the average age of a gamer is 33 years old.
- The gamer base consists of 54% male and 46% of female players.
- It is also reported that 59% of gamers will vote in the next presidential election, which draws attention to the political impact game developers are in hold of (ESA, 2019).

2.1.4 Microtransaction

A small transaction that many free-to-play games utilize for monetization. Designed to be purchased online, multiple times/often as opposed to a one-time payment for a game (price tag price).

3 Relevant literature

Most of the sources are from the early 2000's to the present. As the industry has substantially grown in the last decades, the core principles and trends have remained the similar regardless of the time. The modernization and rapid development of the industry has also taken place in this same time span.

Finland has a history of video game development and the culture has been perceived more in favor of the industry compared to some countries – hence the amount of available Finnish sources. Most of the sources are from the western countries - big part of the industry is in these countries after all.

3.1 Professional point of view

3.1.1 “Free-to-Play Games: Professionals’ perspectives”

This study on Free-To-Play (F2P) business model, conducted to the University of Tampere by **Kati Alha** (Researcher for the University of Tampere), **Elina Koskinen** (Thesis researcher, Communication), **Janne Paavilainen** (games researcher, University of Tampere), **Juho Hamari** (Dr. Hamari is a Professor of Gamification, University of Tampere and University of Turku) and **Jani Kinnunen** (Researcher for University of Tampere). Like the title suggests, the authors are indeed professionals of the industry and therefore provide valuable points of view as well as information. The paper gives great insight to the details of the gaming industry as well as the views of the end consumer. Emphasis of the study being on the F2P business models. The paper was published in 2014 which on the other hand means it might be slightly outdated regarding the last 5 years since the industry is growing on such a big scale but still provides valid and usable information about the time when it was released as well as a speculation and projection on how the F2P business model will be implemented in the future. Regardless of the release date, this paper gives great insight to 4 different main points which are: Game industry professionals’ attitudes towards F2P, Presumed players’ attitudes towards F2P, Ethics of F2P games and Future of F2P games.

3.2 Earlier point of view

3.2.1 “Entertainment Software: suddenly huge, little understood”

A paper by Frank Alpert of The University of Queensland provides great findings of the stages of the industry in earlier 2000's. The paper was published in 2007 which makes it relatively old in comparison, considering the latest changes that have occurred. The information provided is still very much valid as the core principles have not changed. It provides a good outlook on the industry from a very different place and time than where we are today. A good indication of change the industry has gone through can be seen when reading through, the paper.

“However, there does not seem to be a single term that everyone uses to collectively describe all types. Terms sometimes used are “video games”, “electronic games”, “digital games”, or “interactive software”.” (Alpert 2007, pg. 89)

Another good indicator of the difference between today and 2007 is the difference in the usage of the different business models. The study suggests that in 2007 pay-to-play was more used compared to free-to-play than it is today.

“Entertainment software is more expensive than most other entertainment products. Compared to movies, music and TV, the new entertainment software generally has a recommended retail price of around \$50, which is more than five times the cost of a movie ticket and more than three times the RRP of a music album or movie DVD”. (Alpert 2007, pg. 92)

3.3 Legal point of view

3.3.1 “Belgian gaming commission”

“FPS Justice, Gaming commission”, the Belgian gaming commission, which reports to the Ministry of justice of Belgium (FPS = Federal Public Service), has conducted research report about the various freemium business models used in games. The report assesses the legality of the said business models (with an emphasis on the microtransactions). The report suggests that the way the microtransactions are

implemented, they act as indirect way of gambling. This is a problem since there is no enforced regulation for the age limits, anyone of any age can purchase and/or download a video game regardless of the suggested age limits. The reports of FPS Justice provide a great source and a reference for future cases in other countries for dealing with the issue. (Belgian Gaming Commission 2018a, Belgian Gaming Commission 2018b)

3.3.2 “Activision publishing patent nr. 9,789,406.”

Activision Publishing INC. has patented a “system and method for driving microtransactions in multiplayer video games”. (Marr et al. 2017)

The patent aims to stimulate the usage of microtransactions by interfering in the matchmaking system of the online matches in a way that, as opposed to the initial purpose of the matchmaking service (matching similarly skilled players with each other), the system prefers to match better skilled players – who have purchased items (cosmetic upgrades, skins) against lower skilled players - who have less purchased items.

“For instance, the system may match a more expert/ marquee player with a junior player to encourage the junior player to make game-related purchases of items possessed/ used by the marquee player. A junior player may wish to emulate the marquee player by obtaining weapons or other items used by the marquee player.” (Marr et al. 2017)

This patent is a great representation of the current trends of the gaming industry. Such features suggest that the nature of gaming has changed, more towards maximizing profits, with the cost of other features of the games.

4 Discussion & Analysis

In this section, the industry and the concepts are discussed and analyzed, with practical examples and explanations.

4.1 PESTLE Analysis of the industry

The industry's growth has resulted in increased interest surrounding it. It is obvious that as the industry gains traction, more and more consumers are interested and involved with games and the culture surrounding it. With this growth, the interest of other parties than just consumers have increased over time as well. As games are becoming more and more popular and significant in terms of influence, things such as legislation has naturally followed with the growth.

To observe and analyze the changes in views and perceptions for also other parties than consumers, a PESTLE analysis may help to explain the factors that have and will act as either in support or in opposition to the industry and its development.

Political

As the industry has grown in terms of revenue, the political influence has grown as well.

A good implication of the growth of influence and size would be the actions of Supercell. A Finnish mobile game company "Supercell" has made a political statement by refraining from excessive tax optimization. In this case, like mentioned, Supercell has made the commitment of remaining to operate in Finland, regardless of the very high tax rates. This has resulted in the company being the biggest corporate taxpayer in Finland for the span of five years (2012-2017). During these years, the amount of taxes paid by Supercell to the government Finland totaled at 622 million euros. As a whole Supercell and its employees paid over 1 billion euros in taxes between 2012 and 2017. (Mäntylä 2017)

In the Chinese markets, just like any other company operating in China, gaming publishers must publish the games via a Chinese company. These Chinese publishing

companies usually modify popular online games for the Chinese market. (Niko Partners 2020)

A very popular Nintendo title “Animal Crossing: New Horizons” with over 31 million units sold (Nintendo 2020), was banned by the Chinese government because of “lack of censorship ability”. In this case, players were able to draw free-handed pictures in-game, which resulted in political messages against the Chinese government. China is known for its rather governing approach. (Gilbert 2020)

Economical

Growth of e-commerce has worked as a catalyst for the growth of the video game industry. In Finland, the e-commerce sector has been growing with approximately 20% annual pace in the last few years. (Paytrail 2019) The rise of e-commerce has certainly helped the growth of the industry. Since gaming is very much linked to computers (both consoles and PC’s) it creates a synergy between the industries. This has further enabled the selling and marketing of the digital products and services such as digital copies of games, in game purchases/microtransactions, subscriptions.

Most of the big game companies utilize e-commerce in various ways, such as in-game stores, subscriptions and various implementations of microtransactions

On consoles, the console companies (such as: **Sony** - *PlayStation*, **Microsoft** - *Xbox*, **Nintendo** - *Switch*, *Wii*) sell digital games, as well as subscriptions with their online services. The digital products are sold through various mediums such as a built-in store (**PlayStation Store**, **Xbox Live marketplace/Microsoft store**, **Nintendo e-Shop**) as well as websites (third party websites and online marketplaces included). In these digital products, the various ways of in game purchases may be implemented. (Sony 2021, Microsoft 2021, Nintendo 2020)

On PC, as a gaming platform, the digitalization of games is even further, and games are almost exclusively sold in digital form through various channels such as:

- **Valve**; through their digital platform “Steam”

- **Activision Blizzard/Blizzard Entertainment;** through their digital platform “Battle.net”
- **Electronic Arts (EA);** through their digital platform “Origin” (as well as the console stores for PlayStation and Xbox)
- **Epic games** (the publisher of one of the most popular/most grossing games: “Fortnite”), through their digital platform; “Epic games launcher”.
- **Ubisoft;** through their digital platform “Uplay”

Social

The rise in popularity of games suggests that the culture around gaming has changed from a “geeks” and “nerds”, as more towards a new mainstream/norm. The social pressure and stigma around gaming has kept diminishing throughout the years and nowadays it is socially acceptable to play video games, regardless of the demographics such as age and gender. (ESA 2019)

Influencers linked to gaming have risen in popularity year by year. Up until recently, the most subscribed youtuber “PewDiePie” was started and still recognizes as a gaming channel. A channel operated by YouTube, devoted solely on gaming content “YouTube Gaming” had in the year 2020, the 5th most subscribers on the platform. (Socialblade 2020).

The improvement in social reputation of video games also correlates with the rise of popularity of live streaming of games on platforms like “Twitch.tv” (owned by Amazon since 2014).

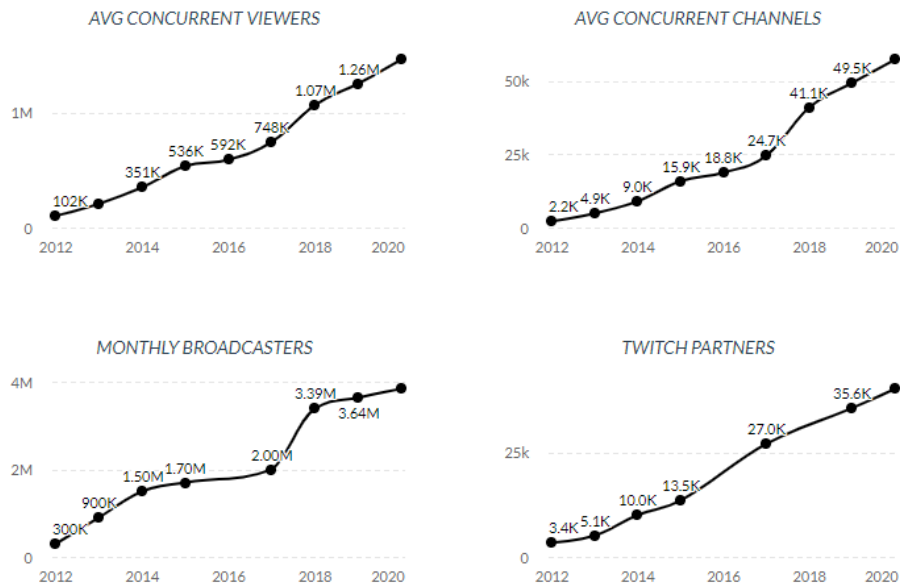


Figure 1 Twitch.tv user statistics (Twitchtracker 2020)

The chart suggests growth for the livestreaming being tenfold from 2012 to year 2019 alone.

Competitive gaming also known as “esports” has also greatly risen in popularity. Esports has grown near mainstream level of interest in the last 10 years. A recent Business Insider article estimates that the esports industry alone will reach a milestone of \$1,5 billion by the year 2023. (Soto Reyes 2021) The development and growth of esports has also further accelerated the growth for live streaming platforms such as Twitch.tv and YouTube.

Technological

As the technology has advanced, video games have evolved from arcade machine Pac Man to experiencing lifelike and realistic graphics with VR glasses. Now, even mobile devices are more powerful, compared to a PC 20 years ago, in terms of computing power and memory capacity which makes improved graphics and running more complicated software possible. As the National Aeronautics and Space Association reports, the space probes “Voyager 1” and “Voyager 2” had 69,63 kilobytes of memory each, where as an iPhone 5 has 16 gigabytes of memory which is approximately 240 000 times the memory. (NASA 2013)

The improvements in the infrastructure around the world have allowed globally the broadband speed and bandwidth to improve in performance, which has resulted in new opportunities to share content and even to play remotely with the hardware elsewhere (referred as “Cloud gaming”). (Nvidia 2021)

Legal

Recently there have been examples of resistance to the industry in the legislation. In China (the biggest market for video games, \$24.4b out of total \$100b market share in 2016) (Newzoo 2016) a curfew for minor players was imposed to curb minors video game addiction. All underage players have a “curfew” for online gaming between 22:00 and 08:00. Restrictions to daily game time have also been imposed – 90 minutes per day on weekdays and three hours per day on the weekends and holidays. Regulations on money consumption on games, for gamers under the age of 18 and 16 have also been imposed. (BBC 2019)

“Gamers eight to 16 years old can spend up to 200 yuan (£22, \$29) per month, while those between 16 and 18 years can spend up to 400 yuan on their gaming accounts.” (BBC 2019)

The restrictions have already had a significant effect on the market size of one of the biggest markets for video games in the world as in 2019 the U.S gaming industry’s revenues surpassed the revenues of Chinas’ gaming industry first time that year.

The western countries have not implemented any laws limiting or prohibiting people from playing video games per say. Legislation in the west has mainly been based on the content rating systems such as Pan European Game Information – PEGI (For European markets) and Entertainment Software Rating board – ESRB (For North American markets). (PEGI 2021, ESRB 2021)

*“Age ratings are systems used to ensure that entertainment content, such as games, but also films, tv shows or mobile apps, is clearly labelled with a minimum age recommendation based on the content they have. **These age ratings provide guidance to consumers, parents in particular, to help them decide whether or not to buy a particular product for a child.**” (PEGI 2021)*

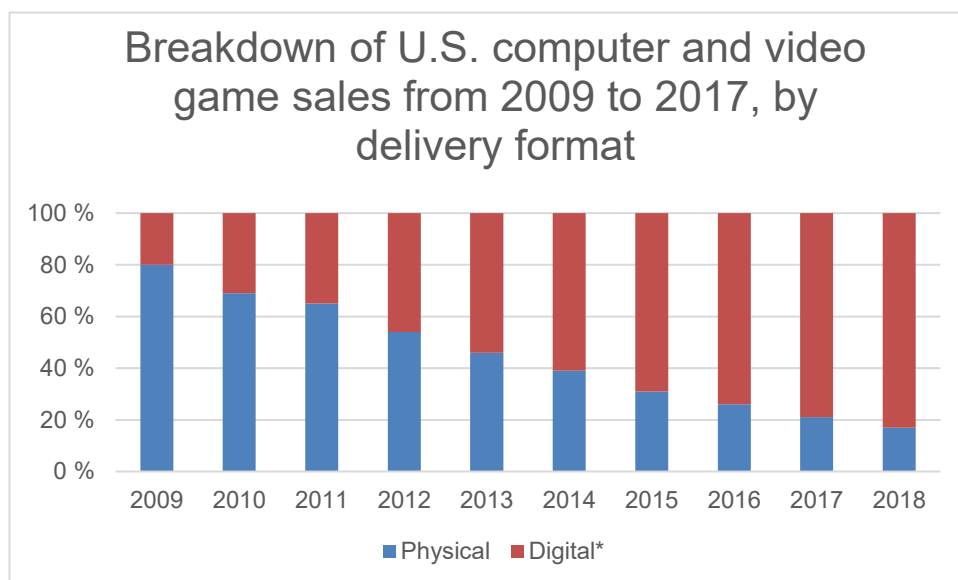
Some European countries have already started to impose legislation regarding the loot boxes, as they can be considered a way of gambling. As gambling is a highly regulated area in many countries, the legislation has now started to address the issue. (Belgian Gaming Commission 2018a)

Environmental

There is quite a lot of variance between estimated energy consumption of gaming, depending on the source and method of calculation. Many studies suggest that the energy consumption of gaming will greatly increase with the introduction of “Cloud gaming”. New developments that require improved hardware will also shorten the life cycle of gaming hardware – which will have an ecological impact as well.

Plastic waste from physical video games is decreasing because of the shift in technology from physical to digital products (Bardwell 2019).

Table 1 “Breakdown of U.S. computer and video game sales from 2009 to 2017, by delivery format” (Statista 2019a)



4.2 Different game monetization methods

In this section, an overview of the different monetization methods is given, with practical examples of the implementations of the methods in certain games.

The Pan European Game Information (PEGI) suggests that any purchases that add new content, game functionality, features upgrades for a particular game, **and are made during gameplay** are to be considered as an **in-game purchase**. (PEGI 2017)

4.2.1 Subscription

Merriam-Webster dictionary defines “subscription” as follows:

” a purchase by prepayment for a certain number of regular deliveries of something (such as issues of a periodical) or for a certain period of access to or use of something (such as an online service)” (Merriam-Webster 2021)

In the context of games, subscription may refer to access (to play the game) granted by a subscription fee, a premium subscription or so called “season pass/battle pass”. In the case of season passes and premium subscriptions, the game is usually free to play, but certain extra features can be purchased for a recurring fee.

Examples of subscriptions in the context of games

World of Warcraft, a monthly fee is required to play the game on the official servers. A purchased copy of the game (digital or physical) and extensions (digital or physical) are also required and/or limiting the game experience. (Blizzard Entertainment 2021)

Runescape, a F2P game with the possibility to pay a premium monthly fee for extra features. Most of the content of the game is “behind” the premium subscription. (Jagex 2021)

PlayStation Plus, access to play online multiplayer with the PlayStation is limited for those who pay an extra monthly fee. Some of the most popular games are mainly played

as online multiplayer. PlayStation Plus members are also given free digital copies of certain games. (Sony 2021)

4.2.2 In-game currencies

A player can purchase with real money, a virtual currency which can be used to add features or content to the gaming experience during gameplay. (PEGI 2017)

Some games have game modes in which the concept is built in a way that the player is encouraged to spend real money to buy in game currency.

Example of In-game currency

FIFA points

In EA's "FIFA"- football games, a player may choose to buy FIFA points to accelerate the progress their team, in a certain game mode (FIFA Ultimate Team – FUT). (EA 2021)

The points are a core component of the implementation of various monetization methods within the "FIFA" game franchise.

FIFA points are sold in the in-game stores of PlayStation and Xbox live as well as in 3rd party stores – both, in physical and digital format e.g., Gigantti brick and mortar stores as well as the web store. (Gigantti 2021)

4.2.3 Loot box

As the Belgian gaming commission's report suggests, the term "Loot box" is used to describe an element of the game with which the player can acquire game items in exchange for a payment or progress (by playing the game), in a randomized manner. The items may vary from characters, objects, emotions or characteristics. (Belgian Gaming Commission 2018b)

In some games the unlocked features may offer an advantage against other players, in some games the unlocked items or features are purely cosmetic.

Examples of loot boxes

EA Sports, FIFA

In the EA sports' "FIFA" franchise contains a specific game mode "FIFA Ultimate Team – FUT" in which the loot box aspect is clearly visible and very much used. (EA 2018)

With the in-game currency a player can purchase virtual card packs (the implementation of a loot box in FIFA), that consist of virtual cards. The cards each pack contains are randomized with a random number generator (from a set table of possible cards which varies by the pack) and each card has a "drop rate" (the odd of receiving a certain card) which depends on the rarity and performance of the player. The odds of cards are undisclosed from the player/customer.

Each card represents a real-life football player, with different stats (e.g., movement speed, ball handling, shooting power etc.). With these cards, a player may build a team consisting of the in-game players (virtual representations of real-life football players), the player has unlocked from card packs.

With no additional purchases made by the player, the same outcome can technically be achieved by playing. Finishing matches within the game mode awards "coins" (a second in-game currency, which is only gained by playing, or bought with the "FIFA points"). The amount of time it takes to gain the same outcome is rather a lot – preferring the usage of real-life money instead.

Therefore, effectively a player may indirectly buy progress within the game mode – with more money spent, the odds of unlocking good players are bigger. As FIFA Ultimate Team is built around online play, spending real life money yields an advantage against other players who have not unlocked as good players.

Similar game modes with the same focus around the microtransactions can be found in most of the EA Sports game franchises such as "NHL", "Madden" and "NBA" (EA 2019)

Counter-Strike:Global Offensive

In Counter-Strike: Global Offensive, loot boxes are implemented as “cases” that contain a cosmetic item (referred as “skins”). To open a case, a player needs to add funds to their Steam “wallet” (platform on which the game is played). With the funds, a player can buy an in-game case and a key with which the case can be unlocked. (Valve 2021a)

The skins alter the 3d model of weapons or equipment that the in-game character is wearing (e.g., a different colored gun). Unlike in FIFA Ultimate Team, there is no competitive advantage aspect gained with the purchases, as the modifications/upgrades are only cosmetic.

4.2.4 Direct purchases

Not all microtransactions contain a game of chance. Direct purchases of in-game items such as cosmetic upgrades or currencies are implemented in some games.

Example of direct in-game purchases

World of Warcraft

Battle.net shop has a big selection of in-game items available for purchase. The items are cosmetic and effectively offer no competitive advantage in exchange for the money. The sold items include for example: pets, rideable mounts and hats. (Blizzard Entertainment 2021)

Previously mentioned “in-game currencies” can also be considered a direct in-game purchase if the purchase is done in-game.

4.2.5 Analysis

There are many possible variations of virtual goods or products that are sold in games in many ways. The core principle of the sold virtual goods or similar products may vary. In some cases, **the good or product is indirectly the progress, or goal of the game.** As an example: A game mode rewards the player with a prize. The prizes may be used to gain small performance increases, depending on the type of game (e.g., a slightly faster movement speed of an in-game character). Therefore, the game content and goal

consist of little by little accumulating better and better features for a character or a team of players for example. Effectively when allowing players to purchase these said traits the very objective of the game is possible to be achieved without playing the game, with purchases alone.

Most multiplayer games have a ranked game mode (e.g., FIFA Ultimate Team “seasons”), the goal and objective are to rise up in the real time rankings against other players in a multiplayer environment. The amount of money spent in the game effectively results in better results against other players and leads up to a higher ranking. Games that allow the purchase of “indirect progress”, have the problem of the competitiveness diminishing because of the ability to “take shortcuts” with the purchases. When two equally skilled players (“Player X” & “Player Y”) are matched against each other the playing field may not be level if the amount of money spent in the game is not identical between the two. If the Player X has spent 1000€ into the game and unlocked a bigger selection of features/gained a better performance, whereas the player Y has not spent any money, the Player X will have a competitive advantage over the Player Y although the players are equal in terms of skill. Games that allow the purchase of indirect progress are often referred as “pay-to-win”.

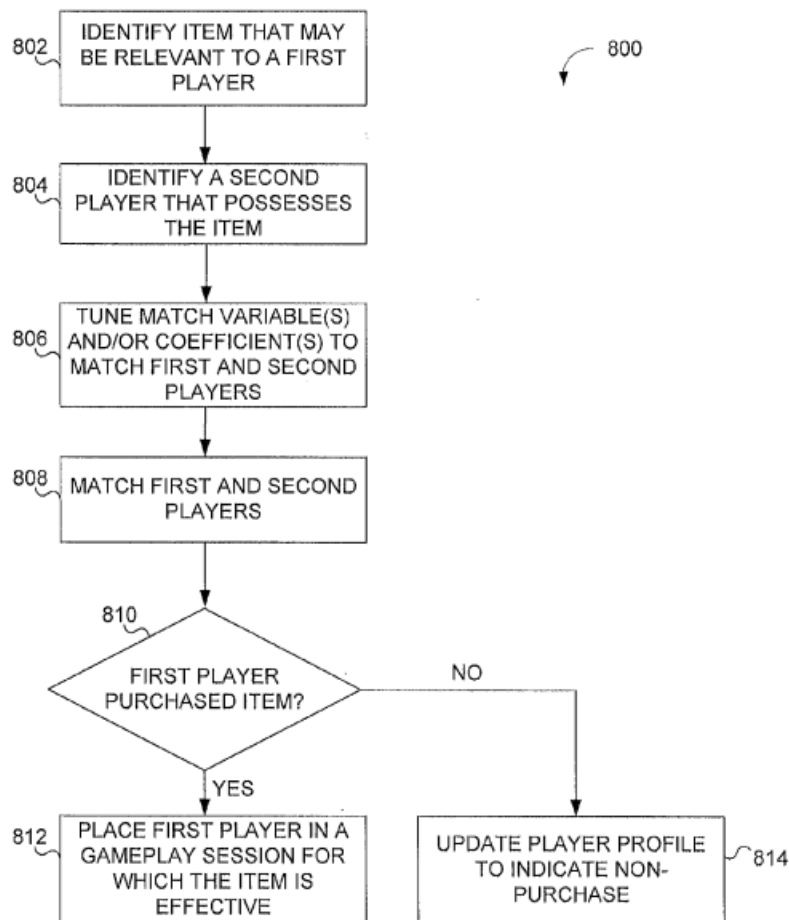


Figure 2 "a process of influencing in-game purchases through targeted matchmaking, according to an implementation of the invention" (Marr et al. 2017)

Selling competitive advantage or cosmetic upgrades are among the ways game developers incentivize in-game purchases. There are many examples of companies building the game around microtransactions, this seems to be driving the nature of the games in a new direction. The patent of Activision suggests that by purchasing in-game items and products will result in receiving of easier opponents in a competitive game mode. Effectively a player is rewarded for their spending of real money to in-game purchases. (Marr et al. 2017)

4.3 Pay-to-play

4.3.1 Discussion

As the name of the model suggests, a player needs to make a payment to receive access to the game.

For example, the access can be restricted in following ways:

- Physically. Either part of the data or all the data of a software (game) is stored on a data storage medium such as a disc or a cartridge. The physical data storage medium containing the data is needed to operate the software on a platform such as a computer or a console.
- Digitally. A digital restriction can be imposed via various ways such as product keys (single use or multiple use), limited install activations or persistent online authentication. The latter one of the methods is highly used by the biggest game publishers (e.g Electronic arts/EA, Valve, Ubisoft etc.)

Because of the limitations of the current time back in 2000's, there was no alternative way for the game developers to monetize their games but to require payment upfront.

4.3.2 Examples

World of Warcraft

World of Warcraft was released by Blizzard Entertainment (now part of Activision Blizzard) in 2004. At launch, the game had a “price tag price”. On top of this purchase price, the game had a monthly fee and even to this day still has this fee. On top of the initial purchase price and the monthly subscription fee, during its life span from 2004 to present, the game has had 8 expansions all with an initial purchase price. If a player wanted to continue their character progression, the purchase of the expansion pack was required. (Blizzard Entertainment 2021)

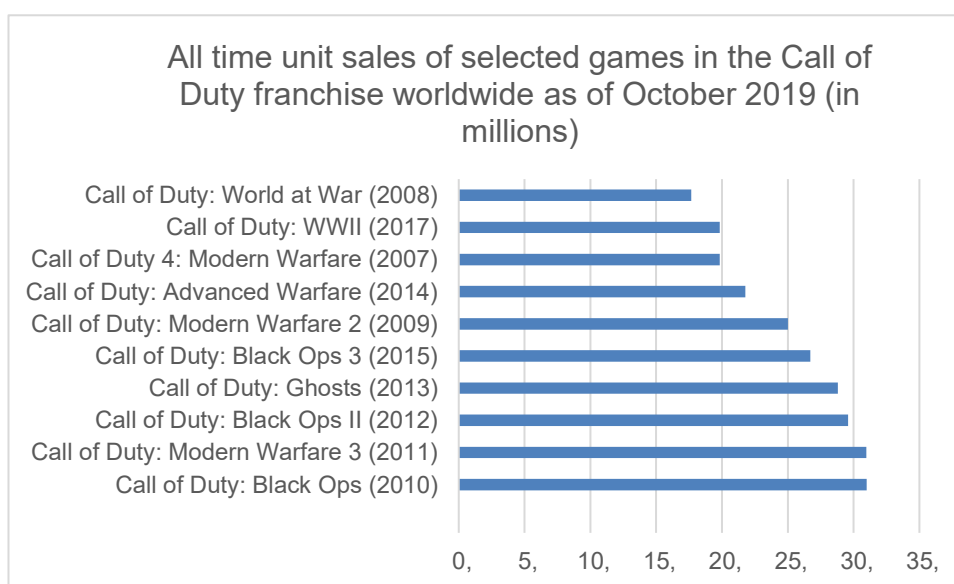
Not only does the game have an initial purchase price, it also has regular expansion release, which effectively means reoccurring payments for the created content. On top of these two types of monetization, the game has a subscription fee.

World of Warcraft is a great example of adaptive game monetization design. Even with such extensive monetization, the player base has been very big and the engagement very high.

Call of Duty- Franchise

Call of Duty is a “First person shooter - FPS”- game. It is of the most successful game franchises of all time, COD has had almost yearly releases of new titles, which has helped to maintain the popularity of the series.

Table 2 All-time unit sales of selected games in the Call of Duty Franchise worldwide as of October 2019 (in millions) (Statista 2019b)



As the chart suggests, the franchise has been very successful in terms of sales. On top of the initial purchase price, some of the Call of Duty games offer in-game purchases for the online game modes.

4.3.3 Analysis

One of the strengths for pay-to-play model is that all the players have purchased the game. There is no need for extra content or incentivizing of players because the payment for the work of the game developer has already been paid upfront in terms of the initial game purchase.

When an investment is required from the players, it may also increase the engagement of the player base, which is quite important especially if the emphasis of the content is on online multiplayer. In terms of online multiplayer games, higher engagement leads in positive things for the game - better behavior of players (less cheating and exploitation).

As weaknesses for the pay-to-play model, the initial purchase price / required investment creates a threshold of entry for players and potential customers. A player must be confident enough in the game to be making the purchase decision possibly without any prior knowledge or experience of the game. With respect to the same issue of uncertainty about the product with no prior experience, players are effectively required to “buy a pig in a poke”. However, if a game franchise has a long history of success, this has been proven to affect to the sales of new titles in the same franchise.

4.4 Free-to-play

4.4.1 Discussion

Free-to-play (F2P) is a form of “freemium” business model. The two terms F2P and Freemium are used interchangeably in the context of games. A F2P game just like the name hints, is a game that can be downloaded and played free of charge. Most F2P games encourage buying of various virtual goods within the game (Alha et al. 2014, pg. 1).

Examples of possible virtual goods:

- **In-game currencies** (such as “FIFA points”)
- **Direct in-game purchases**

- **Subscriptions**
- **DLC** (Downloadable content, game expansions etc.)
- **loot boxes** (and other random chance purchases)

F2P is a widely used business model and it has had its share of controversy as in many cases some of the business models' components make it possible to act as an indirect way of gambling.

“However, it was noted that the combination of children and F2P is ethically problematic. The concepts of money might not yet be clear to children. This causes a problem in designing games for such an audience and it causes even a bigger problem for the parents whose device the child is using. Some notions were given about the parents' responsibility and keeping the passwords safe, so a child could not buy anything without a permission.” (Alha et al. 2014, pg. 7)

This raises the question whether it is ethical and/or even legal to use these business models in some contexts. There are already examples of governmental action against these practices. (Tassi 2019)

Belgium among other countries have placed restrictions or bans on Loot boxes. Loot box is the umbrella term for one or more game elements that are integrated into a video game whereby the player acquires game items either for payment or for free in an apparently random manner. These items can be very diverse, varying from characters or objects to emotions or special characteristics. This umbrella term is based on the (treasure) boxes that contain these items. (Naessens 2018)

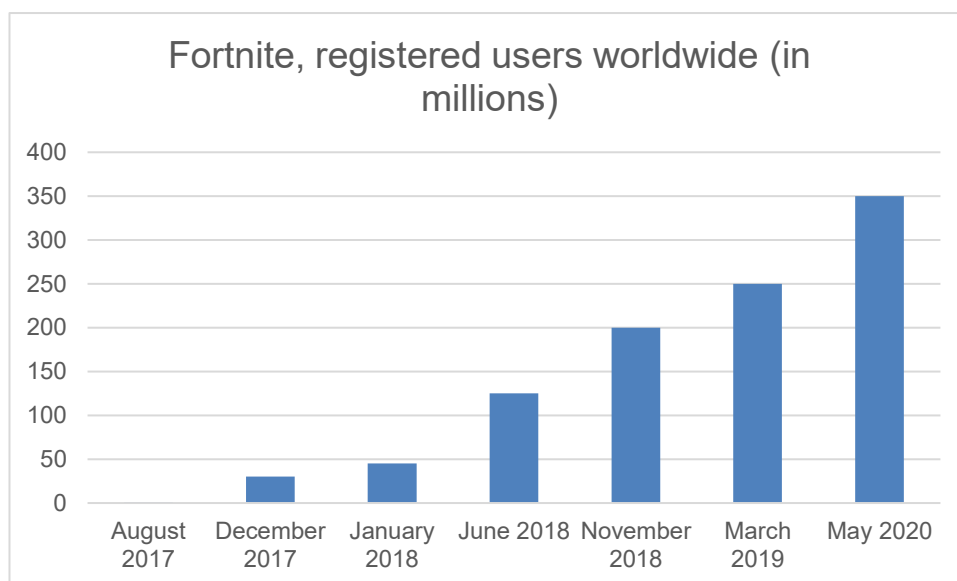
The Belgian Gaming commission ruled the loot box mechanic as a form of gambling. A loot box that costs money to open and has a RNG (Random number generator) based prize (the chances are not disclosed to the consumer, this leaves room for manipulation) meets the definition of “game of chance”. Therefore, it is subject to the Belgian rules of gambling. (Belgian Gaming Commission 2018b) All of the big so called “Triple A” gaming companies have abided by this conviction in Belgium and several other countries in Europe. (Belgian Gaming Commission 2018a)

4.4.2 Examples

Fortnite

Fortnite is great example of a successful free-to-play game. The game experienced an explosive growth of player base in the year 2018. From January 2018 to May 2020 the player base grew from 50 million to 350 million (sevenfold growth).

Table 3 Fortnite, registered users worldwide (in millions) (Statista 2020)



With the low threshold of entry combined to an easy to pick up concept, the game excelled in terms of revenue during these few years. Fortnite was the most revenue generating game title in the year 2019. (Philips 2020)

In Fortnite, an in-game currency “V-bucks” is implemented. With the in-game currency, a player can buy directly various cosmetic upgrades as well as a “battle pass”-subscription. The battle pass subscription yields extra rewards for playing the game, rewards that are not achievable for those who do not have the battle pass.

It is notable that in Fortnite the purchasing of in-game items does not yield any competitive advantage against other players – the upgrades are merely cosmetical. A feature which the game shares with many very popular titles.

4.4.3 Analysis

As a countermeasure to the legislation, some companies have therefore modified the way of implementing loot boxes, effectively to remain unchanged, in a way that respects the law.

As an example, in the game “Counter-Strike: Global Offensive” the process of opening cases was slightly altered exclusively for players from Belgium. In practice the principle of loot boxes has remained the same but as a difference compared to the past implementation, a player is able to see the next item they will receive from the case, without opening the case (free of charge). However, a player is limited to seeing only one item at the time, from one single case – to be able to see the content of another case, the initial case (of which’s content has already been revealed to the player) must be first opened. (Valve 2017)

Overall, the free-to-play model offers a very well-functioning compromise for the developers and players. The games have a low threshold of entry for new players as it requires no initial investment. The potential for a big player base is bigger than for a pay-to-play game. As demonstrated by the rise of popularity of games such as “Fortnite” the low threshold of entry has granted substantially big amount of voluntary paying customers. The percentage of players that choose to spend money might be relatively small, but the sheer number of players (350 million in case of Fortnite) resulted in big revenues.

4.5 Both types of monetization

For some titles, the elements of freemium business model is combined with an initial purchase price for the game. In other words, a pay-to-play game may utilize microtransactions.

A good example of such is EA’s football game for PlayStation and Xbox, “FIFA”. The game is priced in conjunction with other console games on launch. On top of this price, players may buy various items or products (e.g FIFA Ultimate team). The game has been for several years making the most of its profits from microtransactions. And the trend is rising. (EA, 2019)

“Our most popular live service is the Ultimate Team mode associated with our sports franchises. Ultimate Team allows players to collect current and former professional players to build, and compete as, a personalized team. Net revenue from Ultimate Team represented approximately 28 percent, 21 percent and 16 percent of our total net revenue during fiscal year 2019, 2018 and 2017, respectively, a substantial portion of which was derived from FIFA Ultimate Team.” (EA, 2019)

5 Conclusion

The conducted research on the wide range of sources seems to support the preliminary conclusion. The increasingly popular business models are utilizing in-game purchases in various forms. The free-to-play models seem to accommodate the needs of customers better than a mandatory one-time investment, which has been typical for pay-to-play titles. As many examples show, free-to-play models are very viable and may in fact increase the revenue generated by a game, although the game requires no initial investment to be played.

The research suggests that some of the most popular and revenue generating games utilize a mixture of different types of microtransactions instead of just one, unlike in the past (upfront payment only). This has drastically changed from the past where the only method of monetization was the upfront payment. This development is a result of multiple things, things like improvements in infrastructure have allowed better network connections and better bandwidth, which has led to services like Twitch.tv to rise in popularity. This rise of popularity has further accelerated the growth for titles such as “Fortnite” – which use a variety of Free-to-play monetization methods.

With respect to the findings, it is no surprise that the game developers and publishers have begun to favor implementation of microtransactions. The patented system and method for driving microtransactions by Activision (Marr et al., 2017), is a good representation of the current trends of the industry. As the mentality of the industry seems to have switched towards more revenue maximizing over other features such as competitiveness and quality of experience, it inevitably influences the nature of the games and the gaming experience.

As estimated and suggested by many indicators, the industry's growth is not expected to slow down but to keep growing instead. The low threshold of entry for free-to-play games allows the better availability for the masses. Even though the percent of players that end up voluntarily spending money to in-game purchases might be relatively small, because of the number of players a free-to-play game is able to reach, the revenue ends up being substantially big in the end.

Up until now the regulation and research on the topics has been rather small, but it has started to catch up and will continue to grow as the industry grows. More and more countries are starting to regulate and govern these microtransactions, which is arguably very much needed.

The industry has taken great strides towards digital from physical. So far it has been the format of games that has switched from physical (discs, diskettes) to digital downloads and digital authentication. This tendency of development (from physical to digital) is not expected to stop at the formats only, next possible step to undergo a similar transformation is the hardware. This development has already started to take place in terms of cloud computing where the hardware used for gaming can be located elsewhere and the output (screen and controller) elsewhere.

6 Recommendations for future research

As this thesis focused on the variety of monetization methods and examples mainly in the console and mobile sector, a preferable direction for future research would be the mobile gaming sector. Similar structure for research may be implemented in the context of mobile gaming as well.

The aspect of cloud computing and cloud gaming is becoming more and more accessible as the level of hardware has kept increasing during the years. There are already many companies offering services in cloud gaming. As this sector of industry has not been addressed in this thesis, it is a recommendation for future research.

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Figures

Figure 1 "Twitch.tv user statistics" (Twitchtracker 2020)

Figure 2 "a process of influencing in-game purchases through targeted matchmaking, according to an implementation of the invention" (Marr et al. 2017)

Tables

Table 4 "Breakdown of U.S. computer and video game sales from 2009 to 2017, by delivery format" (Statista 2019a)

Table 2 "All-time unit sales of selected games in the Call of Duty Franchise worldwide as of October 2019 (in millions)" (Statista 2019b)

Table 3 Fortnite, registered users worldwide (in millions) (Statista 2020)