



BSc thesis in Business Administration

A Case Study on Loot Boxes in Two Video Games

A comparison between Overwatch and Star Wars Battlefront 2

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Abstract

This thesis takes a closer look at microtransactions and loot boxes by examining two cases of loot boxes in video games and contrasting consumer reactions towards those two games. The goal of this thesis is to answer the following research question: *Why did consumers accept the implementation of loot boxes in Overwatch but rejected the implementation of loot boxes in Star Wars Battlefront 2?* To answer this question, the authors relied on published research, published thoughts of professionals, interviews with video game developers as well as video game critics, an examination of relevant forum discussions and a detailed examination of the video games in question. The authors research revealed that the implementation of loot boxes in Star Wars Battlefront 2 caused negative consumer reactions because they included items that gave an in-game advantage to players. However, the implementation of loot boxes in Overwatch did not cause a similarly negative consumer reaction because they included items that were cosmetic in nature and did not affect the player's in-game performance. It is the view of the authors that video game publishers and developers should either implement loot boxes with exclusively cosmetic items, offer them as free accessories with other sold virtual goods, or alternatively avoid the loot box model entirely in favour of direct sales of virtual goods or the sale of alternative currency that can be used to unlock virtual goods.

Preface

This thesis is a final project that represents twelve credits towards a BSc degree in business administration at Reykjavík University. The object of the thesis is to answer the question of what explains the difference in consumer sentiment towards the implementation of loot boxes in two similar video games that were released within the last two years. Both authors are avid video game players, and both have experience with the two games under review in the thesis. The authors interest in the subject matter was piqued with the extensive media coverage of the negative consumer sentiments towards the implementation of loot boxes in the game Star Wars Battlefront 2. Since both authors had experience playing Overwatch, which had been released a year and half before, the negative consumer sentiment towards Star Wars Battlefront 2 was surprising. Overwatch had a similar system of loot boxes as Star Wars Battlefront 2 which to the best knowledge of both authors had not generated any negative consumer sentiment. For this reason, both authors were interested in finding the controlling factor or factors that might explain this difference in consumer sentiment.

The thesis was prepared under the guidance of Hallur Þór Sigurðarson, assistant professor at Reykjavík University. The authors would like to thank Hallur for a fruitful collaboration on the thesis. The authors would also like to thank their spouses and immediate family for their patience and support. The authors declare that they are the sole authors of this thesis and that this thesis is the product of their own research and in accordance with the requirements of Reykjavík University.

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List of Abbreviations

EA	Electronic Arts
F2P	Free-to-Play
MMORPG	Massively Multiplayer Online Role-Playing Game
P2P	Pay-to-Play
PEGI	Pan-European Game Information
RNG	Random Number Generator

1 Introduction

Video games have been a form of entertainment for people of all ages for decades. Before the advent of the internet video game publishers relied on a revenue model that has been dubbed pay-to-play (P2P). This revenue model entails that consumers pay an upfront single price to obtain a fully functional video game, a sum of money for a physical copy of a product in retail (Osathanunkul, 2015). The introduction of the internet brought with it online multiplayer games as well as a new way for video game publishers to sell games and provide after sales support. Video game publishers could now move from selling physical copies to fully digital copies in addition to developing new revenue models. An example of a new revenue model is free-to-play (F2P) video games. F2P games require no upfront fee to obtain a functional copy of the game but the game has embedded multiple revenue streams based on the optional consumer purchases of in-game digital content (Osathanunkul, 2015). An example of a popular F2P game is League of Legends where the developers derive their revenue mainly by selling skin textures for characters and items within the game. For every month in 2016 there was an average of 100 million active players in League of Legends (Volk, 2016) and in the fiscal year of 2016 the game generated \$1.7 billion in revenue (Garreffa, 2016).

Recently the video game industry has seen the adoption of a new revenue model which has been dubbed “games as a service”. Big publishers such as Electronic Arts (EA), Ubisoft and Square Enix seem to be transitioning to making video games that function as an ongoing service experience for their consumers (Schreier, 2017a). This transition seems to have coincided with increased revenue in the video games industry with the global market as a whole grossing over \$100 billion in 2016 and projected to gross approximately \$116 billion in 2017 (Wijman, 2017). The industry is projected to keep growing at a compound annual growth rate of 8.2% towards 2020, reaching a global yearly revenue of \$143.5 billion in 2020 (Wijman, 2017). But what does this new revenue model entail for the industry and the end consumer? Although there is no official definition for “games as service”, the general consensus seems to be that such games offer a continuous development of the video game after the initial launch. This includes development of new maps, items, player events and in general focusing on a long-term development plan (Wong, 2017). Video games designed as a service also often have a focus on online multiplayer with a competitive and/or cooperative gameplay elements (Wong, 2017). The P2P revenue model seems to be ill suited for continuous development since P2P doesn’t typically bring in additional revenue, aside from the revenue derived from the

upfront purchase of the game. In order to fund continuous development, developers need to secure a constant revenue stream.

According to research by Osathanunkul (2015) there are a few revenue models that can support a continuous development. Those include advertising, subscriptions, microtransactions and player to player trading. Technically there are few limitations on what revenue models publishers and developers can combine to provide or increase revenue. It is for instance possible to combine a P2P model, a subscription model, a microtransaction model and a player to player trading model or a different combination thereof within the same game. The only real limit is consumer sentiment. Publishers and developers run the risk of pushing the limits of consumer tolerance as they try and find the optimal balance that effectively maximizes revenue and player enjoyment. Revenue models based on microtransactions fund continuous development by selling virtual goods directly to players or by selling virtual currency that can be used to buy virtual goods within the game (Osathanunkul, 2015). Loot boxes are an example of microtransactions where players are given the chance of winning virtual goods for use in the game. Some virtual goods are rarer than others, so the statistical chance varies (Koeder & Tanaka, 2017). Loot boxes have recently been implemented in many popular P2P video games which has led to a consumer backlash against loot boxes as well as other forms of microtransactions in P2P video games.

The aim of this thesis is to conduct an explanatory case study (Baxter & Jack, 2008) of two recently released P2P video games, *Overwatch* and *Star Wars Battlefront 2*, in which loot boxes were implemented to derive revenue. Since its release, *Overwatch* has become extremely popular with over 35 million active players as of October 2017 (Brian, 2017). However, *Star Wars Battlefront 2* garnered such a negative reaction because of its implementation of loot boxes that all in game purchases were initially turned off, just before the game was officially released (Schreier, 2017c). The negative reaction led to reactions from elected representatives of the state of Hawaii and the country of Belgium where they expressed a desire to initiate an investigation whether loot boxes could be considered a form of gambling (Good, 2017, p. 2). For purposes of fulfilling the aim of the thesis, the following research question has been formulated: *Why did consumers accept the implementation of loot boxes in Overwatch but rejected the implementation of loot boxes in Star Wars Battlefront 2?* The authors believe that these two video games represent good examples as both games are similar in nature. Both games are multiplayer online shooters with a science fiction setting and both games were released within the last two years. The authors believe that both games appeal to a similar

market segment and for these reasons the authors believe that these games are well suited for the comparison that forms the basis of the above stated research question and thesis.

For the purposes of this thesis the authors will variously be using the terms consumer and player in singular and plural forms to denote individuals who have interest in video games or bought a video game and subsequently played it. Consumers are those who are interested in video games, who are potential buyers of video games, or have bought and played video games. Players are consumers that have bought a specific video game and subsequently played it. The terms publisher and developer will also be used interchangeably to denote a business enterprise that derives revenue from developing and/or selling video games as well as deriving subsequent revenue from various monetization strategies such as microtransactions. Publishers are firms that commonly provide the finances, the marketing and the sales of video games. Developers are firms that design, program and produce video games. Some developers however do not have a publisher but self-publish their video games, sometimes called independent developers or indie developers.

2 Overview of video games and microtransactions

The beginning of the video game industry is commonly traced back to the late 70's and early 80's when video games were played on refrigerator-sized machines which were mostly found in arcade halls or universities. The games were monetized by requiring players to insert a coin into the machine at frequent intervals in exchange for extra lives or extra time in the game. (Kokkonen, 2014). Therefore, arcade games might share some features with many modern video games with microtransactions. By the year 2000, a revolution in gaming occurred with the adoption of better broadband internet connection and local area network systems. This allowed players to locally connect multiple computers together and play with each other or against each other. Online video games also saw a breakthrough with massively multiplayer online role-playing games (MMORPG) where hundreds or thousands of players could interact, cooperate or compete against each other on the same platform. World of Warcraft (Wow), which is familiar to most video game players, was released in 2004 and became extremely successful. The game offers its players a fairy-tale virtual world with millions of players, in which anyone who works hard enough and devotes time can rise through the ranks of the in-game society and acquire great virtual wealth within the game. World of Warcraft uses a P2P and a subscription-based service, where players have to buy the game itself for a fixed price

and after that pay a monthly fee. World of Warcraft generated around \$180 million dollars in subscription revenue per month, or \$2.15 billion per year during the games peak popularity (Leack, 2017). After a 54% decrease in revenue in the year 2014, the game's developer, Blizzard Entertainment, implemented a hybrid F2P system with the introduction of WoW tokens (Kollar, 2015). Players could purchase these tokens with real world money and then use these tokens to unlock in-game items, sell the tokens in the World of Warcraft auction house or add 30 days of game time to their subscription (Kollar, 2015). Today, playing video games is no longer a niche hobby, but a mainstream entertainment (Purcaru, 2014).

Technological innovation has impacted the business models of video game publishers. The old traditional method of selling video games as physical product at a fixed price in retail with no subsequent revenue streams is still a common practice by various publishers. In order for this revenue model to be viable the publisher and the developer need proper market research, as having a game with an unclear target audience can lead to diminished returns and possibly a deficit. However, digital distribution and online gaming has allowed publishers and developers the ability to offer their players the possibility of player-based value creation. Players can clearly indicate what aspects they like or dislike with their in-game behaviour, as well as direct polling or commentary on community forums. The developer can respond by implementing fixes or patches to the game. An example of this interplay is the reaction of the publisher EA and the developer DICE to the negative consumer reaction to their implementation of loot boxes in Star Wars Battlefront 2. EA and DICE responded by temporarily removing microtransactions from the game after the controversy cost EA an estimated \$3 billion in stock value (Kim, 2017).

Because of the rapid evolution of the internet and growing popularity of online multiplayer games, publishers and developers have increasingly shifted from an upfront paid only method to a varied mix of paid and free business models with assorted monetization strategies attached, like microtransactions and loot boxes, which this thesis is focused on. As mentioned before, publishers and developers seek revenue by selling virtual goods via microtransactions in the form of cosmetic changes, new levels, maps, characters and other virtual items which help to make the world feel more extensive. In some genres developers have even implemented systems that give players a competitive advantage over other players. For example, offering competitive virtual goods which players can invest real-world money in, and that gives players a significant advantage in multiplayer games, rather than earning it with hours of gameplay. This is called a "pay-to-win" system in the video game industry (Grosso, 2016).

The F2P model implements these systems as part of its market strategy of offering games as a service with monetization taking place during the game's lifespan. This motivates both the publisher and the developer to keep the players engaged, because retaining their players as active players for longer periods increases the chances of further revenue as virtual goods can be sold as long as the game has active players. However, the standard lifetime of a traditional premium game is often just a few months, while the initial sales push of advertisements and excitement peters out. The growing popularity of these business models adds to the importance of looking into its influence on consumers and players in terms of understanding their interaction with the product, purchasing behaviours, the process of their decision making and their feelings towards it (Muncy, 2017).

2.1 The business of microtransactions

As mentioned earlier, microtransactions are small purchases of virtual items and goods inside a video game that has already been purchased or acquired for free. The basis of this thesis will consist of microtransactions within video games that have been purchased, not acquired for free.

All businesses employ a business model. In essence, a business model describes the architecture of the value creation, delivery and capture mechanisms employed (Teece, 2010). A business model defines how the enterprise responds to customer's needs, how it delivers value and how it encourages the customer to pay for that value (Teece, 2010). After an implementation of those factors, a good business model will hopefully convert a portion of that value into profits (Teece, 2010). Developing a successful business model is not enough to assure competitive advantage, but once implemented, the main elements of the model can often be quite transparent and easy to imitate in only a few months (Teece, 2010). Because of that, business models might, to some degree be shared by other competitors (Teece, 2010). It can however take time to get a business model right, maybe months or years (Teece, 2010). Therefore, it is necessary to stay flexible, experiment with the product and to learn from the competition (Teece, 2010). Developing video games is a long, expensive process which involves countless hours of design, programming and other related work. Publishers and developers therefore need to employ proper financial management, planning and decision making to stay competitive and viable (Kokkonen, 2014).

Video games have never been more expensive to make as they require constant evolution of cutting edge graphics and innovation of gameplay to push sales (Freedman, 2018).

Premium video game prices have remained largely flat since the late 1990's. However, the value of the U.S. dollar has certainly not been flat. According to data from the U.S. Bureau of Labor Statistics consumer price index, the dollar experienced an average inflation rate of 1.76% per year from 2006-2016, or a cumulative price change of 19.1% percent ('\$60 in 2006 → 2016 | Inflation Calculator', n.d.). Those numbers rounded to a flat 20% means that video games in 2016 should have cost roughly \$72, not \$60. With all this in mind, video games should probably cost twice as much as they have retailed in the past decade, if all costs are taken into consideration. However, if a publisher sells a premium video game for \$100-150, it will likely result in lower sales. But in return, the number of video game consumers has increased over the past decade which has partly made up for the high production costs (Extra Credits, 2018). According to Extra Credits (2018), developers cannot rely on the revenue derived from retail sales alone on a premium video game to get a good return on their investment. If the sales do not meet the publisher's and the developer's expectations, they could be looking at large losses and in the worst case, bankruptcy (Extra Credits, 2018). For example, the publisher Nexon had to write off the video game LawBreakers as it was a total sales failure (C. Jeffrey, 2018). Nexon claims that the game's failure was due to it being released around the same time as the similar and widely more successful game PlayerUnknown's Battlegrounds (C. Jeffrey, 2018). Nexon has not published the exact losses attributed to the failure of Lawbreakers but said that it accounts for the majority of the \$32.6 million expenses reported in Q3 of 2017 (Hester, 2018). The developer of LawBreakers, Boss Key Productions, recently shut down, most likely due to the unsuccessful launch of LawBreakers (Marks, 2018). For these reasons, video game publishers and developers have had to look to new revenue models to bring the desired and necessary return.

Microtransactions have become one of the largest sources of online consumption for video game consumers and a promising revenue model for publishers and developers. The free access to download and play a F2P game makes the product accessible to a large audience. This audience is then put in an environment where virtual goods they are advertised and sold to them. However, only a portion of people who play F2P games spend money on virtual goods, but the low percentage who do buy virtual goods contribute to subsidizing the whole user base (Agarwal, 2017). The larger the minority of highly engaged players, or "whales" as they are sometimes referred to, the more revenue the product generates on average (Agarwal, 2017). The development of F2P games might include high production costs, but marginal costs are low or close to zero (Seufert, 2013). A product's marginal cost of distribution is the cost of delivering additional units to customers. For physical products, these costs include shipping,

storage, licensing and packaging of the product. However, digitalization has given publishers a way of largely eliminating these cost factors since distribution has moved largely to online platforms. Often, the only associated cost with the distribution of F2P games are marketing and platform fees (Seufert, 2013). This has the effect of pushing the monetization stage to the end of the economic architecture as revenue is tied to the publisher and the developer understanding the player's behaviour and responding by enhancing the gaming experience (Davidovici-Nora, 2014). The F2P business model puts emphasis on evaluating players behaviour and experiences before monetizing it (Davidovici-Nora, 2014).

2.2 The move towards smartphones and social media

Rapid development in mobile technology and broadband internet over the past two decades brought with it adoption of cell phones and furthermore, smartphones. This has given consumers a new way to play online video games with an abundance of on demand options of F2P games (Fields, 2014). Online social networks and mobile platforms have also introduced video games to new consumers. This has spawned a whole new breed of consumers who would not consider spending over \$60 dollars on a retail video game, but seem willing to spend their money on microtransactions in F2P games (Fields, 2014). Playing video games on smartphones and other handhelds devices has taken a large share of the online video game market from other platforms such as the PC and video game consoles like the PlayStation 4 and Xbox One (Fields, 2014). In 2017, the global video game market was projected to generate \$116 billion in revenue, a 10.7% increase from the previous year (Wijman, 2017). Mobile gaming was estimated to have a market share of around \$50 billion or 43% of the global market, becoming one of the most significant segment of the entire video game industry (McDonald, 2017). This has dramatically changed the economics of video games and the monetization strategies that the video game industry uses.

Mobile games rely on microtransactions, sometimes called in-app purchases, where players buy virtual goods and services in exchange for real-world money. Publishers and developers of mobile games have realized that it was harder to acquire new players by charging an upfront fee to acquire and play the game. Publishers and developers then shifted their consumer acquisition strategy to a F2P business model with microtransactions to generate revenue (Tomić, 2017). The F2P model became dominant in the global app store platforms, growing almost exponentially between years since 2011 (Dogtiev, 2018). In 2011, microtransactions in mobile games managed to generate \$712 million in revenue (Dogtiev,

2018). In 2012, this number had doubled, and in 2017 microtransactions in mobile games generated close to \$37 billion in revenue (Dogtiev, 2018). The global mobile app revenue is predicted to generate up to \$189 billion in 2020 (Dogtiev, 2018).

With F2P, a constant contact with players is maintained because they have access to the basic version for free and on demand, as stated previously. F2P revenue flows show greater stability during the business cycle in contrast to the strong seasonal impact when selling premium games for a fixed up-front fee (Tomić, 2017). One advantage of the F2P model is that it wipes out the consumer's barrier to entry and empowers the consumer to decide the value of the game himself, as opposed to having a publisher or a developer making the decision and relying on the consumer's agreement (Davidovici-Nora, 2014).

Many F2P developers are based in markets with direct network effects (Balaji, 2015). Meaning that given a certain number of players playing the game, some will eventually want to purchase a portion of the premium content with microtransactions. Since the barrier to entry has been removed, if the game proves popular enough it is likely to increase its number of active players. Although they are releasing a video game out on the market for free, developers of F2P games are still able to achieve higher revenue, even when most players will never take out their wallets and spend money on microtransactions in the game (Balaji, 2015). In his book "Free", Chris Anderson (as cited in Balaji, 2015) explains that F2P is often called the 5% rule, where only 5% of players are willing to spend money on microtransactions. Some consumers have been referred to as "whales" and those consumers are generally willing to spend a substantial amount of money, upwards to \$500 dollars on average, on a video game during its lifespan (Balaji, 2015). If you increase the number of active players, you also increase the chance of acquiring these whales (Balaji, 2015). So developers model their in-game economy to capture the attention of these whales (Balaji, 2015). Whales account for roughly 50% of all in-game revenue and are in effect subsidizing free access to the game for the remaining 95% of players (Balaji, 2015). Part of the economics behind this model is that video games often have high fixed costs, but the marginal cost of distributing a software product among 100 or 10,000 consumers is nominal (Balaji, 2015).

3 Theory

The theoretical framework in this chapter is meant to give a better understanding of the literature concerning research into microtransactions and loot boxes in particular. The path to understanding microtransactions and loot boxes in relation to business models and monetization strategies starts from beginning to know what they are, how they work, and their implications.

3.1 Microtransactions

The dictionary definition of microtransactions in the Oxford dictionary is: "...a very small financial transaction conducted online." ('microtransaction | Definition of microtransaction in English by Oxford Dictionaries', n.d.). However, in the video game industry they are commonly defined as in-game purchases of virtual goods ranging from \$0.99 to \$99 (Agarwal, 2017). These virtual goods are functional items like weapons or armours; decorative items such as clothes and accessories; downloadable content such as unlocking new maps and features; and what has been criticized for upsetting the balance of video games, tactical in-game advantages (Hamari et al., 2017). In 2016, more than a quarter of video game consumers in the United States admitted to purchasing some form of additional video game content ranging from \$1 and \$20, while 11% of consumers said that they have spent more than \$250 on in-game purchases ('Video game monetization - Statistics & Facts', n.d.). According to The Statistics Portal ('Video game monetization - Statistics & Facts', n.d.), consumer spending on in-game purchases will be roughly \$32 billion in 2020, compared to \$22 billion in 2015.

3.2 The demand for virtual goods

It is clear by now that no game can survive without some kind of revenue stream, particularly F2P games. As mentioned earlier in this thesis, the selling of virtual goods has become a stepping stone in the video game industry. However, Hamari (2015) states that video game publishers do not only sell virtual goods to generate revenue, but also to better meet the wider willingness-to-pay spectrum. Meaning that casual players can acquire the game for free or at low cost, while hardcore players spend progressively more on virtual goods in the game. Video game developers face the problem of creating demand for virtual goods, for instance by creating situations in the gameplay design that increases the likelihood that players would

justify spending their money on virtual goods that are desirable in the players eyes (Hamari, 2015). This is a balancing act where the developer needs to make the game as enjoyable as possible to attract and maintain a playerbase but also try to create burdensome scenarios in the game environment which encourages the player to spend their money and circumvent the inconvenience (Hamari, 2015). Or in other words, less enjoyment may lead to more purchases. However, previous studies have discussed how such inconveniences could also lower engagement and the flow of the game, as well as bias the competition between players (Hamari, 2015). Or in other words, less enjoyment may lead to players no longer wanting to play the game.

The demand for virtual goods is based on the items ability to affect the gameplay either through gameplay advantages or their perceived decorative value (Yoo, 2015). Virtual goods purchased with microtransactions offer a hedonic value to players rather than utilitarian value according to Lehdonvirta (2009), meaning that they provide benefits such as emotional enjoyment or pleasure after the transaction takes place according to consumer behaviour theory ('Hedonic Consumption Definition | Marketing Dictionary', n.d.). Yoo (2015) states that the more players perceive the value of items, the higher the probability that they will purchase those items. Lehdonvirta (2009) points out that players who buy virtual goods report higher levels of immersion in a video game. However, it takes a certain amount of immersion in the gameplay before virtual goods begin to feel demanding enough to purchase (Lehdonvirta, 2009). Lehdonvirta (2009) mentions in his research three attributes that act as purchasing drivers for consumers when they are considering buying virtual goods. Those are the functional attributes, the hedonic attributes and social attributes (Lehdonvirta, 2009). Functional attributes include items that improve the players performance and can therefore grant players an advantage over other players (Lehdonvirta, 2009). This monetization system has been called pay-to-win and has been met with mixed success, but this will be further discussed later in the thesis. Hedonic attributes can generate emotional or hedonic responses (Lehdonvirta, 2009). This is particularly relevant with a virtual good's in-game visual and aesthetic appearance, but also any background fiction, animation or sound affiliated with them (Lehdonvirta, 2009). Lehdonvirta (2009) considers rarity the most socially oriented attribute of virtual goods, because its value is strongly correlated with its ability to distinguish few owners from non-owners. There is no doubt that performance advantages and new functionalities have a strong influence on consumers' purchase decisions (Lehdonvirta, 2009). However, performance is a positional attribute: "If everyone has high performance, no one has high performance." (Lehdonvirta, 2009).

Yoo (2015) studies online video game items in light of the theory of consumer perceived value. According to this theory, consumers make purchasing decisions based on three aspects; functional value, emotional value and monetary value (Yoo, 2015). Functional items that have functional attributes may grant an advantage to a player's character, which is desirable since being more competent than others is important in the eye of video game players (Yoo, 2015). The emotional value refers to the player's social value and feeling of enjoyment towards the game and its virtual goods (Yoo, 2015). Video game players with virtual goods feel high level of control and are motivated to devote more time to the game (Yoo, 2015). The third aspect is the monetary value and refers to the cost effectiveness of virtual goods (Yoo, 2015). If players perceive virtual goods as being cost effective in terms of saving time and money, they are more likely to purchase them (Yoo, 2015). Yoo (2015) also points out in his study that the purchase of virtual goods has a positive impact on the player's playtime, meaning that players are playing the game for a longer period of time. Also increasing the value of virtual goods increases the player's loyalty towards the game (Yoo, 2015).

As an example, Clash of Clans is a F2P strategy game set in a fantasy themed world where the player is a chief of a village. In Clash of Clans mid- and hardcore players spend upwards of thousands of dollars building their village in the game (Rigney, 2012). In an interview by Wired magazine discussing microtransactions in Clash of Clans, one player said that "once you convince yourself to spend two hundred dollars on it, another two hundred dollars isn't that much more." (Rigney, 2012). Another player reported saying that "you are buying your way to the top of the leaderboard with no gaming skill required." (Rigney, 2012). The Helsinki-based developer Supercell, which developed Clash of Clans and other similar video games, generated \$2.3 billion in revenue in the year 2017 (Rigney, 2012). That is a remarkable financial accomplishment for a company that has only released four video games in its seven year life span, and all of them F2P (Rigney, 2012).

3.3 In-game advantages

According to research published by Festinger (as cited in Evers, van de Ven, & Weeda, 2015) on social comparison, players form impressions of themselves by ranking themselves in comparison to other players. They do so by evaluating their performance based on how they rank beside another player (Evers et al., 2015). Hence, if the player is outperforming other players, they feel better about themselves. But if other players are performing better, the player might become frustrated and have negative feelings about themselves. An online video game

that uses microtransactions that give in-game advantages might make the players who bought them better off than other players (Evers et al., 2015). These situations can bias the gameplay and the game environment, resulting in other players unable or unwilling to buy the same advantages, which makes them relatively worse off, frustrated, and often envious (Evers et al., 2015). However, buying in-game advantages is technically fair because the game allows it, and everyone has the option to do so, but it is seen as a shortcut to success that feels undeserved (Evers et al., 2015).

In three studies on three different video game genres, both F2P and premium, it was discovered that players respond negatively towards other players who buy functional in-game advantages (Evers et al., 2015). Those that bought advantages were seen as being less skilled, less liked, and they earned less respect as a result (Evers et al., 2015). However, players do not disapprove the use of real-world money in an in-game environment, only if it makes another player objectively better off (Evers et al., 2015). Players were also less likely to cooperate with another player who bought in-game advantages compared to a player who earned them through gameplay time alone (Evers et al., 2015). Even if the player with the advantages was an ally, teammates still disliked that player (Evers et al., 2015). The reason for this is as mentioned before, teammates reflect badly on themselves since one's own relative standing is lowered in the game (Evers et al., 2015). However, players are tempted to buy in-game advantages if they are confronted with other players who have acquired such advantages (Evers et al., 2015). The players generally approved the use of ornamental or decorative items that did not accommodate in-game advantages (Evers et al., 2015). Furthermore, the study found out that consumers thought ornamental items should be permanent and functional items with in-game advantages should be temporary (Evers et al., 2015). According to a study done by Artz and Kitecheos (2016), it was found that most consumers will not purchase a virtual good if it gave them an advantage in the game. They also found that the majority of consumers think that the use of microtransactions in a premium priced video game is an unfair practice since a premium price has already been paid, and for that they believe they should get the full game with all benefits included. However, a minority felt that the purchase of microtransactions in a premium priced video game is good use of their money because it supports video game developers, particularly indie ones (Artz & Kitecheos, 2016).

3.4 Loot boxes

Loot boxes have been compared to baseball cards, which in the early 90's generated around \$1.2 billion at its peak of sales. Collectors would buy packs hoping it would reveal rare, limited edition cards (Jeff, 2009). Loot boxes function in a similar manner in video games, where consumers are guaranteed to get something from a loot box, though the quality or rarity is unknown. However, one major difference in this comparison is that baseball cards were tradeable in real life, which is not the case with in most cases with loot boxes and the virtual goods that are obtained from opening them. In some video games though, players can digitally trade in-game items and in-game currency for real money in an aftermarket that is run on third party websites (Griffiths, 2018). Or on official player-to-player trading forums, like there is on the Steam platform for video games such as Counter Strike: Global Offensive.

The purchase of loot boxes takes place within online video games and is seen being similar to a lottery mechanism in the virtual world (Koeder & Tanaka, 2017). Consumers purchase loot boxes or virtual keys to unlock loot boxes with microtransactions, and then receive virtual goods by opening or unlocking loot boxes and get a chance selection of available virtual items (Koeder & Tanaka, 2017). However, loot boxes don't always have to be bought and can be won through progression milestones and game time, with different methods in different genres of video games (Griffiths, 2018). These boxes also take the form of packs, crates, chests, bundles and card packs (Griffiths, 2018). For the purpose of this thesis we will only use the term loot boxes. All players wish they can win rare items and are often encouraged to invest lots of money on microtransactions to hit the jackpot (Griffiths, 2018). The chance of winning such items are minimal and commonly unknown, as the developers generally do not publish the odds of winning the items that are available (Griffiths, 2018).

Consumers may perceive the opening of a loot box as a moment of anticipation followed by a release (Wiltshire, 2017). Acquiring new clothes on the avatar in a video game may be a disappointment, but it sometimes offers the emotional pleasure of getting exactly the item the consumer wanted (Wiltshire, 2017). Consumers sometimes find what has been compared to a gambler's pull to open another loot box because that is the moment of excitement that anything is possible (Wiltshire, 2017). That is why loot boxes have caused a controversy in some countries as it is viewed as a form of gambling and that consumers are paying for something that should already be available in the game (Wiltshire, 2017).

Video game industry groups such as the Entertainment Software Rating Board (ESRB) have claimed that loot boxes should not be considered a form of gambling because consumers always receive an item or multiple items from loot boxes, although not always the items that

they wanted (Birch, 2017). Though there is an element of chance in the mechanics of loot boxes, the consumer is always guaranteed to receive something and for that reason loot boxes do not trigger the gambling content descriptor (Birch, 2017). Dirk Bosmans, the operations director for the Pan-European Game Information (PEGI), stated that video game rating organizations cannot define what constitutes as gambling and that such definitions should be the responsibility of national gambling commissions (Palumbo, 2017). For instance, the gambling commission of the United Kingdom does not classify loot boxes as a form of gambling because the items obtained from loot boxes cannot be exchanged for real currency (Hood, 2017). Furthermore, the gambling commissions consider third-party websites, that facilitate the exchange of virtual goods obtained from loot boxes with real currency payments, a form of unlicensed gambling (Hood, 2017). Valve, the publisher for the online multiplayer game Counter Strike: Global Offensive, has successfully sued third-party websites after it was revealed that such websites generated up to \$1 billion in revenue from item gambling in one year (M. Jeffrey, 2016). Because of these controversies the gaming industry has suffered legislative backlashes. In November 2017, the state of Hawaii announced actions to address loot boxes, particularly in EA's Star Wars Battlefront 2 (Good, 2017b). The state's representatives claimed that loot boxes constitute as "predatory practices" which lure under-age kids into gambling (Freedman, 2018). In February 2018, the Hawaii state introduced bills of legislation that would prohibit the sale of video games that include loot boxes to consumers under the age of 21 (Good, 2018). The bill also mandates that publishers specially label video games that includes, in some form or another, loot boxes (Good, 2018). At the time of this writing the status of this legislation is unknown.

4 Methods

The purpose of this thesis is to answer the question: *Why did consumers accept the implementation of loot boxes in Overwatch but rejected the implementation of loot boxes in Star Wars Battlefront 2?* To answer this question, it was imperative to understand the perspectives of the consumers. A qualitative case study method was used, or more specifically an explanatory case study (Baxter & Jack, 2008). A qualitative case study seeks to explore or describe a phenomenon in context using a variety of data sources (Baxter & Jack, 2008). According to Yin (as cited in Baxter & Jack, 2008), explanatory case study is a type of case study that is used if researches seek "... to answer a question that sought to explain the presumed

links in real-life interventions that are too complex for the survey or experimental strategies.”. A few methods were used to gather information for the results.

4.1 Playing the games

Both video games were played by one of the authors of this thesis. The author spent considerable time playing both Overwatch and Star Wars Battlefront 2 to get a better understanding of the gameplay, the progression system and the function of the microtransactions in both video games. Both video games were played on a PC with a Microsoft Windows operating system. The author played Star Wars Battlefront 2 both before and after the update was released on March 21st 2018, which removed the loot crates from the game.

4.2 Interviews

Interviews were taken with an experienced video game critic in Iceland and two professional developers at CCP Games that work on monetization for the video game EVE Online. Both interviews were semi-structured interviews in person (Kajornboon, 2005). Semi-structured interviews are non-standardized, with questions that can be reordered and worded differently depending on the situation, and with the possibility to ask follow-up questions (Kajornboon, 2005). Ólafur Þór Jólsson is the manager of wholesale for Sena, which imports to Iceland the PlayStation systems, video games, DVD's and more. Ólafur is also a host at GameTívi which is an Icelandic television show and an YouTube show about video games. GameTívi has been running for 17 years now and Ólafur has been a host during all those years, reporting on video game news, critiquing newly released video games and providing video game related entertainment of varying kinds. Eðvald Gíslason is a data scientist at CCP and is also a part of a business leadership team that oversees monetization methods for EVE Online. Hafsteinn Halldórsson is a senior software engineer at CCP and is leading a team that implements microtransactions into EVE Online. CCP is a video game developer based in Iceland and is best known for publishing and developing the MMORPG EVE Online. EVE Online has been in continuous development since it was released in 2003.

4.3 Video game reviews

There are many video game critics on the internet and many of them have reviewed Overwatch and Star Wars Battlefront 2. A few selection of reviews were selected to explore the critical reception of the two games.

4.4 Forum discussions

There are a lot of comments on forum websites regarding the loot boxes in both Overwatch and Star Wars Battlefront 2, as well as a lot of discussion about loot boxes in other video games and microtransactions in general. A few comments were selected to express the general consumer view on loot boxes and on microtransactions. All the comments came from forum discussions on the website Reddit, on the subreddits r/Overwatch and r/StarWarsBattlefront which are dedicated to discussion and other related content to Overwatch and Star Wars Battlefront 2 respectively. Comments from other subreddits on Reddit were also used.

A question was laid out by the authors on the forum discussion website Reddit, on a subreddit called r/Games. This subreddit is dedicated for video game news and discussion. The question was titled “Why were the loot boxes in Star Wars Battlefront 2 not ok, and why are the loot boxes in Overwatch ok?”. The authors asked why consumers found the loot boxes in Star Wars Battlefront 2 not acceptable but found the loot boxes in Overwatch acceptable. The authors also asked the users on Reddit to express their opinion on the reactions to the loot boxes in Star Wars Battlefront 2 and Overwatch, as well as asking where they drew the line when it came to microtransactions in video games. This could also be classified as a form of a structured interview because all the users who answered were given the same questions with the same wording (Kajornboon, 2005), although it was not conducted in person and the answers of other users were on display for those users that had not yet given their answer. Some users were also asked a follow up question, which is more common in semi-structured interviews (Kajornboon, 2005).

5 Results

This chapter will go over the results from the gathered information regarding both Overwatch and Star Wars Battlefront 2. There will be a short description for both Overwatch and Star Wars Battlefront 2 and what content is available in them. Next there will be an analysis on the microtransactions in both Overwatch and Star Wars Battlefront 2. After that there will be an overview on opinions on microtransactions and the loot box model, from both the interviews with the professionals mentioned before, as well as comments from the forum website Reddit. There will also be an overview of what comments were made regarding the loot boxes in Overwatch and Star Wars Battlefront 2 respectively. Next there will be an examination on what content was available to players at launch and what comments were made on Reddit regarding the available content. After that there will be an overview of the reactions to the gameplay in the two games by examining reviews, comments of Reddit regarding the gameplay, and by examining published sale numbers. Next will be an overview of the comments that compared Overwatch and Star Wars Battlefront 2 and where Reddit users explained why they thought the loot boxes in Star Wars Battlefront 2 were not acceptable but the loot boxes in Overwatch were acceptable. Finally, there will be some final comments from both the interviews and a summarization of the results.

5.1 Description of the two video games and their content

5.1.1 Overwatch

Overwatch is a first-person hero shooter developed and published by the video game developer Blizzard Entertainment and was released on May 24th 2016. At launch the game sold for \$39.99 for the standard edition or \$59.99 for the special edition on Windows, and for \$59.99 on PlayStation 4 and Xbox One. The special edition included extra items, such as free loot boxes and some free cosmetic items. The game focuses on team based online multiplayer battles where a team of players competes with another team of players over a set objective. The design of Overwatch can be described as cartoony and futuristic, with science fiction technology.

At the start of a new match the players must choose which hero/character they want to play as during that match. The list of characters is extensive and currently bolsters 27 different characters, six of which were released for free after the launch of the game and more are expected to be released in the future. Each character is different from the others in terms of weapons, abilities, and their physical and visual designs. The game currently has 22 different

maps set in locations from all around the globe. Most maps are set in fictional locations but take inspiration of famous real-world locations and architecture. Blizzard Entertainment regularly release new maps for free, so the list of maps and locations is ever increasing. There are currently eight different game modes available in the online multiplayer. Overwatch offers players to play either casually or competitively.

Players progress by playing games, earning experience points and gaining levels as a result, whether players play casually or competitively. The maximum level a player can currently reach is level 2,400. For each level gained, the player is rewarded a loot box which contains cosmetic items to allow players to customize the look and sound of their characters. Credits are usually rewarded instead of a cosmetic item when the player already possesses a cosmetic item that was supposed to be rewarded from a loot box. These Credits can be used to purchase any of the cosmetic items that are available in the loot crates, so long as they are not a part of an ongoing seasonal event. Overwatch has regular seasonal events with special thematic cosmetic loot boxes for each event. The seasonal cosmetic items are only available while the seasonal event is ongoing but can be bought with Credits when the event is over.

5.1.2 Star Wars Battlefront 2

Star Wars Battlefront 2 is a first- and third-person shooter developed by the video game developer DICE and was published by EA on November 17th 2017. At launch the game sold for \$59.99 for the standard edition or \$79.99 for the special edition, on Windows, PlayStation 4 and Xbox One. The game focuses on team based online multiplayer battles as well as offering a single player campaign which tells a story set in the Star Wars universe, though the focus will be on the multiplayer for a better comparison to Overwatch. The design of Star Wars Battlefront 2 can be described as photorealistic and uniquely futuristic, using the designs from other released media set in the Star Wars universe.

In the online multiplayer, players play on the battlefront of battles from the world of Star Wars while fighting for and against different factions from all the different eras of Star Wars: Republic vs. Separatists, Rebel Alliance vs. Galactic Empire, and Resistance vs. First Order. The game has many different maps set during famous events or in famous locations from the Star Wars movies and TV cartoons. EA and DICE aim to continue releasing new maps from different locations in the Star Wars universe as a free update to the game. There are currently seven different game modes available in the online multiplayer. There is no competitive play in Star Wars Battlefront 2, only what can be called casual play.

In ground combat in the online multiplayer, players play as the troopers or heroes from the world of Star Wars. Troopers are categorized into four different classes: officer, assault, heavy and specialist. Players who perform well in battle gather battle points that can be used to spawn in as a vehicle, special unit or a hero/villain (famous characters from Star Wars) which can be played for as long as players keep them alive. Each class of troopers, vehicles, special units and heroes/villains have a multitude of customization options that can be unlocked in the form of Star Cards, skins, emotes or victory poses. EA and DICE aim to continue releasing new heroes, villains and special units from the Star Wars universe as a free update to the game. In starfighter combat in the online multiplayer, players play by piloting starfighters or hero/villain ships in the world of Star Wars. Starfighters are categorized into three different classes: interceptors, fighters and bombers. Each class of starfighters and hero/villain ships have a multitude of customization options that can be unlocked in the form of Star Cards. Players who perform well in battle gather battle points that can be used to spawn in as a hero ship or a villain ship, depending on the faction the players are playing for. EA and DICE aim to continue releasing new hero and villain ships from the Star Wars universe as a free update to the game.

The progression system for Star Wars Battlefront 2 was very complicated at launch, mainly because of the integration of the loot crates with the progression system, but that integration was removed when the progression system was given an overhaul with an update that was released on March 21st 2018. The progression system is based on Star Cards that give either bonuses or boosted abilities. Before the update the only way for players to get better Star Cards for their troopers, vehicles, special units, ships and heroes/villains was to open loot crates and the only way to get more loot crates was to buy them with Credits or Crystals. Credits are the in-game currency that can be earned while playing the game. Crystals are a secondary in-game currency that can be earned by completing specific challenges or can be bought with real world money.

With the progression system update loot crates no longer included Star Cards, only Credits or cosmetics. Loot crates can currently only be earned by logging in daily. Everything players had unlocked from loot crates before the update stayed unlocked, but now each class earns experience when players play as that specific class and each time a player gains a level with that specific class they get a Skill Point for that class. Skill Points can be used by players to unlock new Star Cards or upgrade the ones that players already have, instead of relying on their luck with the loot crates. After the update all heroes/villains and all hero/villain ships that were locked before the update were unlocked for all players. Credits had no use after the

progression update until microtransactions were reintroduced on April 18th 2018. Credits could then be used as a non-monetary option to purchase the new microtransactions.

5.2 The microtransactions in the two video games

Price is an important element of any product since it can greatly influence whether a consumer is willing to purchase the product. The pricing of microtransactions is difficult since it must give the consumer the feeling that he has got something substantial in return for their money, while providing a reasonable return to the game's publisher and developer.

5.2.1 Microtransactions in Overwatch

Overwatch contains microtransactions in the form of loot boxes and League Tokens. Players can purchase loot boxes and League Tokens with real-world money either in the game or on the Blizzard Shop webpage. Loot boxes and League Tokens are used to unlock cosmetic items. There are currently over 2,400 cosmetic items available in Overwatch, with each item categorized into seven different categories: emotes, highlight intros, player icons, skins, sprays, victory poses and voice lines. Every loot box contains up to four cosmetic items and/or in-game credits. Credits can also be used to unlock cosmetic items. Each of the seven types of cosmetic items are categorized into four different types of rarity: common, rare, epic and legendary. Players can use credits to unlock seasonal event cosmetic items when the seasonal event is not ongoing. Credits are only available to purchase with real world money in China because of newly implemented online gambling laws, and each purchase of Credits comes with a complimentary loot box (Frank, 2017a).

The League Tokens are used to purchase team skins for each character in the game. The team skins are based on the team logo and uniform of each Overwatch League team (teams that compete in an Overwatch tournament) and are not available in the loot boxes. Players who register their favourite team in the game menu get access to 100 League tokens. Each League skin costs 100 League Tokens to unlock. If players want to purchase more skins they have to buy additional League Tokens. There are currently 12 different teams with skins for 27 different characters each. If a player wants to unlock every skin, he would have to use 32,400 League tokens. According to Blizzard, 50% of the revenue from the purchases of League tokens goes into a shared revenue pool that is shared between all the 12 teams of the Overwatch League.

5.2.2 Microtransactions in Star Wars Battlefront 2

In the public beta (publicly available testing period before launch) for Star Wars Battlefront 2, the game's progression system was completely tied to their loot crates. This meant that to unlock more weapons, boosters and abilities for each class, players had to either buy Crystals and then use those Crystals to buy more loot crates, or players could earn Credits through gameplay to buy more loot crates (Frank, 2017b). The boosters and abilities came in the form of Star Cards of varying rarity which gave players either bonuses or boosted abilities, with the rarer Star Cards giving better bonuses or boosters (Frank, 2017b). The beta players found the economy of this progression system to be exploitative and made the game a pay-to-win (Frank, 2017b). Players who would buy loot boxes with real world money would progress faster than those who did not and would be more likely to obtain rarer Star Cards with better boosters. Paying players would have an edge over non-paying players. As a response to this criticism EA announced changes to the progression system so that players unlocked new weapons for each class by playing as that specific class and they made some small changes to the nature of the Star Cards (Frank, 2017c). This however was not enough to dispel the concerns of consumers who kept on criticising the loot crate system in the game.

Before the game's launch, the ability to purchase Crystals for real world money was removed, as a response to the criticism of consumers. However, the loot crates remained. The loot crates could be purchased with Credits or Crystals, even though the ability to purchase Crystals was removed. Loot crates contained Credits as well as Star Cards, emotes and victory poses for all the different classes of starfighters, troopers, vehicles, special units, heroes and villains. There were three different purchasable loot crates within the game: Trooper crate, Starfighter crate, and Hero crate. There were also the Daily Login crates, which were given to a player that started the game for the first time each day, and several other achievement specific loot crates. Crafting Parts were usually rewarded instead of an item when the player already possessed the item that was supposed to be rewarded and could be used to unlock or upgrade other Star Cards. All loot crates were removed from the game after the update to the progression system that was released on March 21st 2018, except for the Daily Login crates which currently only contains Credits. The achievement specific loot crates were replaced by rewards for an amount of either Credits or Crystals.

On April 18th 2018, microtransactions were reintroduced to the game, again in the form of the secondary in-game currency Crystals that could be purchased with real-world money. Currently Crystals can only be used to unlock skins for playable characters. Only a few skins

were introduced in the update, but EA and DICE are expected to release more in the future. Skins come in four different rarities: common, rare, epic and legendary. This new microtransaction model will however not be examined in more detail in this thesis, since this thesis will be focusing on the loot box model the game had before launch.

5.2.3 Microtransaction price table for the two video games

The tables below show the price of the microtransactions in Overwatch and Star Wars Battlefront 2. The price of the microtransactions in Star Wars Battlefront 2, like they were going to be before launch, is based on information provided in an article on the Eurogamer website (Purchase, 2017).

Table 1: Microtransactions in Overwatch

Loot Box pack	Price	League Tokens	Price
2	\$1.99	100	\$4.99
5	\$4.99	200	\$9.99
11	\$9.99	400	\$19.99
24	\$19.99	900	\$39.99
50	\$39.99	2,600	\$99.99

Table 2: Microtransactions in Star Wars Battlefront 2 (before launch)

Crystal pack	Price	Type of loot crate	Price in Crystals
500	\$4.99	Hero crate	110
1,000	\$9.99	Starfighter crate	120
2,100	\$19.99	Trooper crate	200
4,400	\$39.99		
12,000	\$99.99		

5.3 Microtransactions and the loot box model

In the following chapters the authors will provide a summary of two interviews conducted with two employees of the game developer CCP, and a prominent video game critic and TV presenter in Iceland. A summary will also be provided of discussion threads on online gaming forums found on the forum website Reddit.

5.3.1 Interviews

For the purposes of this thesis the authors conducted interviews with two employees of the video game developer CCP Games, Eðvald Gíslason and Hafsteinn Halldórsson, and a prominent video game critic, Ólafur Þór Jólsson.

Eðvald and Hafsteinn made extensive comments about how important the implementation of microtransaction models in video games is for the success of the game. According to them, CCP tries to avoid any implementation of monetization methods that would have a negative effect on the player experience in EVE online. When asked if the rising cost of developing video games was the driving force behind the implementation of microtransactions in P2P games, Hafsteinn said that it partly explains it. Eðvald believes that the rising cost of developing video games is mainly because of the growth of the video game industry. Eðvald said that:

You grow up playing video games and you never really stop. More and more people are playing video games. It has become a bigger industry than the movie industry. To be competitive, developers must spend more money on making their games better and more graphically impressive. Microtransactions are not necessarily compensating for a higher upfront cost of buying video games, but it is mainly the video games with the F2P model that need it to make the games financially viable. (E. Gíslason, personal communication, March 21, 2018).

Hafsteinn also mentions that the video game industry has changed because the bigger publishers and developers are not willing to take big risks by developing very expensive video games. Microtransactions can instead give extra revenue that can keep these companies operational for a longer period. “When people ask why more developers don’t develop bigger and better games, it’s because it’s such a big risk. If you fail once you can go bankrupt. You have to have something extra in case of emergencies.” (H. Halldórsson, personal communication, March 21, 2018).

Microtransactions can be good for a video game that has a continuous development, but it depends on the implementation, according to Hafsteinn. “If it is well implemented it can be very good. If it is badly implemented it can be very bad. It needs to be implemented with care to make it work.” (H. Halldórsson, personal communication, March 21, 2018). Video game developers and video game publishers ultimately want to use monetization strategies to increase revenue and according to Hafsteinn, microtransactions can be useful to that end. “The best thing you can get out of a video game, when it comes to monetization, is uncapped spending. Meaning that if someone wants to spend \$10,000 or more, then there is something he can spend \$10,000 or more on within the game.” (H. Halldórsson, personal communication, March 21, 2018). This means that there would be no limit on how much each player can spend on microtransactions. However, designing monetization strategies that allows for uncapped spending is easier said than done. Hafsteinn mentions that it is easy to design vanity items, like skins, but determining the price for these items can take a long time. Eðvald says that:

This is very hard for us especially, for EVE Online, because we have to make sure we do not damage the economy in the game, make sure the community is happy with it and make sure vanity items are compliant to what the art director says. No Hello Kitty skins for ships, it would break the immersion. There are a lot of constraints that need to be worked around and because of that there are a lot of different people from a lot of different departments that work on monetization. (E. Gíslason, personal communication, March 21, 2018).

Ólafur Þór Jóelsson, a video game critic, is a firm believer that when consumers pay for a fully priced game they should get a complete experience within the game and an experience that lasts for a while. Ólafur thinks that microtransactions are fine in F2P games and even in very low-priced games because the game is either free for all users or extremely low-priced. He adds that purchasing ornamental or decorative items to distinguish players from other players is completely justifiable. He also believes that video games should provide some kind of value in return for the microtransactions. Meaning that video game developers and publishers should not just implement microtransactions to get more revenue from their existing playerbase but should use that revenue to continue development on the video game by adding more value to the game for all players to enjoy, whether they pay for microtransactions or not. But in his opinion, it is up to the consumers to decide if a video game provides enough value in return for microtransactions. Ólafur also mentioned that he has seen a problematic side to microtransactions while working at Sena, as a service agent for PlayStation in Iceland. He has

had to deal with situations where children have spent tens, hundreds or even thousands of dollars on microtransactions from their parents' credit card. Ólafur has also seen that even though most of these games have age restrictions they are still being played by children. According to Ólafur, these children have access to microtransactions and can be easily manipulated by them, trying to look better or becoming stronger compared to their friends.

When asked about their professional opinion on the loot box model, Hafsteinn said that it is usually good for giving a fast injection of revenue for the developers, but that community sentiment towards it would always be negative. He also said that:

Nobody is happy with it for the long term. If you think you will only have players that will play the game for three to four months max, it's fine, you can use it to milk money from them. But if you have a game that is supposed to run for a long time, then you don't want to have it, because people are not happy with it. (H. Halldórsson, personal communication, March 21, 2018).

Eðvald also says that the psychological effect of the gambling mechanic in loot boxes is the reason for why it works so well at first. According to Hafsteinn, it is entertaining for players to begin with but becomes more tedious later on when players start getting more items that they are not interested in or are getting the same items they already have. They say that loot boxes might work for a developer that knows that their player retention on a game is only three to five months. However, for games like EVE Online which have active players that have been playing up to 15 years straight, proves risky and might put the relationship with the players in jeopardy and fear of losing them. Hafsteinn says that:

There is often a rule of thumb which says that if a game that has been running for several years, and suddenly introduces loot boxes into the game, then it has been decided to shut down the game after six to nine months and to try to get as much money as possible from the remaining playerbase. (H. Halldórsson, personal communication, March 21, 2018).

When asked about the loot box model, Ólafur stated that he does not like the gambling effect of loot boxes. He thinks that earning items through gameplay is more important than earning items by paying for a chance at getting those items. Ólafur however doubts that the algorithm behind the loot box models is always working with a fair random chance.

5.3.2 Forum discussions: Loot boxes

On the forum website Reddit there are a lot of comments that discuss the matter of loot boxes. On a subreddit called r/OutOfTheLoop, there was a discussion on what loot boxes are and why everyone is referring to them as gambling. In this thread, one commenter with the username ForOhForError (2017) said that the loot box model had "... lost a lot of goodwill for being included in full-price games as it's seen as greedy at that point.". Rainbowbloodunicorn (2017) responded by saying he/she thought that the way Overwatch does loot boxes was acceptable since he/she did not find them intrusive. Tianoccio (2017) responded, saying that Overwatch was just a Skinner box, meaning it was designed as an operant conditioning chamber for the express purpose of making players want more loot boxes. One other commenter with the username soulreaverdan (2017) said:

You're not paying for a specific item or pack of items, you're paying for a *chance* at an item, with no guarantee of getting what you want. And while some argue this is okay for free-to-play games, as this is how they tend to make their money back, the fact that it's being included in AAA-tier \$60+ dollar games is leaving a really bad taste in some players' mouths.

On another thread in the r/OutOfTheLoop subreddit, users discussed why loot boxes became so hated in recent years. User MrCapitalismWildRide (2018) says that Overwatch is the reason because it was the first fully priced video game at \$60 that had fully integrated loot boxes into the gameplay loop, which other video game developers and publishers took notice of. Another user comments that one thing he/she feels that is contributing to the hatred of the loot box model is that it seems video game developers and video game publishers show no sign of stopping if there is no serious sales decrease or new law to restrict the implementation of loot boxes (OvertOperation, 2018).

Other comments were similar in nature, and more often than not expressing their dissatisfaction with the loot box model. Two points are regularly mentioned as a reason for the dissatisfaction. One being the fact that loot boxes only give a random chance at getting specific virtual goods, and the other being that loot boxes are sometimes implemented in video games that have already been purchased at a premium price. Though some do not concern themselves with loot boxes, so long as they do not feel them to be intrusive.

5.3.3 Forum discussions: Loot boxes in Overwatch

On the subreddit called r/Overwatch, which is a subreddit dedicated to Overwatch related content and discussion, the attitude towards the loot boxes in Overwatch seems to be generally positive. In a thread discussing the decision of ESRB, the Entertainment Software Rating Board which assigns age and content ratings for video games and apps, to declare loot boxes as gambling, commenters did not seem to agree that the loot boxes in Overwatch should be considered gambling. User Omenoir (2017) stated that he/she believes that the loot boxes in Overwatch are easily obtained and that it is a generous system in comparison to Star Wars Battlefront 2. CookieDoughBlast (2017) comments “I don't really know about other games, but Overwatch's loot boxes don't really feel like gambling to me? You don't have to spend money on them and you can obtain them just by playing the game.”.

On another thread in the Overwatch subreddit there was a discussion on Blizzard's CEO statement that he thinks that Overwatch's loot boxes did not belong in the loot box controversy caused by Star Wars Battlefront 2 in the fall of 2017. User TheBionicBoy (2017) made a comment in agreement that since loot boxes can be earned through gameplay, the items are only cosmetic and there is no market where players can trade items between themselves for money. User mendia (2017) commented:

The most important thing about Overwatch's loot boxes is that they don't feel intrusive to me. I feel they're earned at a very fair and rewarding rate in the game just by leveling up, and the weekly arcade loot boxes make it even better. When I buy loot boxes in OW it is because I want to and not because I feel like I have to.

Another user provided similar thoughts as TheBionicBoy and mendia but added that he/she feels that the loot boxes in Overwatch are not blatantly gambling-based systems like some others (zumoro, 2017). However, not all users on the Overwatch subreddit have a positive view on loot boxes. In a thread where one user praised Overwatch for doing loot boxes right, user 5575685 (2017) commented that there is no way to do loot boxes right and that Overwatch's loot boxes were just the least “shitty” way to do it. User yawkat (2017) comments on Overwatch's loot boxes:

You still can't reliably get skins, even for money. Coin rewards are tiny, you basically have to rely on luck beyond one or two event legendaries per event.

It's better than in many other games, sure, but it's still gambling and sucks.

Another user commented that loot boxes should be left in F2P games and mobile games but should not be included in a fully priced games (KanyeFelloffAfterWTT, 2017).

There are a few things that can be taken away by these comments. Most players feel that the loot boxes in Overwatch are acceptable because they feel that the items in the loot boxes are inconsequential to the gameplay experience and that earning loot boxes without paying money is easy enough for them, which is also a factor why they feel that the loot boxes in Overwatch are not gambling.

There are some players who believe that the loot boxes are not an acceptable way to purchase virtual goods, although they are in a minority when it comes to the discussions in r/Overwatch. These players say that they prefer to be able to purchase straight what they want to buy and not just a chance of getting what they want, which is what the loot box system does. They spend money to get a chance of getting what they want, and that is what makes them feel like the loot boxes in Overwatch are not acceptable. Some even want to get rid of all microtransactions from the game since it is a premium priced video game.

5.3.4 Forum discussions: Loot boxes in Star Wars Battlefront 2

Star Wars Battlefront 2 had a markedly different reaction when their loot box model was explained in more detail a few weeks before launch. After the public beta for Star Wars Battlefront 2, the beta players criticised the game as they found the economy of the progression system to be exploitative and that it made the game pay-to-win (Frank, 2017b) since players that bought loot boxes with real world money would progress faster than those who did not and would be more likely to obtain rarer Star Cards with better boosters. Paying players would have an edge over non-paying players. As a response to this criticism EA announced changes to the progression system and some small changes to the nature of the Star Cards (Frank, 2017c). However, as mentioned before, it was not enough to dispel the concerns of consumers who kept on criticising the loot crate system in the game.

There was a thread created on the r/StarWarsBattlefront subreddit, which is a subreddit dedicated to the Star Wars Battlefront game series, related content and discussion. This thread was created after the beta for Star Wars Battlefront 2 was over, in October 2017. In this thread user CosmoZombie (2017) detailed why he thought the loot crates, like they were before launch, were terrible. CosmoZombie (2017) said that, while ignoring whether or not the loot crates were pay to win, the loot crates were “... actively detrimental to the experience of the game”. CosmoZombie (2017) stated (RNG means random number generator):

As it stands, the system is really more a loot system than a progression system, because player ability and score don't affect your level and equipment. Instead,

your class's level, and thus the number of abilities you're able to use, is based on cards primarily obtainable through the crates. Progression shouldn't be RNG based. It should be purely based on the score you earn with each class. Crates should be extras, not a requirement for anything. As it stands now, they're a requirement for everything. This is unsatisfying.

CosmoZombie (2017) also said that he/she has never seen a monetization system and a progression system like in the beta for Star Wars Battlefront 2, not even in "the worst F2P game". Mostly everyone in this discussion thread agreed with CosmoZombie.

There were many more threads created in the r/StarWarsBattlefront subreddit where there was a discussion criticising the loot crate system in Star Wars Battlefront 2. In one of those threads, one user stated that if the game had been a F2P game he would not have said a word about the system (Hive51, 2017). On another thread on the subreddit there was a discussion on F2P monetization models in general. The most upvoted comment on the thread was made by the user ZaelART (2017), and ZaelART's comment is as follows:

I've felt very uneasy playing a lot of recent titles, I feel like design choices are not centred around fun and my entire experience has been curated by a team of psychologists to try and fleece me. The sad part is, I don't think I'm being paranoid.

There were many more threads created in the r/StarWarsBattlefront subreddit where there was a discussion criticising the loot crate system in the beta for Star Wars Battlefront 2. Most of them with the same criticism as written above, or mostly filled with angry comments with no detail on exactly what about the system made them angry. The players of the beta felt like they were being forced to engage in the loot crate system since it was a necessary part of the progression system in the game. Since the loot crates contained boosters and better equipment, it made players feel that those who would buy more loot crates would overpower those who did not want to. This would have had a detrimental effect on the gameplay experience for those underpowered players. The fact that the random chance element of the loot crates meant that the progression would be random did not sit well with players either. This reaction is in line with the research done by Evers et al. (2015) and the research done by Artz and Kitecheos (2016) that was mentioned earlier, where players felt negatively towards virtual goods with in-game advantages and also towards the players who bought them.

5.4 Content accessibility

How much content is accessible within the video game can have a dramatic effect on what consumers think of the video game. Gating of content is when not all the content of a video game is available to every player immediately. The gating of content that is important to the gameplay is usually seen as a bad thing. In *Overwatch*, all characters and all maps were available to all players immediately, and every new character and map that was added to the game after launch was also available for free for all players. The only content that is not immediately available to all players are the cosmetic items in the loot boxes, which have no effect on the gameplay.

A few days before the launch of *Star Wars Battlefront 2*, players noticed that some famous heroes were being gated. Famous characters like Luke Skywalker and Darth Vader were locked for all players and had to be unlocked with Credits. One Reddit user, TheHotterPotato, decided to calculate how much time it would take to earn enough credits by playing the game, just to unlock Luke Skywalker. TheHotterPotato created a thread on the *r/StarWarsBattlefront* subreddit and detailed his/hers calculations which showed that it would take about 40 hours to unlock just Luke Skywalker, that is if the player did not use any Credits to get loot crates or unlock any other heroes (TheHotterPotato, 2017). This sparked an outrage on the *r/StarWarsBattlefront* subreddit. In the thread created by TheHotterPotato, user Admiral_Petty (2017) expressed his concern that this extreme amount of time needed to unlock just one hero made him feel that unlocking everything in the game was an insurmountable goal without paying for loot crates. On the same thread, user IshouldDoMyHomework (2017) said that EA has made it clear that they would stop at nothing just to maximize their profits.

Four days before the release of *Star Wars Battlefront 2*, there was a discussion thread created around a video where video game journalists took a look at the microtransactions in *Star Wars Battlefront 2*. The thread was titled “Gamespot purchases \$100 worth of loot crates, ends up with less than half the amount of credits needed to unlock Darth Vader and Luke. 40 hours or \$260 to unlock one of the main characters in *Star Wars*.” (SerPounce218, 2017). In this thread players were outraged that it would take \$260 to be able to unlock just one hero in the game. User drmojo90210, with one of the most upvoted comment on the thread, thoroughly detailed why he/she thought this was unacceptable. This user commented that the randomized reward was the most egregious part of this monetization model because players had to use real money to buy a chance at getting some unknown number of Credits, which was necessary if players wanted to unlock these locked characters immediately (drmojo90210, 2017). The user also comments that since EA controls the algorithm that controls what comes out of the loot

crates, they could theoretically change the algorithm so that players had a lower chance at getting certain items, without telling anyone and with zero transparency (drmojo90210, 2017). User drmojo90210 (2017) also added that “... even Vegas casinos have their game probabilities regulated by the government and they have to tell you what the relative odds and payouts are up front BEFORE you hand over your money.”.

User MBMMaverick (2017) created a thread on the r/StarWarsBattlefront subreddit complaining that he/she could not play as Darth Vader, despite having spent roughly \$80 on Star Wars Battlefront 2’s Deluxe Edition. A representative from EA’s Community Team commented on this thread stating that “The intent is to provide players with a sense of pride and accomplishment for unlocking different heroes.” (EACommunityTeam, 2017). The response only exacerbated the situation and EACommunityTeam’s comment ended up becoming the most downvoted comment in the history of Reddit, with more than 668 thousand downvotes (Schreier, 2017b). Bad publicity regarding Star Wars Battlefront 2 and its loot crates was widespread during the weeks before launch and just hours before the game was released, EA announced that they were removing the ability to buy the in-game currency Crystals but would reinstate the ability at a later date (Frank, 2017d).

5.5 Gameplay

Gameplay is arguably the most important element of a video game since it is what makes a video game a video game. The term gameplay encompasses the features and mechanics that are accessible to players in the video game to manipulate in their aim to progress, either in a linear single player or in competition with other players in a multiplayer setting. To determine if the gameplay is good or not, it is helpful to take look at what video game critics and players have to say about the game at launch. This can directly impact how many units are sold of each video game and is also a good indicator of how popular a game is.

5.5.1 Overwatch’s gameplay reaction

Overwatch released with an overwhelming positive reaction, scoring 91 out of 100 on Metacritic based on 63 reviews on the PC platform (‘Overwatch’, n.d.). In their review, Polygon praised Overwatch as a masterfully designed game but criticized its progression system and the need to join friends for maximum enjoyment of the game (Frushtick, 2016). In their review, IGN called the game an incredible achievement in multiplayer shooter design and

even ended up naming *Overwatch* as IGN's game of the year in 2016 (Ingenito, 2016). Daniel Tack (2016) at Game Informer praised *Overwatch*'s gameplay, describing it as dynamic and constantly chaotic. Tack (2016) also said that the gameplay was dramatically different from one character to another. "It's fresh and consistently fun, with matches that are great in random groups, but astonishingly good when played with friends.". Phil Savage (2016) at PC Gamer felt that *Overwatch* was one of the best new multiplayer shooters to arrive in years and believed that the game would only get better with Blizzard continuous development.

On Reddit, on the subreddit called r/Games, which is subreddit for information and discussions on video games, there was a discussion on the review scores that *Overwatch* had gathered, in May 2016. User DemonEyesKyo (2016) praised the game, saying that the game was easy to play, that everything felt really intuitive and polished, and that the gameplay was super fun. User anduin1 (2016) felt that the game did not deserve a 10/10 review since the game was not perfect but still felt that the game was a good "pick up and play kind of game", meaning that it was easy start the game and play a few rounds for a short time.

Overwatch sold well and had gathered seven million registered players within a week, who had already played a combined 119 million hours of the game (Nunneley, 2016). Blizzard's CEO Mike Morhaime also said that they saw a lot of love and support from fans of Blizzard, fans of first-person shooters and people who had never played a game like this before (Nunneley, 2016). The game has received continues updates from Blizzard and has continued to sell well since launch. The latest numbers from Blizzard from October 2017 stated that *Overwatch* had reached 35 million registered players, up from 25 million in March 2017 (Brian, 2017).

5.5.2 Star Wars Battlefront 2's gameplay reaction

Star Wars Battlefront 2 was released with a mediocre reaction, scoring 68 out of 100 on Metacritic based on 61 reviews on the PlayStation 4 platform ('*Star Wars Battlefront II*', n.d.). In their review, Polygon praised its audio and world design, saying that the world was a believable reproduction of the *Star Wars* universe, but criticised the game's economy and lacklustre gameplay (Tach, 2017). Heather Alexandra (2017) at Kotaku felt that the gameplay in *Star Wars Battlefront 2* was oddly paced, with fast movement and swift controls but also with a high time to take down enemies. Alexandra (2017) said that it took time to get used to this but in the end, it became enjoyable. But Alexandra (2017) felt that the enjoyment was hindered by the progression system of the game. According to Alexandra (2017), the game delivers excitement but has also some of the most insidious and predatory design decisions of

recent years that crush the excitement. Andrew Reiner (2017) at Game Informer partly praised Star Wars Battlefront 2, calling it big, bombastic and fun. Reiner (2017) also praised the game's different game modes and all the maps that were available. However, Reiner (2017) felt that the microtransaction model in the game created an uneven battlefield that gave those willing to spend real-world money on microtransactions an edge over players that would not. Tyler Wilde (2017) at PC Gamer said in his review of Star Wars Battlefront 2 that the progression system was a disappointment, but it had not ruined his enjoyment of the multiplayer and that the game was a spectacular and occasionally very fun tour of Star Wars battles.

On Reddit, on the subreddit called r/PS4, a subreddit for information and discussions on video games that release on the PlayStation 4 console, there was a discussion on Star Wars Battlefront 2 right after it launched in November 2017. User chjiokap (2017) said that the multiplayer in Star Wars Battlefront 2 was very addictive and fun but was held back by its progression system. User Stormtrooper512 (2017) had similar views, saying that Star Wars Battlefront 2 was actually a good game, the progression system aside. The same view was expressed by some on this thread, but not all.

At the end of the third quarter of EA's fiscal year, the holiday quarter, Star Wars Battlefront 2 had shipped only nine million copies compared to the previous Star Wars Battlefront's 13 million copies in 2015 (Prescott, 2018). Number of copies sold and revenue from the game was both lower than EA had wanted, and they stated that they would need to sell another 1-3 million copies by the end of their fiscal year at the end of March (Sarkar, 2018). There is no news on whether EA managed to reach this sales goal.

5.6 Comparing Overwatch and Star Wars Battlefront 2

The authors of this thesis decided to create a thread on the r/Games subreddit. In the thread the authors asked users why they thought that consumers were unhappy with the loot boxes in Star Wars Battlefront 2 but accepted the loot boxes in Overwatch. The authors also asked users where they drew the line when it came to microtransactions. The thread got 34 responses from users and most had similar responses to the questions.

User DeadlyFatalis (2018) commented that he/she thought the reason for the different reactions was that the loot boxes in Star Wars Battlefront 2 had things that directly affected the gameplay, while the only things players could get from Overwatch's loot boxes were cosmetic items. DeadlyFatalis (2018) also said that he/she draws the line that there cannot be anything that can directly impact gameplay in a loot box, especially in multiplayer games. User

Eggz_Benedikt (2018) commented something similar, saying that Overwatch's loot boxes only rewarded players with cosmetic items which have no effect on gameplay, while Star Wars Battlefront 2's loot boxes included boosters, unlocks, hero rate increases and more that affected how the game could be played and enjoyed. Eggz_Benedikt (2018) also adds:

That's the line, really; if you're going to employ rewards that can be bought with real money, then they shouldn't affect the game at all as it puts those people who have already paid for the game and do not want to pay for more in-game items, behind. Once you start tucking those types of things behind a paywall that's where you begin to have problems.

User lostquotes (2018a) has a different opinion, saying that he/she does not think that the loot boxes in Overwatch are ok and thinks they are especially predatory because of Overwatch's seasonal events that have items that are only available for a limited time. When asked a follow-up question on what kind of microtransaction system he/she would prefer in Overwatch, lostquotes (2018b) said that he/she would prefer to be able to use real money to purchase skins he/she wants without having to depend on being lucky with loot boxes.

In my opinion, if you're spending actual money you should be able to be certain that you're going to get the one thing that you want. Instead, with Overwatch, you're paying for a random chance at getting the thing you want (lostquotes, 2018b).

User PositronCannon went into great detail on his/her thoughts on the matter. PositronCannon (2018) says similar things to the others regarding the loot boxes in Star Wars Battlefront 2 and Overwatch, that is Star Wars Battlefront 2 had gameplay altering elements in their loot boxes and Overwatch had cosmetic content in their loot boxes that doesn't affect the gameplay. PositronCannon (2018) adds that he/she didn't like the progression system in Star Wars Battlefront 2 since it included upgrades in the form of boosters that increased damage and other stats for players. "The fact that those upgrades are in loot boxes is just adding insult to injury." (PositronCannon, 2018). When it came to microtransactions in general, PositronCannon (2018) comments that he/she doesn't personally care about cosmetic microtransactions but doesn't like it if the content alters gameplay or gives any sort of advantage in a competitive multiplayer gameplay. PositronCannon (2018) says that he/she is more lenient on microtransactions in cooperative games but still doesn't consider it fun if someone can buy themselves so much power that they could easily beat a cooperative game by themselves. He/she also says that he/she doesn't care about microtransactions in single player games as long as it's not a case of splitting the video game into little pieces to sell separately or becomes too time consuming to

try to sell progression boosters (PositronCannon, 2018). PositronCannon (2018) ends his comment by stating:

There's also the argument of loot box systems versus being able to buy things directly. My knee-jerk reaction is to say loot boxes are terrible because RNG should never be involved in purchases with real money. However, on a strictly personal level, as someone who never spends money on microtransactions of any kind, I actually prefer loot boxes because they actually give me a chance to get things for free. But of course, there's the whole gambling consideration, so maybe a mixed system where you can use in-game currency to open loot boxes and be able to buy things directly would be the best compromise.

Eðvald believes that the gating of characters in Star Wars Battlefront 2 was the biggest reason why the game had such a negative reaction to their loot box model. Eðvald thinks that the premium price for the game itself and then the fact that some powerful heroes had to be unlocked with a high amount of in-game currency was the biggest reason why consumers were not happy with EA. "When you have bought the game and then start it you realize you need to spend more money if you want to play as Darth Vader right away." (E. Gíslason, personal communication, March 21, 2018). Eðvald thinks that the reason why there was no negative reaction to the loot box model in Overwatch was because the game was cheap and there was no gating in terms of heroes or maps. "When you spend this much money on a game you demand that you get the full experience in return for the money you spent." (E. Gíslason, personal communication, March 21, 2018).

Ólafur stated that he thinks that the main reason for the negative reaction to Star Wars Battlefront 2's loot box model was EA's bad reputation. "They were like a rope walker slowly losing their balance even before Battlefront 2 came out. Then when it came out they fell to the ground." (Ó.Þ. Jóelsson, personal communication, March 7, 2018). Ólafur thinks that when designing Star Wars Battlefront 2 the designers went too far with their loot box model and mechanics, being able to buy increased power. However, when it comes to Overwatch, Ólafur thinks that Blizzard delivered a quality product with a better loot box model, being just cosmetic. "Star Wars Battlefront 2 was just a pay-to-win system, while Overwatch you could choose not to buy and be unaffected." (Ó.Þ. Jóelsson, personal communication, March 7, 2018). Ólafur also thought that Star Wars Battlefront 2 was, at launch, a total rip off. He felt that having to pay \$60 and paying for microtransactions with pay-to-win elements was not a good value for him as a video game player.

5.7 Final comments

According to Eðvald, the loot box model has been working well for some developers so far, but it has become too risky because countries and states within the U.S.A. are starting to consider legislating the loot box model. “The process of making loot boxes illegal has started in Germany and the U.K. It’s because it is online gambling.” (E. Gíslason, personal communication, March 21, 2018). For example, Hafsteinn mentions games from Valve, where players can unlock loot boxes by buying keys and then sell the items they get on the Steam Marketplace. According to Hafsteinn, this ability to trade in-game items for real-world money gives these items a real-world value which makes their loot boxes real gambling. “The rules say that this is not allowed, but Valve somehow gets away with it.” (H. Halldórsson, personal communication, March 21, 2018), at least for now.

However, different markets demand different things. Hafsteinn mentions that the video game market in Asia is totally different when it comes to consumer perception of microtransactions. “One thing they do over there, which we westerners do not understand is the renting of in-game items for three, five or seven days.” (H. Halldórsson, personal communication, March 21, 2018). This means that players do not pay to own items but only to use them for a limited time, which is a form of uncapped spending. Gifting is also a big thing in Asia according to Eðvald, where players buy in-game items for the specific purpose to give it as a gift to others. “It is heavily dependent on regions what you can get away with when it comes to monetization.” (E. Gíslason, personal communication, March 21, 2018).

Ólafur stated that he thinks that microtransactions in P2P video games is here to stay. Ólafur believes that the actions of EA with Star Wars Battlefront 2 has started a necessary discussion on what microtransaction models are unacceptable, both regarding consumer views and laws. “There will be legal discussion in many places and maybe even legislation in some, and I think that is ok.” (Ó.Þ. Jólsson, personal communication, March 7, 2018). He also hopes that this discussion will make parents more aware of these microtransactions. “I’m old school. I’ve been playing video games for almost 35 years and I prefer paying once and getting the whole experience.” (Ó.Þ. Jólsson, personal communication, March 7, 2018). However, Ólafur says he understands why microtransactions were implemented and why they are not going anywhere anytime soon. “It is expensive to make video games. If you ever watch the credits for a video game you will have to watch for 10 or 15 minutes, it is that long. Those people need to be paid.” (Ó.Þ. Jólsson, personal communication, March 7, 2018). But Ólafur feels that the microtransactions need to be fair to everyone and consumers must make themselves heard by developers when they are unhappy.

5.8 Summary

When comparing the loot box model in *Overwatch* to *Star Wars Battlefront 2*, the general consensus seems to be that the reason why it was relatively well received in *Overwatch* was because the loot boxes only contained cosmetic items, while *Star Wars Battlefront 2* had a negative reaction do to the fact that the loot boxes contained functional items with performance enhancing elements. The gating of characters in *Star Wars Battlefront 2* seems to have also played a big part in the negative reaction to the game just before launch. There are some other factors mentioned that might have had an effect on the reactions of the consumers, like the gameplay experience for the players, weariness of microtransactions in premium priced video games, the publisher's and developer's reputation, and in what regions the games were most popular.

6 Discussion

Comparing the implementation of loot boxes in Blizzard's *Overwatch* and EA's and DICE's *Star Wars Battlefront 2*, it is clear that Blizzard's implementation was a comparatively better design. Most players in *Overwatch* either accept or feel indifferent towards loot boxes in the game since they do not directly affect the gameplay. On the other hand, it has been well established that video game consumers are on average not fans of the ability to buy in-game advantages. It can therefore be argued that EA and DICE made a mistake when designing *Star Wars Battlefront 2*, by making a loot box mechanic that contained in-game advantages. EA has even acknowledged that the loot crate controversy was a large part of why *Star Wars Battlefront 2* fell short of the publisher's sales goal (Sarkar, 2018). That does not mean that publishers and developers must exclude microtransactions that include in-game advantages entirely. That question depends on many factors, for example, if *Star Wars Battlefront 2* had been launched as a F2P game, consumers might not have responded in such a negative manner to the design of the loot box model. It could also be argued that the gating of characters was a mistake, as the forum discussions described in the preceding chapters have shown, it made the players feel like they were being forced into conducting microtransactions to gain access to content that should have been made available without resorting to microtransactions. EA's reputation might also have been a factor as the company had garnered a reputation as a greedy corporate machine and was voted the worst company in the United States in the years 2012 and 2013 (Tassi, 2017). Although EA's reputation had improved in recent years, with the less than successful launch

of a Mass Effect sequel in 2017 and the sudden shutdown of a video game studio in October that was developing a single player Star Wars game, the reputation of EA had started to suffer again. The implementation of the loot box model in Star Wars Battlefront 2 only aggravated the decline of the company's reputation (Tassi, 2017).

EA and DICE did follow some established practices with their original microtransaction model. They designed a hindrance like Hamari (2015) suggests, in the form of gated characters and random chance progression system, to create a demand for loot crates. The social attribute of rarity, as mentioned by Lehdonvirta (2009), becomes prevalent because of the random chance inherent in loot boxes. But the random chance is also an annoyance to those who just want one specific item, and do not want to gamble their own money on whether they can get it or not. Therefore, the hindrance proved to be too great as the loot crates were a necessary element to be able to progress within the game. The fact that the items you got from the loot crates were based on a digital lottery mechanic also made it uncertain how much Credits or money players would have to spend to progress within the game, or to receive a desired item. To sum it up, EA and DICE pushed the envelope and took things too far, resulting in a luck-based pay-to-win system with limited access to iconic characters. This is why consumers rejected the loot box implementation in Star Wars Battlefront 2.

Then there is the argument that loot boxes are a form of gambling. According to the Dutch Gaming Authority, the way loot boxes are implemented could make loot boxes a form of gambling, with some game developers being issued a warning to change their loot box design ('Populaire games overtreden gokregels', 2018). The Belgian Gaming Commission has determined that some video games have loot box mechanics that are subject to Belgian gambling laws and that they are illegal and should be removed, with a possible punishment of a prison sentence or a fine (Yin-Poole, 2018). With more national regulatory agencies taking a stronger look at the loot box mechanics in video games, and with increasing scrutiny from consumers and parents, it is possible that the loot box model is becoming a less favourable method of implementing microtransactions. Even Star Wars Battlefront 2 has moved away from the loot box model and has instead focused on directly selling virtual goods to players, although that might be damage control rather than totally abandoning the model. There is still a lot of discussion and research going on regarding loot boxes, with no way of telling what the final results may be, whether they will ultimately be deemed as gambling or not.

Video games are a form of entertainment and their most basic objective is to provide entertainment to consumers. For this reason, microtransactions must be designed carefully and with precision. For the publisher and developer to receive enough returns on their investment,

there must be a way for them to induce players into conducting microtransactions without having it seem burdensome or negatively impacting the gaming experience. The fact that there is now a website that is dedicated to reviewing what video games have microtransactions and in what form shows that it is very important subject to consumers (Pretty Good Gaming, 2018). As this case study has shown an example of, if the microtransactions get in the way of the experience, consumers could become less likely to buy microtransactions or even the game itself.

7 Conclusion and recommendations

Consumers have accepted the loot box model implementation in Overwatch because the loot boxes only contain cosmetic items that do not affect the gameplay and because players have access to every character immediately. Conversely, consumers rejected the loot box model implementation in Star Wars Battlefront 2 because the loot boxes contained items that gave an in-game advantage and because some characters were not accessible to players immediately. These are the main factors that stood out, but there might be other factors that contributed to the result as well, such as pricing of the games, the reputation of the publishers and the enjoyment players derived from the game. This is something that could be studied in greater detail.

Video game developers and video game publishers should conduct a closer examination of research that has been done on microtransactions and how consumers view them before implementing microtransactions in video games that they are developing. It is recommended that publishers and developers analyse the mistakes that their competition makes with their video games to avoid making the same mistakes. It would also be wise that publishers and developers conducted their own research on how their consumers view microtransactions and what they prefer. It is important to listen to the consumers.

Caution is advised when using the loot box model. There is a possibility of increased regulation due to the loot box controversy caused by Star Wars Battlefront 2 and there is a general negative view on loot boxes by the consumers. It is advised to implement loot boxes with cosmetic items only, making them a free accessory with other sold virtual goods, or to avoid the model entirely in favour of direct sale of virtual goods or the sale of premium currency that can unlock digital items.

More research is needed regarding how the loot box model works, why or why not it is preferable to other forms of microtransactions and how it is used in both video games and card games. There is also a lack of research regarding the so-called gambling effect of the loot box model and what effect it might have on consumers, especially children.

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