Attitudes Towards Free-to-Play Revenue Models Among Finnish Gamers

Long paper

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Abstract. Free-to-play games are dominating the gaming environment on mobile phones. They are free to download and fast to get known and can hook gamers for a long period of time. Yet game companies are generating revenue with in-game payments. Research has shown that a small percentage of gamers actually use money in free-to-play games. This survey study is based on answers of 215 Finnish free-to-play gamers and sheds light on what free-to-play gamers think of the concept; how much they play, how much they spend money and what their attitudes are towards free-to-play revenue model. One of the main findings in this study is that the majority of the respondents had spent money on free-to-play games, yet they still dislike the basic free-to-play revenue model features, such as unbalance of paying and non-paying gamers. It seems that the free-to-play revenue model is still in the maturing phase and gamers are accepting paying with real money more and more. We recommend replication of this study around the world.

Keywords: business model, revenue model, free-to-play, survey, computer game, mobile game

CEUR-WS.org/Vol-3069/FP_05.pdf

1 Introduction

"I play this game every day. It has daily rewards." – 6-year-old nephew of the first author.

This real-life quote illustrates the pervasiveness of digital games in our society. Not only has digital gaming become a more mainstream hobby in the last 30 years, it has also probably become one of the most common hobbies worldwide. In fact, in the United States alone, there are over 210 million people, basically two thirds of the

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entire nation, who consider video games as their hobby (Entertainment Software Association, 2020). Globally, an estimate of 2.69 billion people have played at least one game in 2020, with the yearly numbers constantly rising (Statista, 2021).

Digital games are a quick and easy form of entertainment; they have relatively low entry costs, the selection catering to different interests is varied, and due to advantages in the mobile devices, they are no longer strongly tied to being at a specific location with an access to the hardware to play the games with. However, there are also concerns. For example, the time spent with video games is away from doing something else, and obviously games, including free-to-play games, are not actually free, since otherwise there would be no market for them. The objective of finding out the positive and negative sides of the video games from this viewpoint lead us to consider whether free-to-play games are improving our society or is the downside deeper than has been previously thought (Zagal et al., 2013). To gather observations from as heterogeneous population as possible, we decided to focus on mobile free-to-play games, since the entry costs are very low; any modern mobile smartphone will do, and almost all categories and genres of games industry are also represented in the mobile games ecosystems. Specifically, to get to know how free-to-play is considered among mobile gamers, we decided to create a survey to collect data and observations on the topic and distribute it to the online communities.

Digital gaming differs from non-entertaining software engineering in the sense where non-entertaining software tries to minimize the time spent with the software, the game tries to keep the player within the game as much as possible (Vanhala and Kasurinen, 2014): its function is to entertain the gamer (Zagal et al., 2013). It is crucial for game business models to keep gamers coming back to the game again and again, this is called retention rate and game business model designers intend to get high retention rates. Not all revenue models require high retention rates. Still, especially with free-to-play models the revenue is generated when the player is playing and exposed to either advertisements or microtransactions, not beforehand like it was with the traditional software business model where the customer bought the piece of software – such as a game – from a store to be able to access the software itself. This also leads to ethical issues when business developers try to squeeze the last pieces of money out of frustrated gamers.

In this study three research questions are set:

1) Who plays free-to-play games?
2) How do gamers like to spend money and time on free-to-play games? and
3) What attitudes do gamers have towards the free-to-play revenue model?

In the essence we are aiming to understand how the free-to-play revenue model is seen within the gaming community and what is actually the free-to-play community consisting of.

2 Background

The emergence of the modern generation smart phones and their respective application stores has drastically changed the revenue models of the gaming industry

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(Smed and Hakonen, 2017). In our use, the "revenue model" tells how a company is compensated from products or services it offers (Popp and Meyer, 2011). A revenue model consists of one or more revenue streams (e.g., ads, in-application payments). Usually, the compensation is money, but it does not need to be. Prior to the launch of Apple's App Store for devices with iOS operating system in 2008, the industry standard for games was upfront paid one-time license fee. That is, a customer bought the right to use the game application before being able to use it.

With the emergence of the new application stores with their platforms and ecosystems (such as Apple's App Store, Google's Play and Valve's Steam), new kinds of revenue models emerged (cf. Hyrynsalmi (2014), Hyrynsalmi et al. (2012)). For example, the in-application payments, where a customer can buy more content – such as new levels, better resources, or improvements in the game either with a direct cost (euros or dollars) or with indirect currencies such as virtual diamonds or gold coins – were not widely used before the iPhone era's application stores. These changes brought free-to-play (F2P) games into the mainstream in the industry. In these kinds of games, a user can start playing the game without any monetary transactions. In theory, games can be played endlessly without paying anything for the game (thus, the name "free-to-play"), yet by buying more content or improvements, the gamer can either gain advantage over non-paying peer (e.g. faster building time in certain games), acquire some graphical gadgets or cosmetic items (e.g., new hats or other funny clothes), or for example speed-up the game by reducing the waiting times.

The emergence of the new kinds of revenue streams and models have not gone without collateral damages. For example, there have been frequent reports on appstore bills up to thousands or tens of thousands of euros when an underaged user has been buying more content into the game without fully understanding her actions[1]. In addition, some free-to-play games have been referred to as "pay-to-win" by the critics and scholars if a user is able to buy an advantage in the game over non-paying peers (Howard, 2019; Zendle et al., 2020). Therefore, not surprisingly, more academic attention has been put into considering also ethical consequences of new monetization approaches used especially in mobile games (Hyrynsalmi et al., 2020). This study contributes to this emerging literature by reporting results how the users are perceiving the new revenue models in games.

Zagal et al., (2013) list three types of dark patterns utilized in game design: temporal, monetary and social capital-based dark patterns. The definition for such a pattern is an intentionally designed feature to cause negative experience to gamers. These are strongly related to the free-to-play revenue models and features like pay-to-skip (e.g. no need to wait for finishing the harvest if real money is used), pay-to-win (with real money one can get better weapons) and grinding (do the same tasks over and over again) are examples of dark patterns to harm players' game experience to encourage them to use real money.

There are dozens of different revenue models available when developing a new game. The simplest question is whether a gamer is paying before playing, while

1 https://www.eurogamer.net/articles/2013-02-28-parents-refused-refund-by-apple-after-son-spends-1700-on-free-ipad-game

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playing, both or not paying. Some options are oxymorons, such as freeware game, which would require money, and some options are non-relevant, for example if game is open source there is no money involved inside the game and if one is buying the game, it is not successful to still provide ads or pay-to-win options. In this study we are focusing on games that are free-to-play in the sense that 1) they are gratis to install and 2) provide an option to use real money in the game. Table 1 illustrates the options mentioned here.

Table 1. The revenue models – and example games – of modern digital games loosely based on (Kimppa et al., 2016; Zagal et al., 2013). Black options are not used, and dark gray ones are hardly successful ones. This study focuses on the light orange part. DLC = downloadable content, F2P = free-to-play, P2P = pay-to-play, S2P = Subscribe-to-play.

		How to pay before playing				
		No paying			**Paying**	
		Open source	**Freeware**	**F2P**	**P2P**	**S2P**
How to pay while playing	**None**	Gnu Chess	MoleZ		Quake, Original Angry Birds	World Of WarCraft
	Donation	0 A.D.	Angels That Kill - The Final Cut			
	Ads			Angry Birds		
	DLC			Kingdom Rush	StarCraft	
	Pay-to-win			Dungeon Keeper (2014)		
	Diamonds			Forge Of Empires, AngryBirds 2	Kingdom Rush Vengeance	

3 Research process

The principles of the survey method in general are defined for example by (Fink, 2013). The objective for a survey in general is to collect quantitative information regarding the feelings, considerations, beliefs, and ideas from the target audience, with a certain acceptable level of reliability. Following a classification scheme by (Kitchenham et al., 2002) we conducted an exploratory and observational study on the behavior and beliefs the users have on the free-to-play mobile games.

The online survey was anonymous, with a control question to ensure that the participants paid attention to the survey. It was also localized to Finnish language, to ensure that the target audiences on the selected venues understood the questions and were able to express themselves clearly on the open items. The applied data collection platform was Google Forms, with the target platforms for data collection being

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several Internet sites including two university intranets in Finland. The survey was also advertised via social media platforms such as Twitter. The participation in the survey was absolutely voluntary, and no identifier data besides some basic categorization data, such as age and gender, was collected. Partial works, and the ones which failed the control question were also discarded from the final dataset.

Overall, out of the potential target audience of more than thirty thousand individuals – for example, the survey advertisement was viewed by 2,774 users in Twitter – 215 valid responses were collected. According to Fink a response rate of around five percent is typical for an Internet survey, so we consider the survey data collection rate sufficient and the number of responses enough to warrant an analysis step. Since this was an explorative survey, our objective was to establish trends, and compare our results against the related works and earlier, similar studies on the topic. In this work, we focus on the analysis of the results as a population, with some cross-sectional comparisons presented if deemed meaningful deviation from the general trends. Finally, the survey instrument was developed by three persons, the authors of this article, and an English version of the data collection instrument is available here: https://www.dropbox.com/s/uolu93gsxdfdqgu/f2p-survey.pdf

4 Results

As already mentioned, a survey was created, and it was open from 2021-04-07 to 2021-04-30. The survey was written in Finnish as we had no guarantee that all the respondents could understand English well enough. Thus, we focused only on Finnish gamers. Although digital gaming is a global arena, there are still games that are more popular and successful in some countries and not in others. The aim is to replicate the study in global environment, but the start is carried out within Finnish audience.

In total, 227 responses were gained and 215 were accepted. In the data validation, 12 answers were removed as they did not answer the control question correctly. The survey focused on three different topics: monetary issues, such as how much and how often gamers use real money; time, as in how much gamers spend time with free-to-play games; and opinions on the free-to-play gaming. Additionally general questions, such as age and gender, were also asked.

The average age of respondent was 31 years (median 28, minimum 18, maximum 57) and standard deviation being 9.6. Respectively the age when respondents started playing digital games was 9 (median 8, minimum 1 and maximum 35; the reported minimum age of 1 sounds more like a typo) and standard deviation being 6.3. 61.4% of the respondents identified themselves as man, 35.3% as woman, 2.8% as other and 0.5% did not wish to give this information (See Fig. 1 for more information). 79.1% of the respondents report having been playing free-to-play games for more than 5 years, the rest various degrees of less than 5 years.

Respondents were asked to name free-to-play games that they have been playing. 215 individual games were mentioned. 78 games got more than one mention and 12 games got ten or more mentions. They are listed in Fig. 2. Pokémon Go was the most

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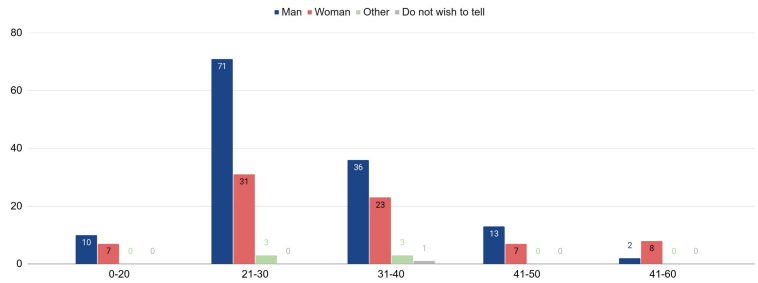

Fig. 1. The age distribution of respondents based on gender.

mentioned game, and it has been a highly successful game over the globe[2] Finland being no exception. We could identify only three mentions of games with Finnish only language.

In the beginning of the survey, we defined free-to-play games as follows: *The aim of this survey is to examine gamers' attitude towards so-called free-to-play games. These games can be played without direct payment to game developers, but games can have options to buy additional goods. These goods can give benefits over other gamers or add cosmetic features to a game. Examples of free-to-play games are, for example, Fortnite, Forge of Empire, Clash of Clans, Heroes of the Storm, Hill Climb Racing and Pokémon Go.* Yet there were still mentions of games that clearly do not fit the definition of free-to-play (such as Nethack). 93% of the gamers could recommend the game(s) they were playing and 7% could not.

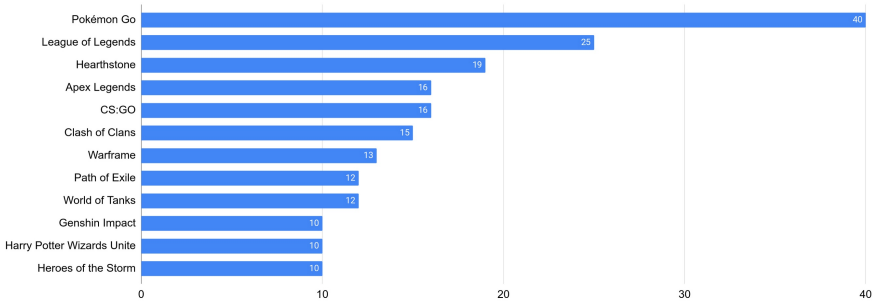

Fig. 2. List of games that got ten or more mentions.

4.1 Time

The amount of time spent with games varied from less than daily to several hours per day. 2.8% of gamers had stopped playing free-to-play games and 17.2% did not play every day. Those who played daily were playing a considerable amount of time as only 3.3% (out of the 215 responses) mentioned less than 15 minutes of playtime per day. 22.3% were playing 16 minutes to 1 hour, 29.8% playing 1 to 2 hours per day and 24.7% were spending more than 2 hours daily playing games.

2 https://www.guinnessworldrecords.com/news/2016/8/pokemon-go-catches-five-world-records-439327

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Gender had no big effect on how much time is spent with free-to-play games, although it seems that men played more long durations per day, but they were also in a bigger percentage with the group of non-daily gamers. This is illustrated in Figure 3.

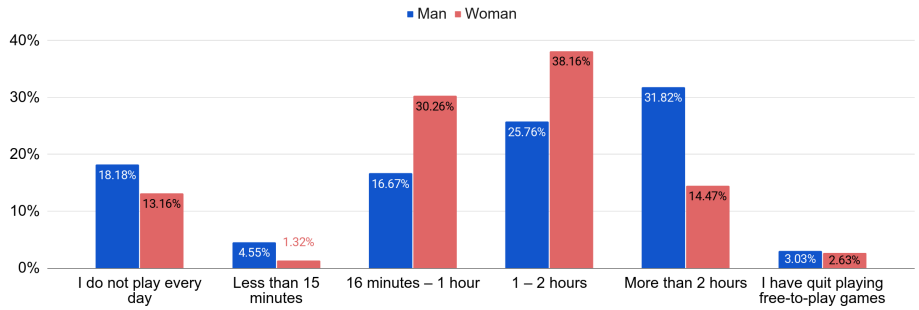

Fig. 3. The amount of time spent with free-to-play games between different genders. Only men and women present statistically meaningful data.

Gamers also play other games than just free-to-play ones. 25.6% reported to spend less than 25% of their playing time on free-to-play games 25.1% spent 25%-50%, 19.5% spent 51%-75% and the biggest group of 29.8% spent more than 75% of their playing time on free-to-play games. As this survey was targeted to free-to-play gamers it is no surprise how much free-to-play games are played, but it is noteworthy that gamers do play other games too.

When asked whether the time spent with free-to-play games has changed during the last year or two 31.6% reported no change, 17.2% moderate decrease and 25.1% moderate increase. The biggest difference was with the significant parts: 7.9% reported significant increase, but 15.3% reported significant decrease in their playtime. 2.8% had stopped playing free-to-play games. It seems that the COVID-19 has not have a significant effect on free-to-play gaming.

Gamers were reasonably satisfied with the amount of time they spend with free-to-play games (75.8%). 7% would like to play more, 16.3% would like to reduce the time and 0.9% would like to stop playing free-to-play-games.

4.2 Money

Previous research has identified key features of the free-to-play revenue model (Davidovici-Nora, 2014; Fields, 2014). One of these has been the concept of “whale” meaning that only a very small fraction of gamers spend thousands of euros in the game and the significant majority does not spend real money at all. Findings in this study challenge this concept.

When asked how much money gamers estimate to have spent in free-to-play games in total only 23.7% answered “none”. 18.1% estimated to have spent more than 300 euros in free-to-play games. Figure 4 illustrates this finding. More than three quarters have spent money on free-to-play games, which is not in line with the previous studies on the topic.

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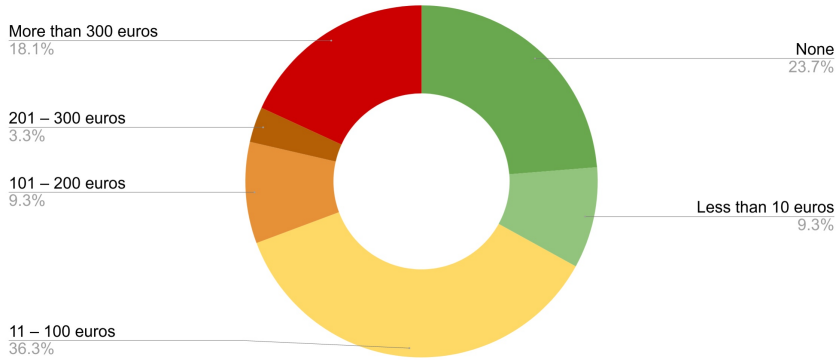

Fig. 4. Answer distribution on the question "Estimate how much you have spent money in free-to-play games in total".

When checking whether gender has any effect on the amount of money spent, it was found that those who identify themselves as men spend significantly more money than those who identify as woman (Chi-squared test: X2=24.88, df=5, p=0.00015). The median spending is less than 10 euros with women and 11 – 100 euros with men. Other genders were so rare, they did not give any statistically meaningful results. The differences between genders are illustrated in Figure 5.

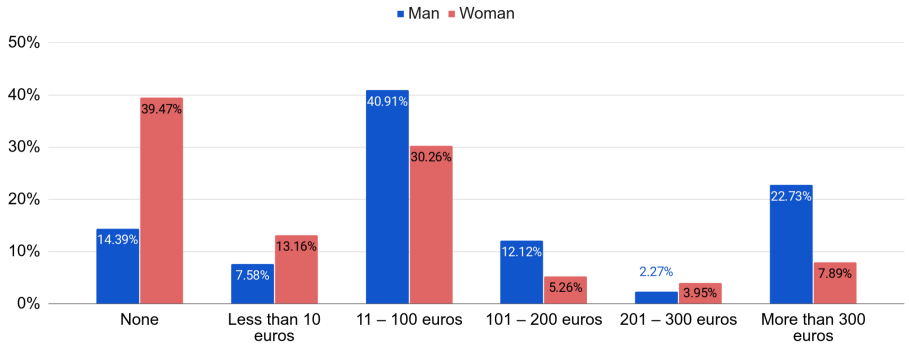

Fig. 5. The differences in spending between genders. Only men and women can be measured statistically.

All age groups (–20, 21–30, 31–40, 41–50, 51–) had pretty similar spendings, and 11-100 euros was the median group in all age groups except the 51– group that had the median value of less than 10 euros.

When cross tabulating whether the time spent with games has an effect on how much money is spent, we found out the group that plays more than 2 hours per day has a median of 101 – 200 euros money spent. All the other groups had a median of 11 – 100 euros of spent money.

When inquiring about the amount of money spent monthly on free-to-play games 69.8% answered none. This is more in line with the previous research and illustrates the issue that gamers do not spend money that often on free-to-play games. Yet,

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almost one third spend money monthly (13.5% less than 5 euros, 8.8% 5 – 10 euros, 4.2% 11 – 20 euros, 0.9% 21 – 30 euros and 2.8% more than 30 euros per month), which is more than has been previously reported (e.g. Davidovici-Nora, 2014).

As the free-to-play revenue model does not explicitly describe how the revenue is generated it was asked where gamers spent money. Four options were given, and the respondent could choose multiple of those. 26.1% had not spent any money. More than half of the respondents had spent money on features that advance them in the game. This indicates that these features bought with real money are not in a minor use at all, but the core part of how free-to-play games are played. Also, more than a third answered that they had bought cosmetic features with real money. Only 8.8% had used money to get rid of ads. It seems that the buyable features could be the most beneficial way to monetize free-to-play games. Figure 6 illustrates this.

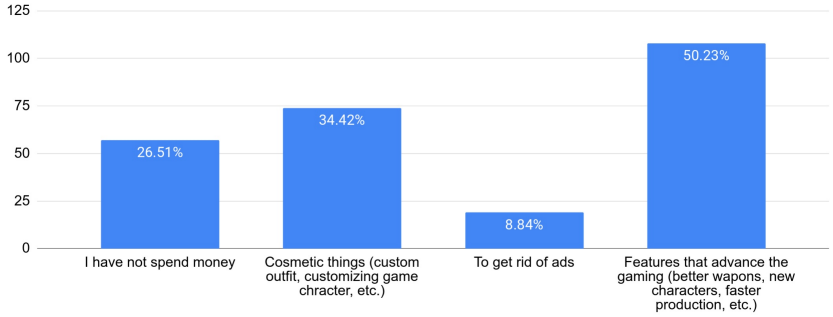

Fig. 6. Answer distribution on the question "To what you spent money in a free-to-play game?". Respondents could select multiple choices.

There seems to be a reason for the fact that only 8.8% of the respondents had used money to get rid of ads. It was asked how much time the respondent spends watching ads in one game session. 67.4% of respondents report that there are no ads in the games they play. 15.8% spend less than a minute, 14.4% spend 1-5 minutes and only 2.3% spend more than 5 minutes per gaming session. Although the first free-to-play games were topped with heavy advertising, it seems that the number of ads have decreased within the most popular games.

It was asked what the respondents think of special offers – such as Valentine's Day or X-mas sales when some goods are sold with "discount" – that are common in free-to-play games. 11.6% considered them cheering up, 50.2% considered them ok and 15.3% considered them merely a way to scam gamers. 22.8 had no opinion as they do not spend money at all. Although these special offers can be scams and dark patterns of trying to get gamers to invest more money into the game, the respondents' attitudes are considered neutral towards them.

Now there have been three distinct questions that have had an option to answer that the respondent does not spend any money on free-to-play games. In Figure 4 the number was 23.7%, in Figure 6 26.1% and now 22.8%. There seems to be some misunderstanding as these numbers should have been the same, but we are unable to tell the reason for this. The questions have been put differently, which might change the respondents' mindset. We still consider all the accepted answers valid human

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created as the game names had been written correctly instead of random spam. The numbers from 22.8% to 26.1% are considered trustworthy in this context.

Next it was inquired whether free-to-play games are considered free or not as no money would be required in the beginning. 19.5% responded that they have not used any money, thus the games are free for them. 9.8% said that they watch ads and hope that will help game developers. 48.4% answered that they have used money, but they could have played the game without any payment, thus games can be considered as gratis. 4.2% said that it is wise to put money into games, thus they do not consider games gratis. 18.1% responded that developing games requires money and one should put money in them, thus gratis is an illusion.

As some gamers spend money into the game and some do not, it creates an unbalanced arrangement between gamers. Some might spend ten hours per day for weeks, others gain the same level by paying 50 euros. It was asked how respondents see this. 29.3% did not see any issues in this arrangement and considered it "totally ok". 23.7% selected the option "Everyone can use money, if one wants. I do not use it." 2.3% thought that they could compensate for their skills (or lack of them) with money. 0.5% (one respondent) would have wanted to use money but could not. Biggest group (44.2%) of the respondents thought there is an issue in this unbalance between gamers and that the more you pay the better you manage is wrong.

We also asked whether the covid-19 has increased how much money is put into free-to-play games. 90.2% did not see any increase, 2.8% could not tell and 7.0% had increased their monetary spendings in free-to-play games.

4.3 Thoughts on free-to-play

Time and money are important concepts when discussing free-to-play games, but there are also other – softer – parts in game studies. We also included several in our survey. First, we asked why one plays free-to-play games. The highest ranked reasons were joy that games bring and to kill some time. Also, other gamers in the game are considered a good reason to play. Games also often offer new content and tasks daily that are considered reasons to play. 5.6% answered that they are addicted a lot to the game, but overall, that was not considered as the reason to play the game. Similarly, although a gamer has put money into the game, it was not the reason to play – yet 6.5% said it was an important reason to play. The Figure 7 illustrates the responses further.

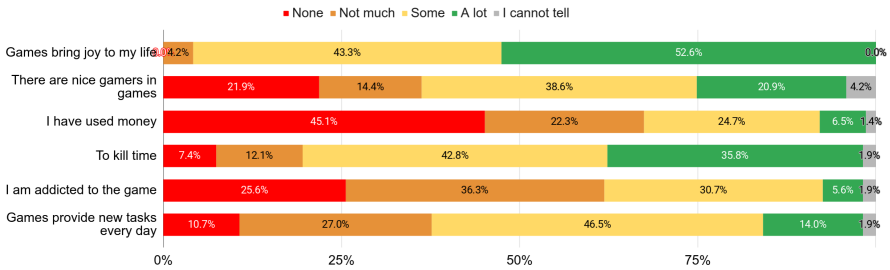

Fig. 7. Reasons to play the free-to-play games the respondents play.

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As the statement "Games bring joy to my life" was met with a positive attitude, it was further cross tabulated whether the amount of money spent would have an effect on the view. This is illustrated in Figure 8. It seems that the more money you put into free-to-play games, the more enjoyable they are – or vice versa, the more you enjoy the game the more you put money in. We are not arguing that money would bring one happiness, but at least it removes the free-to-play game obstacles of enjoyment.

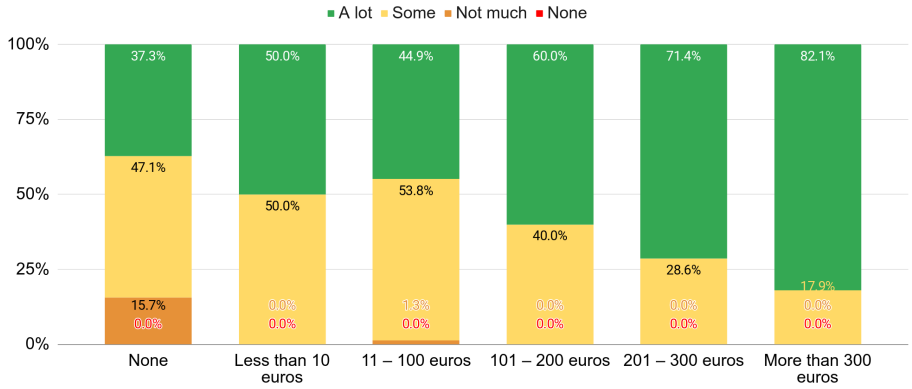

Fig. 8. Cross tabulated joy and the amount of money that is being spent in the free-to-play games. Correlation exists (r = 0.95; n = 215; p = 0.000).

When inquired what respondents think of some features of free-to-play games, none of them were considered good. Respondents did not like the unbalance when some advanced faster by using real money, nor did they like bypassing boring or too difficult parts with real money. Respondents did not like ads in free-to-play games and also grinding did not get positive feedback although it was the least disliked feature. This is in line with the arguments of (Zagal et al., 2013). Figure 9 illustrates this in full.

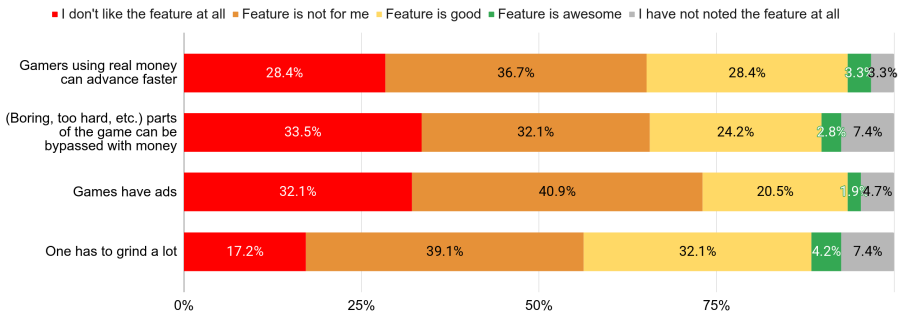

Fig. 9. Gamers' attitudes towards various concepts available in free-to-play games.

The overall thoughts on free-to-play games were positive. 20.5% liked them as they did not require money and 63.7% considered them pleasant entertainment. 14.4% would prefer pay-to-play games and 1.4% hated free-to-play games.

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We also asked if gamers would stop playing free-to-play games – or had already done so – what would be the reason. The most voted option was the lack of fun. Another option gaining votes from more than 50% of the respondents was that there is no new content to play. This is a logical time to stop playing. With free-to-play games there is often an option to accomplish some daily tasks and 41.9% of respondents would be worried that playing takes too much time. In addition to lack of content there is also a possibility to have too much content and 23.3% reported that there is too much new content coming in. 11.2% had got a comment from a close one that she is playing too much, 10.2% considered some games oppressing and 7.9% thought some games take too much money. This is visualized in Figure 10.

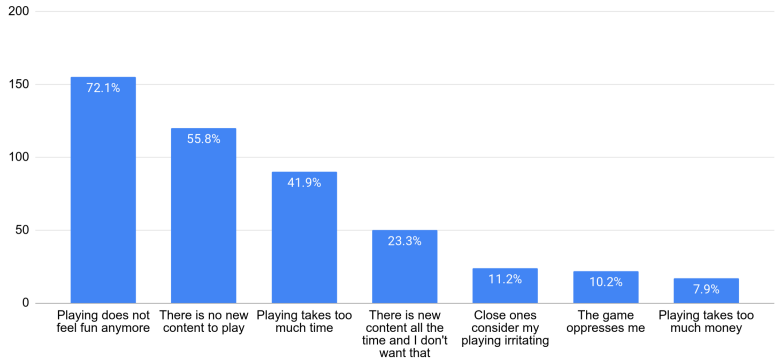

Fig. 10. Reasons to quit playing free-to-play games.

5 Discussion

In the beginning we set three research questions: 1) Who plays free-to-play games?, 2) How do gamers like to spend money and time on free-to-play games? and 3) What attitudes do gamers have towards the free-to-play revenue model? Based on this survey we can argue that Finns play free-to-play games in almost all age groups and all genders although almost two thirds of the respondents identified as man.

The most surprising finding was how a large percentage of respondents spend money on free-to-play games. In this study only around 25% (based on the question it varied from 22.8% to 26.1%) of respondents did not spend money. This means that a significant majority of gamers do spend money on free-to-play games, and this is contrary to previous findings by for example Davidovici-Nora (2014). Although 75% of the respondents had spent money on free-to-play games, 69.8% did not do this on a monthly basis. A longitudinal study on how gamers spent money would shed more light on the topic.

In this study ads did not play a significant role as money was mostly spent on getting features that helped the gamer to advance in the game. Also, cosmetic things (e.g. new clothing for a game character) were bought with real money. In the light of this study, it seems that gamers are ready to use real money on features that help them in a game, but also acquire features that do not directly help them to advance in the

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game. In a sense this is a move from just playing a game to identity building inside a game (Lehtonen and Harviainen, 2016; Vanhala and Kasurinen, 2016) and most successful games today have strong communities and options to build identity. Maybe mobile gaming (both gamers and developers) is ready to move from monetizing gaming features to monetizing identity building features?

Free-to-play games have features where one can use real money to do things such as advance faster, bypass too hard parts and skip grinding. Besides these ads are often shown inside games. Previous discussions have found some of these kinds of revenue models ethically or legally questionable. Nevertheless, this study underlines the issue that all of these features are unwanted, but gamers merely tolerate these features as they are still playing free-to-play games. Do we still need these ethically questionable features, or could the industry move to more ethically sustainable business? As suggested in the previous paragraph there is at least a change.

One last core finding of this study are the reasons to quit playing a specific free-to-play game. The most common reason was that a game would not be fun anymore. This underlines the value proposition of a computer game: it needs to be entertaining. Second reason to quit is the lack of new content – but also the overwhelming amount of new content. Clearly the content is important as there is nothing to entertain from if the content is already played through. But as free-to-play games are also played casually, the gamers can exhaust themselves from too many tasks popping up. This leads us to the third reason to quit: a game takes too much time. With daily tasks giving daily rewards, gamers cannot take a day off and play for example only on Saturdays. This can be frustrating and closed ones can get irritated or the game can start to feel oppressing.

This study reflects only the Finnish audience. We did not ask the income level of the respondents, so we are unable to calculate correlations between income and money spending levels. Only one respondent reported that she would have wanted to spend more money than she could. We cannot estimate how much these findings can be generalized to lower income countries. Our findings require more research and verification with a larger number of respondents from various countries.

As for threats of validity, to maintain the validity of this study against the common threats (for example (Robson, 2011)) the questionnaire was developed following guidelines set by (Fink, 2013), the questionnaire and the collected data was discussed with peers to avoid personal bias, and overall, the data collection phase implemented techniques such as control question, to ensure that the answers were submitted by real people, even though anonymously. Obviously, because of the nature of the data collection, it is impossible to assess if the data population favors some identifiable group such as degree of education or level of income, but at least the group of people who answered represents all genders, age groups, “hardcore” fans and casual players. Overall, the metrics presented in this paper are accumulation data from the survey, so the researcher bias, or statistical inaccuracy on the results should be minimal and not a meaningful issue. It is also noteworthy that although framing effect was tried to minimize in the survey design, there is still a risk that it was not achieved with every question.

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6 Conclusion

In this paper we observe and discuss the free-to-play business model and mobile games in general from the viewpoint of motivation and considerations towards them as a hobby. Since video games, mobile platforms included, are one of the most common hobbies around the world, the different business implications and ethical aspects related to marketing and customer participation are important. At the general level, the different models and techniques for monetizing games are well-known, and unlike traditional game products with purchase costs allowing access, the free-to-play games live from the visibility to their target audiences, and customer retention.

For this study, we conducted a survey (N=215) among the Finnish free-to-play gamers. The more common results provided some talking points; the game industry is global, as globally trending games are also the ones, which are popular among the Finnish gamers. Similarly, the study confirmed that there are both women and men who play games, in all age groups and might spend even several hours per day playing games. However, the survey results indicate that the prior stereotypical money spending models of the gamers might not be completely accurate: It was found out how approximately three quarters of respondents spend money on free-to-play games, almost one third monthly. This finding is not in line with the current reports as they have been suggesting a fraction of paying gamers instead of the majority of what our survey presents. Similarly, the gamers who spend some money are not buying something small just to ease the game or make the experience smoother; cosmetic items and quicker access to the game content made up over 50% of purchases, whereas pragmatic purchases like getting rid of advertisements were less than 10 percent. In fact, designing the game so that the gamer could all but guarantee success by spending money was seen as a design flaw.

In any case, our observations warrant for a need to do additional studies on the real costs of free-to-play games, and test if we could replicate these observations in a larger, multinational context. It would be interesting to conduct this study in other countries or in a global environment to see whether this level of money spending is a fortifying phenomenon or is it a feature of higher income countries. Additionally, if these observations turn out to be more universal and persistent, a discussion on the ethics of digital game marketing and the concept of “free games” should be discussed in more detail, especially considering that most of these game products attract very wide audiences from the different social and age groups.

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