

The Role of Social Pressure and FoMO on Spending in Free-To-Play Games

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Rationale

Introduction

Free-to-play (F2P) games have dramatically gained popularity within the last decade, followed by the surge of people playing *Fortnite*, *Roblox*, *Genshin Impact*, and more, but while they don't cost anything to start, a sizable selection of players end up spending anyway. This is not by accident as game developers use smart strategies to encourage spending. However, other factors outside of game marketing play a role in why people want to spend money in these games. This paper will look at the relationship between F2P games and how social pressure and FoMO are able to influence spending.

Literature Review

The relationship between in-game content and purchase motivations has gained attention in game research. Hamari et al. (2017) explores this idea, attempting to narrow down the reasonings behind this phenomenon through a survey study. The study looked at six dimensions of purchase motivations attempting to clarify why players engage in in-game purchases. A topic of interest included focused on social interaction within F2P games. Social interaction plays an important role in player purchasing behavior, especially when F2P games incorporate multiplayer aspects. Playing with friends has the potential to influence players exponentially, such as "buying accelerators or boosters to keep up with friends' pace or to help the social group fare better" (Hamari et al., 2017). A game that explores this concept is *Destiny 2*; although not originally an F2P game, it includes a battle pass system that offers an exotic when bought in order for players to gain better items so that they can complete quests, trials, raids, and more easily without having to put in as much time in the game. Players want to keep up with their

friends in these games and as a result, it can lead to fear of missing out (FoMO), which has become more prevalent due to technology.

Moreover, the concept of FoMO has become prevalent in recent years, extending from social media to the gaming community. FoMO is part of the reason why players feel the need to spend money on in-game items, loot boxes, and other monetary transactions. This is discussed in a survey study by Hartanto et al. (2024) that explores the relationship between FoMO and risky loot box consumption. The study used the FoMO-Driven Loot Boxes Spiral Hypothesis, which was created to explain that when players begin to engage in risky purchases of loot boxes, it will cause players to enter a self-reinforcing cycle of increased spending (Hartanto et al., 2024). The hypothesis helped determine that there is a positive correlation between risky spending and FoMO, specifically, “significant small to moderate cross-lagged effect from FoMO to risky loot box consumption” and “significant moderate to large cross-lagged effect from risky loot box consumption to FoMO” (Hartanto et al., 2024). As a result, the study proves that players are influenced by social factors, including how desirable certain items are within a game and their popularity in communities. It also extends to how items are marketed as a requirement to feel a “completeness” for a game.

Building on the previous findings, a common strategy game companies employ to encourage spending from players comes from the idea of marketing items or characters as appealing for various reasons, such as them being essential to receiving fulfillment within a game. This method is often referred to as scarcity pricing, as well as user profiling, to manipulate the player's perception of what is valuable (Cao et al., 2024). This is often done when these in-game purchases are marketed as critical to the player, whether it be enhancing the gameplay experience or being "required" to enjoy the game overall. The survey study by Cao et al. (2024)

furthered these ideas, finding that 93.33% of participants in their study acknowledged that there was perceived desirability regarding their purchasing choices. This is partially due to how games use promotional tactics and emotional impact to influence engagement. These tactics are often seen in gacha-type games, like *Genshin Impact*. The game's pull system reinforces all of these ideas, having limited-time banners that players can pull for certain characters as well as their "pity system," which ensures a player will receive the character they are pulling for after a certain amount of set pulls. Some of these characters are a part of the story, which creates the emotional appeal for players to want to obtain certain characters that they relate to or have become fond of due to the narrative.

The relationships that form between the player and the game are another subtle yet important aspect that encourages user spending. These connections can turn parasocial, which is a concept where a person has a one-sided connection with someone they don't know personally, whether they are real or not. This occurs in F2P games often and does influence player spending and interaction. Gong et al. (2024) studies this in more detail, looking at player engagement and spending habits and how parasocial interaction (PSI) impacts their gameplay. It was found that players with a higher PSI or emotional attachment correlated to their commitment to the game and how their investments are viewed more favorably. This demonstrates that sometimes, marketing a character or item within a game is unnecessary, as players are willing to spend the money for reasons other than it being a way to progress or essential to the game. Although it may be unintended, it is still a way to encourage players to spend money, which is what these companies want.

Various methods of persuasion are conducted within these F2P games, most heavily relying on gambling aspects in order to encourage spending from players. This can be said about

more than just F2P games, as regular games will also employ these methods to keep player retention. Items such as loot boxes are a prime example of these behaviors, as players will earn randomized rewards from these boxes in hopes of receiving rare items. Thus, it creates an environment where players are tempted to invest money. Grossman et al. (2024) explores this idea while also looking at online streaming on platforms such as Twitch. These online streams promote regular monetary gambling but also loot box openings or pulling for items on F2P games, which creates a “compelling feedback loop that encourages financial investment” (Grossman et al., 2024). Additionally, companies will sponsor streamers to promote their game to get more players and market to their audiences to be inclined to spend money. This has most notably occurred with *Genshin Impact* or similar Hoyoverse games, as they have one of the largest player bases for these F2P games. The study by Grossman et al. (2024) reinforces these findings, as it shows how these streams reinforce normative behaviors of monetary gambling and can cause not only streamers but also friends to encourage spending money on F2P games.

Admittedly, some players who enjoy F2P games are unwilling to spend money on them; however, they still enjoy the gambling elements or behaviors behind the game. Players who want to remain F2P have rationalized behaviors towards grinding on these games that would yield value in the long term and justify spending money on certain aspects at some point as long as they played the game long enough to “earn” it back (Woods 2022). However, there are ways that these players can be swayed to make monetary investments in these games, even though that was not what they intended to do initially. Woods (2022) explains this in his study, mentioning players' investment decisions are intertwined with what they perceive as valuable, meaning that players will rationalize spending money on the game based on how well they understand the game's mechanics and if the item's perceived necessity is worth putting money into. This

investment of time following the sunk cost effect can cause players to switch to monetary investments instead, as it would save more time if placed at a reasonable price (Woods 2022).

Ultimately, players spend more money when items or character upgrades are presented as cool, marketed as essential, or framed as the optimal way to play the game. Research shows that peer pressure, FoMO, and the idea that certain items are necessary all push players to buy in-game content. Developers use strategies like limited-time offers, emotional storytelling, and gambling mechanics to encourage spending. Online communities and gaming influencers also help normalize purchasing in-game content at a higher value. Even players who start out intending to stay free-to-play are more likely to justify purchases due to the time they've invested. These sources have shown that there is an impact regarding social influences and money being spent on F2P games; however, a lot of research conducted only focuses on the target demographic, young adult males. Also, these sources are isolated to one specific phenomenon, but they could be applied simultaneously within research to provide further analysis. There are opportunities to see if there could be a relationship between these factors and whether or not they could be significant in understanding the social reasoning behind spending in F2P games.

RQ: What social factors influence a player's decision to spend time and money on content in free-to-play games?

H1: Player reports of FoMO and social pressures contribute to spending in free-to-play games.

H2: There is an age-based difference in how players respond to FoMO and social pressures, with younger players being more influenced by social factors and older players potentially spending more due to having more disposable income.

Method

For this research, a cross-sectional survey study will be conducted. Using this type of survey will capture what is going on at the current point in time regarding the topic and how people feel about it. The survey will use a Likert scale to determine the degrees of agreement a participant has regarding social factors that influence spending habits in video games. While most questions will be Likert-type, some will be open-ended or dichotomous to ensure that participants fit the studied demographic. This method works best for the H that is being tested for various reasons. One of the benefits of using surveys in this study is that it can collect a large amount of data quickly from a diverse population due to the nature of the questions being asked. Also, the survey can be delivered through multiple platforms, allowing for the farthest reach compared to an experiment. Surveys are generally used to see a connection between two or more things a participant reports. In this case, the study will see if there is a correlation between social influences and money spent on F2P games. Most previously conducted research on similar topics also uses surveys to establish generalizations about the data collected, which was then presented to a broader population. For example, Gong et al. used a questionnaire to collect information regarding participants' usage of mobile games, game satisfaction, socio-demographic characteristics, and parasocial interactions (PSI) (2025). The information was analyzed similarly to how this study will be conducted regarding questions asked and how data is collected.

Though surveys can offer fast response times and reach a large number of people, some limitations come with this method, such as the limitations of the questioning format. Questions with "yes" or "no" responses, point scales, and more will give numbers regarding the research but will not explain why. This is because surveys are used for correlational purposes rather than causation (unless it's longitudinal). Despite this, the data collected can be beneficial to

understanding whether or not a certain phenomenon may have a correlation that could lead to further research. Another prominent aspect that comes into play when conducting a survey study is the idea of "self-report." Through surveys, audiences are tasked to report on themselves, and depending on the question being asked, they may not like how they would respond, which encourages them to change or lie in their response. This is why it is essential to word questions properly on surveys so that participants are more inclined to respond honestly.

Procedures

Participants

The population for this survey will comprise the age range of people who actively play F2P games, aged 18-40. Using this population will provide the best results as it is the largest group of people who spend time playing F2P games on average. Also, on average, most video game players are around 40 years old; however, more people who spend money on F2P games are younger, which is why a younger population is needed (Costes & Bonaire, 2022). An online survey will be available for participants to fill out with questions that vary in relation to purchasing habits, social influences, and motivations. Gathering participants for a survey study is more manageable now due to the various available methods. The sample will be collected through posts online on social media apps, posters/flyers, email, and word of mouth. The study will be anonymous, as participants will not be required to fill in contact information or their names to submit the form. By not gathering sensitive information, participants will not be concerned if data were to be published as there are no identifiable traits to connect them with. The survey will be honest, and it will be appropriately worded to be accessible to anyone interested.

This method will use nonprobability sampling, as the survey is meant for a specific

population of people who play F2P games. Most likely, those who fill out the survey are a convenience sample, which includes classmates, friends, gaming forums, and more. Also, volunteer sampling would take place as the survey would be advertised to everyone, and those interested in the study would be allowed to participate. Some concerns about nonprobability sampling should be kept in mind, such as the potential for bias or the fact that it does not statistically permit generalization to a wider population. Still, the method effectively gathers data, especially for pilot studies and understanding real-life situations.

Data Collection

Data for this study will be collected via an online survey asking participants about their F2P gaming experience involving monetary investments and social influences they have experienced while playing. The variables that will be tested include FoMO, social influence, and spending behavior. The data will be collected over one month to give proper time for participants to complete the survey and get a decent amount of responses. The ideal range of participants who fill out the survey would be between 300-500 people who play F2P games. The survey will contain questions regarding the participants' demographics needed to analyze the data, such as age and sex. Also, it will ask participants if they play F2P games and how often they play them to decide if they are a good fit for what is being studied. Most of the questions are Likert scale, meaning that participants will have to decide, based on their experiences with F2P games, how they feel about what is asked, ranging from strongly agree to strongly disagree. The Likert scale will be a 7-point scale, allowing for a neutral option if participants have not engaged with the behavior, as some people have remained F2P during the entire gameplay experience. Points will be tallied based on how a participant responds and appropriately sorted after collecting all data.

Results

Data Analysis

To analyze the data collected to address the H, descriptive statistics and a correlation test will help summarize the responses received. Participants' answers will be put on a point system, which will determine their score. A higher score indicates that participants feel pressure to spend money due to social influences compared to others with a lower score. Descriptive statistics will be used to find these scores' mean, median, and mode. Afterward, sample variation and standard deviation will be calculated based on the sample gathered, which can determine the distribution of the score acquired and determine if the data has a normal bell curve.

Furthermore, a correlational study will be conducted to see if there is a degree of relationship between money spent and social influences regarding F2P games. Depending on how the data is presented, there could be a positive, negative, curvilinear, or no relationship between the data. Also, the strength of the correlation will be examined to see how spread out the data is. Doing this will help discover if there is a correlation that would further prove the H that is being studied. It also opens up opportunities for further research on the topic. There are also opportunities to see if age influences influence and money spent as the demographic could play an important part in understanding if one group of individuals is more likely to spend money due to social factors.

Implications

The research outcomes will provide insight into the phenomenon of F2P games beyond just looking at the social influences. One of those is that the results can help explain monetization strategies better if FoMO and social pressures predict spending. This means it is not just advertising or marketing; rather, these outside factors are a larger reason for spending

money than initially thought. It can raise questions about whether companies expect this behavior from consumers, which is another aspect that could be explored. These results could also encourage researchers to consider microtransactions' impact and whether they could be regulated. The meaning behind the spending varies per person, and if FoMO and social pressure play a bigger impact than just marketing, it becomes increasingly more complex to devise a solution to the risky spending in F2P games.

Some limitations should be considered when considering the research, one being the genre of F2P game users play. Monetary investment varies heavily for some of these F2P games, with gacha games having individuals spend thousands of dollars to unlock characters/items. Compared to other games like *Roblox* or *Fortnite*, which only have microtransactions for cosmetic reasons, There is a discrepancy between these games and how much players are willing to justify spending, even with outside influences. There could also be a difference in spending habits depending on what is advertised within F2P games, as there are sales that occur periodically in some games, which can increase player spending randomly and not be accounted for unless controlled in a survey study.

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Appendix A

Survey Questions

Spending Behavior

1. I am satisfied with my spending decisions I have made in F2P games.

Strongly disagree |----|----|----|----|----| Strongly agree

2. I set limits or budgets for how much I spend in F2P games.

Strongly disagree |----|----|----|----|----| Strongly agree

3. I regularly make in-game purchases to enhance my gameplay experience.

Strongly disagree |----|----|----|----|----| Strongly agree

4. I spend money to progress or unlock content faster.

Strongly disagree |----|----|----|----|----| Strongly agree

Social Pressures

5. I have felt influenced by friends to spend money on F2P games.

Strongly disagree |----|----|----|----|----| Strongly agree

6. I have felt left out when my friends have items that I don't.

Strongly disagree |----|----|----|----|----| Strongly agree

7. When I see advertisements for a F2P game either online or in-game, I feel inclined to spend money.

Strongly disagree |----|----|----|----|----| Strongly agree

8. Social media posts have influenced me to consider spending money.

Strongly disagree |----|----|----|----|----| Strongly agree

9. Influencer content and promotions make in-game purchases more appealing to me.

Strongly disagree |----|----|----|----|----| Strongly agree

FoMO

10. I have purchased in-game content because it was available for a limited time.

Strongly disagree |----|----|----|----|----| Strongly agree

11. I worry that I will miss out on limited offers in F2P games if I don't play regularly.

Strongly disagree |----|----|----|----|----| Strongly agree

12. I feel anxious when I see others obtain limited-time items I missed.
Strongly disagree |-----|-----|-----|-----|-----| Strongly agree

13. I log in to the game frequently to check if there is limited time content.
Strongly disagree |-----|-----|-----|-----|-----| Strongly agree

Demographic

14. What is your age as of your last birthday? ____

15. What is your sex? ____

16. I play free-to-play (F2P) games.

- Yes
- No

17. How often do you play F2P games?

- Daily
- A few times a week
- Once every few weeks
- Monthly or never

18. In the past month, how much money have you spent on in-game purchases on F2P games?

- \$0
- \$1-\$10
- \$11-\$20
- \$21-\$30
- \$31-\$40
- \$41-\$50
- More than \$50

19. What is your most played F2P game?: ____