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**Exploring motivations for virtual rewards in online F2P Gacha games: Considering  
income level, consumption habits and game settings**

In Partial Fulfillment of the Requirements  
for the Bachelor of Science in Global Business

by

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May, 2020

## ABSTRACT

*The objective of this study is to figure out players' motivation on paying for virtual rewards in online F2P Gacha games. Based on the previous studies and primary survey, this paper will draw a conclusion with a primary survey collection which covered more than 3700 adept Gacha game players. Possible factors including income level, consuming habits and game settings which may be players' paying motivations are analyzed to weigh their dependency about how they sustain and influence players' playing and consuming behaviors. The correlation analysis and regression analysis will be used to measure the relationship between these factors and payment for Gacha games. As a result, players' income level has a significant correlation with their payment in Gacha games while their consuming habits in other virtual goods doesn't have a significant positive correlation with paying for Gacha games.*

Keywords: F2P Gacha game; virtual goods; consumer behavior; online payment

## INTRODUCTION

Gacha game is generated from Gashapon, a kind of capsule toy derived from Japanese Bandai company that consumers can get a random one from a sets of given toys in a loot box (Toto, 2012). The system of Gashapon and loot box are applied to the initially Free-to-Play on-line game no matter PC games or mobile games since 2010s. However, the loot box system in these so-called “free-to-play” game lures players to spend a lot on in-game virtual currency for the possibility of getting random virtual rewards such as rare items or game characters (Nieborg, 2016). It is quite confusing that players are willing to pay for uncertain virtual rewards with an uncertain gaining rate.

In Japan and many other countries, Gacha game has gained popularities since it was born and has earned a lot of money for game companies (Kaneko, Yada, Ihara, & Odagiri, 2018). When Gacha games got success overseas, Chinese domestic entertainment companies have paid attention to Gacha games. Other than Fate/Grand Order imported from Japan, some Chinese domestic games such as Arknights, Ayakashi and The End of School gained huge popularity these years (GPC, CNG Gamma Data, & IDC, 2018).

One of the major topics to be investigated in game industry is the paying motivation of game players. In this contribution, the study focuses on mobile Gacha game as a special game type to figure out paying motivations of players based on the factors of players’ income level, consuming habits on other virtual goods and game settings. The conclusion is drawn by surveying and analyzing adept Gacha game players to examine the correlations between their purchasing behaviors in Gacha games and the above possible factors.

## **LITERATURE REVIEW - BACKGROUND**

### **Concept of F2P Gacha games**

Gacha game is derived from Gashapon toys, thus, Gacha game mainly earns from Gacha right, which is defined as a right that has been granted to the virtual user upon satisfaction of a predetermined condition in the game, such as an accomplishment of a mission or a use of actual money in the game. A virtual user may obtain at least one card each time the gacha right is exercised (Patent No. JP2012024248A, 2012). Although there are various definitions about Gacha games, it is conceptualized Gacha game and told about Gacha game's regulatory history in Japan from defined as gambling (Koeder & Tanaka, 2017). The paradox shows in this paper is that though people are not forced to pay the money for the free-to-play game, players still pay a lot on account of motive from virtual rewards in the loot box system. It is undeniable that the F2P revenue model is immensely lucrative for those developers who are able to aggregate significant amounts of players (Nieborg, 2016).

### **Industry Criticism of Gacha games**

There appears both positive and negative voices to Gacha games. Games can be designed in a way that players can receive certain rare items only through playing Gacha games. This is one of the reasons why the mechanic is subject to some (still relatively mild) criticism in Japan, where it is likened with gambling by some voices (Toto, 2012). Thus, Gacha game can somehow be compared with gambling. This comparison can be a proper aspect to analyze players' mentality when they pay for Gacha games. Especially some young people are addicted to gain random rewards from loot boxes in these video games (Drummond & Sauer, 2018). Thus, some game developers and publishers are being criticized for increasingly relying on these transactions such as Gacha and loot boxes to generate revenue, a practice that some view

as illegal or exploitative (McCaffrey, 2019). In China, the Ministry of Culture in China announced new regulation in December 2016 to force game publishers to provide more information on their game elements (Koeder & Tanaka, 2017). Thus, public information and somehow transparency of game data may help Chinese players to rationally purchase in Gacha games.

### **Current Situation of Gacha games**

In 2018 mobile games report posted by App Annie, an App industry standard company, 8 of 10 top game apps by worldwide consumer spend are Gacha games or with a Gacha loot box system including Fate/Grand Order, Honor of Kings, Monster Strike, Lineage M, Fantasy Westward Journey, Dragon Ball Z Dokkan Battle, Clash of Clans and Clash Royale, only the rest two games are not Gacha games (Sydow, 2018). This report strongly proves Gacha games appeal players to pay more than other types of games at least as for mobile games.

According to 2019 China Game Industry Trends Report, 6.6% male players whose TGI (Target Group Index) of playing shooting and fighting games is high to 151 to spend more than 5000 RMB on games while 57% female players have once paid for games (CNG Gamma Data & Tencent Cloud, 2019). Games with a Gacha system still has a promising market future in China. In 2018, Chinese self-developed mobile online games revenue has reached 6.92 thousand million dollars, entering into a stage of steady growth with a 23% year-on-year growth (GPC et al., 2018). In 2018, China, America and Japan's mobile game global market shares are respectively 31.3%,17.4% and 17.8% (CNG Gamma Data & CNG Gamma Data, 2019).

The prospectus of Bilibili Inc (2018), one of the biggest video website company with more than one hundred million users in China, given to NASDAQ has mentioned the website has “ a young and culturally aspirational user base willing to invest in a high-quality entertainment

experience. According to Quest Mobile, as of December 31, 2017, approximately 81.7% of our user base were Generation Z, individuals born from 1990 to 2009 in China.” Besides, in Bilibili Inc.’s IPO prospectus, it also mentioned it “started to experience significant growth in the number of average monthly paying users since the fourth quarter of 2016, primarily due to the exclusive launch of Fate/Grand Order in China in September 2016 and the success of this game.” As Bilibili prospectus reports shows (2018), their “net revenues from mobile games increased substantially from RMB342.4 million in 2016 to RMB2,058.2 million (US\$316.3 million) in 2017, primarily attributable to a 140% increase in average monthly paying users from approximately 253,700 in 2016 to approximately 609,300 in 2017.” As one of the biggest online video website company, Bilibili attributes the great increase of its revenue to Fate/Grand Order, a mobile card game based on a Gacha system. Thus, Gacha game with an In-Game-Purchasing system can be regarded as an efficient earning tool for some companies even though it is Free-to-Play initially.

### **Players’ Mentality of Purchasing in Gacha games**

Even most Gacha games initially are offered free-to-play no matter for PC games or mobile games, many players finally would like to pay for rare rewards. It's exact the same as "Pay-to-Win" slippery slope people feared would come to pass with micro-transactions (and has come to pass in certain free-to-play games) but obscured behind an additional layer of pseudo-gambling (Dingman, 2017). Players may would like to spend more money on winning these rare items which can help players progress more effectively in the game (Griffiths, 2018). In a word, players’ brain more likely to pay attention to and try to figure out the awesome rewards instead of noticing the randomness of rewards.

Paying for rewards in Gacha games is subject to the consuming behavior of paying for virtual goods. Since Gacha games generated from Japan, some Japanese researchers found

“once players receive some benefits from making in-game purchases, they start paying more money and ultimately pay a large amount of money within a time frame (Shibuya, Teramoto, Shoun, & Akiyama, 2019).”

## **STATEMENT OF HYPOTHESIS**

Gacha game somehow can be assimilated to gamble mentality for several reasons. The uncertain virtual rewards gaining can bring different consuming experience to consumers compared with paying for real commodities. Since paying for Gacha game is not only a consuming behavior but a kind of entertainment, players’ paying motivations can be influenced by diverse factors.

Thus, based on the literature review and previous study of other game industry researchers, the hypothesis of this paper can be derived as followings.

### **Research Question (RQ): Exploring Motivations for Virtual Rewards in Online F2P Gacha games: Considering Income Level, Consumption Habits and Game Settings**

H1: Regarding players’ economic level consuming habits

1a – Higher income encourages players to pay more

1b – Paying for Gacha games is contradicted to paying for other entertainments

H2: Regarding game companies and operators’ actions

2a – Game settings and paying settings charm players to pay

2b – Players’ loyalty to Gacha games or companies encourage them to pay

## **METHODOLOGY**

### **Study Design**

In this research, correlational studies are mainly applied. A correlational study is a type of research design. This design helps to predict score and explain the relationship among variables (Taiwo & Faw, 2012). In this paper, possible factors that influence players' paying motivations for Gacha games will be described based on the study and used as the variables to show the relationships with players' paying willingness. In the correlational study, the relationship among several factors such as demographic and virtual rewards in Gacha game itself will be figured out and demonstrated to work.

### **Pilot Study (Qualitative Method)**

A qualitative pilot study was designed to test the reliability and effectiveness of the survey questions in the survey combining both deep discussions and interviews with 50 (25 males and 25 females) adept Gacha games players in the online game forum.

### **Instrumentation Design (Quantitative Method)**

A survey is designed based on the pilot study and previous survey (Bilibili Inc., 2018) to get the primary data from adept Gacha games players. In order to figure out F2P Gacha game players' paying motivation, the survey covered 3848 people who are randomly selected based on judgmental sampling in players' online chatting group, online forum and game official website comment areas. Since the survey was posted where adept and loyal Gacha game players are mostly willing to gather, bias from non-gamers can be avoided to a certain degree.

#### ***1. Demographic Information***

Since the target group of adept players of Gacha game is diversified and complex, the demographic information of target population is gathered including age, genders and economic level. Individual monthly income and family annual income are used to measure participants' economic level. Some other information that refer to player's interested game types and paying mentalities are also gathered in the surveys.

## ***2. Consuming Habits***

Considering about the relationship between paying for virtual goods and entertainment consumption, the survey also refers to participants' daily consumption on other entertainments such as idols' merchandises and software using. The time that players spent on Gacha games is also recorded as a possible factor.

## ***3. Likert Scales***

Two sections of 5-points Likert Scales are used in the third part of the survey to measure the degree how players agree or not with the factors that influence their consuming behavior in Gacha games. Factors that influence players' consuming behavior in this section refer to the appearance, background and power of virtual rewards themselves, players' preference, players' psychological needs and companies' reputation.

## **ANALYSIS / RESULTS**

3848 participants offered valid responses to this questionnaire, 2978 of them are males, 853 of them are females and the rest of 17 people chose other genders. 3466 participants are young adults between 18 to 29 years old. 3721 participants are adept Gacha game players who have consuming experience to purchase in F2P online Gacha games, thus, these people's

response will be analyzed to figure out their paying motivations. The specific frequency and proportion of each part can be referred in the appendix section at the end of this paper.

		<b>Age</b>			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-12	1	.0	.0	.0
	13-17	125	3.4	3.4	3.4
	18-22	1947	52.3	52.3	55.7
	23-29	1425	38.3	38.3	94.0
	30-39	214	5.8	5.8	99.8
	40-49	6	.2	.2	99.9
	50+	3	.1	.1	100.0
	<b>Total</b>	<b>3721</b>	<b>100.0</b>	<b>100.0</b>	

*Table 1: Frequency Distribution of Age*

Table 1 shows the age distribution of survey participants which most are Generation Z, individuals born from 1990 to 2009 in China. 1847 people are in age 18-22 with a proportion of 52.3 in the whole population. To some degree, it can show that Gacha games really appeal a lot of young people in China.

		<b>Paid for Gacha Games in Total</b>			
CNY		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-50	92	2.5	2.5	2.5
	50-200	283	7.6	7.6	10.1
	200-500	339	9.1	9.1	19.2
	500-1,000	502	13.5	13.5	32.7
	1,000-5,000	1177	31.6	31.6	64.3
	5,000-10,000	541	14.5	14.5	78.8
	10,000-50,000	614	16.5	16.5	95.4
	50,000+	173	4.6	4.6	100.0
	<b>Total</b>	<b>3721</b>	<b>100.0</b>	<b>100.0</b>	

*Table 2: Distribution of Payment for Gacha games in Total*

Table 2 shows the distribution of players' total payment for Gacha games (CNY). 1177 people paid for Gacha games from 1000 to 5000 (CNY) and even 887 people (21.1%) in the whole survey population have paid for Gacha games more than 10000 (CNY).

<b>Correlations</b>				
		Income	Total Payment for Gacha Games	Largest Single Payment for Gacha Games
Income	Pearson Correlation	1	.403**	.382**
	Sig. (2-tailed)		.000	.000
	N	3721	3721	3721
Total Payment for Gacha Games	Pearson Correlation	.403**	1	.835**
	Sig. (2-tailed)	.000		.000
	N	3721	3721	3721
Largest Single Payment for Gacha Games	Pearson Correlation	.382**	.835**	1
	Sig. (2-tailed)	.000	.000	
	N	3721	3721	3721

\*\* . Correlation is significant at the 0.01 level (2-tailed).

*Table 3: Correlations analysis of players' income and Gacha games consumption*

In Table 3, the correlation analysis of players' income and Gacha games consumption shows that there is a significant positive correlation between income and total mobile game consumption, with a correlation coefficient of 0.403. The correlation between income and mobile game single consumption is also significant and positive with a correlation coefficient of 0.382.

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	615.950	2	307.975	378.772	.000 <sup>b</sup>
	Residual	3023.057	3718	.813		
	Total	3639.007	3720			

a. Dependent Variable: Income

b. Predictors: (Constant), Total Payment for Gacha Games, Largest Single Payment for Gacha Games

*Table 4: Examination of regression analysis of income with Gacha games payment*

In Table 4, the regression analysis shows that R Square = 0.169 and the examination of ANOVA shows that the F = 378.772. Thus, the regression analysis is reliable.

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	
	B	Std. Error				
1	(Constant)	1.772	.047	37.829	.000	
	Total Payment for Gacha Games	.164	.016	.277	10.192	.000
	Largest Single Payment for Gacha Games	.086	.016	.151	5.546	.000

a. Dependent Variable: Income

b. R Square = 0.169; F=378.772

*Table 5: Regression analysis of income with Gacha games payment*

In Table 5, as the corresponding significance probability was 0.000, less than 0.05, reaching the significance level, the model fits well. Thus, the regression result is significant.

The standard regression coefficient of total consumption is 0.277, and the sig = 0.000, less than 0.05, reaching the significance level. The value indicates that total payment on Gacha games and income has a positive correlation. As for largest single payment for Gacha games, the sig is also 0.000, much less than 0.05, proving the positive correlation between them. When

players earn more money, they would like to pay more and they can afford for extra expenditure of Gacha games.

**Correlations**

		Total Payment for Gacha Games	How Often Pay for Video Games	How Often Pay for Merchandis es of idols	How Often Pay for Legitimate Software	Time Spent on Longest Played Gacha Games	Time Spent on Gacha Games in Total
Payment for Gacha Games in Total	Pearson Correlation	1	-.441**	-.177**	-.256**	.281**	.314**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	3721	3721	3721	3721	3721	3721

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

*Table 6: Correlations analysis of total payment for Gacha games with consuming behaviors and durations of game life*

Table 6 shows the correlations between total payment for Gacha games with consuming behaviors and durations of players' game life.

As for the frequency that players pay for video games including all kinds of mobile games, PC games and console games, there is a significant negative correlation with total payment for Gacha games as the coefficient is -0.441. More often players paid for other video games, they pay less for Gacha games in total.

As for the frequency that players pay for merchandises of their idols or favored virtual characters, there is a significant negative correlation with total payment for Gacha games as the coefficient is -0.177. More often players paid for merchandises of their idols or favored virtual characters, they pay less for Gacha games in total.

As for the frequency that players pay for the legitimate version of software and games instead of using pirated software, there is a significant negative correlation with total payment

for Gacha games as the coefficient is -0.256. More often players paid for the legitimate version of software and games, they pay less for Gacha games in total.

As for the time that players have spent on their longest played Gacha games, there is a significant positive correlation with total payment for Gacha games as the coefficient is 0.281. Players spend more time on a single game, they pay more for Gacha games in total especially for this game.

As for the time that players have spent on Gacha games in total, there is a significant positive correlation with total payment for Gacha games as the coefficient is 0.314. Player playing durations of Gacha games are longer, they pay more for Gacha games in total.

Descriptive Statistics		
	Mean	Std. Deviation
Enjoy the Gacha collecting process	3.72	1.075
Prefer the story and personality of characters	4.19	.905
Prefer the voice, painting style and CG modeling	4.17	.877
Fill the vacuum inside players	2.83	1.192
Prefer the background of characters such as historical prototypes	3.77	1.004
Prefer the game and story background	3.99	.919
Prefer the game producer or company	2.65	1.101
The character and props can help effectively and strongly	4.11	.939
Time limited or rare to get	3.84	1.043
Touted by other players	3.17	1.134
Need of game testing, marketing and advertising	2.40	1.110
Just want to spend money	1.64	1.005

*Table 7: Factors of game settings that players think can encourage their consuming*

Table 7 shows some possible factors may encourage players to pay for Gacha games. Based on the 5-points Likert Scale data, the mean of story and personality of game characters (4.19), the art appearance (4.17) and the power of characters and props (4.11) are the top 3 most important factors.

		Income	Single Payment
100% get based on published price	Pearson	.110**	.161**
	Correlation		
	Sig. (2-tailed)	.000	.000
	N	3721	3721
Based on the probability with a maximum paying ceiling	Pearson	.076**	.149**
	Correlation		
	Sig. (2-tailed)	.000	.000
	N	3721	3721
Based on the probability without a maximum paying ceiling	Pearson	.000	-.052*
	Correlation		
	Sig. (2-tailed)	.993	.001
	N	3721	3721

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

*Table 8: Correlations analysis of single payment in Gacha games and income with attitudes towards game payment settings*

Table 8 shows the correlation analysis of players' single highest payment in Gacha game and their income with their acceptance towards game payment settings. Acceptance towards all three typical payment settings have significant correlations with players' income and single highest payment. The setting of 100% gain based on published price reaches the most positive correlation with a Pearson correlation coefficient of 0.110 with income and 0.161 with single highest payment. Getting based on the probability with a maximum paying ceiling also has a positive correlation coefficient of 0.076 with income and 0.149 with single highest payment but a little bit weaker than 100% gain. However, paying without a maximum ceiling has no significant correlation since almost all players are not willing to pay based on this condition while there is a negative correlation coefficient with single highest payment as -0.062.

## CONCLUSIONS AND PRACTICAL IMPLICATIONS

This study analyzes the possible motivations which encourage players to purchase in Gacha games. Unlike daily necessity, the payment for Gacha games shows a significant positive correlation with players' income and economic level. In the group of adept Gacha game players, higher income can support players to pay much more than players with low income. The finding cannot show the similarity between Gacha games and gambling, at least players with lower income know to avoid endless and addicted payment.

As for consuming behaviors, adept Gacha game players doesn't tend to pay a lot for other video games, merchandises of idols and even legitimate software. Purchasing power of Gacha game players may be limited by the relatively high price of virtual rewards in Gacha games. Thus, consuming behaviors on other entertainment and virtual goods doesn't has a significant positive correlation with consuming behaviors on Gacha games. This finding can show the loyalty of Gacha game players to Gacha games. Besides, the game life duration and time players spent on Gacha games have a significant positive correlation with payment in games. Players who have higher income and pay more have lower acceptance towards gaining rare items based on probability without maximum ceiling. These major consuming players are more willing to pay for 100% gaining the rare item or characters.

Practically, game companies should try to expand one single game's service time instead of creating many new games. The story and personality of game characters and its art effect such as CG modeling are most important for adept players who are willing to pay a lot for Gacha games. Though the strong power of game characters and props is also important, it may break the power balance in games. Thus, companies should try to create characters with charming personality in Gacha games to encourage players to pay for them. Besides, for the sustainable earnings and business, though paying without a maximum setting seems to earn a

lot for companies initially, players who pay a lot are not willing with this payment setting while they prefer to pay with a 100% gain or a probable gain with a maximum paying ceiling. Though players are encouraged by their gambling mentality, they still retain rational consuming.

## **LIMITATIONS AND FUTURE RESEARCH**

This study targets on the group of adept Gacha game players who already have experience to purchase in Gacha games. Thus, the study analysis based on the data gathered from participants who paid for Gacha games other than people who never pay for Gacha games. It can only be figured out the reason that adept Gacha game players are willing to pay for games, but it cannot really figure out the way to encourage people who have no paying experience in Gacha games to pay without any analyzing comparison between these two player groups.

In this study, the analysis part doesn't create a new model even though using the regression analysis. In the future research, the data of ordinal categorical variables can be re-collected as continuous variables to avoid the sensitive parallel line test in ordinal categorical logistic analysis.

As for the responses, the study almost covered adept players and the data was collected from the top popular game players online forum, thus, the conceal extent of players to Gacha game in this study and their payment for Gacha games may be relatively high than general average data. Gacha game's generally business and revenue may not be so bullish as what shows in this study.

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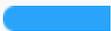
## Appendix

### Survey Responses

#### No. 1 Your gender

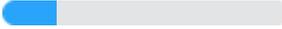
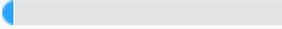
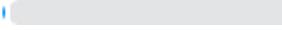
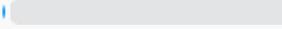
Choices	Frequency	Percentage
Male	2978	 77.39%
Female	853	 22.17%
Others	17	 0.44%
Valid Responses	3848	

#### No. 2 Your age

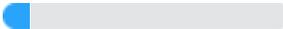
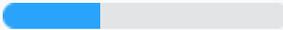
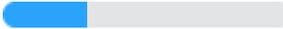
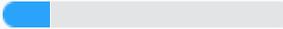
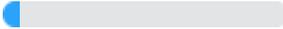
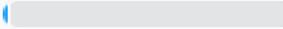
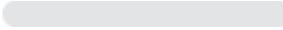
Choices	Frequency	Percentage
0-12	1	 0.03%
13-17	147	 3.82%
18-22	2017	 52.42%
23-29	1449	 37.66%
30-39	221	 5.74%
40-49	8	 0.21%
50+	5	 0.13%
Valid Responses	3848	

#### No. 3 You mostly live in

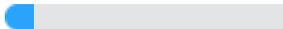
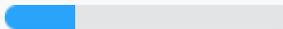
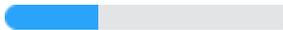
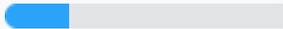
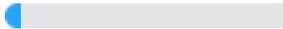
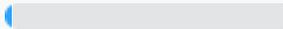
Choices	Frequency	Percentage
East/Southeast coast of China	2062	 53.59%
Northeast China	297	 7.72%
Northwest China	105	 2.73%
Southwest China	417	 10.84%

Central China	754	 19.59%
North America, Europe, Australia	149	 3.87%
Japan	34	 0.88%
Other countries	30	 0.78%
Valid Responses	3848	

No. 4 Your personal average monthly income (CNY)

Choices	Frequency	Percentage
0-1,000	376	 9.77%
1,000-2,000	1329	 34.54%
2,000-5,000	1140	 29.63%
5,000-10,000	637	 16.55%
10,000-20,000	271	 7.04%
20,000-50,000	75	 1.95%
50,000+	20	 0.52%
Valid Responses	3848	

No. 5 Your average annual household income (CNY)

Choices	Frequency	Percentage
0-50,000	403	 10.47%
50,000-100,000	974	 25.31%
100,000-200,000	1265	 32.87%
200,000-500,000	889	 23.1%
500,000-1,000,000	235	 6.11%
1,000,000+	82	 2.13%
Valid Responses	3848	

No. 6 Have you ever paid for video games including all kinds of mobile games, PC games and console games

Choices	Frequency	Percentage
Often pay	2283	59.33%
Sometimes pay	1514	39.35%
I play games without paying	38	0.99%
I never play video games	13	0.34%
Valid Responses	3848	

No. 7 Have you ever paid for merchandises of your idols or favored virtual characters

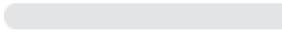
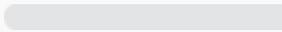
Choices	Frequency	Percentage
Often	659	17.13%
Sometimes	2238	58.16%
Never	551	14.32%
Not interested in anyone	400	10.4%
Valid Responses	3848	

No. 8 Have your ever used the legitimate version of software and games instead of using pirated software

Choices	Frequency	Percentage
Often	1971	51.22%
Sometimes	1625	42.23%
Almost not	224	5.82%
Never use software	28	0.73%
Valid Responses	3848	

No. 9 Do you know about Gacha video games with a system of loot box

Choices	Frequency	Percentage
I am a player	3739	97.17%
I once was a player	81	2.1%

I am not a player but know about it	17	 0.44%
I never hear it	11	 0.29%
Valid Responses	3848	

No. 10 Have you ever paid for Gacha video games 9-1.2

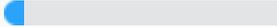
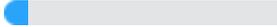
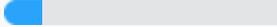
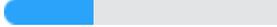
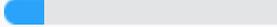
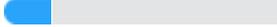
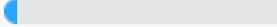
Choices	Frequency	Percentage
Often	2065	 54.06%
Sometimes	1656	 43.35%
Not yet but plan to pay	43	 1.13%
Not yet and never	56	 1.47%
Valid Responses	3820	

No. 11 How much have you paid for video games other than Gacha games in total (CNY) 10-1.2

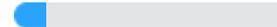
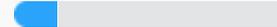
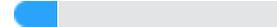
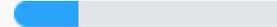
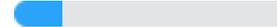
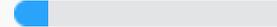
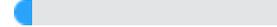
Choices	Frequency	Percentage
0-50	108	 2.9%
50-200	189	 5.08%
200-500	292	 7.85%
500-1,000	443	 11.91%
1,000-5,000	1103	 29.64%
5,000-10,000	638	 17.15%
10,000-50,000	710	 19.08%
50,000+	238	 6.4%
Valid Responses	3721	

No. 12 How much have you paid for Gacha video games in total (CNY) 10-1.2

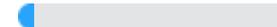
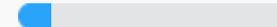
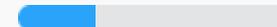
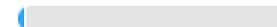
Choices	Frequency	Percentage
0-50	92	 2.47%

50-200	283	 7.61%
200-500	339	 9.11%
500-1,000	502	 13.49%
1,000-5,000	1177	 31.63%
5,000-10,000	541	 14.54%
10,000-50,000	614	 16.5%
50,000+	173	 4.65%
<b>Valid Responses</b>	<b>3721</b>	

No. 13 How much is your highest payment for a single character or game props no matter you get it or not (CNY) 10-1.2

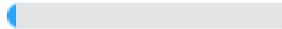
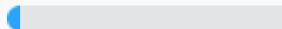
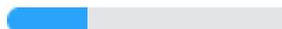
Choices	Frequency	Percentage
0-50	409	 10.99%
50-200	574	 15.43%
200-500	557	 14.97%
500-1,000	839	 22.55%
1,000-2,000	637	 17.12%
2,000-5,000	469	 12.6%
5,000+	236	 6.34%
<b>Valid Responses</b>	<b>3721</b>	

No. 14 How long have you spent on your longest played Gacha video game 9-1.2

Choices	Frequency	Percentage
Less than 6 months	226	 5.92%
6 months - 1 year	474	 12.41%
1 year - 3 years	1991	 52.12%
3 years - 5 years	1047	 27.41%
More than 5 years	82	 2.15%

Valid Responses	3820
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No. 15 How long have you played Gacha video games in total 9-1.2

Choices	Frequency	Percentage
Less than 6 months	119	 3.12%
6 months - 1 year	164	 4.29%
1 year - 3 years	1083	 28.35%
3 years - 5 years	1551	 40.6%
More than 5 years	903	 23.64%
Valid Responses	3820	

No. 16 You would like to pay for Gacha video games based on following factors 9-1.2

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1.Enjoy the Gacha collecting process	217(5.68%)	271(7.09%)	884(23.14%)	1519(39.76%)	929(24.32%)
2.Prefer the story and personality of characters	87(2.28%)	100(2.62%)	511(13.38%)	1482(38.8%)	1640(42.93%)
3.Prefer the voice, painting style and CG modeling	77(2.02%)	97(2.54%)	510(13.35%)	1599(41.86%)	1537(40.24%)
4.Fill the vacuum inside you	613(16.05%)	874(22.88%)	1308(34.24%)	623(16.31%)	402(10.52%)
5.Prefer the other background of characters such as historical prototype	141(3.69%)	247(6.47%)	953(24.95%)	1545(40.45%)	934(24.45%)
6.Prefer the game and story background	106(2.77%)	120(3.14%)	701(18.35%)	1729(45.26%)	1164(30.47%)

7.Prefer the game producer or company	711(1 8.61%)	891(2 3.32%)	1467(3 8.4%)	539(14. 11%)	212(5.5 5%)
8.The character and props can help effectively with strong power	96(2.5 1%)	140(3. 66%)	622(16. 28%)	1453(3 8.04%)	1509(3 9.5%)
9.Time limited or rare to get	160(4. 19%)	261(6. 83%)	808(21. 15%)	1492(3 9.06%)	1099(2 8.77%)
10.Touted by other players	401(1 0.5%)	578(1 5.13%)	1324(3 4.66%)	1067(2 7.93%)	450(11. 78%)
11.Need of game testing and marketing	1078( 28.22%)	793(2 0.76%)	1436(3 7.59%)	363(9.5 %)	150(3.9 3%)
12.Just want to spend money	2447( 64.06%)	618(1 6.18%)	517(13. 53%)	158(4.1 4%)	80(2.09 %)

No. 17 You accept following methods to get rewards/ rare characters and items in video games 6-1.2.3

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.100% get after sharing/watching advertisements	636(16 .58%)	486(12 .67%)	881(22. 97%)	837(21. 83%)	995(25. 95%)
2.May get after sharing/watching advertisements	1380(3 5.98%)	798(20 .81%)	848(22. 11%)	499(13. 01%)	310(8.0 8%)
3.100% get based on published price	240(6. 26%)	229(5. 97%)	821(21. 41%)	1378(35 .93%)	1167(30 .43%)
4.100% get based on monthly membership	261(6. 81%)	281(7. 33%)	800(20. 86%)	1361(35 .49%)	1132(29 .52%)
5.Based on the probability with a maximum paying ceiling	195(5. 08%)	356(9. 28%)	905(23. 6%)	1469(38 .31%)	910(23. 73%)
6.Based on the probability without a	1592(4 1.51%)	1002(2 6.13%)	813(21. 2%)	307(8.0 1%)	121(3.1 6%)

maximum paying ceiling					
7.Free to get after easy but a lot of repetitive work	307(8.01%)	466(12.15%)	1182(30.82%)	1297(33.82%)	583(15.2%)
8.Free to get after challenge but non-repetitive work	184(4.8%)	284(7.41%)	890(23.21%)	1484(38.7%)	993(25.89%)