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The Change of Trends of Client-based Games Market and Mobile Games Market and Their Analysis

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ABSTRACT

Since 2016, Chinese client games have stopped growing while Chinese mobile games have taken the place of Chinese client games and increased dramatically. The reason behind this is worthy of exploration. It can be predicted that the thriving of mobile games would closely correlate to the declining Chinese client games. This article intends to find out the reason why Chinese client games lose market share and look for the solution to assist Chinese client games in regaining the lost market share. Qualitative and quantitative methods as well as a secondary source are adopted in this article to carry out the research. The study concludes that Client-side games can return to rapid growth by learning the benefits of mobile games, such as shortening single gameplay and creating a community atmosphere.

Keywords: *Client-based Games Market, Mobile Games Market.*

1. INTRODUCTION

Past twenty years from 1996 to 2016 has witnessed the development of Chinese client games, one of the traditional online games that relies on downloading clients to play games on computers, at an alarming rate. However, since 2016, Chinese client games have begun to lose momentum. To be more specific, during the last five years, the market share has kept declining significantly. However, the opposite is Chinese mobile games, game software running on mobile phones. The number of players has been increasing steadily, according to the data released by a survey on the Chinese game industry. It is evident that Mobile games have been one of the most major competitors of Chinese client games. The reason why game players once in possession of great affection for Chinese client games currently turn to playing mobile games would have a close association with the advantages of mobile games, which Chinese client games cannot give. This research aims to explore the reason why Chinese client games lose market share through the comparison between Chinese client games and mobile games as well as searching for the solution to assist Chinese client games in gathering momentum.

An upsurge in the popularity of mobile games leads to the stagnation and decline of the client-based games once in vogue, which could be concluded from the data of the annual report on the analysis of the game market conducted by Game publishing Committee of China Audio-video and Digital Publishing Association from 2016 to 2020. These reports show that client-based game revenue declined from $61.6 billion to $55.92 billion whereas mobile game revenue increased from $51.46 billion to $209.676 billion. The effects mobile games exerting on the client-based game nearly have not been studied and this area is worthy of an intensive research.

The present article firstly intends to study what client games can learn from their mobile counterparts. Secondly, what is the relationship between the types of mobile games and their sales? Thirdly, what are the effects of sale channels in domestic and foreign markets on the market share of mobile and client games?

2. LITERATURE REVIEW

Given that this study is designed to explore the change of the trend of client-based games and mobile games market and Analysis, the related current literature can be divided into three parts, namely, the weakness of client-based games compared with mobile games, the relationship between the number of categories of mobile games and sales, and the impact of the layout of sales channels in domestic and foreign markets on the market share of mobile and client games.

The literature concerning the disadvantages of client-based games in comparison with mobile game will first be introduced. Jin Guo and Chengfeng Guo (2010) introduce how the development of the mobile Internet market accelerates the growth of the mobile entertainment industry, and it reveals the portability of mobile games which is not available in client games. [1] Zongnan Han (2017) shows that one of the most important reasons why mobile games are so popular is that it can help people to maintain their interpersonal relationships with others. [2] The disadvantages of the client-based games could be found in the exploration of the merits of mobile games because some disadvantages of the client-based games would be the advantages of mobile games; otherwise, the growth of the client-based games would not slow down at the period when mobile games rise. Jian Li (2019) well elucidate how Chinese game industry develops, in which the merits of mobile games are explained in detail and how mobile games are portable and why people favor mobile games are also included. [3] By studying this paper, the drawbacks of traditional games can be easily found.

The in-depth research on the relationship between the number of categories of mobile games and sales could help to understand which part of the mobile games attracts game players most. According to Tang J and Li D (2017), ever since 2015, Role-playing game, strategy game, chess and card game and multiplayer athletic game have been ubiquitous around China [4]. In 2018, according to Tang J and Li D (2018), Role-playing game dominated the market with the share of 32.4%, and the Strategy game held 17.0% of the revenue [5]. In 2019, according to Tang J and Li D (2019), Role-playing games have still taken up 37.8% of revenue, with an increment of approximate 5%, Strategy games accounting for 23.2%, with an increment of 6%, multiplayer athletic (MOBA) games occupying 13.7% [6]. In the report from Tang J and Li D (2020), the strategy games (37.18%), shooting games (17.97%) and role-playing games (11.35%) have occupied the highest market share in 2020 Chinese self-developed games overseas market (GRC, 2020, 2019) [7]. It is clear that the leading game category occupies the most market share is changing drastically.

The analysis of the impact of the layout of sale channels in domestic and foreign markets on the market share of mobile and client games serves as an effective way to probe into whether the sales channels layout is the leading reason behind the fall of the client-based games market. Animation Xpress and Mumbai (2019) demonstrate a method to widen the channel of distribution both in domestic and international markets of the client-based game, which is to let the client-based game enter the mobile game market in both domestic and international markets[8]. It shows that expanding new overseas markets can help the client-based game market occupy a larger market share

Chen, Z., & Guo, S. (2018) introduce the industrial chain of mobile game and client sides game [9]. Wang, R., & Su, C. (2014) also use the business model to forecast the game industry [10]. These two papers show the importance of the model and industrial train to forecast the future market.

3. RESEARCH DESIGN AND METHODS

3.1. Research Design

In order to further explore these questions, this study has launched an individual research. In this paper, both qualitative and quantitative methods are adopted, and, in the meantime, secondary sources make a great contribution to the conclusion. When it comes to the research on the advantages and disadvantages of client games compared to mobile games, a qualitative analysis is adopted. As for the analysis of the relationship between game types and sales and the relationship between sales channels and sales, a quantitative analysis is employed. And in the correlation analysis, secondary sources from 2018-2020 to cite has been used.

3.2. Methods and Sources

3.2.1. Advantages and disadvantages comparison

Table 1. Advantages and disadvantages of Client-based games and Mobile games

	Client-based games	Mobile games
Advantage	1. Good visual effects; 2.Suitable for professional players (like high difficulty, skill)	1. Can be played at any time and location for nowadays nearly every person will take a mobile phone whenever and wherever he or she is; 2. Stronger social attributes; 3. Easier downloading and installation; 4. less difficult to operate
Disadvantage	1. Restricted by location and time; 2. Difficult for Casual Gamer	1. Poor visual effects; 2. Cannot meet the requirements of some professional players for games

Through Guo's China Mobile Internet Market Analysis (2010) and Han's Analysis on the Reasons for the Popular Development of Mobile Online Games (2017), we can get the data in the table above. As can be seen in the table, the mobile game has higher user stickiness and users can play it anywhere at any time, which can enlighten the client game. Additionally, with the monopoly from the gigantic conglomerate, Tencent, people have been endowed with a better sense of interaction with their friends, reinforcing the bond between the players and impelling cooperative gaming style, which can be served as an immaculate facilitator for the company to advertise their products and improve players' experience (Li, 2019).

3.2.2 The relationship between the number of categories of mobile games and sales

3.2.2.1. Descriptive statistics

In order to find out the relationship between game types and sales, 4 aspects through a qualitative methodology have been analyzed: 1) absolute growth rate 2) category revenue chain growth analysis 3) marginal revenue benefit analysis 4) comprehensive analysis-by comparing the marginal benefits of different categories Derive better game categories.

As data can be seen from the table, the game is mainly divided into Role-playing game (RPG), Multiplayer Online Battle Arena (MOBA), Shooter game (SG), Strategy Game (SLG), Computer Role-Playing Game (CRPG) and The Card Game (TCG). In this article, we will mainly discuss the data of these major game types.

The study of the relationship between the number of categories of mobile games and sales needs three types of data, the year over year growth rate of revenue for each game category from 2019 to 2020, the year-on-year growth rate of the number of each game category from 2019 to 2020 and the marginal rate of return of each game. Before getting the above-mentioned statistics through calculating, each percentage of the revenue of each mobile game type as well as the proportion of the number of each mobile game category in China between 2018 and 2020 should be collected at first and these data have been drawn into four charts, a table (table 1), a line chart (Figure 1), a table (Figure 3) and a line chart (Figure 2), for which could be presented more clearly. Table 2 and Figure 1 both showed the percentage of the revenue of each mobile game type in China from 2018 to 2020.It is noticeable that the proportion of the revenue of MOBA was sharply rising over the period of three years. Both RPG and SG were on a downward trend during the same period. The other three types of mobile games underwent no variation. From 2018 to 2020, through RPG received the highest amounts of revenue, it decreased considerably. In 2018, its amount of revenue was 40% while the figure in 2020 is below three quarters of that. Interestingly, although MOBA received the smallest numbers of revenue between 2018 and 2020, it had the fastest growth, the percentage of the revenue of which in 2020 was the triple of that in 2018.

Table 2.the percentage of the revenue of each mobile game type in China from 2018 to 2020

	2018	2019	2020
RPG	40%	48.5%	28%
MOBA	1.0%	2.2%	3%
SG	6.0%	3.0%	3%
SLG	11.0%	14.0%	12%
CRPG	7.0%	7.5%	8%
TCG	13.0%	7.0%	16%

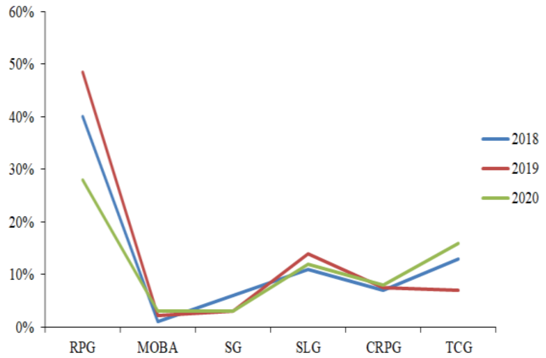

Figure 1 the percentage of the revenue of each mobile game type in China from 2018 to 2020

Table 3 and Figure 2 both compare the proportion of the number of each mobile game category in China between 2018 and 2020.It is clear that the percentage of the number of RPG was on a downward trend, while that of the amount of SG and SLG was on the rise. The rate of the number of MOBA and CRPG were stable and the proportion of the amount of TCG decreased greatly first and then increased. The percentage of number of RPG in 2020 was nearly two thirds of that in 2018. In 2018, SG took up the smallest number, with the amount of 4.8%, whereas in 2020, occupying the smallest number was TCG. Besides, the growth rate of the proportion of SG was the fastest, and the percentage of the number of SG was three time of that in 2018.

Table 3. compare the proportion of the number of each mobile game category in China between 2018 and 2020

	2018	2019	2020
RPG	32.4%	28.6%	19.48%
MOBA	17.0%	14.9%	15.28%
SG	4.8%	8.6%	15.04%
SLG	8.1%	13.6%	12.06%
CRPG	13.0%	16.9%	11.46%
TCG	6.9%	3.9%	7.77%

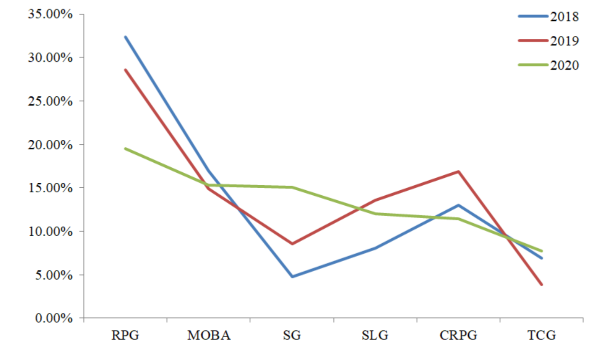

Figure 2 comparing the proportion of the number of each mobile game category in China between 2018 and 2020

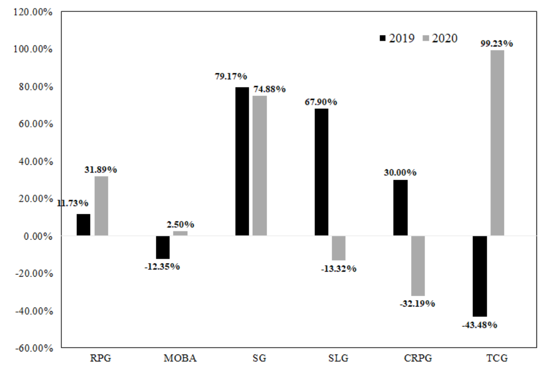

Figure 3 year-over-year growth rate of revenue for each game category from 2019 to 2020

3.2.2.2. Quantitative analysis

The year-over-year growth rate of revenue for each game category from 2019 to 2020 can be calculated through the formula $\frac{M_t - M_{t-1}}{M_{t-1}}$. Mt refers to a certain kind of game revenue in T year and Mt-1 refers to the game revenue in T-1 year. Using this formula, we can calculate the year over year growth rate of revenue for each game category from 2019 to 2020.

Based on the formula $\frac{M_t - M_{t-1}}{M_{t-1}}$, I get the year-over-year growth rate of revenue for each game category from 2019 to 2020 and a bar chart is drawn to better perform the rate.

The graph below shows the year-over-year growth rate of revenue for each game category. Based on the manifestations of the graph, there have been only two types of game under decreasing revenue which were MOBA and TCG, and still two types of games under negative growth rate which is SLG and CRPG. Meanwhile, in 2019, SG had the highest growth rate of revenue while TCG had the lowest growth rate of revenue; In 2020, TCG, unexpectedly, had the highest growth rate on account of its catastrophic performance last year, and CRPG had the lowest growth rate of revenue.

In addition to the data comparison in the same year, the comparison in different years within the same game is fairly intriguing as well. TCG had the largest growth rate of approximately 140% and SLG had the largest slump of around 80%. Besides, there are some minor changes in other types of games, such as the 60% downturn of CRPG, 20% increase of RPG, 15% increase of MOBA and 5% drop of SG.

Then we introduce the formula $\frac{N_t - N_{t-1}}{N_{t-1}}$, which N_t refers to the number of a certain kind of game in T year and N_{t-1} refers to the number of the same kind in T-1 year. Using this formula, we can calculate the year-on-year growth rate of the number of each game category from 2019 to 2020. The data obtained from the formula $\frac{N_t - N_{t-1}}{N_{t-1}}$ is used to make a graph below, which describes the year-on-year growth rate of the number of each game category.

Based on the graph showing below, there are some conspicuous variations of the growth rate of the number of each game. Only one type of game, SG, was decreasing in 2019, and another type of game, SLG, was decreasing in 2020. Besides, in terms of the largest growth rate of each year, MOBA had the most enormous growth rate in 2019, and TCG had the largest growth rate in 2020.

Additionally, as for the comparisons between two years, MOBA had the most gigantic slump of 85% and the TCG had the biggest upturn of 82%. Also, SG underwent 50% of increase, SLG decreased 40%, RPG had a 20% increment and CRPG had a minor oscillation of 1% downturn.

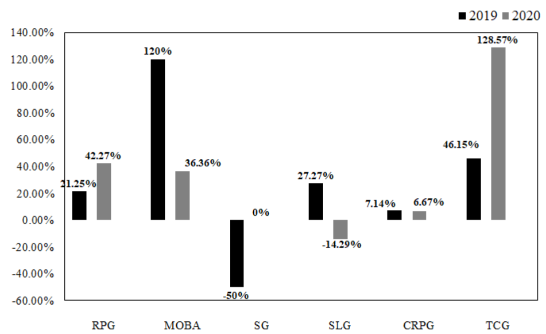

Figure 4 the growth rate of the number of each game

Finally, through the third formula $\frac{M_t - M_{t-1}}{N_t - N_{t-1}}$, we can get the marginal rate of return of each game. And a bar chart is drawn to display the marginal rate of return of each game.

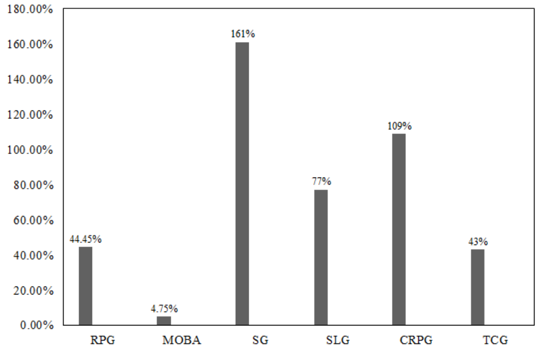

Figure 5. Marginal rate of return of each game

In the absolute growth rate analysis, we can see the shooter game (SG) revenue growth rate of 6.44%. The growth rate for the card games (TCG) was 9%. Year-on-year revenue analysis shows that the shooting category (SG) of the year-on-year revenue growth rate is the fastest of the six categories.

In the analysis of mobile terminal marginal revenue, shooter games (SG) and strategy games (SLG) have the highest marginal revenue. Based on the data mentioned above, a conclusion can easily arrive at that client-side games can focus on both types of game development and increase returns.

3.2.3. The impact of the layout of sales channels in domestic and foreign markets on the market share of mobile and client games

The data of China's domestic game market and foreign game market sales in 2018-2020 and sales in key regions abroad in 2018-2020 can be obtained from the 2019 China games industry report and the 2020 China games industry report. Two charts have been drawn (Figure 6 and Figure 7) to show these statistics.

Figure6 below shows the comparison of China's domestic game market and foreign game market sales in 2018-2020.

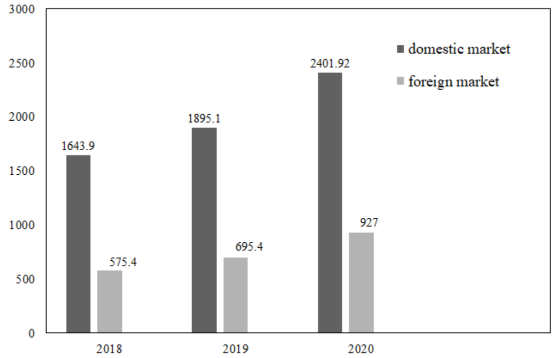

Figure 6. The comparison of China's domestic game market and foreign game market sales in 2018-2020

Figure 7 below shows the comparison of sales in key regions abroad in 2018-2020.

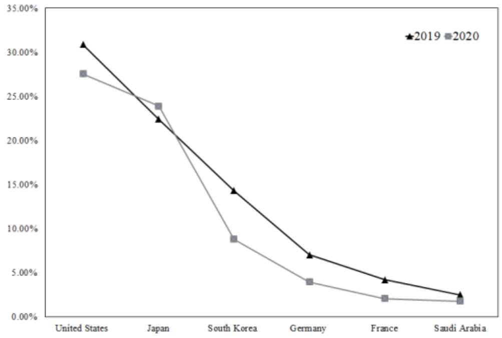

Figure 7. The comparison of sales in key regions abroad in 2018-2020

From Figure 6, it shows that the domestic market growth rate in 2019 is 15.28% and the foreign market growth rate is 20.86%. 2020 domestic market growth rate is 26.74% and foreign market growth rate is 33.3%. From this, it can be seen that the growth rate of the foreign market has exceeded that of the domestic market, and there is more room for development in the future.

According to Figure7, we can see that in overseas markets, Japan's year-on-year growth rate is increasing while the year-on-year growth rate of the rest of countries is decreasing.

4. CONCLUSION AND RECOMMENDATION

4.1. Conclusion

This article first collects the number and market share of each game category in China's domestic market and then draws some tables and figures by the collected data. Based on the data and figures presented above, the below conclusions can be drawn is that if Client-side games intend to rise in a rapid growth, they should follow the suggestions below.

First, according to Table 1, we can easily find the principal benefit of mobile games is their friendly community atmosphere.

Next, based on figures from 3 to 5, a conclusion can be reached is that Client-side games are supposed to shorten single gameplay. The reason is that in figure 5, we can find that not all types of mobile games have large marginal rate of return. Specifically, among six types of mobile games, SG and CRPG share higher marginal rate of return, the marginal rates of return of SLG, RPG and TCG unnoticeable, MOBA's rate of return being the least.

Besides, figure 6 indicates that for Chinese R & D games, the foreign market has more room for growth than the domestic market.

Last, an interesting finding from figure 7 is that Japan has maintained the highest growth rate on the international market of Chinese self-developed games, and its year-on-year growth is still rising.

Unfortunately, it is impossible to do the quantitative analysis on the pros and cons of the Client-side games and Mobile games due to the difficulty in obtaining comparative data on their portability and social attributes. Additionally, due to the late development of China's domestic game industry, although the scale of our market has developed rapidly in recent years, the relevant market data are relatively limited, which fails to support the further detailed analysis, so the conclusion may have some flaws. I hope that this research can be helpful to promote the development of the China's domestic game industry.

4.2. Recommendation

If Client-side games intend to win back the market share that has been occupied by mobile games, it is highly recommended that Client-side games be committed to creating a friendly online game community. Besides, the company that develops client-side games should focus on two types of games, SG and CRPG, for SG has the highest marginal rate of return and CRPG takes up the second highest marginal rate of return. In addition, for Chinese R & D games companies, more attention should be paid on the overall foreign market. Last, increasing funds in Japan market is a brilliant idea for Chinese game companies.

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