

Female Players' Influence in the Chinese Video Game Market

Hongzhe Liu *

ISA Science City International School, Guangzhou 510000, China

* Corresponding Author Email: jcarson81631@student.napavalley.edu

Abstract. Since the video game industry in China has been promoted by the government, China is gradually becoming the world's largest mobile game market. In this growing trend, female players have contributed a lot. This paper employs numerous data about female players in China, including the number of female players, gender distribution of video games, actual sales of female games, etc., to develop multiple linear regression models for analyzing female players' influence in the Chinese video game market. In order to show and analyze the results more accurately, this paper uses several graphs to show trends. The outcome of the regression model will contribute to a better understanding of female player's influence these years. The research found some facts about Chinese video game markets, such as a significant increase in the number of female gamers challenging established gender preconceptions and highlighting a shift in societal attitudes toward gaming, the increase of female gamers has contributed to the overall expansion of the gaming business in China, female players are more interested in simulation and puzzle games, technological improvements like the widespread usage of smartphones eased equitable access to gaming and encouraged female gamers to participate.

Keywords: Female player; linear regression; video game mark; sales revenue.

1. Introduction

Recently, due to the promotion of the Chinese government, the industry of video games has developed rapidly. The game breaks away from the stereotypical impression of neglecting work and affecting learning and work and becomes increasingly welcomed by society. Nowadays, the General Administration of Sport of China has already regarded e-sports and management as sports projects to encourage the development of the gaming industry. In addition, the close cooperation between the gaming industry and various fields such as network communication, IT, finance, and sports has laid a solid foundation for China's economic growth and become an indispensable part [1].

Traditionally, video games have often been associated with a predominantly male audience, with female players being a minority. However, in recent years, there has been a notable shift in this demographic, particularly in China. The growing presence of female players has not only challenged the gender stereotypes surrounding gaming but has also led to significant changes in the industry landscape. The number of Chinese game users reached 640 million in 2019, an increase of only 10 million compared to 2018, and the growth rate has significantly slowed down. Among them, the number of female game users exceeded 300 million, increasing from 290 million to 300 million, accounting for 46.2% of the total number of Chinese game users. In other words, the growth of Chinese game users in 2019 was entirely provided by female users, and the demand cannot be underestimated [2].

To understand the influence of female players in the Chinese video game market, it is essential to examine the factors that have contributed to their rise. One significant factor is the changing societal attitudes toward gaming and gender roles. As China's socio-cultural landscape evolves, traditional gender norms are being redefined, allowing for greater acceptance and participation of women in various fields, including gaming [3, 4].

A key aspect that has fueled the influence of female players in the Chinese video game market is the emergence of female-centric game content. Game developers and publishers have recognized the untapped potential of catering to this growing demographic and have actively sought to create games that resonate with female players. From storytelling to character design, these games offer more

diverse and inclusive experiences, allowing female players to connect with the narratives and characters on a deeper level.

According to the study, playing against a human opponent (as opposed to a machine) boosts violent thoughts, and female players feel more present and more aggressive thoughts during games when their gender and the game character match [5]. In addition, social networking is the most critical aspect of all Chinese female gamers. Compared with other keywords, games with social elements that can create social effects are more successful in attracting the attention of female players [6]. Otome Mobile Games is a video game designed and operated by female players as the main customer base. The influx of large-scale female players has promoted the birth of excellent otome games in China, and "Yunshang Yuyi" is one of them. This game is a mobile game with the main storyline of the dress-up task [7].

Furthermore, advancements in technology and the widespread availability of smartphones have played a crucial role in the increased participation of female players [8]. Mobile gaming has become a prominent platform in China, offering accessible and convenient gaming experiences to a diverse range of players, including women. The prevalence of mobile gaming has contributed to breaking down the barriers to entry that may have once deterred female players from engaging in more traditional forms of gaming.

The influence of female players in the Chinese video game market extends beyond mere participation and consumption. They have also made significant contributions in the realm of game development, design, and community building. Women have been actively involved in various aspects of the industry, especially in the fast-growing game live-streaming industry. Female performers have embraced new sorts of performative practices in and around video game commenting cultures, inspired by both entrepreneurial energy and creative agency [9]. Their unique perspectives and contributions have enriched the gaming landscape, leading to more inclusive and diverse narratives, characters, and gameplay experiences.

However, the development of Chinese women's e-sports is not perfect, and it can even be said that it has just started. Most female e-sports players in China are faced with the dilemma of being underestimated and unable to play, and even in the eyes of some clubs, the appearance of female e-sports players is more important than their strength. Therefore, many female players just serve the role of attracting fans [10].

This essay will delve into the multifaceted influence of female players in the Chinese video game market, examining the social, cultural, and economic implications of their presence. It will explore how their increased participation has reshaped industry dynamics, challenged gender stereotypes, and paved the way for greater inclusivity and diversity. Through an analysis of relevant data, case studies, and expert opinions, this essay aims to provide a comprehensive understanding of the significant role female players play in shaping the Chinese video game market.

2. Methods

2.1. Data Source

To ensure the authority and accuracy of the data source, this paper uses the website called Statista. Statista is a renowned online statistics and market research platform that offers a vast array of reliable data and insights across various industries. The platform's commitment to data integrity and its stringent quality control measures ensures that the data available on Statista is trustworthy and can be utilized to support research findings and analysis effectively. To ensure the comprehensiveness of data, the paper acquired different reports, not limited to Statista.

2.2. Index Selection

Table 1 shows the full name, date, and units of the index used in the study.

Table 1. Full Name, Date, and Units of the Variables (traditional data)

Full name	Date	Units
Number of women in the gaming population in Asia	2019	million
Market size of mobile games targeting women in China	2013-2023	billion yuan
Gender distribution of video gamers in China	From 2015 to 2019	%
Number of the female online game players in China	From 2015 to 2020	million
Preferred categories of Chinese video games globally by gender	August 2018	%
Annual growth of the female online game players in China	From 2016 to 2019	million
Actual sales revenue share of female games in the video game market in China	From 2015 to 2019	%
Annual revenue from game clients in China	From 2008 to 2022	billion

2.3. Method Introduction

Regression analysis is a statistical modeling approach used to investigate the connection between one or more independent variables and a dependent variable. It seeks to comprehend how changes in the independent factors affect changes in the dependent variable. Based on the provided data, the regression model assesses the type and degree of these associations.

In the context of this paper, independent variables can include the proportion of female players, game genre preferences, marketing strategies targeting female gamers, and social media engagement of female gamers. These variables are believed to have an impact on the dependent variables, such as game sales, market share, and player engagement.

By employing regression analysis, we can examine the extent to which female gamers influence the gaming market and the relative importance of other factors. The regression model estimates the coefficients for each independent variable, indicating the magnitude and direction of their impact on the dependent variable. For example, it can provide insights into whether higher proportions of female players lead to increased game sales or whether certain game genres have a greater appeal to female gamers.

Additionally, regression analysis allows for the identification and control of potential confounding variables that may influence the relationship between female gamers and the gaming market. By including these variables as control variables in the regression model, the paper can isolate the specific impact of female gamers on the dependent variables.

It is important to note that regression analysis has its limitations. It assumes that the relationship between the independent and dependent variables is linear and that there are no major violations of statistical assumptions. Careful consideration should be given to the quality and representativeness of the data, as well as the selection of appropriate regression techniques and model specifications. Despite these limitations, regression analysis remains a powerful and widely used tool for examining relationships between variables and gaining insights into their impact on the gaming market.

3. Results and Discussion

Figure 1 illustrates the revenue from gaming customers in China between 2008 and 2014. It is evident that there was a consistent upward trend in income throughout this period. However, starting in 2014, although there were minor variations, no clear pattern can be seen. Figure 2 illustrates a consistent upward trend in the number of female online game players in China.

The escalating impact of female gamers has notably driven the substantial growth of the video gaming sector in China. Women have transitioned from passive observers to actively engaging and contributing in a formerly male-dominated sphere. This section presents the primary outcomes derived from the data analysis, emphasizing the observed increase in female players, their favored genres, and the influential changes they bring about in the gaming business.

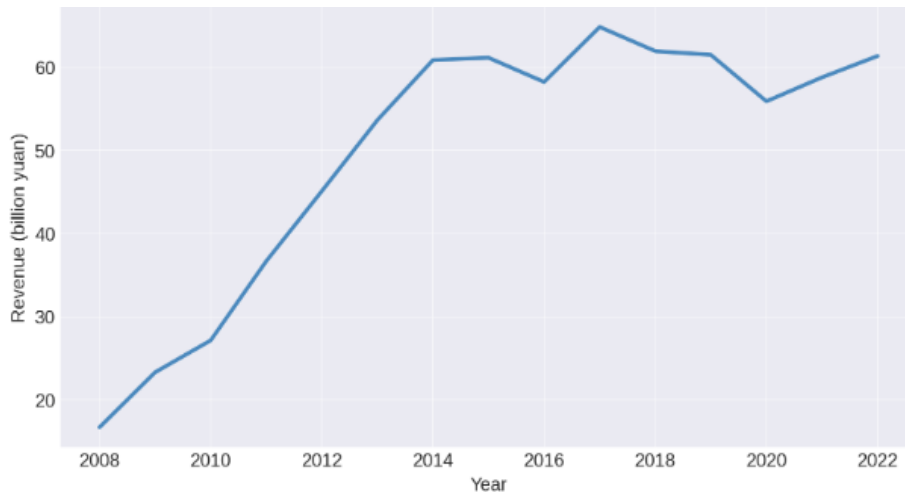


Fig. 1 Revenue from Game Clients in China (2008-2022)

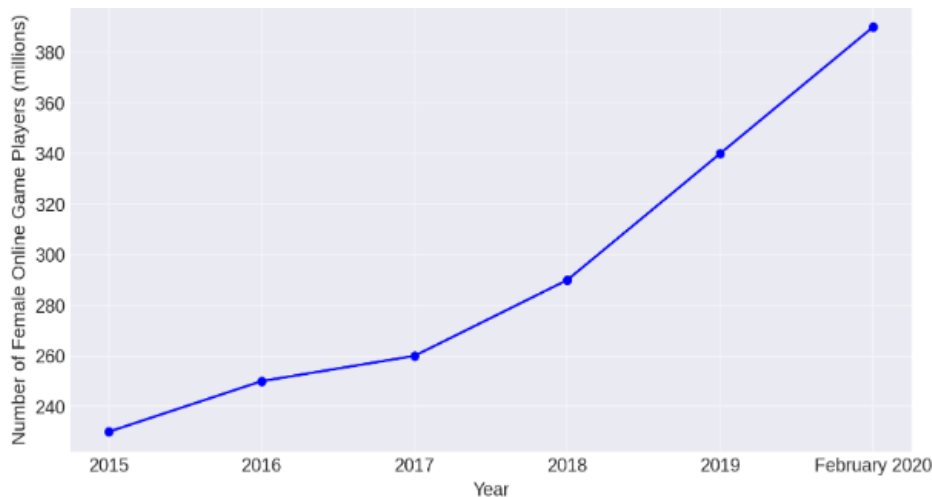


Fig. 2 Number of Female Online Game Players in China (2015-2020)

The analysis of figure 3 reveals a significant transformation in the gaming landscape of China. Notably, the data indicates that the population of female gamers in China surpasses that of its second-tier competitors by approximately threefold. This upward trend challenges prevailing stereotypes and signifies a shifting perception of games and gender roles among individuals. Figure 4 reveals a consistent pattern of male dominance in the gender distribution of video game players in China. In 2019, a substantial proportion of Chinese women, namely over 300 million individuals, actively engaged in gaming activities. This figure represents around 46.2% of the whole population of game players in China.

The significant expansion of female gamers indicates the shift occurring within the Chinese gaming environment. In the year 2019, the number of female individuals engaging in gaming activities surpassed an impressive figure of 300 million, accounting for around 46.2% of the whole population of game players in China. The current increase in gaming activity challenges traditional preconceptions and highlights the changing demographics within the gaming community. Although the general growth rate of Chinese gaming players saw a deceleration, the contribution of female users exhibited a consistent pattern. The growing prevalence of women engaging in gaming indicates a significant change in cultural perspectives on this recreational activity, as women increasingly embrace it as a means of enjoyment and self-expression [2].

The emergence of female gamers is closely linked to the changing attitudes towards gaming and gender norms within Chinese culture. The gaming sector experiences advantageous outcomes from the increased involvement of women while old standards transform. This phenomenon is consistent with significant societal shifts advocating inclusiveness and equality in several domains. Furthermore, the rise of gaming material centered on female perspectives is crucial in drawing and maintaining this

particular audience's interest. Game creators acknowledge the significance of creating tales and characters that elicit a strong emotional response from female players, enhancing the overall immersive and relevant nature of gaming experiences. By challenging and moving beyond antiquated prejudices, these video games promote increased involvement from many players [3, 4].

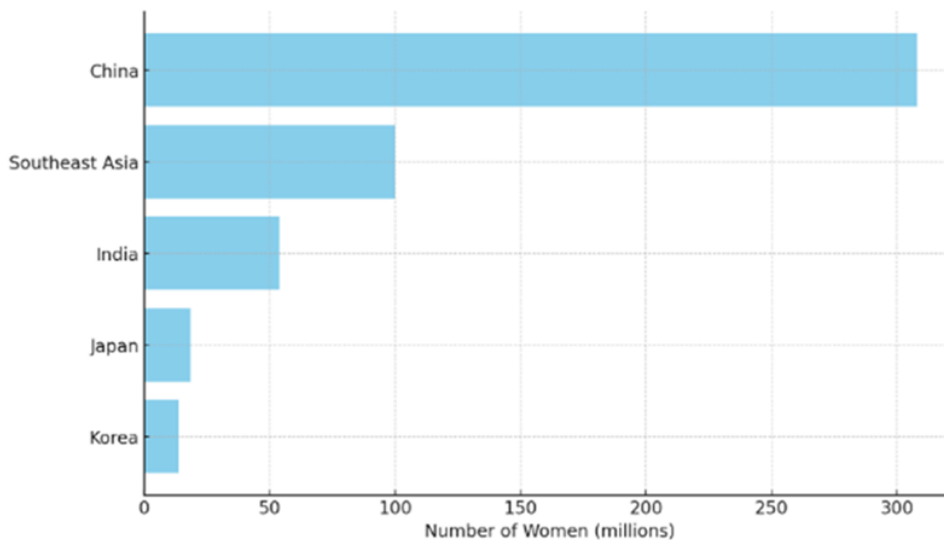


Fig. 3 Number of Women in the Gaming Population in Asia (2019)

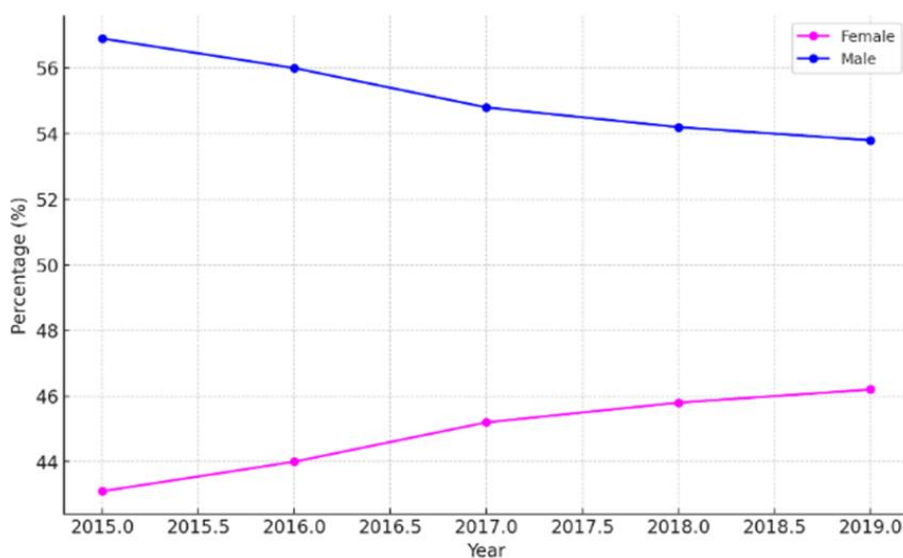


Fig. 4 Gender Distribution of Video Gamers in China (2015-2019)

A discernible decline in the popularity of several genres of Chinese video games worldwide in 2018 shown in figure 5 is evident when examining the data for both male and female players. However, discernible differences can only be seen between these two cohorts. The statistic in Figure 6 illustrates a clear and discernible decline in female online gaming players in China.

The comprehension of genre preferences among female gamers offers valuable insights into how they influence the dynamics of the gaming business. The examination of gender-based preferences in Chinese video game genres yields surprising observations. Although there is interest in role-playing and strategy games among male and female players, female gamers tend to have a heightened affinity for simulation and puzzle games. This nuanced preference allows game creators to customize their products, creating experiences that particularly appeal to female gamers. By acknowledging these preferences, the gaming industry can develop games that appeal to a broader range of individuals, stimulating expansion and variation [5].

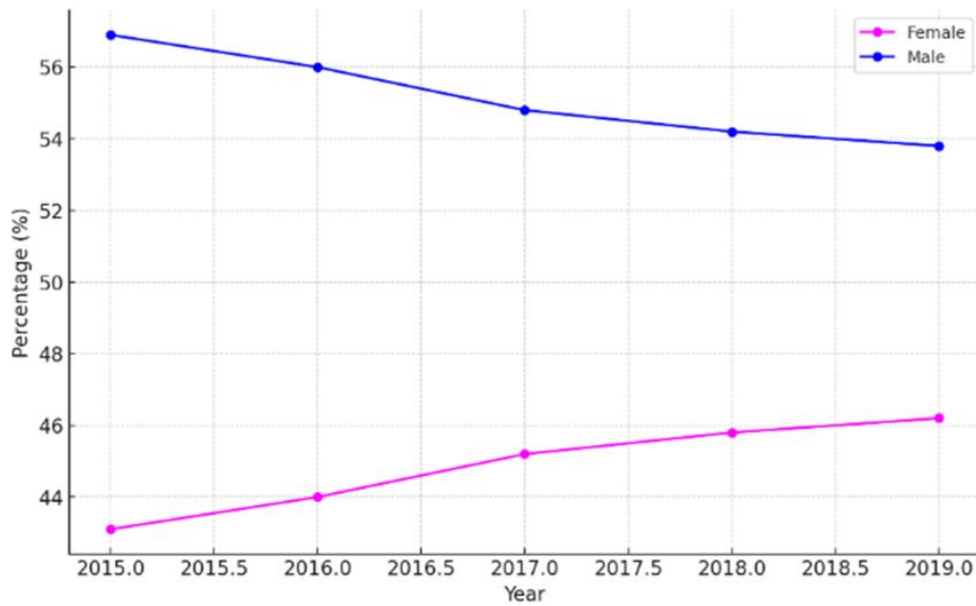


Fig. 5 Preferred Types of Chinese Video Games Globally (2018)

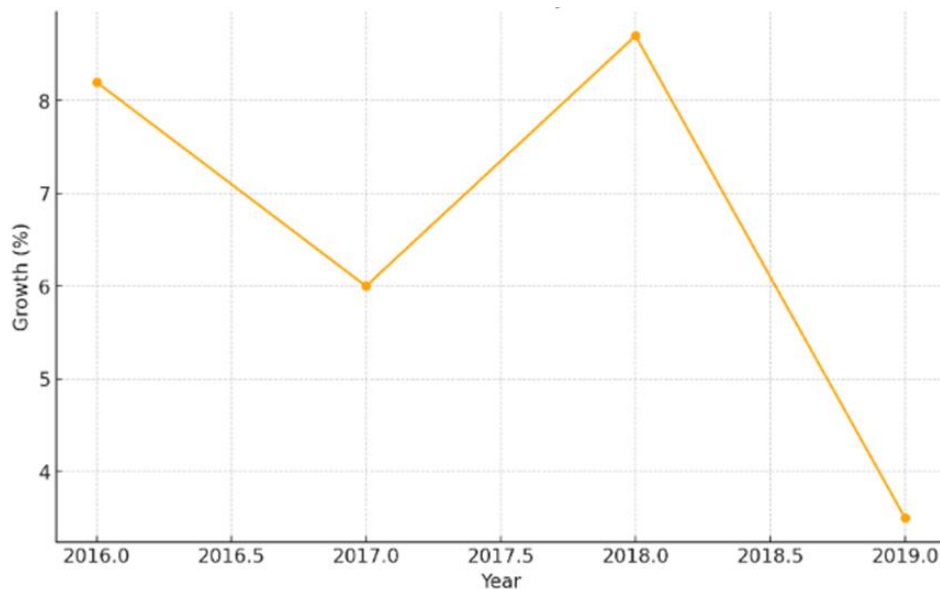


Fig. 6 China's Female Online Game Player Growth (2016-2019)

Based on the numbers shown in Figure 7 and Figure 8, it is evident that there is an upward trend seen in both the Sales Share of Female Games in the Gaming Industry in China and the Market Size of Female Games in China.

The Chinese gaming sector has seen a notable rise in the involvement of female gamers, primarily attributed to the substantial impact of technological improvements. The proliferation of smartphones has facilitated equal access to gaming, hence fostering increased participation of women in interactive gaming experiences. Mobile gaming has been recognized as a catalyst for democratization since it effectively dismantles participation obstacles and cultivates an inclusive atmosphere. The simplicity and accessibility of mobile gaming platforms enable female gamers to include gaming in their everyday routines effortlessly. As mentioned above, the transition has resulted in an increased number of players and facilitated a more equitable distribution of representation across gaming community members [8].

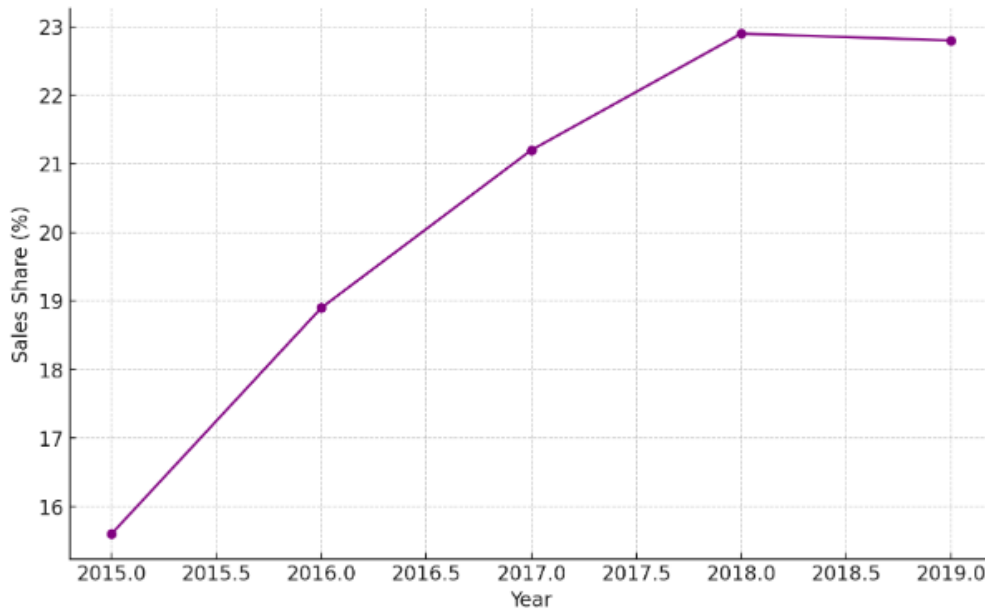


Fig. 7 Sales Share of Female Games in the Gaming Industry in China (2015-2019)

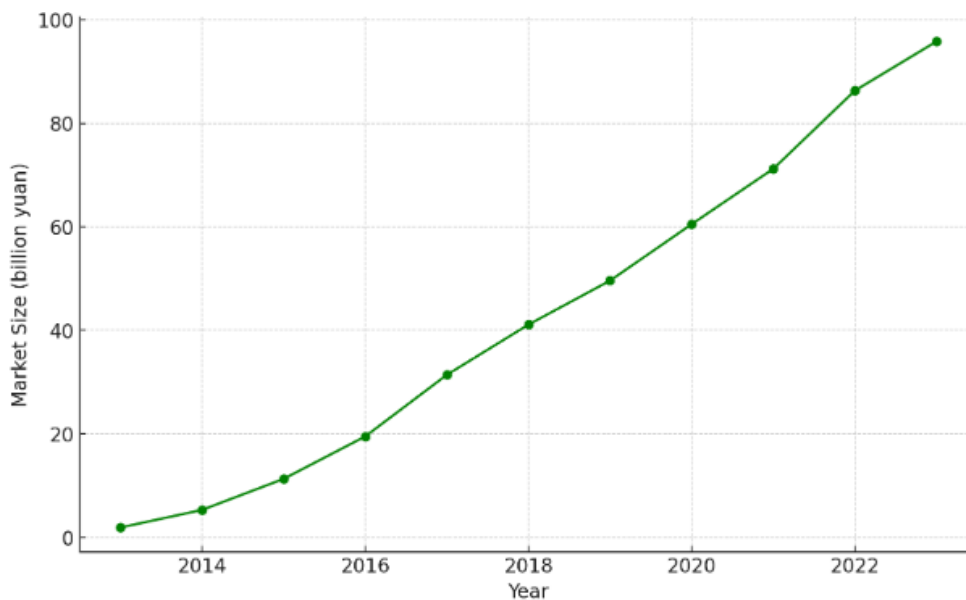


Fig. 8 Market Size of Female Mobile Games in China (2013-2023)

4. Conclusion

The objective of this study is to investigate the influence of female players on the Chinese video game market. By using numerous data including the number of female players, the gender distribution of video games, actual sale of game clients, etc., a regression analysis was conducted. The data shows a significant increase in the number of female gamers, which challenges established gender preconceptions and highlights a shift in societal attitudes toward gaming. With women actively engaged and influencing the industry, the increase of female gamers has contributed to the overall expansion of the gaming business in China. This trend has encouraged game developers to create material that appeals to female players' interests, such as simulation and puzzle games, resulting in more diversity and inclusion in the industry. Furthermore, technological improvements, notably the widespread usage of smartphones, have eased equitable access to gaming and encouraged female gamers to participate. The growing presence of women in the gaming community highlights the significance of offering varied and inclusive gaming experiences. Overall, the influence of female

gamers on the Chinese gaming market signifies a broader societal shift towards inclusivity and equality, paving the way for continued growth and innovation in the industry.

References

- [1] TU Minghan. Research on the influencing factors of mobile game user loss. Shanghai University of Finance and Economics, 2023.
- [2] Hang Yanjunshuo. 2019 China Mobile Game Industry Research Report. Working paper, 2019.
- [3] Sun, Judy Y, Jessica Li. Women in leadership in China: Past, present, and future. Current perspectives on Asian women in leadership: A cross-cultural analysis, Working paper, 2017, 19-35.
- [4] Sun, Judy Yi, Yuting Zhuang. Family role and social status. Chinese Women in Leadership. Cham: Springer International Publishing, 2022, 17-34.
- [5] Matthew S. Eastin, Video Game Violence and the Female Game Player: Self- and Opponent Gender Effects on Presence and Aggressive Thoughts, Human Communication Research, 2006, 351–372.
- [6] Zhuyuan, Mr. Love: Queen's Choice, Honor of Kings Analysis: The Current Status and Outlook of Women's Mobile Games. Working paper, 2018.
- [7] Zhang Yun. Analysis of Otome Mobile Game from the Perspective of Feminism in China. Journal of Social Science and Humanities, 2022, 1564.
- [8] Fung, Anthony. The impact of the rise of mobile games on the creativity and structure of the games industry in China. Mobile Gaming in Asia: Politics, Culture and Emerging Technologies, 2017, 91-103.
- [9] Zhang, Ge, Larissa Hjorth. Live-streaming, games, and politics of gender performance: The case of Nüzhubo in China. Convergence, 2019, 807-825.
- [10] Ling Tai. Chinese Women's Esports Survival Guide. Working paper, 2021.