

Analysis on the Changing Trend of the Difference of Family Education Investment in China over Recent Years

Yajie Li^{1,a,*†}, Aiyue Zhang^{2,b,†}, and Yi Zhao^{3,c,†}

¹*School of Foreign Language & Literature, Yunnan Normal University, Kunming, Yunnan, China*

²*School of Foreign Language, Chengdu University of Traditional Chinese Medicine, Chengdu, Sichuan, China*

³*School of Education Science, Nanjing Normal University, Nanjing, Jiangsu, China*

a. 100402@yzpc.edu.cn, b. 100414@yzpc.edu.cn, c. 04200436@njnu.edu.cn

**corresponding author*

†These authors contributed equally.

Abstract: Family education has received ever-increasing attention in recent years, while the previous studies have mostly focused on the analysis of horizontal causes such as the connotation, status quo and influencing factors of differences in family education investment. The previous studies lack the analysis of vertical and temporal changing trends. Based on the data from 2010 to 2020 in the children database of China Family Panel Studies, this study longitudinally analyzes trends of the non-economic investment in family education in China — “parents checking children’s homework” and economic investment — “extracurricular tutorial” and finds that both show an overall obvious upward trend. It is enlightened that society gives more importance to both economic and non-economic investment in family education and expects to provide more diverse and efficient policies and suggestions on family education investment in the coming years, which is of great significance to improve the quality of family education and promote educational development.

Keywords: family education investment, homework, tutoring.

1. Introduction

Since January 1, 2022, China has officially carried out the Family Education Promotion Law of the People’s Republic of China. What should be noticed is that China has never passed specific legislation pertaining to family education. The importance of family education has risen from “family affairs” to “state affairs”. What is behind the promulgation of policies and regulations is the deepening of national attention to family education. The influence of family education on people’s life is greatly significant. The educator Mr. Cai Yuanpei once said that the family is the first school of life. China upholds a tradition of attaching importance to children’s education and parents often put a lot of effort into cultivating children. Whether it is the educational economic investment defined in human resources, or the time and emotional investment other than the economic part, they are both regarded as a part of the family education investment that can be quantified and analyzed.

Sociological research believes that there are two ways for families to affect children's development. One is to provide invest financial resources in distinguishing educational possibilities for students, including "famous schools", "key schools" in regular schools and off-campus paid educational services — shadow education (i.e. extracurricular tutoring); and the second is to influence children's learning behavior and attitude through parental educational participation and behavioral support, and ultimately affect the development of students [1]. Based on the data of CFPS 2010-2020, this article will focus on the longitudinal analysis of family education investment including the changing trend in the past ten years in two aspects: off-campus training investment and homework guidance. The characteristics of family education investment in the stage of compulsory education in China in the new era. What's more, the time changes in investment costs will be analyzed from a dynamic and diachronic perspective. Through this research, people can have an intuitive understanding of the changes in the two investment methods of family education in the past ten years and strengthen the society's and parents' concentration on family education investment, which is conducive to parents to rationally plan family education investment models and the government to formulate family education related policies. In this way more efficient and high-quality family education can be obtained and Chinese education can be well developed.

2. Literature Review

Family investment in education is an indispensable part of education. Many scholars have concerned about this problem. The existing literature mainly studies the connotation, present situation, influencing factors and implementation suggestions of family education investment.

Judging from the connotation, many scholars have divided the types of family education investment in detail, such as emotional investment and economic investment, time investment and money investment, on-campus investment and off-campus investment, etc. [2-4] Lu Chuntian and others pointed out that parents' emotional input can influence the healthy development of children's cognitive ability more than all kinds of economic input. Li Jiali and He Ruizhu analyzed the influence of family education investment on children's academic performance from the aspects of social capital, cultural capital and shadow education, and found that there were class differences in the amount of time and money that parents spent in their children's education. Parents with upward bias belief attached great importance to the financial and time spent in kids' education, and parents' time investment was the primary element impacting their kids' academic performance [5]. At the same time, part-time investment has the most glaring impact on the heterogeneity of youngsters' educational performance [6]. Gu Tianzhu and others also verified that parental companionship and extra-curricular investment can significantly promote their kids test scores, yet from a relative point of view, parental companionship is more important than extra-curricular investment.

Judging from the present situation and influencing factors, the current social environment and family environment have different influences on family education investment. It is mainly concentrated in the areas where families are located, government education policies, public education investment, the number of family children, family income level, family level and parents' education level, etc. Among them, scholars have made the most extensive and comprehensive research on two factors: socio-economic background and family area. From the social point of view, Li Hongwei pointed out economic development has brought about the rapid growth of family education expenditure, and Fang Chao and Huang Bin found the increase in the government's financial allocation per student will lead to a higher proportion of family education expenditure [2, 7]. From the perspective of individual family factors, Wei Yi analyzed the marginal consumption tendency of families with different socio-economic backgrounds, children's structures and household registration to their kids' educational programmes inside and outside school [8]. In rural families, rural parents rarely seek the balance between quantity and quality in monetary investment

in their children's education [5]. Among urban families, families with better socio-economic backgrounds have a higher investment in children's school and outside school, and it is found that girls' investment in children's school expansion and outside school interests is higher than boys' in only-child families. From the perspective of social interaction, Li Fulin found that there were differences in the role of family interaction among different professional classes in promoting family education investment: the higher the professional class, the lower the impact of online and offline social interaction on family education investment [9]. In addition, many studies include the area where the family is located, paying special attention to the comparison of family education investment between town and country. Liu Baozhong compared the current situation of educational investment between urban and rustic families in China from the perspectives of education expectation, education expense and education involvement. He concluded both urban and rural families have higher education expectations for their children, but the extra-curricular tuition expenditure of urban families surpasses that of rustic families, and urban families take interactive participation, while rural families take one-way participation [10]. Han Junhui and Liu Dianhong, by comparing and analyzing the educational investment behavior of urban and rural families, found that the self-expectation of children's education and parents' expectation of children's education in urban families were higher than those in rural families, and predicted that the educational investment behavior trend of urban and rural families would be divided in the future [11].

From the implementation suggestion, some scholars hold opposing views on education investment. Some scholars emphasize the positive role of family education investment, and think that the expansion of investment in family education should be promoted. Liu Xingbei, Lu Bo and Lu Zongnan suggest paying attention to the positive influence of family education in time investment and economic investment on children's social development [11, 12]. Li Hangxing believes that it is necessary to strengthen the leading role of financial investment in education, guide social resources, and make educational investment multi-channel and diversified to promote the increase of private educational investment [13]. While other scholars hold a negative attitude towards the investment in family education, and think that the investment in family education in China should be reduced as much as possible. Studies have confirmed that such suggestions are related to the reduction of education expenditure in China's fiscal centralization policy [14]. Chi Wei, Qian Xiaoye and Wu Binzhen suggested that the state should increase its investment in education, provide more high-quality educational resources, and reduce the family's investment in out-of-school education to reduce the burden of family education [15]. Hu Yongmei and Wu Shuang believe that the substantial increase in education expenditure has restrained the economic burden on low and middle-income families. The authority is supposed to rationally distribute educational resources, reduce the difference in education levels and boost the balanced development of education [16]. The main reason for the disagreement among different conclusions is that the research is not comprehensive enough. At present, the research often only focuses on one aspect of family education investment, and only studies the advantages or disadvantages, lacking a comprehensive understanding of the overall role of family education investment.

Overall, the existing studies have explored the reasons for the differences in investment in family education in China from the differences in the amounts and emotions of different types of expenditure items in family education, including the social interaction, family class background, family cultural atmosphere and parenting concepts. However, insufficient research have figured out the changing characteristics of family education investment in China from a longitudinal perspective. With China's economic development and educational policy reform, the public put ever-increasing emphasis on education. Therefore, it is particularly necessary to analyze the changing characteristics of the differences in family education investment in recent years and explore the underlying logic of the differences in the new era, especially in this society where the

investment in family education is growing rapidly and people are paying more and more attention to education.

3. Data and Method

3.1. Data Resources

The data used in this study come from the database of China Family Panel Studies (CFPS) which is a national, large-scale and multidisciplinary social tracking survey project and published by the Institute of Social Science Survey at Peking University. The database officially started the baseline survey in 2010, and then respectively conducted five rounds of full-sample follow-up studies in 2012, 2014, 2016, 2018 and 2020. The sample of CFPS covers the population of 25 provinces or cities or autonomous regions in China except for Hong Kong, Macau, Taiwan, Xinjiang, Tibet, Qinghai, Inner Mongolia, Ningxia and Hainan, representing 95% of the population of China. Thus, the sample of CFPS can be considered a nationally representative sample. The questionnaires in CFPS consist of four chief categories: community questionnaire, family questionnaire, adult questionnaire and children questionnaire. This study mainly uses the data from the children's database of CFPS from 2010 to 2020.

3.2. Variable

In this study, “frequency of checking children's homework” and “extracurricular tutorial costs” will be selected as the two variables, which represent the non-economic investment and economic investment in family education investment respectively. According to the content of the questionnaire, the frequency of parents checking their kids' assignments was divided into five categories: “very often”, “often”, “occasionally”, “rarely” and “never”. The extracurricular tutorial fee includes tutoring class fees, tutoring fees and parent-child class fees (including interest classes offered by kindergartens). “Extracurricular tutorial classes” refers to training classes taught by specialized teachers to improve academic performance or develop certain skills in children's spare time, which are different from courses that are taken during formal teaching time in schools.

3.3. Research Method

The study statistically organizes the data from 2010 to 2020 and analyzes the overall change trend, group change trend and differences between groups with STATA.

3.4. Data Processing

Among the total data on the frequency of parents checking kids' assignments from 2010 to 2020, with the missing samples and “not applicable” samples removed, the actual sample size used in 2010 is 4778. The size is 4426 in 2012 and 4348 in 2014. The actual sample size used in 2016 is 5307, and the actual sample size used in 2018 reaches 5423. The last one in 2020 is 4612. According to the question in the questionnaire —— about whether there are extracurricular tutorial expenses, the sample size of the expenditures is 1271 in 2010 and 1261 in 2012. Then it turns to 1341 in 2014 and 733 in 2016. Finally, in 2018 and 2020, the sample size with expenses becomes 1579 and 1512.

4. Research Results

4.1. Analysis of the Changing Trend of the Frequency of Parents' Checking Homework

Figure 1 shows the trend of the frequency of parents checking children's assignments from 2010-2020. From 2010-2020, the total number of families whose parents "never check" homework dropped from 20.76% to 11.77%, of which the decline was obvious in 2018-2020, but the frequency change showed a steady downward trend in ten years. From 2010 to 2020, the total number of families whose parents check their children's homework increased from 79.24% to 88.23%, an increase of 8.99%. Figure 2 shows the changing trend of parents' frequency of checking their children's homework, among which "frequently (2-4 times a week)" is the highest proportion among families that check homework, with the largest increase in ten years, from 32.59% in 2010 to 43.08% in 2020, with an increase of 10.49%. In addition to "often", the frequency of "very often" is on the rise, with an increase of 6.32% in ten years. Taken together, from 2010 to 2020, not only the proportion of parents' check-up homework is constantly increasing, but also the frequency of check-up homework is becoming more and more frequent. The proportion of "frequent" and "very frequent" exceeded 60% in 2020.

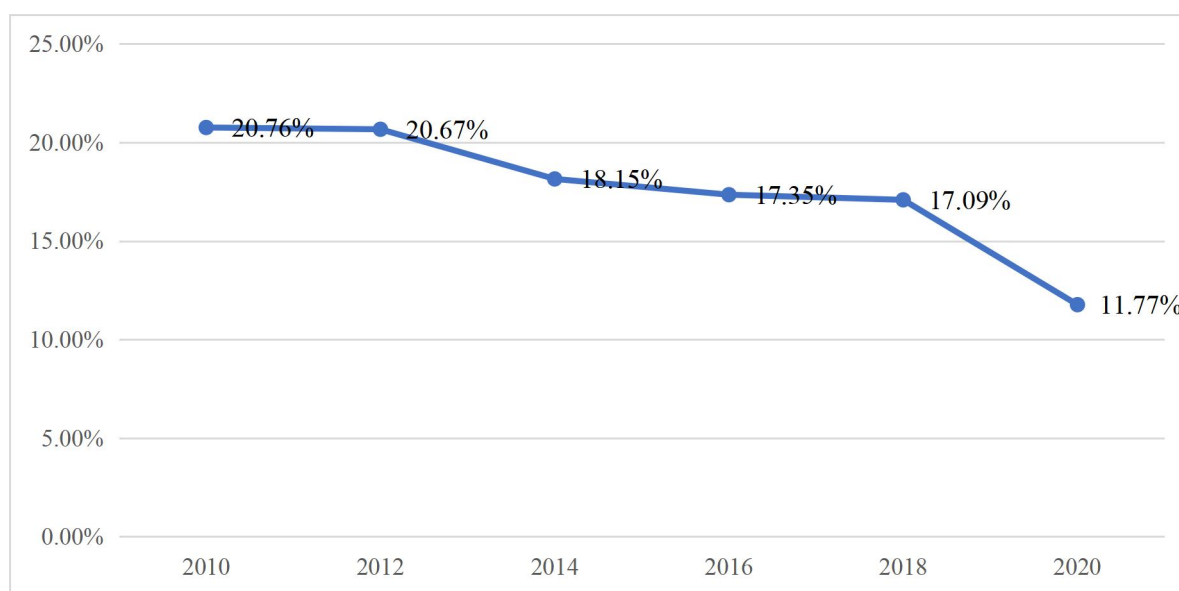


Figure 1: Trends in the frequency of parents' "never checking homework" from 2010 to 2020.

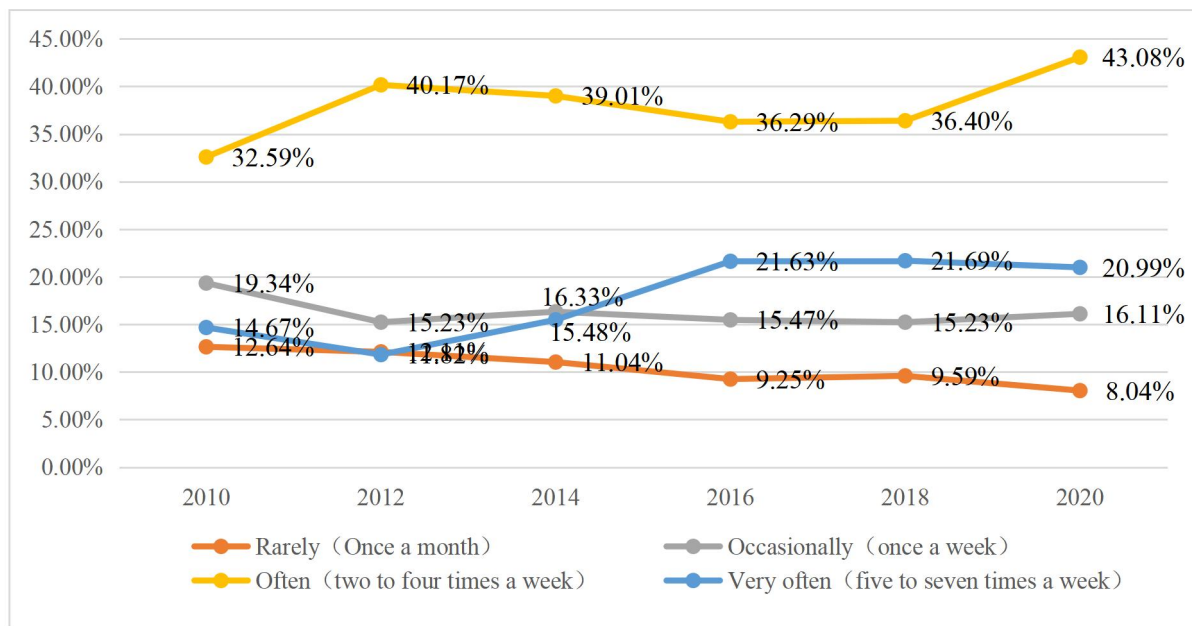


Figure 2: Trends of frequency of parents checking their children's homework from 2010 to 2020.

In recent years, especially since 2018, one of the reasons for the overall obvious increase in the frequency of parents' check-in homework may be the promotion of new media tools such as online parent groups and homework punch-in software in home-school co-education. More and more schools require parents to regularly supervise their children's studies, study punch-in and upload homework through a series of new media platforms, which to some extent increases the frequency of parents' check-in homework. At the same time, the Five-Year Plan for Guiding and Promoting Family Education (2016-2020) mentioned online and offline home-school co-education should be realized by constantly building new media education platforms, which also promoted parents' emphasis on students' after-school study and homework. Of course, in this process, whether parents take the initiative and voluntarily to conduct homework inspections is also a question worthy of further exploration.

4.2. Analysis of the Changing Trend of Extracurricular Tutoring Expenditure

Because the monetary values of different years are different, the study can't compare them directly. The authors need to consult the China Statistical Yearbook to know the consumer price index of each year, and then convert the data into comparable data before making an analysis. Therefore, based on the monetary value in 2010, this study compares the average value of extracurricular tutoring from 2012 to 2020 with the real value. Figure 3 analyzes the changes in the average extracurricular tutoring expenditure from 2010 to 2020, and shows that the average extracurricular tutoring items invested by families in the past ten years have increased significantly from 1,259.666 yuan to 4,741.616 yuan.

There may be two reasons for the trough in 2016. On one hand, the CFPS questionnaire was adjusted in 2016, and the same modules previously belonging to adult answering questionnaires and children answering questionnaires were integrated to share module data. As a result, the sample size of "extra-curricular tutoring fees (RMB) in the past 12 months" in the questionnaire in 2016 was small. On the other hand, in 2013, the Ministry of Education issued the "Ten Provisions for Reducing the Burden of Primary School Students", which requires schools and teachers not to organize students to make up classes or take new classes collectively in their spare time, winter and summer vacations, weekends and other statutory holidays. Public schools and tutors are not allowed

to organize or participate in holding “pit-occupying classes” and extracurricular cultural lessons. Since the statistical results of CFPS data are published in even years, and it takes a certain time to implement the policy after its publication, the statistical results of 2016 show that the participation rate of students in extracurricular tutoring and the average expenditure has decreased [17].

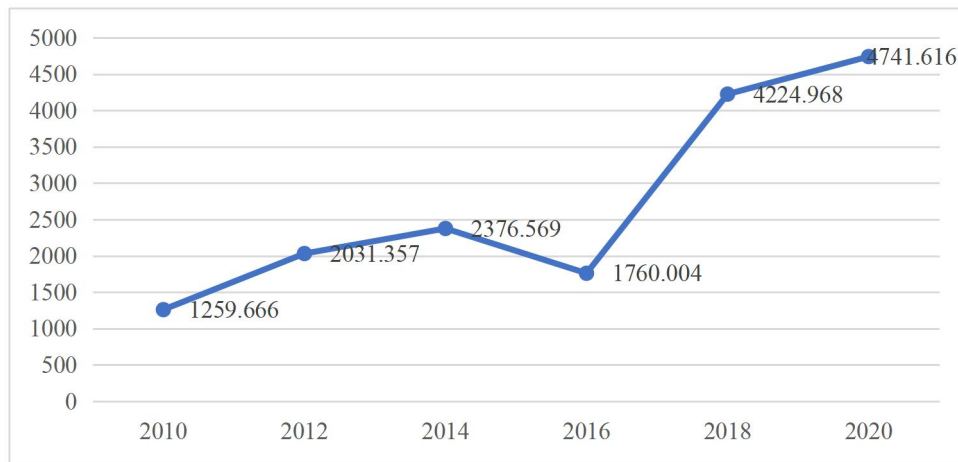


Figure 3: Change trend of average expenditure of extracurricular tutoring from 2010 to 2020.

4.3. Comparison of Extracurricular Training Expenditure of Families with Different Frequencies of Inspection Work

According to the average data of extra-curricular tutoring expenditure of families with different inspection frequencies from 2010 to 2020, this study divides “very often” and “frequently” into “high frequency”, while other frequencies are “low frequency”. Through the comparative analysis of the average extra-curricular tutoring expenditure of two types of inspection families in Figure 4, it is found that the changing trend of extra-curricular tutoring expenditure of families with different inspection frequencies is consistent with the overall expenditure trend, except in 2014. From 2010-2016, the average expenditure of “high-frequency” family tutoring always exceeded the average total expenditure, and from 2016-2020, the expenditure of “high-frequency” family tutoring was close to the average total expenditure. However, the average extracurricular tutoring expenditure of “low frequency” families in 2010-2018 was slightly lower than the average total expenditure, but it increased significantly in 2018-2020.

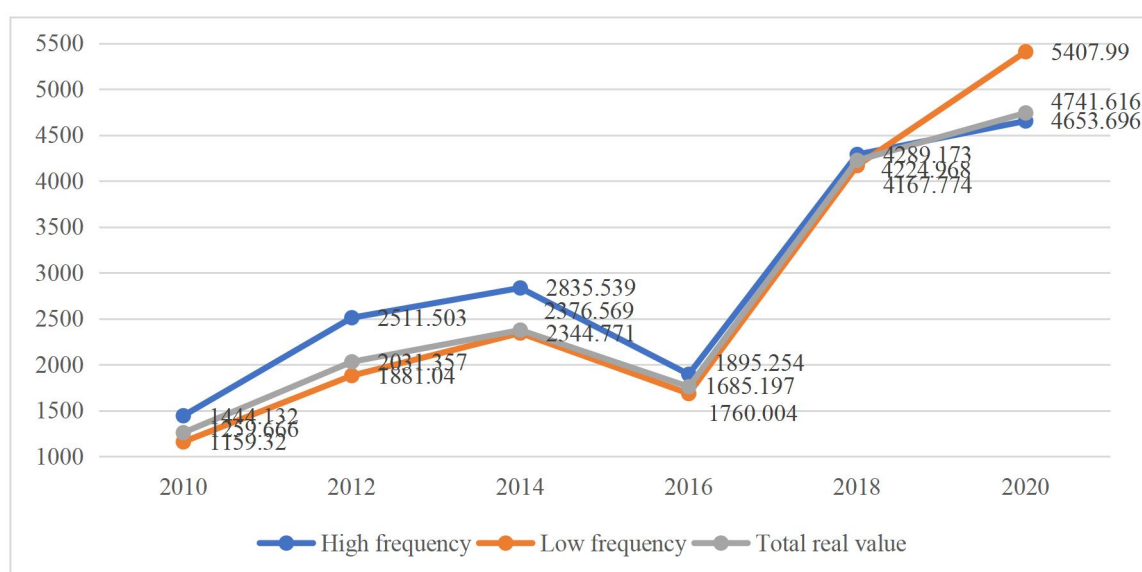


Figure 4: Change trend of average expenditure of extracurricular tutoring in families with different frequency of examination from 2010 to 2020.

5. Conclusion

According to the results of this study, the non-economic investment and economic investment in family education in China have increased to some extent in the last 10 years, mainly in the significant increase in parental checking frequency of homework and extra-curricular spending.

Social, economic, and educational perceptions have a strong influence on the system. For social reasons, the current social competition is more and more intense, and “educational connotation” has become the norm. Students and parents who are directly exposed to the competition are investing more and more education energy and cost, hoping that through the emphasis on family education the children will be in a more favorable position on the road to higher education.

For economic reasons, the development of the economy will also lead to an increase in family education expenditure. To improve human capital and educational returns, parents would like to spend more on youngsters’ learning. From educational concepts, the traditional educational concept of “hoping for boys to become dragons” and “hopeful for girls to become phoenixes” in China has existed for a long time. Most families have high expectations for their children and more and more family hope their children can get the best education.

Finally, the study has some limitations. First, this study chooses the two variables of “frequency of checking children’s homework” and “cost of extracurricular tutoring” as the representatives of economic and non-economic investment in family education, but the study didn’t carry on the in-depth study of other indicators of family education investment. Next, the integration of questionnaire modules in 2016 resulted in the absence of many samples, which may affect some research results. Therefore, a more and longer span of tracking data and evidence support is needed to further explore the development trend of our family education investment.

With the “double reduction” policy carried out, the burden of assignments reduced in schools and the restriction of extracurricular tutoring in subjects, the investment in family education in China may show a different investment tendency from the present. This study is expected to provide some diachronic data support for future research on policy-making and family education investment.

References

- [1] Ling Cai. (2022) Analysis on the Family Expenditure for Education. *Dynamics of Social Sciences*, 2,68-78.

- [2] Jiali Li, Ruizhu He. (2019) *Time Investment, Financial Investment and Youth Development: Interpretation of Social Capital, Cultural Capital and Shadow Education*. *China Youth Study*, 8,97-105.
- [3] Lu Chuntian , Li Yifei & Chen Ling. (2019) *Emotional Input or Economic Support: An Empirical Analysis of Family Education Investment*. *Journal of Social Development*, 6(01),50-67+243.
- [4] Tianzhu Gu, Jianfu Ma & Rou Sun. (2021) *Education Input: Time v.s. Money, Which is More Important?* *Journal of Educational Studies*, 17(04),148-165.
- [5] Yi Wei. (2020) *In-school or Out-of-school: Household Spending on Children's Basic Education in China*. *Journal of East China Normal University(Educational Sciences)*, 38(05),103-116.
- [6] Haining Wang, Zhiming Cheng, Russell Smyth. (2022) *Parental Misbeliefs and Household Investment in Children's Education*, *Economics of Education Review*, Volume 89.
- [7] Hongwei Li. (2000) *An Empirical Study on the Urban Residents' Family Education Consumption in China*. *Education & Economy*, 4,1-7.
- [8] Chao Fang, Bin Huang. (2022) *Crowd-in or Crowd-out : How Financial Investment in Public Education Produces An Effect on a Family's Education Expenditure*. *Educational Research*, 43(02),150-159.
- [9] Fulin Li. (2021) *Does Social Interaction Influence Family Education Investment? ——Based on the Moderating Effect of Occupational Status*. *FORUM ON CONTEMPORARY EDUCATION*, 5,76-87.
- [10] Baozhong Liu. (2017) *A Comparative Study on the Investment of Family Education in Urban and Rural Areas of China*. *China Youth Study*, 12,45-52.
- [11] Junhui Han, Dianhong Liu. (2017) *Urban-rural Comparison and Evolutionary Game of Family Education Investment Behavior*. *Education Research Monthly*, 2,54-60.
- [12] Xingbei Liu, Bo Lv, Zongnan Lv. (2021) *Research on the Relationship between Family Education Investment and Early Children's Social Development*. *Journal of Shaanxi Institute of Education*, 37(9),8.
- [13] Xinghang Li, Qiqi Sun. (2013) *Study on the Financial Investment in Education in China*. *Journal of Southwest Minzu University(Humanities and Social Science)*, 34(09),215-219.
- [14] Ryu Jeongmin, Park Sewon, Park Yoonseo, Park Jeongwon, Lee Munjae. (2021) *Innovative Culture and Firm Performance of Medical Device Companies: Mediating Effects of Investment in Education and Training*. *International Journal of Environmental Research and Public Health*, 18(17).
- [15] Wei Chi,Xiaoye Qian, Binzhen Wu. (2012) *An Empirical Study of Household Educational Expenditure Burden in Urban China*[J].*Tsinghua Journal of Education*, 33(03),75-82.
- [16] Yongmei Hu, Shuang Wu. (2008) *The Empirical Study of Compulsory Education Burden of Inhabitants in Beijing*. *Educational Science Research*, 6,28-32.
- [17] Haiping Xue, Chenchen Fang. (2019) *Supplementary Tutoring for Compulsory Education Students in China: Status and Trends*. *China Economics of Education Review*,0(4),75-97.