

Analysis of the Influence of “Universal Two-Child” Policy on the Development and Investment of Preschool Education

Jiayue Yu

International Department, The Affiliated High School of SCNU, China

yujy.paige2017@outlook.com

Abstract. The implementation of the “universal two-child” policy is a key measure to deal with the new population normal characterized by low birth rate, low death rate and high aging rate in China, which is conducive to easing the structural contradiction between China's population age and the transformation of economic growth. It can be seen from the analysis of existing studies that the implementation of the “universal two-child” policy will at least promote the significant improvement of China's infant birth rate in the short term, and will have a serious impact on the development of infant preschool education through the lack of preschool education places, the insufficient supply of health care and education resources and the shortage of preschool education fund. In this regard, at the family level, they will choose different investment level of preschool education fund for their children based on the growth of family income and children's education goals, but they will face a series of difficulties. Therefore, the government should adopt different incentive mechanisms from internal and external factors in order to promote the healthy development of preschool education, aiming at the dilemma caused by family preschool education investment. Finally, the paper puts forward corresponding policy suggestions.

Keywords: Universal two-child policy, Preschool education development, Investment.

1. Introduction

Since the reform and opening up, China's economic development has made remarkable achievements, but at the same time, China's population structure has also undergone remarkable changes. As shown in figure 1 below, since 1999, the number of children aged 0-14 years in China has been continuously decreasing, the child dependency ratio has been continuously decreasing, the number of people over 65 years old has been increasing rapidly, and the elderly dependency ratio has been rising rapidly. It can be seen that, against the background of population structure that the demographic dividend recedes gradually due to the continually decreasing fertility and increasingly severe aging (CAI fang, 2011), China's population and family planning policy is in urgent need of reform. Therefore, since the third plenary session of the 18th central committee of the communist party of China announced the implementation of the “single two-child” policy in 2013, the fifth plenary session of the 18th central committee of the communist party of China announced the implementation of the “universal two-child” policy in 2015, and the policy came into effect on January 1, 2016.

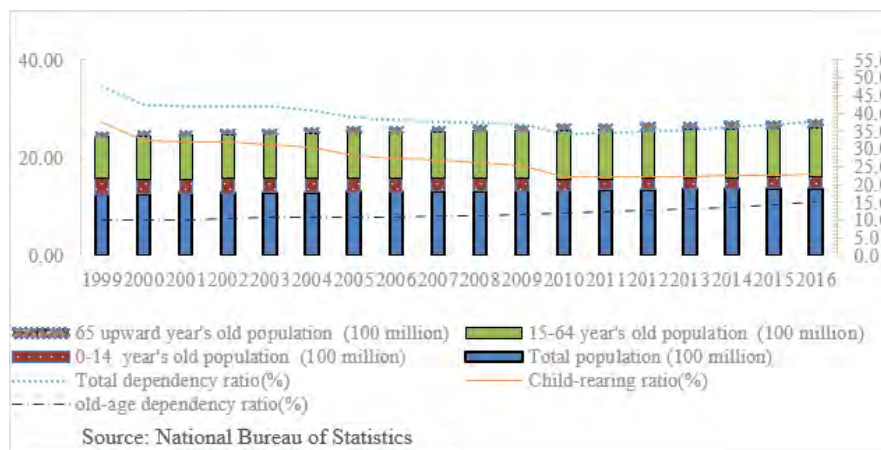


Figure 1. Population Age Structure Change

Meanwhile, according to the data provided by the development planning division of the ministry of education, in 2016, there were 44.13 million preschool education children in kindergartens (including attached classes), 2.23 million full-time teachers for preschool education and 710,000 child-care workers. According to this calculation, the ratio of full-time teachers and students in China's preschool education in 2016 is 1:19.77, and that of child-care workers and students is 1:62.13. The ministry of education issued the "standards for the allocation of teaching and administrative staff in kindergartens (interim)" in 2013 (teacher [2013] no. 1), which stipulates that "there are 30 persons in each class in a full-time kindergarten, with 2 full-time teachers and 1 child-care worker in each class, or 3 full-time teachers in each class". It can be seen from this that the teacher resource allocation in China's preschool education is seriously insufficient (Li ling et al., 2018). With the implementation of the "universal two-child" policy in January 2016, the infant birth will temporarily reach the peak (Zhai zhenwu et al., 2014; Zheng yile, 2016; Li ling et al., 2018; Yuan xin, 2018), which is bound to aggravate the dilemma of allocation of preschool education resources. In addition, the imbalance of basic education resource allocation between urban and rural areas and between regions has been existed for a long time (Li ling et al., 2018), so the release of second child policy will inevitably have an impact on the development of basic education. How to address these issues through family and government preschool education investment is the focus of this paper. Therefore, in view of the current population structure, this paper focuses on the existing research on the impact of universal two-child policy on preschool education investment, and on this basis, puts forward its own views and policy suggestions.

2. Influence of Universal Two-Child Policy on Preschool Education Investment

2.1 Influence of Universal Two-Child Policy on Population Structure

It is well known that the adjustment of a country or region's fertility policy will have a significant impact on its future population structure. Different scholars have different conclusions of the impact of the universal two-child policy, officially launched in January 2016, on China's future population structure. Guo zhigang (2015) believed that the fertility level of Chinese women of childbearing age has been reduced to a very low level, and their fertility level will not be significantly improved even if they face the adjustment of the universal two-child policy. Qiao xiaochun (2014) believed that the universal two-child policy would guide the adjustment of future fertility level to the level of replacement, and achieve a new situation of moderate population size and structural adjustment and optimization in both direction. According to the research of Zhai zhenwu et al. (2014), China's annual population size will increase dramatically after the comprehensive two-child policy, with the peak of birth population reaching 49.95 million and the peak of fertility level of women around 4.5. Wang jinying and Ge yanxia (2016) used the hierarchical birth rate model of children with different ages according to different family types to calculate that the universal two-child policy to some extent slows down the reduction of the total population and labor force population, increases the labor supply after 2035, and reduces the labor force burden and the degree of population aging. But after 2030, China's population will continue to decrease at an average annual rate of 6.4 million, and by the end of this century, the population will be reduced to 1.016 billion. Li ling et al. (2018) used the cohort-component method and used the Leslie matrix to establish the population prediction model, and estimated that: the school-age children and kindergarten children of preschool education will experience the first increase and then decrease in 2017-2035, among which the peak number of school-age children will appear in 2021 and reach 69.8104 million, and fall to 43.7302 million by 2035. The peak number of preschool education children in kindergartens appears in 2022, which will reach 61.5273 million and fall to 43.7302 million by 2035. From the above existing studies, it can be seen that the implementation of the "universal two-child" policy will promote a significant increase in the birth rate of infants in China at least in the short term. Therefore, it is necessary to study the impact of the substantial increase in the number of infants on the existing preschool education resources and the investment in preschool education by families and the government.

2.2 Influence of Universal Second Child Policy on Preschool Education Resource Allocation

The gap in the preschool education places is obvious. Kindergartens are the main place to carry out preschool education activities, and the pressure of resource allocation of preschool education brought by the "universal two-child" policy is reflected in the pressure of kindergarten demand quantity. According to studies conducted by Zhang Huirong et al. (2013) and Li Ling et al. (2018), after the implementation of the "universal two-child" policy, the demand number for preschool education kindergartens in China will undergo an inverted "U" change process, with the peak value appearing in 2022, reaching 341,800, and then gradually decreasing, about 242,900 by 2035. From the perspective of urban and rural areas, the demand of urban preschool education kindergarten experiences a process of first substantial growth and then slow decline in 2017-2035. Among them, the demand of preschool education kindergarten continues to increase in 2017-2022, and the peak appears in 2022, reaching 224,400, and then continues to decline, falling to 169,200 by 2035. However, the demand for rural preschool education kindergartens experiences a process of short-term growth first and then continuous decline. From 2017-2021, it is in the stage of short-term growth, and the peak appears in 2021, reaching 128,200. After 2021, it enters a continuous decline phase, and by 2035, it will drop to 73,700. According to the "2016 national education statistics bulletin of career development" and the data by development planning division of the ministry of education, there were 239,800 kindergartens in China in 2016, including 114,100 urban kindergartens and 125,700 rural kindergartens. When the demand for preschool education kindergartens in China reaches its peak in 2022, there is about 102,000 fewer than in 2016. Since then, the demand for preschool education kindergartens has gradually decreased, and there is still a shortage of 3100 by 2035. When demand for urban preschool education kindergartens peaks in 2022, there is a shortage of 100,300. When demand for rural preschool education kindergartens peaks in 2021, there is a shortage of 2,500. It can be seen that, after the implementation of the "universal two-child" policy, the primary problem faced by preschool education is the insufficient supply of kindergartens, which is also the focus of the implementation and solution of the policy.

Health care and education resources are in short supply. Health care and education work is the center of preschool education activities. As the main teacher resource of preschool education, full-time teachers and child-care workers are an important guarantee for the smooth operation of health care and education work and the quality of preschool education. Therefore, to analyze the pressure brought by the "universal two-child" policy on preschool education, it is necessary to focus on the teacher resource demand (Li Ling et al., 2018). According to the data provided by the development planning division of the ministry of education, in 2016, there were 44.13 million preschool education children in kindergartens (including attached classes), 2.23 million full-time teachers for preschool education and 710,000 child-care workers. According to this calculation, the ratio of full-time teachers and students in China's preschool education in 2016 is 1:19.77, and that of child-care workers and students is 1:62.13. The ministry of education issued the "standards for the allocation of teaching and administrative staff in kindergartens (interim)" in 2013 (teacher [2013] no. 1), which stipulates that "there are 30 persons in each class in a full-time kindergarten, with 2 full-time teachers and 1 child-care worker in each class, or 3 full-time teachers in each class". It can be seen from this that the teacher resource allocation in China's preschool education is seriously insufficient. If we consider the baby boom effect brought by the implementation of the "universal two-child" policy, the fostering pressure brought by the contradiction of resources allocation of teachers and students will be more prominent.

The funding pressure of preschool education is huge. Sufficient and efficient investment of preschool education funds is the premise and foundation to ensure the smooth development of preschool education (Zhang Xuemin and Ye Zhong, 2014). Therefore, we need to make clear how much pressure will be exerted on preschool education funding by the baby boom effect caused by the implementation of the "universal two-child" policy. According to the estimation of Li Ling et al. (2018), after the implementation of the universal two-child policy, the total expenditure demand of China's preschool education fund will gradually increase from 478.3 billion yuan in 2017 to 1192.959 billion yuan in 2035. However, according to the actual situation of total expenditure of education fund for kindergarten students, by 2035, when the total expenditure demand of preschool education fund in

China reaches the peak, the investment gap of preschool education fund will reach 812.219 billion yuan. Thus it can be seen that the baby boom effect brought by the implementation of the "universal two-child" policy will exert more and more financial pressure on preschool education funding in the short term.

2.3 Family Choice of Preschool Education for Children

Family is the primary unit responsible for infant and child care. After the implementation of the "universal two-child" policy, family, as the primary responsible subject for the bearing of infants, will be the first to be impacted in terms of preschool education investment. The above existing studies show that from the perspective of national macroscopic level, "universal second child" policy is bound to bring short-term baby boom phenomenon. Therefore, it is assumed that individuals and families actively respond to the second child fertility call, and most choose to have two or more children. At this point, the family's choice of preschool education investment will have a series of changes. First, when the family income growth is slow, the increase of the number of children will compress the family's pursuit space for the quality of children education, and the expenditure funds of infants and children are reduced. Secondly, when the number of children increases, in order to maintain the cultivation level of preschool education for multiple children, the parents will increase the labor market input and improve the labor participation rate. When it meets a certain threshold value, the improvement of labor participation rate is conducive to improving the average labor productivity of the whole society. But crossing this threshold will be bad for the individual's physical and mental health and will have a negative impact on productivity. Thirdly, with the intensification of human capital competition, along with the concept of "don't let children lose at the starting line", as the number of children increases, parents will increase their investment cost of preschool education and improve the quality of preschool education for their children. But this may be done at the expense of existing savings and future consumption, and on top of the fact that household income is growing faster than children's education outlays, which would otherwise lead to a build-up of household debt. Therefore, from the above analysis, it can be seen that the implementation of the "universal two-child" policy may lead to the debt dilemma of households, and lead to the human capital cultivation to re-enter the chase path of "returning from quality to quantity" (Becker & Lewis, 1973), which is not conducive to the improvement of the average labor productivity of the society (Li Jianmin, 2015). In this situation, the government needs to play a macro and micro regulatory role.

2.4 Government's Obligation to Invest in Preschool Education of Children

The aforementioned research shows that, on a macro level, "universal second child" is bound to bring short-term baby boom phenomenon. Based on the analysis of its impact on education fund at the household level, we believe that at the macro level, the government needs to adopt macro fiscal and tax means to adjust it. First of all, the policy effect of "universal two-child" policy requires the government to provide incentives through fiscal and tax means to prevent the abortion of the two-child policy due to the high cost of having and raising children, which is the premise and foundation. Secondly, when the economic downturn leads to slow growth of household income, the government needs to give more financial and tax incentives to families to maintain the investment level of preschool education fund for multiple children. In economic ascent, policy regulation should be adopted to reasonably guide families with multiple children to spend reasonable preschool education fund to stimulate families' demand for the quality of child care. Thirdly, the "universal two-child" policy forces the government to increase the funding intensity for preschool education, which should reasonably guarantee the sufficient and balanced allocation of preschool education resources in both urban and rural areas in terms of the ratio of the childcare workers per student, the number of kindergartens, the corresponding supporting public service facilities for early childhood education and the input of teacher resources. As a kind of public service, education plays an important role in providing, supervising and maintaining public services outside the government while family plays the role of first subject responsibility. Under the background of "universal two-child" policy, the government should give full play to its regulatory role.

3. Conclusions and Policy Recommendations

The implementation of the "universal two-child" policy is a key measure to deal with the new population normal characterized by low birth rate, low death rate and high aging rate in China (Li Jianmin, 2015), which is conducive to easing the structural contradiction between China's population age and the transformation of economic growth. It can be seen from the analysis of existing studies that the implementation of the "universal two-child" policy will at least promote the significant improvement of China's infant birth rate in the short term, and will have a serious impact on the development of infant preschool education through the lack of preschool education places, the insufficient supply of health care and education resources and the shortage of preschool education fund. In this regard, at the family level, they will choose different investment level of preschool education fund for their children based on the growth of family income and children's education goals, but they will face a series of difficulties. Therefore, the government should adopt different incentive mechanisms from internal and external factors in order to promote the healthy development of preschool education, aiming at the dilemma caused by family preschool education investment. Finally, the paper puts forward the following policy suggestions:

(1) Families need to choose the number of children rationally. According to the current situation of China's population structure, the policy moves from "single second child" to "comprehensive second child". Subsequent "comprehensive triplet" or multiple births may occur. Therefore, as the first responsible unit of infant bearing, families should rationally choose the number of children, and should, on the premise of fully considering the growth of family income, pursue the replacement of the number of children by the quality of children education, so as to properly match the number of infants with their family income.

(2) An early warning mechanism for the matching of infant number and preschool education resource should be established. Due to the characteristics of household registration and mobility, the number of babies born has the character of incomplete controllability. In addition to the depreciation and aging of preschool education resources, the matching of infant number and preschool education resource supply need real-time monitoring and warning. Li ling et al. (2018) [2] have proposed a complete preschool education resource early warning mechanism, which will not be described here.

(3) The government should build a legal incentive mechanism to stimulate the bearing of the second child. First, a family planning fund system should be set up to provide financial and tax support to parents who have a second child from the aspects of individual income tax, fertility reward, maternity leave and free access to public services to stimulate fertility. Secondly, it should establish a sound family subsidy mechanism for preschool education to reduce the financial burden of families while maintaining high preschool education level for multiple children.

(4) Preschool education resource supply needs to increase substantially. First of all, preschool education resources in urban and rural areas should be significantly increased or improved, including the allocation of relevant infrastructure, the number of childcare teachers, and the salary and treatment of kindergarten teachers, so as to properly match the existing number of infants and children. Secondly, preschool education resource supply should be distributed evenly between regions, urban and rural areas, all of which are based on scientific early warning of preschool education resource and the urban and rural distribution of infants. Finally, preschool education resources have the nature of semi-public goods, so a legal supervision mechanism should be established to quantify the depreciation measurement mechanism of public infrastructure in preschool kindergartens and reset it in time.

(5) The preschool education funding mechanism led by the government and invested by private capital should be established. At present, the investment of preschool education is mainly led by the government, but the rights and responsibilities of the central government and local governments, provincial governments and municipal and county-level governments are not very clear. Therefore, it is necessary to improve the "provincial-level coordination, county-oriented" management system. It needs to clarify the financial input of governments at all levels in preschool education, and ensure the implementation of the responsibilities of kindergarten teachers, strengthen the coordination of provincial and municipal governments, implement the main responsibility of county-level governments, and give full play to the role of township governments. It should increase support to

poor areas and actively promote the provincial balance of preschool education career development. At the same time, it should actively try to introduce private capital to form the preschool education development model for new kindergartens with state capital holding and private capital participation.

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