

Analysis of Domestic Labor Supply Under the "Universal Two-child" Policy

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ABSTRACT

With the changes in the population structure, China's population policy has been continuously adjusted since the 1980s. In early 2016, China began to implement the universal two-child policy, hoping to cope with the aging population, the declining birthrate, and the decline in labor supply. However, it was not satisfactory. Based on demographic data, this paper analyzes the background of the universal two-child policy, as well as the current changes in the labor supply situation and existing problems in China, and put forward suggestions to further improve the birth policy, increase the willingness of women of childbearing age to give birth, improve the quality of employment, and strengthen human capital investment.

Keywords: Population policy, Universal two-child policy, Labor force supply.

1. INTRODUCTION

China's fertility policy has undergone a long period of tortuous change. In the 1960s and 1970s, China was in the stage of rapid increase of population. The rapid increase of population and backward social productive forces led to the imbalance of population and social and economic development, and the people were in a society of material shortage. Taking into account the national conditions, the party and state leaders had to formulate a family planning policy. In 1980, the central committee held the Fifth Symposium on Population, and the family planning policy tone was generally clear, advocating that a couple have a child. In 1982, China officially established family planning as a basic national policy. This policy slowed down the growth rate of China's population, and with the implementation of the "Reform and opening-up" policy, the quality of life of the people has been significantly improved. But over time, the policy has also created problems, such as aging of population and declining birthrate.

The Fifth National Census in 2000 showed that the population of China over the age of 60 was 130 million, accounting for 10.33% of the total population, and the population over the age of 65 was 88.11 million, accounting for 6.96% of the total population. Therefore, according to the

UNESCO's definition of population aging, as early as 2000, China had basically entered a population aging society. Comparing the data in recent years with the data of the Fifth National Census and the Sixth National Census (see "Table 1"), the size and proportion of the population aged over 60 and 65 are on the rise. The aging of the population in China has further deepened; however, the age structure of the population has an important impact on the labor supply of a country.

Table 1. China's population aging

China's Population Aging	Aging			
	2000	2010	2018	2019
Population and proportion over 60(thousand people; (%))	13076 10.33	17765 13.26	24949 17.9	25388 18.1
Population and proportion over 65(thousand people; (%))	8811 6.96	11883 8.87	16658 11.9	17603 12.6

The aging population means a decline in the supply of labor in China, and China will be in a stage with a low fertility rate. In 2019, China's population of 0-14 years old was 234.92 million, accounting for 16.8% of the total population. At this stage, China's dysfunctional population structure is not optimistic.

In order to promote the balanced development of China's population and actively respond to the existing problems, China began to implement the "separate two-child" policy in November 2013. However, within two years of the implementation of the policy, the situation is not optimistic. The number of families applying for "second-child" is far lower than expected, accounting for only 15.4% of those eligible for childbearing [2]. Therefore, in less than three years, China has further relaxed its childbirth policy and has implemented the "universal two-child" policy on January 1, 2016, which promotes a couple to have two children. Compared with the previous birth policy, the "universal two-child" policy shows further relaxation in policy. This policy can ease pressure from of aging population and declining birthrates, and at the same time provide more working-age population in the future.

2. CHANGES IN THE LABOR SUPPLY SITUATION

2.1 Trend of the Total Population

In terms of the birth population, in the two years after the "separate two-child" policy, China's birth population in 2014 was 16.87 million, an increase of 470,000 over the previous year, and the number of births in 2015 was 16.55 million, a decrease of 320,000 from the previous year. Although the number of people born in the first year of the implementation of the policy has increased, the increase is not large, and the number of people born in the second year shows a downward trend. The "separate two-child" policy is not effective. After the "universal two-child" policy was introduced, the number of births in China from 2016 to 2019 was 1,786 million, 1,723 million, 1,523 million, and 1,465 million, respectively. China's birth rate is declining year by year. The implementation of the "universal two-child" policy cannot effectively slow down the decline in the total number of newborns in China. The reasons for this phenomenon are as follows: On the one hand, the scale of 15 to 49 year-old women of childbearing age in China reached its peak in 2011 and has been declining since then. The corresponding birth population has also decreased, and the average age of women of childbearing age in China is increasing; On the other hand, the willingness of Chinese women to give birth has generally declined, coupled with the imbalance of the sex ratio between men and women in China. Since the policy in 2016, the birth ratio of the "second child" has always been

around 50%, and the positive significance of the "universal two-child" policy has continued to be released. According to data from the National Health Commission, 40.3% of babies born in 2016 were the "second child", and in 2017, the "second child" accounted for 51.2%, surpassing the number of the "first children" for the first time (In 2017, the number of the "first child" was 7.24 million, and the number of the "second child" was 8.83 million). This shows that the "universal two-child" policy has produced certain effects in the short term, but as the "second child" willingness is gradually released, the "first child" willingness is still not high, the number of births in China will gradually decline in the future.

The "Green Book of population and labor: Reports on China's population and labor (No.19)" issued by the Chinese Academy of Social Sciences (CASS) mentioned that the era of negative population growth in China is coming. According to the calculations of the "Green Book", China's population will peak at 1.442 billion in 2029 and will enter a continuous negative growth from 2030 onwards, decreasing to 1.364 billion in 2050, and if China's total fertility rate remains at 1.6, negative population growth will occur earlier than 2027 [3].

2.2 Trend of the Working-age Population

The total population is divided into the working-age population and non-working-age population. The quantity of labor supply mainly refers to the part of the population suitable for production activities. To roughly calculate the quantity of labor supply in a country or region, the proportion of the working-age population can be used as an indicator. According to the data obtained from the previous national censuses, the proportion of China's working-age population in the total population is rising gradually, and it accounts for a considerable proportion of the total population (see "Table 2"). However, after 2010, the proportion of the working-age population in China began to decline. According to the 2020 Statistical Yearbook, the proportion of the working-age population dropped from 74.5% at the highest point in 2010 to 70.6% in 2019, an average annual decline of 0.43%. After China's working-age population reached its peak of 1.00582 billion in 2013, it also showed a downward trend, reaching 989.1 billion in 2019. After the implementation of the "separate two-child" policy, the size of the working-age population in 2014 and 2015 decreased by 1.13 million and 1.08 million respectively from the

previous year. After the implementation of the "universal two-child" policy, the size of the working-age population from 2016 to 2019 decreased by 4.31 million, 4.72 million, and 4.47 million respectively from the previous year.

According to relevant predictions of relevant scholars, the proportion of the working-age population is expected to drop to 68% in 2030 [4]. The results of the United Nations plan show that China's working-age population is expected to decrease by 200 million people by 2050.

Table 2. Proportion in previous censuses

proportion in previous censuses	Census time(year)		
	1953	1964	1982
The proportion of the population aged 15-64 in the total population (%)	59.3	55.7	61.5
	1990	2000	2010
	66.7	70.1	74.5

2.3 Trend of the Labor Force Participation Rate

The working-age population can be divided into the labor force population and the non-labor force population. The labor force population is also called the economically active population (EAP), and the ratio of the EAP to the working-age population is defined as the labor force participation rate. The labor force participation rate is affected by many aspects, such as wage level, wage policy, education system, and social security factors.

After the implementation of the "separate two-child" policy, the EAP in 2014 and 2015 increased by 3.9 million and 4.01 million respectively over the previous year. The rise in the EAP and the decline in the working-age population have led to an upward trend in the labor participation rate. After the implementation of the "universal two-child" policy, the EAP in 2017 and 2018 dropped by 80,000 and 1.19 million respectively from the previous year. The EAP has been declining and the scale of decline is gradually increasing. Instead, the labor force participation rate has risen. This is because the decrease in the size of the working-age population was higher than the decrease in the economically active population in 2017 and 2018. In the future, the scale and proportion of China's labor force population will continue to decline, but in 2030, China's labor force population will still maintain a huge scale of 960 million [5].

3. RELEVANT RECOMMENDATIONS BASED ON THE "UNIVERSAL TWO-CHILD" POLICY

With the development of society, the improvement of economic level, and the continuous improvement of education level, many young people's concept of childbirth has changed a lot compared with before. In addition to the pressure of housing employment and supporting the elderly, although the "universal two-child" policy has played a certain positive role, the results it can achieve are still limited. Therefore, merely implementing the "universal two-child" policy cannot effectively alleviate the country's current problems of serious aging and continuous decline in labor supply. At the same time, relaxing the birth policy and formulating and improving relevant policies and regulations are also links that need to be considered. Supplementing and perfecting the relevant aspects of the "universal two-child" policy is an indispensable link in improving the quantity and quality of labor supply in China. The following measures can be taken:

3.1 To Improve the Birth Policy

In this regard, we can consider relaxing the birth policy in the future, and doing a good job of publicity under the current birth policy, and improving the supporting medical, education, and security systems, establishing a flexible childcare mechanism, and reducing the cost of raising children for young people, and alleviating fertility concerns. At the same time, we can refer to a series of birth-friendly policies adopted by France, Switzerland and other countries. For example, in the 1970s and 1980s, France began to support dual-income families, building childcare services for 0-3 years old, and in the 1990s, it raised the standard of childcare allowances and expanded childcare, in the 21st century, it has expanded the coverage of childcare allowances and promoted gradual reforms [6]. This series of policies have kept the fertility rate in France at a stable level. At present, we are based on our country's national conditions, drawing on successful examples and drawing lessons from failures to lay the foundation for the creation of a good fertility environment.

3.2 To Formulate and Improve Policies and Measures to Improve the Willingness of Women of Childbearing Age

Many of China's existing laws protect women's rights and interests. We can start by improving the "Law of the People's Republic of China on the Protection of Rights and Interests of Women". On the one hand, we should increase punishment for actions that violate women's rights, such as improving the hidden gender discrimination of individual companies in the labor market. Because of the special physiological structure of women, women need to take maternity leave every time they give birth to a child. Therefore, many companies are reluctant to hire female workers or raise the employment threshold for women in disguise. In terms of promotion, married women are often unable to concentrate on work due to fertility reasons or because they are considered to have invested too much effort in family life and raising children. Therefore, they often encounter the "ceiling" of promotion. The social state should guarantee the legitimate rights and interests of women and reduce the occurrence of unequal treatment of women due to fertility problems in order to effectively increase women's willingness to bear children. On the other hand, we should increase subsidies for enterprises and women giving birth to alleviate the worries of both parties and promote the development of friendly relations between enterprises and employees.

3.3 To Improve the Quality of Employment

Due to the change in the demographic structure of china, the employment problem has shifted from the total contradiction of insufficient employment to the structural contradiction of low employment quality. The quality of employment mainly includes the employment income, working environment, personal development prospects, and job satisfaction of the employees, as well as the satisfaction of the employer, family, and society [7]. To improve the quality of employment, we can start from the following aspects. Firstly, due to the current structural contradictions in employment, vocational and technical training can be carried out on a large scale. Secondly, the income level of employees can be increased and the working environment of employees should be improved. Finally, comprehensive employment services should be provided for fresh graduates and migrant workers who migrate from rural to urban areas.

Achieving high-quality employment can effectively alleviate problems such as pension pressure and declining labor supply.

3.4 To Focus on Human Capital Investment

The current economic and social development of our country has been transformed, from the former labor-intensive manufacturing industry to the high-precision enterprise. It can be said that the fourth industrial revolution led by robots, artificial intelligence, and related technologies has quietly arrived. According to the estimates of "The net impact of AI and related technologies on jobs in China" published by PWC (Pricewaterhouse Coopers) in December 2018, in the next 20 years, about 26% of China's existing jobs will be replaced by artificial intelligence and related technologies [8]. However, artificial intelligence and related technologies can generate about 38% of new jobs by increasing actual income levels and productivity, and will eventually increase net jobs by about 12%. The development of artificial intelligence will create more jobs, improve productivity and boost economic growth. The development of society requires more high-quality talents and professional technical personnel. Therefore, in the future, we will focus on professional technical training and higher education, promote development with technology, and replace quantity with quality.

4. CONCLUSION

Although the "universal two-child" policy can promote an increase in the scale of labor force supply, because newborn babies need to go through about 15 years of growth before they can enter the working-age population stage, that is, the adjustment of the fertility policy can indeed have an impact on the scale of labor supply. But it needs a "transition period" of up to 15 years. This means that the effects of the "universal two-child" policy on the demographic structure and labor force supply cannot be fully demonstrated in the short term. During this period, because of the female reproductive stage, and because some women face the situation of unattended babies at the end of the reproductive stage and have to withdraw from the labor market, the number of female labor supply will decrease, the total supply of labor force will show a downward trend instead. According to relevant forecasts, the working-age population will be 932 million in 2030, accounting for 64.84% of the total population, and by 2050, the working-age

population will be 825 million, accounting for 60.62% of the total population [9]. It is concluded that the population with more births under the "universal two-child" policy cannot reverse the downward trend in the size and proportion of the working-age population in China. According to the estimates of the Green Book on Population and Labor, during the "14th Five-Year Plan" period, the supply and demand of the labor market will basically maintain a balance, and the relative shortage of labor supply will continue to exist. According to estimates, assuming that 2017 is the base year, the employment structure ratio of the three major industries in 2050 will be 10:25:65. From 2017 to 2050, the total employment scale will increase by 57.3 million people. Among them, the employment scale of the primary industry decreased by 127.07 million; the employment scale of the secondary industry decreased by 12 million; the employment scale of the tertiary industry increased by 186.68 million [10]. It can be concluded that by 2050, China's total employment scale will not increase much. The change in labor demand is mainly reflected in the redistribution of employment among various industries. It is clear from the data that the number of employees in the tertiary industry is expanding. Therefore, in the future, China will not have a large demand for ordinary labor, but will mainly focus on "technical talents".

AUTHORS' CONTRIBUTIONS

Ruixin Fang is responsible for data collection, data analysis, and the manuscript writing. Yu Chen contributed to revising and editing.

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