# **Development of China's Demographic Policies**

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#### Abstract

The paper examines the development of demographic policies throughout the history of the People's Republic of China, makes predictions for future trends and offers potential solutions based on quantitative analysis. The policies focused on controlling the fertility rate control, with measures first advocated by the government and then made a part of administration regulation, with further changes at legislative level. The author shows that while the Chinese population is growing, but fertility is decreasing and concludes that the population will decrease in the near future unless the situation changes. That explains the adjustments made by the Chinese government which is integrating demographic policies into the country's long-term strategies.

#### **Key words**

China, Demography, Employment policy, Family Planning Policy, Population Aging, Development

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# Introduction and methodology

emography policy affects long-term national development. China's population is the largest in the world and will reach around 1.4 billion by 2035. The large total population will have a long-term impact on economic development and the allocation of public service resources.

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This paper contains both qualitative and quantitative methods of analysis. Qualitative research is based on the institutionalist approach. The quantitative method includes time series analysis and regression analysis used to make forecasts and statistically support the ideas put forward in this paper. We have used the Cobb-Douglas Production Function<sup>2</sup>, Adequate Population theory (Chen, 2016), and the Malthusian theory of population growth<sup>3</sup>. The data for the quantitative analysis comes from the National Bureau of Statistics of China<sup>4</sup>.

Population quantity in China is well controlled by the government's policies which efficiently alleviated the pressure on economic development at the beginning of economic reform (Chen, 2016). The policies were implemented soundly and were subsequently adjusted, and the population structure was reshaped by these policies (Zhang and Chen, 2020).

The situation has a number of causes. At the beginning of economic reform, the Chinese government believed that fewer children would relieve the urban family burden, so that capital would be accumulated in the country to develop the economy (Guo and Yu, 2015). Thus, family planning policies were strictly implemented in urban areas. For families in rural areas, the plan was implemented relatively less strictly, because the government had developed a labor-intensive industry, and additional labor in rural areas could be used in the secondary industry sector. The number of children born was kept under control, and decreased.

The consequence of this has a potentially negative impact. One factor is the aging issue, which China is facing in the near future. The pandemic made the situation worse. After 2025, the aging problem will be more severe, and the population will reach a ceiling in subsequent years (Zhou and Li, 2018). As a consequence, there will be problems such as a high percentage of elderly people, gender imbalance, and imbalanced distribution of population in regions.

Most scholars believe that the adjustment should be implemented immediately. Adjustments are already being made, with the limit on children per family

<sup>&</sup>lt;sup>2</sup> Cobb–Douglas production function https://en.wikipedia.org/wiki/Cobb%E2%80%93Douglas\_production\_function (accessed: 20.02.2022)

Malthus' population theory https://baike.baidu.com/item/%E9%A9%AC%E5%B0%94%E8%90%A8%E6%96%AF%E7%9A %84%E4%BA%BA%E5%8F%A3%E7%90%86%E8%AE%BA/3890735?fr=aladdin (Accessed 20 February 2022)

<sup>&</sup>lt;sup>4</sup> National Bureau of Statistics of China http://www.stats.gov.cn/english/ (accessed: 20.02.2022)

already increased from 1 to 3. The limitation may be abolished in the near future (Zhuang and Melnikov, 2017).

## Development of demography policy

## Demography policy: foundation

In 1949, despite its population of about 550 million, China lacked capital and technology to develop, and threats to China's borders remained. Sufficient human resources were extremely important for economic recovery and development. The national defense force depended on sufficient population. Therefore, the Chinese government encouraged childbirth, and after the end of the civil war, China's living conditions stabilized, improvements in health care reduced mortality, and the population increased rapidly.

Mao Zedong stated that China's large population is a great thing, that there is always a way to support the increasing population and the method is production. In 1950, National Health Ministry promulgated the Interim Measures for the Restriction of Birth Control and Induced Abortion, and abortions were banned for a short time.

The first census in 1953 showed that the total population was 590 million, 46 million more than in 1949<sup>5</sup>. The previous phase of the policy of encouraging childbirth led to the rapid growth of the population. The growth of food and foodstuffs was lower than population growth.

At the end of 1954, Chairman Liu Shaoqi and the Ministry of Health, the Ministry of Light Industry, the Ministry of Commerce, and the All-China Women's Federation held meetings to discuss the population issue at different levels, and in early 1955, the "Report of the Party Group of the Central Ministry of Health on Family Planning<sup>6</sup> was published. In an important speech on "Promoting Birth Control" the government considered it to be a personal matter of the people, and refrained from force or intervention by legislation. Thus citizens were encouraged to be responsible for their own birth control measures.

First Census https://baike.baidu.com/item/%E7%AC%AC%E4%B8%80%E6%AC%A1%E5%85%A8%E5%9B%BD%E4%BA%BA%E5%8F%A3%E6%99%AE%E6%9F%A5/1605970?fr=aladdin (accessed: 20.02.2022)

Report of the Party Group of the Central Ministry of Health on Family Planning https://m.huxiu.com/article/279375.html (accessed: 20.02.2022)

The "Report of the CPC Central Committee on the Report of the Party Group of the Ministry of Health on Birth Control" on March 1, 1955, also indicated that the CPC Party was in favor of proper birth control, which would be beneficial to future generations. This can be considered as the beginning of family birth control policy. The attitude changed from "opposing birth control" to "appropriate birth control." The 1956 "Report on the Proposals for the Second Five-Year Plan for the Development of the National Economy" emphasized that "in the period of the 2nd five-year plan, we must continue to develop health and medical services and appropriately promote birth control". As by this time the Chinese government's attitude had changed from opposing birth control policies to supporting appropriate birth control, the 1956 Report emphasized the need to continue to develop medical and health services and to promote birth control.

The government continued to support birth control for a number of reasons, including problems with food supply, and encouraged birth control among the population, except in areas inhabited by ethnic minority areas, especially rural areas.

In 1956, Zhou Enlai delivered the "Report on the Proposals for the Second Five-Year Plan for the Development of the National Economy<sup>8</sup>" at the Eighth National Congress of the Communist Party of China, stating: "We are in favor of birth control measures."

In 1957, Chen Yun stated: "China has a large population and must optimize birth control policies. This is a major issue related to economic construction." "Measures for birth control will take ten or twenty years. The central government and all provinces and cities must set up special committees to take care of this matter."

<sup>7 1956</sup> Report on the Proposals for the Second Five-Year for the Development of the National Economy https://bai-ke.baidu.com/item/%E5%85%B3%E4%BA%8E%E5%8F%91%E5%B1%95%E5%9B%BD%E6%B0%91%E7%BB%8F%E6%B5%8E%E7%9A%84%E7%AC%AC%E4%BA%8C%E4%B8%AA%E4%BA%94%E5%B9%B4%E8%AE%A1%E5%8-8%92%E7%9A%84%E5%BB%BA%E8%AE%AE%E7%9A%84%E6%8A%A5%E5%91%8A/56668977?fr=aladdin (accessed: 20.02.2022)

Report on the Proposals for the Second Five-Year Plan for the Development of the National Economy https://baike.baidu.com/item/%E5%85%B3%E4%BA%8E%E5%8F%91%E5%B1%95%E5%9B%BD%E6%B0%91%E7%BB%8F%E6%B5%8E%E7%9A%84%E7%AC%AC%E4%BA%8C%E4%B8%AA%E4%BA%94%E5%B9%B4%E8%AE%A1%E5%888%92%E7%9A%84%E5%BB%BA%E8%AE%AE%E7%9A%84%E6%8A%A5%E5%91%8A/56668977?fr=aladdin (accessed: 20.02.2022)

In 1957, the "People's Daily" published Ma Yinchu's "New Demography Theory9", in which he stated that "the economy is a planned economy and births must be planned". Some people even believed in "limiting grain and oil supplies for birth control". However, the "New Demography Theory" was widely criticized, and birth control policy was not made compulsory by law.

## The initiation of demography policy on the administration level

In 1962, the government issued the "Instructions on promoting Family Planning<sup>10</sup>", which gradually increased control of the rapidly increasing population, scheduled family planning in urban areas, and aimed to reduce unemployment. Some rural areas with a high population density also began family planning. The growth rate of the population was controlled so that the attitude to the population problem would gradually become more serious. These instructions were sent down to local governments.

In 1964, the Family Planning Commission of the State Council was established, with family planning agencies set up in some areas, and family planning work began to be conducted in the field. The population in 1964 was close to 700 million.

Birth control became more strictly enforced when the State Council established the Family Planning Commission, which had branches in various areas.

After the start of the "Cultural Revolution" in 1966, China suffered from crises in economic and social development. Although the demography policy was retained and family planning did not change, chaos in society made the policies hard to implement fully. Later, the Family Planning Commission of the State Council was abolished, and family planning agencies in various regions were unable to carry out their work normally.

In 1966, the People's Movement of the Cultural Revolution was launched and China's social development was shaken. Social instability made it difficult

<sup>9</sup> New Demography Theory https://baike.baidu.com/item/%E6%96%B0%E4%BA%BA%E5%8F%A3%E8%AE%BA/1653530?-fr=aladdin (accessed: 20.02.2022)

Instruction on promoting Family Planning https://baike.baidu.com/item/%E4%B8%AD%E5%85%B1%E4%B8%AD%E5%A4 %AE%E3%80%81%E5%9B%BD%E5%8AA11E9%999%A2%E5%85%B3%E4%BA%8E%E8%AE%A44%E7%9C%9F%E6%8F% 90%E5%80%A1%E8%AE%A1%E5%88%92%E7%94%9F%E8%82%B2%E7%9A%84%E6%8C%87%E7%A4%BA/56669214?-fr=aladdin (accessed: 20.02.2022)

for some state institutions to function properly, including the Family Planning Commission which was later abolished.

In 1970, Zhou Enlai stated that family planning is within the scope of national planning, it is not a health issue, but a planning issue. As family planning policy was not strictly enforced in the 1970s, China's population continued to grow at a rapid rate, and the population growth had reached a point where it could not be ignored. The government proposed "late and few" policy, which encouraged couples to have children at a relatively older age and have one or two children.

In 1971, the State Council approved the Report on Good Family Planning Work, which proposed that the natural growth rate should be reduced to about 1% so that the population could be controlled in the long run. The birth rate was to be controlled within 1/15 in rural areas and 11% in urban areas, and the government had different policies for different groups of people.

The international environment changed. The relationship between China and the Western world began to ease. China no longer needed a large quantity of human resources as a national defense reserve. In 1972, the government proposed implementing family planning and adapting population growth to the development of the national economy. In 1973, the Office of the Family Planning held the first meeting on family planning work in the country and proposed a "late and few" birth policy. The Central People's Government reorganized the family planning working group to manage China's family planning policy.

The phase of using administrative orders to implement family planning began in 1973, when China was still in the midst of a people's movement and the efficiency of implementing family planning was greatly limited. But by this time family planning was clearly in the national interest, and the government could not wait any longer. The total fertility rate began to decline in 1973.

In 1975, the "Report on the National Economic Plan for 1975" stated that family planning was highly recommended by Chairman Mao, and population control is feasible.

# The initiation of demography policy at legislative level

In 1978, the "Constitution of the People's Republic of China" was adopted at the first session of the Fifth National People's Congress. The Constitution stated that the state promotes family planning, thus family planning was included in the Constitution for the first time. In 1979, the "Government Work Report" adopted by the Second Session of the Fifth National People's Congress proposed practical measures to be established to reward couples who have only one child.

In 1980, the "People's Daily" published an editorial entitled "We must control population growth with a plan" stating that China's population should not exceed 1.2 billion before the next century.

In 1980, the government stated that except in sparsely populated minority areas, it is generally recommended to have only one child per couple, in order to control the population growth rate as soon as possible. Later, the government issued "An Open Letter to All Communists and Communist Youth League Members on Controlling the country's Population Growth<sup>12</sup>". The government encouraged party members to take the lead in following the new family planning policy. The letter stated: "In order to strive to keep the total population of China under 1.2 billion by the end of this century, the State Council encourages couple to have only one child". The open letter stated that while the average age of the population is increasing, and there is a shortage of labor. This aging phenomenon had now begun to affect the development of China, although at this time the situation was not so obvious because of the population growth, with less than 5% of the population over the age of 65. Here, the government was anticipating the future.

In 1981, the population rebounded and the demographic policy was aimed at limiting the number of the population and improving its quality. In 1982, the government issued the "Instructions of the Central Committee of the Communist Party of China and the State Council on a Further working guide to Family

<sup>11</sup> Constitution Law https://baike.baidu.com/item/%E4%B8%83%E5%85%AB%E5%AE%AA%E6%B3%95/9547682?fr=alad-din (accessed: 20.02.2022)

 $<sup>^{12}</sup>$  Open Letter to All Communists and Communist Youth League Members on Controlling the country's Demography Growth https://baijiahao.baidu.com/s?id=1647241567006613626&wfr=spider&for=pc (accessed: 20.02.2022)

Planning<sup>13</sup>". This instruction specified that demographic policies were core policies of China, and in order to improve the quality of the population and control the quantity of the population, it also suggested late marriage age and late birth.

Rural areas had different standards because the situation varied from place to place. Most couples were allowed to have only one or two children, while those from minority ethnic groups were generally allowed to have two children. For the state public service staff and urban residents, they could generally have only one child, but under special circumstances, they could apply to the state. In this way, the government limited the number of children to control the birth rate.

This limit on the number of children born was decided by the governments of the administrative regions and autonomous regions administered by the state, and the corresponding policy was sent to the people's congresses for review and approval, after which it could be implemented in the respective regions.

In 1982, Article 25 of the "Constitution of the People's Republic of China" at the National People's Congress stated that the state promotes family planning<sup>14</sup> to adapt population growth to economic and social development plans. ... Both spouses have the obligation to implement family planning". In 1982, the Twelfth National Congress of the Communist Party determined that "the implementation of family planning is a foundational national policy of our country." This constitution established the strong legal position of family planning, and family planning became a national policy.

In 1981, the State Council turned the Family Planning Working Group, a temporary agency established in 1973, into the National Family Planning Commission. Family planning committees began to be reinstated as administrative units at all levels of local government, and family planning committees were organized to establish professional organizations in different regions to promote and monitor family planning. China's population development came to be regulated by legal and administrative measures.

Family planning https://baike.baidu.com/item/%E8%AE%A1%E5%88%92%E7%94%9F%E8%82%B2%E5%A7%94%E5%91%98%E4%BC%9A (accessed: 20.02.2022)

<sup>&</sup>lt;sup>13</sup> Instructions of the Central Committee of the Communist Party of China and the State Council on the Further working guide in http://www.law-lib.com/law/law\_view.asp?id=44889 (accessed: 20.02.2022)

In 1984, the Central Committee of the Communist Party of China approved and forwarded the "Report on Family Planning Work" of the Party Group of the National Family Planning Commission to local governments and implemented the policy of blocking a big leak and opening a small leak. The central government continued to require that local governments at all levels should implement family planning policies in all regions and according to different circumstances, while continuously improving existing policies and regulations.

In 1986, Deng Xiaoping reiterated in the "People's Daily" that "strictly controlling population growth is based on our immediate interests.... This is China's major strategic decision.<sup>15</sup>"

In addition to the central government's goal of focusing on economic construction set at the beginning of economic reform, the central government in the 1990s required governments at all levels and autonomous regions to make family planning policies as important as economic construction, and to establish leading working groups on population and family planning at all levels of government. At the same time, the central government required that population should be added as an important indicator in the medium- and long-term plans for regions.

In 1998, the government and people's congresses discussed the basic policies, systems, guidelines, and measures for family planning in the form of special laws. Family planning policies occupied a more critical position in the national development strategy, providing legal protection for family planning rights.

In 2000, the Central Committee and the State Council issued the "Decision on Strengthening Population and Family Planning Work" to Stabilize Low Fertility Levels, stating that after the shift in the type of population reproduction is achieved, the main task of population and family planning work will shift to stabilizing the low birth rate and improving the conditions of the population.

After 2000, government tried to stabilize the low birth rate and solve the demography problem in different ways. The family planning work had some success. and the "Population and Family Planning Law", the "Migrant Demography

Deng Xiaoping's ideas on population, coordinated economic and social development and sustainable development in his discourse on the population. http://cpc.people.com.cn/GB/33839/34943/34983/2641931.html (accessed: 20.02.2022)

Family Planning Management Measures", "Family Planning Technical Services Management Regulations" and other relevant legal provisions were introduced to ensure the effective implementation and compliance of demography family planning policies. Local governments made adjustments for the provisions of the birth policy under the Family Planning Regulations, and gradually improved the current birth policy.

The family planning policy was implemented stably, the demography problem was solved in a coordinated manner, the population was effectively controlled, and the fertility level was reduced, which created favorable conditions for economic and social development. The "Decision of the Central Committee of the Communist Party of China and the State Council on Strengthening Demography and Family Planning Work to Stabilize the Low Fertility Level stated that after the transformation of demography reproduction type is achieved, the main task of population and family planning work will shift to stabilizing the low fertility level and improving conditions for the newborn population.

In 2001, the Ninth National People's Congress approved the Demography and Family Planning Law of the People's Republic of China, and family planning policy formally became national law. The promulgation of the "Demography and Family Planning Law" and the "Administrative Measures on Family Planning Work of Floating Demography", "Administrative Regulations on Family Planning Technical Services", and "Administrative Measures on Collection of Social Maintenance Cost" constitute the current framework of demography and family planning work.

In 2003, the former National Family Planning Commission was renamed to National Demography and Family Planning Commission.

As Premier Wen Jiabao stated in a speech at Harvard University in 2003: "No matter how small a problem is, when it is multiplied by 1.3 billion, it is a huge problem; if the gross national product is divided by 1.3 billion, it may be a very small problem<sup>16</sup>".

<sup>&</sup>lt;sup>16</sup> Wen Jiabao's speech at the welcoming banquet in the U. S. https://news.sina.cn/sa/2003-12-09/detail-ikknti-ak8806733.d.html (accessed: 20.02.2022)

In 2006, Hu Jintao said: "Owing to the large population, weak production foundation and unbalanced development, we insist on development and reform to solve problems, so that the outcome of development will benefit all people<sup>17</sup>.

## The modern demographic policy

With the imbalance of labor supply and demand, the central government began to adjust the population policy in 2013, the one-child policy began to end in some regions, and a partial 2-children policy was launched. Family planning policy had led to a low birth rate and the problem of the aging population.

In 2016, China's State Council released the China Population Development Plan, which stated that between 2016 and 2030 the population structure will enter a period of transition. For policy, economic and social reasons, China's fertility rate had rebounded to slow down the aging problem, but the demographic structure still had not significantly improved. After the implementation of the comprehensive two-child policy, the total fertility rate for women of childbearing age increased from 1.63 in 2013 to 1.69 in 2018, but the family planning that began 40 years ago led to a smaller set of young generations, and China's natural growth rate was declining every year by 0.003%.

The report of the 19th National Congress elaborated on the implementation of the Healthy China strategy and called to promote the link between the birth planning policy and relevant economic and social policies and strengthen research on demography development strategies. This strategy promotes the integration of the fertility policy and related economic and social policies. The National Health and Family Planning Commission will work with relevant departments at the request of the central government, apply a problem-oriented approach and collect local experience. According to the work plan of the comprehensive two-child policy, the government will optimize tax, social security, housing and employment policy, and prioritize the allocation of maternal and infant health care, infant care services, public service resources, including preschool education and K12 education, which would encourage and support

Hu Jintao's speech "Insist on peaceful development and promote win-win cooperation" http://theory.people.com. cn/n/2013/0916/c40531-22935897-2.html (accessed: 20.02.2022)

families intending to have two children. The government will maintain an appropriate level of fertility and promote a long-term and balanced demography development.

In the past, previous policies proved to be very efficient while they were being implemented, but the long-term effects were not well considered. Over-adjustments brought fluctuations. Based on previous experience, China's government now pays more attention to long-term strategies. Research on long-term strategy is not only the basis for appropriate demographic policies, but also the basis for the efficient development of society. Key indicators should be monitored and adjusted, for instance, the fertility rate, mortality rate, migration etc. These are the leading indicators that reveal long-term demography development patterns and trends.

With macroeconomic control as the "General Route" of the party, the Cobb-Douglas model would be an appropriate model to explain the current situation in China. The Cobb-Douglas model is applied as the basic model to break down economic growth. L stands for the quantity of labor. P stands for the population, e stands for the employment rate.

$$L(T) = P(t) \cdot e(t) \tag{1}$$

Y stands for GDP, K stands for the capital reserve.

$$Y(t) = K(t)^{\alpha} A(t) L(t)^{1-\alpha}$$
(2)

$$Y(t) = \frac{\partial Y(t)}{\partial A(t)} \dot{A}(t) + \frac{\partial Y(t)}{\partial K(t)} \dot{K}(t) + \frac{\partial Y(t)}{\partial L(t)} \dot{L}(t)$$
(3)

$$\dot{Y} = K^{\alpha} L^{1-\alpha} \dot{A} + \alpha A K^{\alpha-1} L^{1-\alpha} \dot{K} + (1-\alpha) A K^{\alpha} L^{-\alpha} \dot{L} \tag{4}$$

$$\dot{Y}(t) = Y(t) \frac{\dot{A}(t)}{A(t)} + Y(t) \alpha \frac{\dot{K}(t)}{\dot{K}(t)} + Y(t) (1 - \alpha) \frac{\dot{L}(t)}{\dot{L}(t)}$$
(5)

 $\frac{K(t)}{K(t)}$ ,  $\frac{\dot{A}(t)}{A(t)}$ , and  $\frac{\dot{L}(t)}{L(t)}$  stand for the growth rate of capital reserve, TFP, and labor.

$$\frac{\dot{Y}}{Y} = \frac{\dot{A}}{A} + \alpha \frac{\dot{K}}{K} + (1 - \alpha) \frac{\dot{L}}{L} \tag{6}$$

Therefore, the model is contracted based on function (5) to estimate a

$$\frac{\dot{Y}}{Y} - \frac{\dot{L}}{L} = \frac{\dot{A}}{A} + \alpha (\frac{\dot{K}}{K} - \frac{\dot{L}}{L}) \tag{7}$$

$$I_Y - I_L = SR + \alpha (I_k - I_L) \tag{8}$$

 $I_{\scriptscriptstyle Y}$  is the growth rate of GDP,  $I_{\scriptscriptstyle L}$  is the growth rate of Labor quantity, and SR is the Solow Residual.

$$I_{V} - I_{I} = \beta_{0} + \beta_{1} (I_{k} - I_{I}) \tag{9}$$

VariablesCoefficients $\frac{\dot{K}}{K}$ 0.471 $\frac{\dot{L}}{L}$ 0.529Intercept0.004

**Table 1: Coefficients and Variables** 

Source: Author's calculation based on data from the National Statistics Bureau of China

Demography policy affects population and labor, and macroeconomic control affects economic growth. These indicators correspond to the variables in the model to prove that macroeconomic control is related according to some certain perspectives. Unlike some developed countries, the coefficient of China is higher, roughly 0.52, and more than half the contribution to economic growth comes from labor quantity based on the current model. Thus, it is necessary to integrate labor policies under the macroeconomic control system. Appropriate demographic policies will maintain the supply of labor.

China's demographic policy started as a series of guidelines and suggestions made by the government. It later became part of administration regulation when the demographic structure worsened. Eventually, the family planning law was passed by the People's Congress of China, and it is now also part of the con-

stitution. This long path means that China is aware that demographic policies matter to the whole country. The government is trying to control it more and more strictly.

The government also constructs and improves the public service system for the implementation of demography policies. It also ensures a steady growth in investments and budgets for demography policies. The input into demographic policies and family planning has increased more than regular fiscal revenue growth. Funds are distributed to implementing subsidiary policies, facilities, and human resources, which guarantees the policies can be fully and efficiently implemented. Local governments increase their fiscal budgets year every year. By 2010, the national per capita expenditure on demography and family planning had risen to 22 yuan from 10 yuan per capita at the end of the Tenth Five-Year Plan period. The government funds for demographics and family planning have now reached 30 yuan per capita. They also encourage enterprises, public organizations, and individuals to invest in projects relating to demographic issues, such as Nursing Homes, kindergartens, etc. Because of the aging demographic structure, the problem of insufficient labor force has come sooner than expected.

Compromises and integration exist between policy, traditional culture, and values. For instance, "respect for the elderly" and "taking care of the elderly" are traditions of Chinese society. After the founding of the People's Republic of China, new demographic policies for retirement regulation and a social security system were passed to take further care of the elderly. Additionally, "taking care of the elderly" as an individual obligation towards one's own parents are part of the constitution. On the other hand, traditional Chinese culture leads many families to want male children as heirs, which breaks the balance of gender. There are currently slightly more male infants than female infants, and the government outlaws learning the infant's gender in advance. The problem of the gender imbalance originates from detecting the infant's gender illegally, as women could have an abortion if the baby was a girl. This method of selection has led to an imbalance in China's male-to-female ratio, and this unbalanced and unhealthy demographic structure can affect the development of society.

There are also some exceptions for demographic policies. The government has implemented a demography policy to control the number of children for all ethnic groups, but the policy for ethnic minorities is relatively less restricted.

In general, ethnic minorities with a population of over 10 million are advised to have one child per couple. Small ethnic groups with a population under 10 million population are allowed to have two children, or three in some cases, but not more than three. All regions have specific provisions on the birth policy for the demography of ethnic minorities, which guarantees that the culture of small ethnic groups is kept alive.

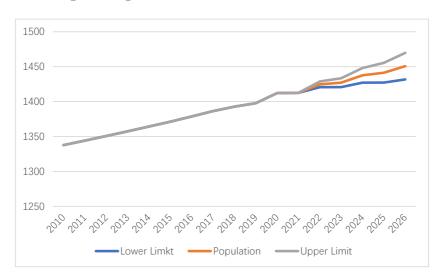
There are minor regional differences in demographic policies. The urbanization rate of China increased from 39% in 1950s to 89% in 2020, and the proportion of urban population is getting higher and higher. Family planning policy also applied specific provisions for different regions. During the family planning period, rural families could only have one child, and only special cases were taken into consideration. For instance, some couples are allowed to have a second child if both parents are only children from their own families, or if the first child is disabled and unable to work.

Currently, families in rural area who have only one child can apply to have a second child, and people who work in the fishery industry may have two or even three children. There are also differences between provinces. Couples in rural areas can have a second child if they have two or more brothers, and only one of them is fertile and only has one child, and the other brothers do not adopt children. Some regions, such as Jiangsu province, allow couples in certain industries to have a second child if their first child is a girl. In Beijing, Tianjin, Hebei, Jilin, Anhui, Henan and Hebei provinces, couples in rural areas can have a second child if certain conditions are met.

The demographic structure can be influenced by the birth rate, death rate and other indicators. The birth rate is the most practical adjustment index, which is the core measure of China's demographic policies to control the birth rate to affect the demographic structure in future.

# Trend analysis

The paper analyzes the future trend in China's demographic policies with the time series analysis model (ARIMA). For the forecast of population growth and total population, 52 years of data are collected to forecast 5 years of growth respectively.



Graph 1. Population forecast (millions) (2010-2026)

Source: Author's calculations based on data from the National Statistics Bureau of China

Table 1. Population data and forecast (millions) (2010-2026)

	Lower Limit	Population (millions)	Upper Limit
2010		' '	• • • • • • • • • • • • • • • • • • • •
2010	1337.705	1337.705	1337.705
2011	1344.13	1344.13	1344.13
2012	1350.695	1350.695	1350.695
2013	1357.38	1357.38	1357.38
2014	1364.27	1364.27	1364.27
2015	1371.22	1371.22	1371.22
2016	1378.665	1378.665	1378.665
2017	1386.395	1386.395	1386.395
2018	1392.73	1392.73	1392.73
2019	1397.715	1397.715	1397.715
2020	1412.12	1412.12	1412.12
2021	1412.6	1412.6	1412.6
2022	1420.585	1424.71	1428.836
2023	1420.774	1427.107	1433.44
2024	1427.126	1437.617	1448.107
2025	1427.186	1441.35	1455.514
2026	1431.733	1450.743	1469.753

Source: Author's calculations based on data from the National Statistics Bureau of China

1,000%

0,800%

0,600%

0,200%

0,000%

200920102011201220132014201520162017201820192020202120222023202420252026

-0,200%

-0,400%

-0,600%

-0,800%

Lower Limit

Growth Rate Upper Limit

Graph 2. Forecast of Demographic Growth Rate (%) (2000-2026)

Source: Author's calculations based on data from the National Statistics Bureau of China

Table 2. Population Growth Rate data and forecast (%) (2010-2025)

	Lower limit	Growth Rate (%)	Upper limit
2010	0.479%	0.479%	0.479%
2011	0.613%	0.613%	0.613%
2012	0.743%	0.743%	0.743%
2013	0.590%	0.590%	0.590%
2014	0.671%	0.671%	0.671%
2015	0.493%	0.493%	0.493%
2016	0.653%	0.653%	0.653%
2017	0.558%	0.558%	0.558%
2018	0.378%	0.378%	0.378%
2019	0.332%	0.332%	0.332%
2020	0.145%	0.145%	0.145%
2021	0.034%	0.034%	0.034%
2022	-0.243%	-0.008%	0.226%
2023	-0.200%	0.100%	0.401%
2024	-0.465%	-0.100%	0.265%
2025	-0.551%	-0.108%	0.335%
2026	-0.697%	-0.121%	0.455%

Source: Author's calculations based on data from the National Statistics Bureau of China

As the graph shows, China's population will continue to grow, but the growth of the population is close to zero, which means the population will decrease in the near future. The previous family planning policies were quite effective, and population growth is now decreasing, with a clear decrease over the last few years. The factors leading to the change in the age structure are varied, and although the policies are an essential part, there are other social factors, such as the cost of education for children, etc.

Demographic structure is an important factor in the development of the country. According to forecast data, China's population growth will decline, and the government will increase the proportion of the working population, and increase the number of children, which would slow down the aging process.

As mentioned above, the government is trying to change the urban demographic structure by controlling the birth rate, and the limit on the number of children is still in force. China will soon face an aging problem; it is expected to come during the 14th five-year plan, as a large amount of the working population born in the period of high fertility in the 1950s and 1960s gradually retire, causing the proportion of China's workforce in the total population to decline rapidly.

However, demographic policies will be improved in the future, with more detailed policies and support programs, and more cooperation with government, NGOs, and enterprises to promote efficiency of implementation. The China People's Congress is reviewing amendments to the Population and Family Planning Law, with a third-child policy planned.

### **Potential solution**

The previous policies certainly had a positive effect on controlling the size of the population, and also reached primary targets. China has the largest population in the world, and without these polices, the insufficient natural and social resources per capita would have shrunk tremendously.

Unfortunately, the birth control policy significantly changed the demographic structure, causing problems such as an insufficient number of children and an imbalance in the gender ratio.

The solutions are based on the demographic structure as a benchmark. China's demographic structure is currently in a state of low mortality and low fertility, and it is entering an aging demography status where the dependency ratio and social pressure is high. The most effective solution is to increase the birth rate, although in the short term this will continue to increase the dependency ratio and increase social pressure temporarily. However, in the long run, the demography structure will be adjusted to an appropriate level, which is beneficial for long-term development.

The government should rescind childbirth restrictions and increase the number of children to balance the demographic structure with a higher teenage dependency ratio, which would contribute significantly to economic growth. It would also improve the supply of labor.

The government can adjust the legal age of marriage, to increase the number of children. If the average age of childbirth is 25 years, there are only four generations every 100 years, but if the average age of marriage is 20 years, there will be five generations in 100 years. Lowering the legal marriage age can lower the age of childbirth.

During the 40 years since the beginning of economic reform, the government's birth control policy has not only delayed the age of marriage, but also created the concept of "late marriage and late childbearing" in people's minds. This concept should be changed first of all, and the government should use publicity campaigns to change it.

In addition to these campaigns, the government can provide financial assistance to families with several children. The economic situation has improved, so that the cost of raising children is higher, and the main investments in children are education, insurance, and health care, all of which impact the living standard of families with several children more than families with one child. The government should invest more in education and health care for children, to reduce the cost of raising children and increase the fertility rate.

The government should increase penalties for violations of demography policy. The government should increase penalties for gender detection, while advocating gender equality, which could help China to gain a stable demographic structure.

The government should adjust the retirement age so that the working age population increases and the non-working population decreases. This directly changes the dependency ratio, which will slow down the pressure of aging. The government should continue to invest in higher education, in technology and human resources. Technology can increase productivity, and human capital will ensure the future ability to develop science and technology, but also to ensure future productivity growth, as greater output can delay the pressure of aging on society.

#### Conclusion

Over the past few decades, population policies have become more and more critical. The main measures were initially advocated by the government, later became part of administration regulation, and were then passed into legislation,

Population policy is a crucial factor for social and economic growth and the policies in China focused on controlling the fertility rate. Demography policies were implemented with some variations in different aspects, such as major ethnic groups and minorities, urban and rural areas, etc.

Modern demographic policies are gradually being integrated into China's long-term strategies, and also gradually being strictly implemented with multiple measures.

At present, the population of China is growing but fertility is decreasing, which means that the population will decrease in the near future. In future, the target of policies will shift from controlling the population size to stabilizing the demographic structure.

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### Развитие демографической политики в Китае

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**Аннотация:** В статье анализируется эволюция демографической политики в Китайской народной республике, на основе количественного анализа делается прогноз тенденций развития и предлагаются потенциальные решения. Политика, направленная на сокращение уровня рождаемости, была сначала поддержана на уровне правительства и затем соответствующие изменения были внесены на законодательном уровне. Автор показывает, что при росте населения КНР, уровень рождаемости снижается и заключает, что численность населения будет сокращаться, если не произойдут изменения. Это объясняет коррективы политики со стороны правительства КНР, которое интегрировало демографическую политику в долгосрочную стратегию развития страны.

**Ключевые слова:** Китай, демографическая политика, политика занятости, политика планирования семьи, старение населения, развитие

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