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Current Demographic Trends in China

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Abstract

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As the first and probably the only generation of only children, the post-80s in China are not having babies, and the post-80s are not having babies, so the fourth baby boom is not happening. And the bigger problem is that China's fertility rate dropped to a dangerous 1.5 that year. The fertility rate is the ratio of the number of babies born in a year to the number of women of childbearing age in the same period, and generally speaking the fertility rate must be at least 2.1 to achieve a balanced population replacement in the country and not lead to population decline. A fertility rate of 1.5 is a red flag that China's population is moving into a negative growth path.

This thesis analyses the challenges posed by China's recent demographic trends with respect to its economic development and future growth. Policy recommendations are provided based on the preceding analysis.

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1. Introduction

1.1 Introduction: The importance and background of the population problems in China today are presented.

The demographic problems of China today have become a topic of widespread concern for national and international scholars. With the passage of time, China's population has undergone tremendous changes in terms of its size, structure and distribution. In recent years in particular, low fertility rates and ageing have become increasingly prominent, posing a great challenge to China's future economic and social development. At the same time, Confucian culture, economic development and policy measures have also had an important impact on the population issue. The aim of this paper is to provide a systematic overview and discussion of the demographic issues in China today and to analyse the problem from different perspectives. Through research and discussion on China's low fertility rate, educational pressure, housing prices, Confucian culture and post-modernisation development, this paper aims to make some suggestions and future perspectives on China's population problems. ^[5]

1.2 Purpose: To explain why this topic needs to be explored and to outline the structure and content of this paper.

The purpose of this paper is to analyse the impact of low fertility, ageing, educational pressure, housing prices and Confucian culture on China's population problems by systematically sorting out and exploring the root causes of China's population problems and the future direction of development. Specifically, the aims of this paper are as follows:

1. to analyse the root causes of the low fertility and ageing problems and to explore the measures and policies that the Chinese government and society should adopt
2. to explore the impact of educational pressure and housing prices on the low

fertility rate, and to propose corresponding countermeasures and recommendations

3. to analyse the influence and role of Confucian culture in China's population problems and to explore its relationship with modernisation and economic development

4. to propose directions and recommendations for the future development of China's population issues, and to provide references and ideas for China's population issues

The following chapter provides a comprehensive discussion and analysis of the issues pertaining to China's demographic challenge, and a concluding chapter summarises the findings of this research and provides policy recommendations intended to address the challenges posed by the demographic trends that are the focus of this thesis.

2. Overview of the issues

2.1 China Population Report: To provide an overview of the current status of China's population, including population size, birth rate and ageing.

2.1.1 Total population of 1.41 billion, beginning of negative growth, ageing, fewer children and three major trends accelerating

China's total population of 1.412 billion in 2022 began to grow negatively, the first negative growth since 1949 except for the three-year natural disaster period (1959-62), in line with China's forecast results for total population in 2021. In 2020 China's total population was estimated at 141.78 million, a net increase of 2.04 million, and 2021's total population was 141.26 million[MK1], a net increase of only 480,000, a new low since data became available. In 2022, the total population will be 141.175 million, a decrease[MK2] of 850,000 from 2021, and the total population will begin to peak and thereafter decline, entering a period of negative growth. It took 12 years for China's population to go from 800 million to 1 billion; 14 years to go from 1 billion to 1.2 billion; and 24 years to go

from 1.2 billion to 1.4 billion. ^[24]

The 2016 National Population Development Plan (2016-2030) predicted China's population to be 1.42 billion in 2020, but did not achieve it, overestimated the impact of the comprehensive two-child policy on fertility enhancement, put the total fertility rate at 1.8 in 2015, and expected the total fertility rate to be 1.5 and 1.6 in 2020 and 2030, respectively, and in turn predicted that China's population would reach a peak of 1.45 billion around 2030. ^[11]

In addition, the United Nations (UN) has also overestimated China's population growth. The UN World Population Prospects 2019 has nine scenarios for China's population, of which the medium scenario assumes a total fertility rate of 1.70, 1.72 and 1.73 for 2015-2020, 2020-2025 and 2025-2030 respectively, and thus projects that China's population will peak at 1.46 billion in 2031. The low scenario assumes that China's total fertility rate will be 1.45, 1.32 and 1.23 in 2015-2020, 2020-2025 and 2025-2030 respectively, and that the population will peak at 1.45 billion in 2024. The latest UN World Population Prospects 2022 lowers the parameters of the future population projections for China, but still sees a general trend of slowly increasing total fertility in China from 2023 onwards. The medium scenario fertility parameters are: rising to 1.27 in 2030, 1.34 in 2040, 1.39 in 2050 and around 1.48 by 2100. ^[34]

Compared to the replacement level of 2.1 for a constant population, China's total fertility rate is around 1.15 in 2021 and will have fallen to less than 1.1 in 2022, already a low level, and will decline further as the fertility build-up effect disappears. If the total fertility rate remains low, China's population will continue to experience negative growth. The population will shrink slowly for the first 25-30 years after the peak, but will start to shrink significantly faster around 2050 as the population born during the high fertility period of 1962-1975 reaches the end of its life. ^[20]

2.1.2 Ageing is intensifying and is shifting from a period of demographic dividend to a period of demographic burden

The pace and scale of ageing in China is unprecedented, with the proportion of

people aged 65 and over reaching 14.2% in 2021, entering a deeply ageing society, rising to 14.9% in 2022, and expected to enter a super-ageing society with a share of over 20% around 2030, before continuing to rise rapidly to around 36.8% in 2060, and stabilising for a period before rising again to around 46% in 2084 and beyond. From 2001 to 2010, the proportion of elderly people aged 65 and above in China increased by an average of 0.2 percentage points per year, and from 2011 to 2022 by an average of 0.5 percentage points per year, with the pace of population ageing accelerating significantly.

Due to its large population base, the size of China's elderly population is also unprecedented. It is expected that by 2035 and 2050, China's elderly population aged 65 and above will reach 327 million and 393 million respectively, accounting for 36.8% and 40.4% of the world's elderly, with roughly one in every three Chinese people aged 65 and above by then. China's ageing problem will also become increasingly prominent, with more than 35.8 million people aged 80 and above in 2020, accounting for 2.5% of the population. It is expected to account for 3.8%, 10.3%, 17.1% and 20.8% in 2030, 2050, 2073 and 2100 respectively. ^[25]

There are large geographical differences in ageing, with significant ageing in the Northeast and Sichuan and Chongqing regions. According to the provinces, only Tibet will have a population aged 65 and above of less than 7% in 2021, not entering the ageing stage; 13 provinces such as Xinjiang, Guangdong, Qinghai and Ningxia will have a population aged 65 and above of between 7% and 14%, initially entering the ageing stage; 17 provinces such as Hebei, Shaanxi, Zhejiang, Beijing, Hebei and Hubei will be higher than 14%, in the deep ageing stage, of which, Liaoning, Chongqing, Sichuan, Shanghai, Jiangsu, Heilongjiang and Jilin are as high as 18.8%, 17.8%, 17.6%, 17.4%, 17.0%, 16.8% and 16.7% respectively.

The baby boomer population of 1962-1976 has entered into old age and exited the labour market. China is moving from a period of demographic dividend in the past decades to a period of demographic burden. The combined burden of old age, social security spending and government debt will continue to rise in the future.

2.1.3 Declining working-age population and declining potential economic growth

The size of the labour force continues to shrink and the proportion of the working population declines significantly, with the size of the population aged 15-64 falling from 1 billion to 970 million between 2010 and 2021, with the proportion falling from 74.5% to 68.3%, and expected to fall to 59% by 2050. The proportion and size of China's working-age population peaked in 2010 and 2013 respectively, and then entered a phase of rapid decline. According to the scenario in Yuwa Population's China Population Projection Report 2021, the proportion of working-age population is expected to drop to 59.1% in 2050 and 44.3% in 2100. The demographic quantitative dividend will disappear, and labour costs will rise sharply, challenging China's status as the world's factory, while social innovation and entrepreneurial dynamism are likely to decrease, and potential economic growth declines. ^[44]

China is moving from a period of demographic dividend to a period of demographic burden, and is facing a situation of "getting old before getting rich". After the reform and opening up in 1978, China grew rapidly to become the world's second largest economy, relying on a large and young labour force and the huge unified market associated with it. rising together, with the savings exceeding the investment component generating a trade surplus, while excess liquidity and rising per capita income levels drove consumption upgrades and higher potential economic growth rates. Against the backdrop of a prolonged period of low fertility, the proportion and size of China's working-age population aged 15-64 peaked in 2010 and 2013 respectively, while the proportions of the working-age population in Japan, the US and the UK peaked in 1991, 2009 and 2013 respectively, when per capita income was much higher than in China.

If no changes are made, the ageing demographics will affect long-term economic growth. The increase in the total population and improvements in the quality and structure of the population propelled the US economy to take off in the second industrial revolution and to become the world's dominant nation after World War II. The ageing population has made the contradiction between China's social security income and expenditure increasingly pronounced, and the pension gap will grow; as total labour supply continues to decline, labour costs will increasingly rise, and some manufacturing industries have begun and will continue to migrate to Southeast Asia, India and elsewhere. From a marginalist economics point of view, China's demographic dividend is coming to an end and it is facing the situation of "getting old before it gets rich". In the future, the savings and investment rates will gradually decline, while the consumption rate will gradually rise and the potential growth rate of the economy will decline. In absolute terms, the total dependency ratio of China's population is currently around 40%, and the country is still in the "demographic window of opportunity" (less than 50%), when the population burden is

relatively light. ^[15] ^[18]

2.1.4 The number of new births continues to reach record lows as the number of young children increases

The comprehensive two-child policy has not been as effective as expected, and the three-child policy has not been effective at all, failing to reverse the declining trend in China's birth population, and the “fertility pile-up” effect has largely ended. Since the founding of New China, there have been three rounds of baby booms, averaging 21 million per year from 1950-1958, 26.28 million per year from 1962-1975 and 22.46 million from 1981-1994, before gradually declining to around 16 million from 2003-2012, including 16.35 million in 2012. The fourth baby boom was originally supposed to occur after 2010, but disappeared due to the long-standing strict enforcement of family planning. 16.4, 16.87 and 16.55 million births were recorded in 2013-2015, respectively. In late 2015 the central government decided to fully liberalise the two children policy, and the number of births reached 17.86 million in 2016, the peak since 2000. However, starting in 2017, the number of births declined for six consecutive years, falling below the 10 million mark by 2022 to 9.56 million, continuing to hit a record low.

By province, Guangdong leads the way in terms of births, with large populated provinces such as Henan, Shandong and Hebei seeing births fall by more than 40% in the last five years. In terms of births, the top three provinces in terms of births in 2021 are Guangdong, Henan and Shandong, with 1.183 million, 793,000 and 750,000 respectively, with only Guangdong Province having over one million births, together accounting for 26% of the country. From the change in the birth population, from 2017-2021, the birth population in Xinjiang, Shandong and Heilongjiang decreased by more than 50% in 3 provinces, the birth population in Chongqing, Hunan and Hebei decreased by 40%-50% in 10 provinces, the birth population in Shanxi, Jilin and Sichuan decreased by 20%-40% in 15 provinces, and the birth population in Ningxia, Guizhou and Tibet decreased by less than 10% in 3 provinces only.

The current birth population figures for 2022 announced around the world, compared to 2021, have declined, with varied proportions of decline in the range 6%-14%, including Qinghai, Chongqing, Guizhou, Guangxi, Gansu, Jiangxi birth population decline of 6%, 7.9%, 9.4%, 11.9%, 12.7%, 13.8% respectively.

2.2 The low fertility problem in the three East Asian countries is severe: Explaining why three East Asian countries, including China, face a serious low fertility problem.

Young people in China, Japan and Korea are simultaneously reluctant to have children, and the entire East Asian economic sphere has fallen into the low-fertility trap. China is now liberalising its third child policy, paying for births and extending maternity leave, measures which, judging from the experience of Japan and South Korea, have not worked, with the number of newborns in Japan falling below 800,000 for the first time in 120 years and last year's death toll surprisingly being twice as high as the number of births. Japan is clearly more worried about the population than the excessive radioactivity in seawater. Japanese Prime Minister Fumio Kishida has also acknowledged that this is a critical situation. If the young people of Japan are low in desire to have children, the young people of South Korea, by comparison, are completely opposed. South Korea's statistics for 2022 reveal that its total fertility rate has fallen to 0.78, a record low since records began, and the country continues to be at the bottom of the list. 48.3% of men in South Korea want to live on their own and less than 5% of women who think they must get married are not in love or married, and are even less likely to have children. ^[32]

China has a negative population growth for the first time in 60 years, with the number of births falling below 10 million. These figures are mentioned many times in the report, but for some reason, another one is not discussed. In fact, instead it is the most dire, and that is the total fertility rate. This figure was 6 in China 60 years ago, the global average is now 2.3, in Japan it is now 1.3 and in South Korea 0.78. China's total fertility rate dropped to 1.175 in 2022, surpassing Japan to be closer to par with South Korea and ranking fifth from the bottom in the world, just ahead of South Korea, Singapore, Andorra and San Marino. According to international practice, below the 1.5 alert line, you can fall into the low vitality trap, whereby the less you have children the smaller the population becomes, and the smaller the population the less you can have children. Has China fallen in? The current argument is that it remains to be seen and the bottom line is flexible. In fact, in China anecdotal evidence is strongly suggestive: you only have to go out and look at the cold maternity wards, civil affairs offices and kindergartens to have a more or less good idea. The next question is what to do. China has made many attempts in the past two years, with two separate children, two full children, policy liberalisation of three

children, payment after the birth of a child, even more payment for the birth of a child to buy a house, and concessions on loans, as well as extended marriage and maternity leave, no restrictions on having children out of wedlock, and the inclusion of assisted reproductive technology in medical insurance. In Japan, the Angel Plan was developed in 1994 to cope with the declining birth rate. By now, kindergarten in Japan is free, and money is paid every month from the fourth month of pregnancy until the end of secondary school, which is about 150 euros. South Korea has paid a total of two hundred and eighty trillion won in the last 16 years to stimulate childbirth. Korean manufacturers have 60 days of childcare leave, a year of paid childcare work time off, which adds up to a year per week, then subsidies for pregnancy, subsidies for baby care, subsidies for parenting, and subsidies for schooling. It can be said that China has done what Japan and Korea have done, and what China has not done, Japan and Korea have also done, but still there seems to be no way to reverse the declining trend of fertility. ^{[32] [40]}

2.3 The influence of Confucian culture on population issues: The fundamental conflict between Confucian culture and economic modernisation:

An analysis of the impact of Confucian culture on China's population problem reveals possible clues regarding why this situation has developed. China's total fertility rate was as high as 6 in 1960, requiring family planning; today the figure is less than 1.2, eliminating any need for family planning. Such a precipitous fall in fertility in just a few decades is clearly abnormal. If there is an epidemic or regulatory element to a similar drop in economic growth, the matter of fewer and fewer births is no longer explained by conventional logic. The Confucian culture of the East Asian countries, represented by patriarchy, is in fact in fundamental conflict with the modernisation of society. In Confucian culture, men have a higher educational and economic status, while women have a lower one. However, as women's education and economic and social status increases, they must take into account the realities of employment opportunities, promotion opportunities, household chores and relationships between in-laws and daughters-in-law when considering childbearing. Research is actually consistent with common everyday observations that the higher the female labour force participation, the lower the fertility rate seems to be, and the higher the female education, the lower the willingness to have children. Women are expected to be economically active and to take responsibility for the

reproduction of the population, both functions competing for female resources, and it is economic modernisation that has transformed people from “natural” to economic beings, with the consideration of fertility expected to become an economic choice. At the macro level, it is the fundamental contradiction between production and population reproduction, the conflict between rational choice at the individual level and the overall needs at the national level. Reversing the trend towards low fertility may require either a return to a small peasant economy backwards or communism forwards. The next point focuses on why China's fertility rate has fallen so strangely. ^[6]

All three East Asian countries have experienced a period of economic take-off. China's GDP, for example, has increased 33-fold in 40 years. Their economies are typical of post-modernising countries, characterised by a lack of accumulation of modernising factors of their own, and top-down economic modernisation initiated by the powerful force of the state apparatus. This model of modernisation tends more towards structure, with the traditional Confucian family structure allowing women to become directly productive and thus develop the economy, a process of rapidly turning natural people into economic people. China, having completed in a few decades the modernisation of developed countries over the last hundred years, has also necessarily had to face in a short time the problems accumulated by others over the last hundred years. The high housing prices, low welfare and 996 Work (from 9am to 9pm, six days a week), and overtime wages of 3,000 to 4,000 RMB that we see in China today are themselves an overdraft on the demographic dividend. China's hardest working generation is already old, so China's younger generation will inevitably work harder. The debts borrowed in the past will have to be repaid sooner or later, and demographic problems such as childlessness, ageing, pension emergency and insufficient health insurance premiums will gradually emerge, which may be the price that this generation of Chinese people will have to bear in the next 30 years. ^[39]

2.4 Conflicts arising from the Confucian cultural sphere in East Asia and the Western economy:

Explain the differences between Confucian culture in East Asia and the Western economy, and compare and discuss the differences

between the two and the implications for China's demographic problems.

A demographic crisis has loomed over East Asia. How did East Asia go from having the highest natural population growth rate to having the lowest birth rate in the world? Nearby South Korea is already experiencing negative population growth, and Japan has been suffering from low fertility for decades. The Chinese in Singapore and Malaysia, which are also part of the Confucian cultural circle, have also fallen into a demographic crisis. Why are young people in East Asia reluctant to have children anymore? On the surface it seems that not having children is an economic problem, the money for milk powder for children, tuition classes, school houses and so on, a big economic burden weighing people down. But what of Beijing, Seoul, Singapore and Tokyo? Their economic affluence does not fit that sort of explanation? In the eyes of the post-50s and post-60s elders, it simply does not hold water. How hard can it be financially to raise children today? How hard was it to raise a child in the 1950s and 1960s? How can six adults—two parents, and two sets of grandparents and grandparents—not be able to raise a single child today when Chinese parents could still raise four or five children at a time of extreme material deprivation? In fact, if you do the maths, you will find that the cost of tuition classes, school houses and so on is not a necessity but an option. To put it more plainly, not having children may seem like an economic issue, but it is essentially a cultural one. It is the distortion of the concept of optimal birth control in the age of commodities, the encroachment of the culture of competition on family life, and the alienation of marital relations by the logic of the market economy.

First, let's discuss the distortion of the concept of optimal birth control in the age of commodities. After decades of ideological change, today the concept of optimal birth control is deeply rooted in the hearts of the people of East Asia. Is there a problem with the concept of optimal birth control? Of course not. For parents, optimal birth control is responsible for their children, and for children, optimal birth control is good for their growth and development. But the question is, how is optimal birth control defined? It has to be admitted that the definition of optimal birth control today almost equates to having money, a harmonious family life, the right values to identify with and a loving family atmosphere. Once there is no money, none of this can constitute optimal birth control as superior. Because without money you cannot eat imported milk powder, you cannot attend piano tutoring classes, you cannot hire a famous teacher as a tutor, and you cannot afford to buy a school district house so that your child can go to a primary school attached to the National People's Congress in Qingbei, but your

child lives in a rich family with daily bickering, or you are sent to an aristocratic school by your parents from a young age, and you do not even see your parents in person, can you be considered eugenic? To put it plainly, the idea of optimal birth control has been distorted in the context of the commodity economy.^[17]

Secondly, the encroachment of a competitive culture on family life. The tide of the market economy has been strong for 40 years, and along with the institutional choice of the market economy system, culturally the Confucian cultural circle, including China, Japan and Korea, has also been profoundly influenced by American culture, the central manifestation of which is the promotion of this market-based behavioural influence. From the competitive culture of the individual subject's sense of competition, historical experience has shown that a competitive culture is the inevitable result of Western-style individualism. From primary school to secondary school examinations, from university entrance examinations to civil service examinations, from competition in the workplace to entrepreneurship, it can be said that young people throughout the Confucian cultural circle have grown up in competition, and that competition constitutes the life course of contemporary people. Not letting children lose at the starting line has fallen into the subconscious of parents in the new age East Asian countries, and this losing itself is a relative concept, for behind the losing is the competition of rivals. In this culture of competition, people see others as rivals first and friends second in their social relationships. To put it bluntly, social trust is difficult to build in a competitive culture. When the culture of competition spreads to family life, on the one hand it causes a lack of trust among young couples, who even have to enter into prenuptial agreements before getting married and think about how to deal with divorce; and on the other hand, young parents who grow up in competition think about the competition for their children early on, and the willingness to win this competition invariably raises the cost of childbirth.

Thirdly, there is the alienation of the marriage relationship by the logic of the market economy. Although the market economy has become the economic norm in countries such as China, Japan and Korea, it is easy to see, on reflection, that there is a natural contradiction between the spirit of Confucianism and the logic of the market economy. The logic of the market economy is a purely modern economic rationality, the core of which is the appreciation of capital, whereas Confucianism's beliefs about life and its understanding of social life are rooted in marriage and family. For the market economy, the state comprises the consumer market, the place of supply of raw materials and the means of production, but in the perspective of Confucian culture, the state is a combination of countless homes, the state is the spiritual home of man. The logic of cultural affiliation to the market economy comes from

capital, while the Confucian humanism is driven by the family; the two cannot go hand in hand. The present coexistence is essentially a pain in the process of reviving Confucian humanism. In the cultural sphere, China is facing the alienation of the traditional marital and family relations of Confucianism by the logic of the market economy. On the one hand, Confucian humanism understands the family as an emotional homogeneity, whereas the market economy has transformed the marriage relationship into a contractual relationship, the essence of which is a relationship entered into between two parties in a business partnership. On the other hand, Confucian humanism sees procreation as the transmission of culture, the continuation of incense and the foundation of the family, whereas the market economy has capitalised procreation itself, turning children into an investment, and even the growth and education of children is quantified and evaluated in terms of its merits. To put it bluntly, capital has made people consider procreation as an economic issue, essentially putting family values behind economic values, a misplaced value of life. This cultural pain has led East Asian countries to realise that the market economy is an economic system and a means of development, but it should never be a dominant culture, let alone one in which economic interests encroach on the family values pursued by Confucian culture. The root of the disease of infantilisation is cultural, but it is not the fault of Confucian culture; it is rather the blind westernisation of the cultural realm. ^[40]

2.5 The question of house prices and population: Do house prices affect fertility rates?

This section analyses the relationship between house prices and population issues and explores the impact of house prices on low fertility rates. Over the past years, the supply of houses built in China has actually exceeded the demand. Based on the area of new homes that have been built and not yet sold in China, divided by the area of living space per person in China (37 square metres), it would take 3.4 billion people to fill them. In total, there is no shortage of houses in China, so why have house prices risen so sharply in almost all regions over the past 10 years? Because the central bank has over-issued money. China's monetary overdraft over the past 15 years has had two major points in time, one was the 4 trillion yuan economic stimulus in 2008, and the other was the "shantytown monetary resettlement" in 2015. The former brought about 10 years of major construction, with high-speed railways, highways and airports being built all over the country. The second accelerated the urbanisation process and made evicted families synonymous with "rich people".

Much of this money has gone into real estate, and as a result, property prices have soared. ^[8]

In the three East Asian countries, the decline in fertility has been called a fertility curse. Some believe that house prices are the cause of this phenomenon. In South Korea, people start cramming classes at an early age, competition is fierce, excessive competition is rampant, and people go to great lengths to get into chaebol enterprise but still cannot afford to buy a house. In Japan, young people don't buy houses, cars, luxury goods, fall in love, get married, have children and look old at a very young age. The three East Asian countries are very similar, especially when it comes to house prices. Of the ten most expensive cities in the world, the first is Hong Kong, followed by Seoul, Beijing, Shanghai and Shenzhen. Of the ten cities with the highest suburban house prices, Seoul ranks fourth, followed by Beijing, Shanghai and Hong Kong. Tokyo, Japan ranks first in the world when the ratio of house prices to income is used as a measure.

There has been much academic research into whether house prices affect fertility rates. A study by the American University of Science and Technology found that residents living in flats had much lower fertility rates than those living in single-family homes. A study by the University of Iowa showed that the more rooms in a house, the higher the fertility rate. Economists have also found that fertility rates and rents are negatively correlated. With high house prices and expensive rents, it is difficult to afford a single family home and it is difficult to release fertility intentions when you have to squeeze into a two-room apartment in a high-rise block. ^{[11] [15]}

In Hong Kong, for example, the granddaddy of term house sales and communal areas, many people live in extremely small pigeonholes with narrow staircases, small floor distances and even smaller living areas, so the fertility rate in Hong Kong, China, is lower than in Japan and is currently only slightly higher than in South Korea. One of the reasons for the baby boom and subsequent abortion boom in the Soviet Union was that there was not enough room to live. The housing allocation system at the time had no more than 7.15 square metres of living space per person, which in part stifled the Soviet Union's demographic dividend and development potential. Northeast China, on the other hand, copied the Soviet experience in its housing allocation system and had the best implementation of family planning policies in the country. In addition, the labour markets in South Korea and Japan had some problems. Many young people struggle to find stable jobs after graduation, or are offered only low-paying temporary jobs. This precarious work environment makes it difficult for young

people to take on family responsibilities, such as buying a home and raising children. ^{[1] [6] [21] [22]}

2.6 The impact of educational pressure on low fertility rates

According to the China Population Report, education pressure is the biggest cause of low fertility, suggesting abolition of secondary school exams and shortening of the school system. This section explains the impact of education pressure on low fertility and introduces the Chinese government's measures to deal with it.

The United Nations predicts that China's population will be around 788 million in 2100, while the China Population Forecast Report 2023 Edition, released by the Yuwa Population Study, a group of Chinese experts, has more pessimistic figures, saying that if the current trend remains unchanged, China's population will only be 479 million by 2100, and that a major reason why young people are reluctant to have children and do not want to do so is that the burden is too heavy. The study argues that housing, education and healthcare are weighing on many people, and that the excessive burden of education is the most important reason for China's low fertility rate. The high cost of education has led to a decline in births, which in turn has spilled over into the education sector. From 2012 to 2022, the number of applicants for the college entrance exams in China has remained stable at around 10 million each year, while the number of births has fallen by 10.17 million in the past 11 years. The number of births in China last year was 9.56 million, and if we follow this figure, by the time these children take the college entrance exams in 2040, the number of people enrolled in the college entrance exams may drop to less than 6 million, and this number will be far less than the demand for university enrolment, which means that many universities will have difficulty enrolling students in the future. In fact, some kindergartens are already experiencing a shortage of students, as the decline in the newborn population will first affect kindergarten enrolment, then primary schools, secondary schools and finally universities. The overall recommendation of the expert team in the China Population Report is to achieve universal and equal university education, reduce competition for university admissions, abolish the secondary school examination, shorten the school system, speed up the basic education stage by two years, and allow the vast majority of young people to complete their university education at the age of 20, thus giving them more time to start a family and raise the fertility rate. ^[45]

2.7 Impact of ageing on society

2.7.1 The social dependency ratio has risen sharply

As of 2019, China's population aged 16 to 59 is 900 million, and the total population of the remaining two age groups is 500 million, which is equivalent to nearly 2 people supporting one person. By the year 2040, the labour force will be roughly 750 million, while the number of people to support will be over 600 million, equivalent to 1.2 people supporting one person. At the same time, 220 million of the 750 million will be middle-aged and elderly people over 50 years old. For example, if you are an elderly person and you receive a monthly pension of 5,000 yuan, and you share this pension with two young people, each contributing 2,500 yuan, then in 20 years' time, if the elderly person still receives a pension of 5,000, it will be equivalent to a young person contributing 4,167 yuan. If the young man cannot afford to pay that much and continues at the current rate of 2500, then the old man will only get a pension of 3000 yuan. This is why in countries like Japan, Singapore and South Korea, where ageing is very serious, old people are now working rather than staying at home to retire. The monthly pension they receive cannot support their old age and they have to go to work and earn money to subsidise their living.

2.7.2 Changes in the structure of consumption

When analysed over the course of a person's life, the period between the ages of 18 and 50 is the period of greatest consumption and the period with the greatest variety of consumption, whether it is for livelihood protection, acquisition of assets, cultural entertainment, children's education, etc. Basically, this is the period in which all of this takes place. When one reaches the age of 50, many of the categories that one consumed before will be reduced or even eliminated. The amount of money spent will also be reduced, from 1,000 to 500. When there is a large increase in the number of people over 50 in a society and a decrease in the number of young people, it will bring a big change to our current consumption structure. Industries that rely heavily on younger consumers will shrink significantly, such as real estate, and when the number of consumers relying on this industry decreases significantly, businesses in this industry will exit even more significantly. This is because even if you win the competition, there is no point in winning, because what you win is a shrinking

market and your profit margins are being squeezed. At the same time, there will be breakthroughs in sectors that rely heavily on older people, such as healthcare. When the consumer base on which this sector depends is significantly reduced, businesses in this sector will exit even more sharply. This is because it is meaningless even if you win the competition, because what you win through competition is a shrinking market where profit margins are being squeezed. Back to the present generation: in the next 20 years, many of the things we used to take for granted will become less natural, and many categories will even disappear. For example, how many middle-aged and older people like to go to KTV, nightclubs, bars and so on? When there are fewer and fewer young people, especially in small and medium-sized cities, you will find that many of these places of entertainment that used to exist and were still operating well until recently will close down. ^[30]

2.7.3 Difficulties in ageing

The reality is that there is no money, and it is not that there will be no money later, there is already no money now. In the table of the number of months that China's pension insurance can pay, many provinces are already nearing the bottom of their pensions. The way China's social pension funds are received and paid is that the workforce pays in and the elderly receive. But as analysed above, the future labour force is declining, the social dependency ratio is rising, and the base of people paying into pensions is decreasing while the number of pensioners receiving pensions is increasing. The State has, of course, introduced many policies to address this problem. However, all these policies can only slow down the depletion of pensions a little bit, and cannot fundamentally solve the difficulties. When the elderly population continues to grow significantly, lack of money will become a normal part of life for many elderly people. Thus, we will see the same scenario as Japan, Korea and Singapore, where many elderly people with grey hair are working in restaurants, driving taxis on the road and delivering express delivery. ^[31]

The increased demand for health care for the elderly cannot be ignored. With a rapidly ageing population, older persons require more health care services. They are more susceptible to chronic diseases, such as diabetes, high blood pressure and heart disease, which pose greater challenges to the health-care system. In addition, problems of cognitive impairment, especially dementia, are on the rise and require specialised medical and nursing care. Mental health problems, such as loneliness, depression and anxiety, are also prevalent

among older persons and require mental health support and treatment. On the other hand, the social costs associated with the commodification of elderly people's interpersonal relationships are also an issue of concern. Multi-generational family structures are common in traditional Chinese society, but they are gradually disappearing. Children are often dispersed to different cities due to work and life pressures, resulting in less distance and interaction between the elderly and their children, which increases their sense of isolation. In addition, older persons may be unfamiliar with social media and virtual social interaction, which may make them feel excluded from social interactions, exacerbating social exclusion and loneliness.

The problem of old age difficulties will become a societal problem in the future, and the extent and scope of the problem will continue to deepen. According to a recent government statement, the seriousness of the problem is recognised. In his government work report, Premier Li Keqiang not only called on the government to increase investment in the elderly, but also called on various social forces and private capital to enter the elderly sector and carry out multi-level and diversified elderly services. In the press conference afterwards, the issue was also mentioned once again. The Premier said this: "According to the current scale of public nursing homes, the occupancy rate of those over 60 years old is less than 3%. And this rate is decreasing, because the rate of government investment is far from being able to catch up with the increase in the number of elderly people. This would be an impossible task if we had to rely entirely on the government to support the elderly. The only way to achieve true old age care is to play the role of the whole society and involve all the forces that can provide elderly care services." ^[9]

3. Conclusion and recommendations for China's population issues and future prospects

As the world's most populous country with a large population base, China's progressive implementation of family planning policies in the late last century has effectively controlled the country's population size, and it can be said that China's remarkable economic growth is inseparable from the implementation of a series of policies in which family planning played a significant part. However, with China's birth rate currently running low and the natural population growth rate continuing to be low, the challenge of how to increase China's newborn birth rate and create a new workforce for society has become an urgent problem to be solved. In response to the reluctance of young people to have children,

the Chinese government has taken a variety of measures, such as relaxing its family planning policy and increasing maternity allowances, but the results have not been obviously positive. In order to encourage young people to have children, the government needs to adopt more comprehensive and targeted measures, such as reducing the financial pressure on young people and improving the environment for childbirth. Considering the uneven development between regions and urban and rural areas in China, the total fertility rate varies from region to region, with the total fertility rate in rural areas being higher than that in urban areas, appropriate fertility policies should be formulated for different regions according to local conditions. In the face of the increasingly serious situation of demographic transformation, with an eye on the future, and in the meantime, introduce a fertility-friendly family policy, improve the maternity protection policy system, extend the length of maternity leave for women, implement childcare services, support women's employment, increase the maternity allowance and many other measures, so as to fully implement the policy of encouraging fertility and thereby increase the birth rate. In the future it is inevitable that house prices will fall in large areas, but a small number of areas may go sideways or even rise slightly: for example, properties in the core locations of first-tier cities and strong second-tier cities. First tier cities are large, internationally recognised cities in China, such as Beijing, Shanghai, Guangzhou and Shenzhen, with highly developed economies and diversified industrial structures that attract large numbers of people and investment, have a high cost of living and offer abundant employment and business opportunities. Second-tier cities such as Chengdu, Chongqing, Hangzhou and Wuhan are larger and have relatively developed economies, but are not as internationally recognised as first-tier cities. China also has third- and fourth-tier cities, but with lower economic development and less regional economic dynamism. The smaller the city, the worse house prices will fall. If we start counting from 2020, the 25 to 30 year olds are those born between 1990 and 1995, a total of 106 million people. Extrapolating backwards, in 5-year increments, the total population will be 96.12 million in 2025, 81.31 million in 2030, 79.51 million in 2035 and 82.17 million in 2040. It is clear to see that the population is declining, which means that the base of people who are potentially desperate to buy a home is declining. If you compare this with the previous 10 years, it becomes even clearer. Compare this with the number of people born between 1980 and 1990, 10 years earlier. In 2010, the total number of people aged 25 to 30 was 102 million, and in 2015, it was 125 million. This means that by around 2025, the total number of people in urgent need of a home will be 30 million less than in 2015. This is a precipitous fall. And this downward trend will continue for 10 years, bottoming out only around 2035. When the number of people in need decreases significantly, the supply of houses will exceed the demand, and the government will need to take various measures, such as increasing the supply of land, controlling the rate of increase and decrease of house prices, and

strengthening housing security.

In response to the conflict between the Confucian cultural circle and the Western-style market economy, the government needs to support traditional culture while strengthening exchanges and cooperation with Western countries, screening and absorbing advanced experience and technology, and promoting cultural exchanges and integration in a reasonable manner. The issue of ageing should be addressed by appropriately extending the retirement age and developing the resources of the elderly. Along with the development of medical and health care, the average life expectancy of human beings has increased, and many developed countries have appropriately raised the statutory retirement age in line with their national conditions. For Japan, the country with the most serious ageing problem, the retirement age has been gradually increased to 65 years for men since 2013 and 65 years for women since 2018. The current retirement policy in China was implemented in the 1980s when life expectancy was only in the 60s, but today China has an average life expectancy of 76 years, a much higher standard of living and the energy and ability to work. Retirees have many years of practical experience and accumulated human capital. If they can continue to work after retirement, they not only increase the social labour supply, but also reduce the burden of social support and create wealth for society. To cope with the decline of the demographic dividend, on the one hand, the number of workers can be increased by appropriately delaying the retirement age to increase social labour resources and supplement China's demographic dividend. On the other hand, the power resources of the elderly can be fully tapped and exploited. The elderly population is not a complete consumer, and with their willingness to work met, suitable long-term or short-term jobs can be placed for them to provide them with the conditions to give full play to their remaining energy. It is also possible to encourage older people to participate in social service activities, such as community support, which do not require much physical effort, in order to make the best use of their labour resources. In addition, every effort should be made to ensure that those who are relatively old or in poor health enjoy their twilight years. ^[41] ^[42]

For education: invest more in education to improve human capital. Japan's strategy of investing in human capital and improving the quality of its workforce has helped to capture the second demographic dividend of the ageing demographic transition and has contributed to economic growth. China is now also preparing for the second demographic dividend by increasing investment in human capital, improving the quality of the workforce, making up for the lack of quantity with an increase in quality, and relying on human capital to promote economic growth is an important task in the current period. Firstly, it is important to increase investment in education and improve the educational level of

workers, while attaching importance to the training of skilled personnel, vigorously developing vocational education and improving the mechanism and system of continuing education to ensure that workers adapt to the needs of social development and keep pace with the times. Secondly, health quality is also a basic condition for achieving quality instead of quantity in the workforce. The government should increase investment in the health of workers, improve their health quality and ensure that they can enter the labour market to engage in labour work. Finally, the allocation of educational resources should be rationalised. At present, education in rural China is significantly lower than urban levels, and there is a great difference between the educational resources enjoyed by urban and rural areas. Urban construction relies mainly on the struggle from employed people, and the general improvement of the quality of the labour force should be predicated on the fair and reasonable allocation of labour resources. The state should allocate education resources reasonably according to the specific conditions of the combined regions and urban and rural areas, so that urban and rural areas can enjoy equal access to education opportunities and quality education resources.

Promoting the upgrading of industrial structure: transforming the mode of economic growth

As China's society is gradually ageing, the traditional labour-intensive industries are gradually losing the advantage of unlimited supply of labour that they had in the early days. In today's society, where the proportion of labour force is decreasing, it is difficult to rely on an unlimited supply of labour to bring about sustainable economic growth in the long term. However, the country as a whole will still be in a demographic dividend period until 2035. If we can seize this opportunity to improve the quality of the labour force, change the economic growth pattern and restructure the economy as soon as possible, we will be able to create good conditions for economic growth in the future.

Transforming the mode of economic growth is a long-term task and China will need to make efforts over a considerable period of time. Society needs to rely on technological progress and innovation. The productivity of society will be improved by raising the level of production technology. We need to implement the innovation-driven development strategy, develop good incentives to stimulate the innovative energy and creative potential of enterprises and the research sector, and shift from focusing on exogenous expansion of investment to endogenous strengthening of technology, and from relying on continuous expansion of resource input to relying on continuous improvement of social productivity.

Conclusion

China's population problem is a complex and serious issue that affects not only the Chinese economy and society, but also has global implications. To address this issue, the government needs to take more proactive policy measures to make the people aware of the long-term nature and complexity of the population problem and to integrate it into the long-term planning of the national development strategy. In addressing these issues, China needs to learn not only from the experiences of countries such as Japan and South Korea, but also to adopt different measures based on its own realities. By addressing multiple issues in an integrated manner, China can better cope with its population problems and achieve sustainable economic and social development.

In summary, China's current demographic problems are multifaceted, including the reluctance of young people to have children, an ageing population, the issue of housing prices and the conflict between the Confucian cultural circle and the Western economy. The root causes of these problems are complex and include a number of social, economic and cultural factors. In addressing these issues, a combination of factors needs to be considered and a variety of policies and measures need to be adopted to address them.

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Appendix

China map

