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STUDIES IN LOGIC, GRAMMAR AND RHETORIC 68 (81) 2023

DOI: 10.2478/slgr-2023-0022

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FERTILITY TRANSITION IN CHINA AND ITS CAUSES

Abstract. Demographic transition faced by modern economies, including China, are among the most important long-term socio-economic challenges. In 2022, China observed its population decline for the first time since the early 1960s. The low fertility rate was of critical importance. The unprecedented one-child policy is quite commonly indicated as the main reason for the low fertility rate. However, the departure from this restrictive policy and the actions introduced under the two-child policy implemented from 2016, and then the three-child policy from mid-2021, have not brought an improvement in fertility rates. The aim of the paper is to answer the following research questions: Should the decline and persistent low fertility rate in China be attributed solely or mainly to the unprecedented one-child policy, which was in force for over three decades?

Fertility transition in China is the effect of several factors and depends largely on the studied period. In the 1970s and 1980s, the government's family policy was a key determinant of the decline in fertility. However, contrary to the prevailing belief about the determining influence of the one-child policy, the first stage of the implementation of the birth control policy, the *Wan, Xi, Shao* program, had a greater impact. Since the 1990s, the low fertility rate has been mainly explained by the extraordinary socio-economic changes and rapidly increasing prosperity of the Chinese people. Since the beginning of the 21st century, cultural changes resulting mainly from the integration of the Chinese economy with the global system have been crucial. Cultural changes have affected reproductive behaviour, marriage patterns, marriage postponement, birth postponement, fertility, and family size in Chinese society, which is observed below-replacement fertility.

China's demographic future depends on the fertility trajectory. However, due to the size of the population, but also the position of the Chinese economy in the global economic system, Chinese demographic transition may also bring significant consequences for the global economy.

Keywords: China, population, demography, fertility rate, one-child policy.

1. Introduction

Demographic transitions are now one of the most important long-term challenges for many modern economies, including the economy of China.

After World War II, the People's Republic of China experienced a demographic boom. The population increased from about 540 million in 1949 to 987 million in 1980 (*China Statistical Yearbook*, 2022). The program of natural increase control, gradually implemented in the early 1970s, and then in 1979–80 in the form of a restrictive one-child policy, was aimed at stopping the rapidly growing population so that by the year 2000 Chinese population would not exceed 1.2 million (Goodkind, 2017; Ngan-Ling Chow, Chen, 1994: 72–73; Wang, Cai, Gu, 2013). Birth control was implemented using administrative, legal, and economic means (Goodkind, 2017; Guo, Ding, Zhong, Cheng, Huang, 2019). The Chinese government was removing pro-natalist economic incentives and introducing forced solutions in methods leading to a decrease in fertility. This specific, yet controversial, population policy was formally in force until the end of 2015. In 2022, China, previously considered the most populous country in the world[1], experienced a population decline for the first time since the early 1960s.

Low fertility, which determines demographic aging and shrinking of the population is a key element of demographic transition. The aim of the paper is to answer the following research questions: Should the decline and persistent low fertility rate in China be attributed solely or mainly to the unprecedented one-child policy, which was in force for over three decades?

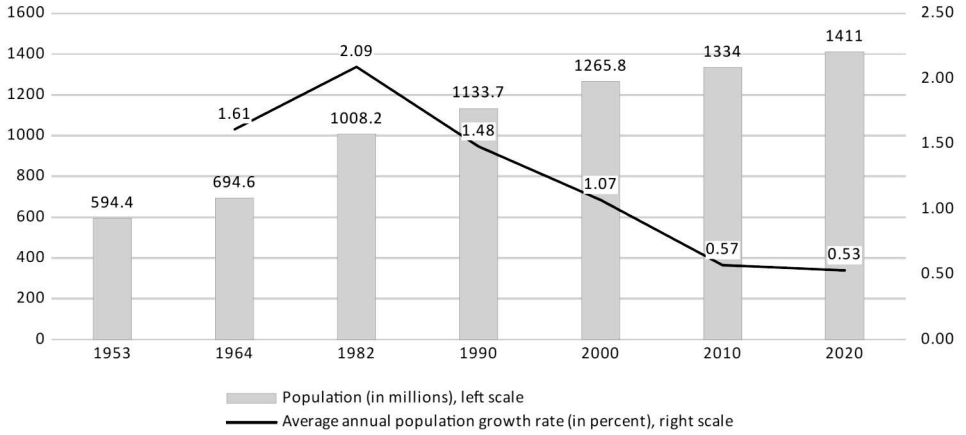
Demographic transitions regarding total population, average annual population growth rate, natural growth rate of population and total fertility rate were examined on the basis of data from the Chinese national censuses and data from the National Bureau of Statistics of China. The analysis of source materials allowed for determining the causes of the population transition. Projections for the population of China until the end of the 21st century, based on various fertility rates, were also presented.

2. Changes in the population size in the People's Republic of China

The data presented in graph 1 (Graph 1) concerning the population size and the average annual population growth rate come from national censuses. Since 1990, censuses in China have been conducted at ten-year intervals. Earlier censuses were conducted in 1953, 1964 and 1982.

Graph 1

Total population and average annual population growth rate in China (in millions) by National Population Census (1953, 1964, 1982, 1990, 2000, 2010 and 2020)



Source: own study based on *The National Census* 1953, 1964, 1982, 1990, 2000: Basic Statistics on National Population Census in 1953, 1964, 1982, 1990 and 2000; https://www.allcountries.org/china_statistics/4_4_basic_statistics_on_national_population.html; Census2010:http://www.stats.gov.cn/english/NewsEvents/201104/t20110428_26449.html; Census2020:http://www.stats.gov.cn/english/PressRelease/202105/t20210510_1817188.html (23.05.2023).

Between the first (1953) and last (2020) censuses, China's population grew from 594 million to 1.411 billion people. However, since 1982, especially in the last two decades, the average annual population growth rate has been clearly declining. In 2016, in response to deteriorating demographics, the one-child policy was replaced with a two-child policy that allowed all married couples to have two children without any restrictions (Wang, Gu, Cai, 2016). However, these changes have not resulted in a permanent and significant demographic boom. Data from the 2020 census, as well as data from the Chinese statistical office on the decline in the number of births from 14.65 million in 2019 to 12.00 million in 2020, triggered an intense debate. In May 2021, the Chinese government introduced a universal three-child policy, pledging to optimize activities to promote sustainable development of the population in the long term. This policy included, among others: the abolition of restrictive measures (e.g., penalties for exceeding the number of births) or the implementation of a pro-natal policy supported by the tax system and other incentives.

The new regulations also have not met with the public response. In 2022, the number of births fell to 10.62 million, and the population, compared

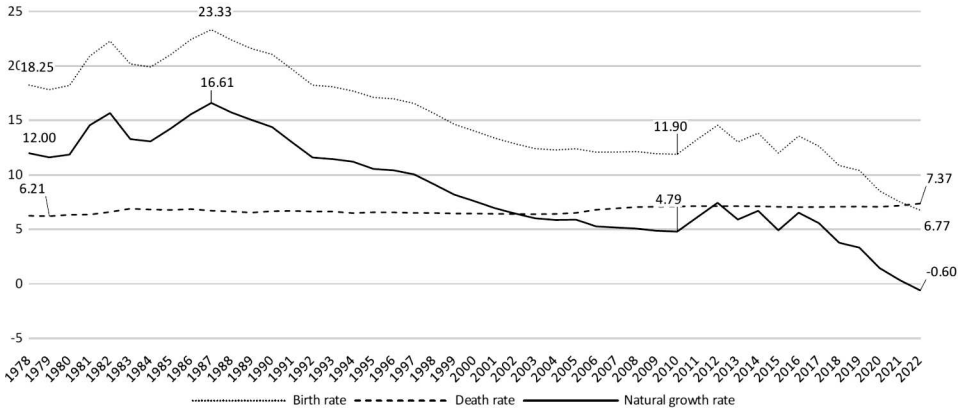
to 2021, decreased by 850,000 people to the level of 1,411,750 thousand (*China Statistical Yearbook*, 2022). China's last population decline was in the early 1960s as a result of Mao Zedong's Great Leap Forward policy, which ended in famine and a dramatic increase in death rates.

3. Reasons for the decline in population size

3.1. Decline in natural population growth rate

Changes in population growth, which from the second half of the 1980s to 2010 was characterized by a strong negative linear trend (Graph 2), shaped by the decreasing birth rate (from 23.3‰ in 1987 to 11.9‰ in 2010) are the main reason for the population decline in China. The liberalization of birth control policy hampered this decline for a short time. Since 2016, despite the actions implemented under the two-child and then three-child policy, the birth rate, and consequently the natural increase rate, have been falling.

Graph 2
Birth rate, death rate and natural growth rate of population in China between 1978 and 2022 (per 1000)



Source: own study based on *China Statistical Yearbook 2022*, http://www.stats.gov.cn/sj/ndsj/2022/indexeh.htm. Source of data for 2022: http://www.stats.gov.cn/english/PressRelease/202302/t20230227_1918979.html (10.05.2023).

In 2022, 9.56 million children were born, while 10.41 million Chinese died. The birth rate was 6.77 per thousand inhabitants and was the lowest since 1978. The natural growth rate had a negative value (– 0.6‰) for the first time in the history of communist China.

3.2. Decline in total fertility rate

The total fertility rate (TFR), which is a synthetic measure of population reproduction is one of the most important demographic factors affecting the size of the population. The fertility rate is the sum of annual fertility rates for successive 15–49 age groups and expresses the average number of children a woman would give birth to during her reproductive period, with a constant fertility pattern from a given calendar year. According to demographers, a stable demographic development of the country can be ensured if the fertility rate is between 2.1 (the so-called simple replacement of generations) (Zheng, Cai, Wang, Gu, 2009). This means that for every 100 women of childbearing age, there are on average at least 210–215 births. Simple replacement of generations allows to maintain the demographic potential in which every woman can be replaced by a daughter – a potential mother of the next generation.

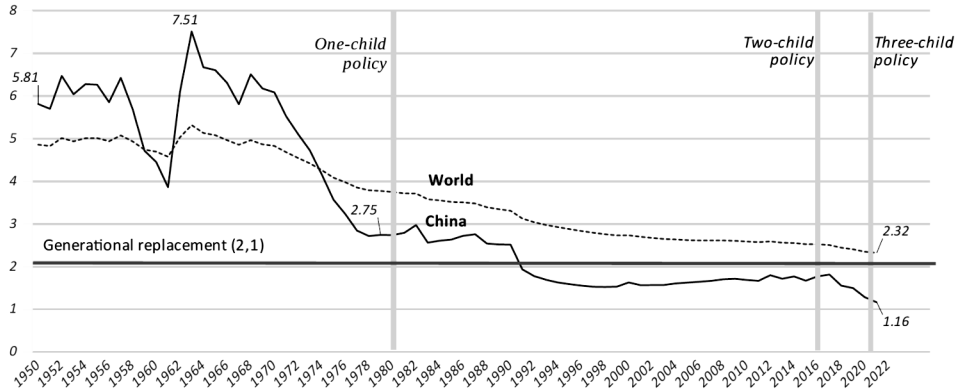
One of the significant effects of China's one-child policy are errors in birth rate estimates, which is why these estimates are difficult and debatable. There are studies in the literature on both understating the number of birth reports (Attané, 2001; Attané, Sun, 1998; Cai, 2010; Godkin 2011; Merli, Raftery, 2000; Wang, Mason 2008; Zheng, Cai, Wang, Gu, 2009) and overstating (Yang, Jiang, Sánchez-Barricarte, 2022) births.

The period between 1950 and 1979 was characterized by severe changes in the fertility rate, ending in the late 1960s with a clear downward trend and a short stabilization between 1978 and 1990 (Graph 3). Since the 1970s, the fertility rate has been declining, but it has remained at a significantly higher level than the replacement level. Although the period from the 1990s to 2017 was characterized by minor changes, the fertility rate did not exceed 2, which means that the level of generational replacement is too low to maintain a stable demographic situation. It should be noted that since the 1960s, the global fertility rate has also been in a negative trend, but with much less volatility than in China.

The implementation in 2016 of the two-child policy in China resulted only in a very short-term and slight increase in fertility, and since 2017 this rate has been clearly declining. In 2021, there were 116 children per 100 women of childbearing age, which is far from the desired level of generational replacement. The reaction of the society to the two-child policy and then the three-child policy was less enthusiastic than expected by the Chinese authorities. The changes implemented especially since 2016, were not included in systemic economic and legal solutions (Zhao, Zhang, 2018). In the opinion of the researchers, the change in China's policy and easing of drastic birth control came at least a decade

Graph 3

Total fertility rate (live births per woman) in China between 1950 and 2021 (in percent)



Source: own study based on *World Population Prospects 2022*, United Nations, Department of Economic and Social Affairs, Population Division (2022). Online Edition; https://population.un.org/wpp/Download/Standard/Population/ https://population.un.org/wpp/ (13.05.2023).

too late (Wang, Gu, Cai, 2016). The decreasing fertility rate, together with a slight internal migration, causes and will cause permanent changes in the population.

3.3. Reasons for the decline in fertility

Low fertility is the key factor influencing the shrinking of societies and demographic aging of populations. There are several reasons for changes in TFR. And they depend to a considerable extent on the analysed period. In general, the reasons for the decline in fertility in China can be divided into three groups: family planning policy of the government, socio-economic changes and cultural changes that determined the change in social attitudes of Chinese women and men.

It is quite widely recognized that the one-child policy determined the decline in the fertility rate in China. However, China's largest fertility decline had occurred before the one-child policy was introduced, following a less restrictive *Wan, Xi, Shao* (Later, longer, fewer) program[2] that encouraged later marriages, longer birth intervals, and fewer births. However, as part of the implementation of the program, forced family planning in terms of enforcement methods[3] occurred in the form of contraceptive campaigns, abortion, and sterilization (Whyte, Wang, Cai, 2015). The data (Graph 3) show that in the decade of the 1970s China experienced the most dramatic

decline in fertility[4]. It exceeded the level of replacement but reached a very low level for an agrarian society.

The one-child policy was implemented since 1980. Strict birth control was binding on almost all urban couples and most rural couples. In exceptional cases, it was possible to have a second child. Household registration (hukou) was a crucial element in birth planning policy (Cai, 2010). After 1984, due to strong resistance to the birth planning policy, this program was eased, especially in the case of families with one daughter (Wang, Gu, Cai, 2016). In 2013, the scheme was further eased for couples where one of the parents was the only child.

One-child policy resulted in a further decline in the fertility rate and a slowdown in the rate of population growth. However, this policy played a limited role in reducing population growth (Wang, Gu, Cai, 2016; Wang, Mason, 2008). In contrast to the drastic decline in fertility due to the *Wan, Xi, Shao* program, the more restrictive one-child policy did not bring a significant and continuous decrease in TFR (Graph 3). In the 1980s, when birth control efforts were intensified, the fertility rate oscillated above generational replacement with observed periods of growth and decline. In the late 1980s, TFR began to decrease, partly due to changes in the birth enforcement system. Responsibility for implementing the regulations was transferred to local party secretaries and other mid-level officials. Under the one-veto rule, an official who failed to meet birth control goals could lose their job or not be promoted (Whyte, Wang, Cai, 2015; Goodkind, 2017). This rule influenced more radical actions in the field of forced abortion or sterilization, among others. The effects of implementing the new rules were reflected in the sharp decline in TFR between 1990 and 1991 (Graph 3). It was only in the 1990s that the fertility rate in China fell below the replacement level, which has remained until today.

Family planning policy, along with the green revolution, is considered one of the most significant social experiments of the 20th century (Wang, Cai, Gu, 2013). The difference was that the goal of the green revolution was to lift millions of people living in developing countries out of hunger, while family planning programs had diverse social and political dimensions and were implemented in various ways in different economies. In the case of China's one-child policy, the Beijing authorities introduced unprecedented birth control. One-child policy is widely criticized, but not only because of the demographic uncertainty it brings. This program is indicated as an example of the government's most ruthless social engineering, a clear violation of basic human rights and interference with individuals' reproductive freedom (Wang, Cai, Gu, 2013).

The significant demographic impact of one-child policy on controlling population growth is currently being questioned (Wang, Gu, Cai, 2016; Whyte, Wang, Cai, 2015; Zhao, 2015; Zheng, Cai, Wang, Gu, 2009). At the same time, its long-term influence on Chinese society is underestimated (Wang, Cai, Gu, 2013; Wang, Mason, 2008). This controversial and misconceived policy prevented Chinese individuals and families from having the number of children they wanted. The smaller birth cohorts of the 1970s resulted in fewer births 20 years later and in subsequent years as these smaller birth cohorts entered childbearing age (Wang, Cai, Gu, 2013; Whyte, Wang, Cai, 2015). The effects of such a policy will be felt in the next generations, and its consequences will affect both those couples who have been forced to have only one child, as well as the whole society.

The nationwide family planning program also affected changes in the demographic structure. Foetal sex selection, which led to a discriminatory gender preference, disturbing the balance in the structure of the population (Qian, 2018; Wang, Gu, Cai, 2016; Wang, Mason, 2008) was a tragic consequence of one-child policy. Widespread, often drastic practices regarding sex selection have caused a permanent damage to the proportions of girls and boys. As a result, China faces a severe problem of *missing women*[5] (Nganling Chow, Chen, 1994). The ratio of boys to girls is one of the highest in the world with 112 in 2021, while the world sex ratio at birth is 106–107 (UN, 2022). Although in China the number of boys is significantly higher than the number of girls, it should be noted that compared to 2010 (ratio of 118), this difference is decreasing (Table 1). A relatively low number of women of childbearing age results in a lower fertility rate, which is why the sex ratio is of great importance for estimating the population (Guo, Ding, Zhong, Cheng, Huang, 2019).

Table 1

Sex ratio at birth in China between 1953 and 2020

Census	1953	1964	1982	1990	2000	2010	2020
Sex ratio at birth (female = 100)	104,88	103,86	108,47	111,3	116,86	118,06	111,3

Source: own study based on *The National Census* 1953, 1964, 1982, 1990, 2000: Basic Statistics on National Population Census in 1953, 1964, 1982, 1990 and 2000; https://www.allcountries.org/china_statistics/4_4_basic_statistics_on_national_population.html; Census2010:http://www.stats.gov.cn/english/NewsEvents/201104/t20110428_26449.html; Census2020:http://www.stats.gov.cn/english/PressRelease/202105/t20210510_1817188.html (23.05.2023).

The nationwide birth control policy performed a vital role in Chinese demographics, but this concerned primarily the initial period of its implementation, i.e., the decade of the 1970s. Moreover, *Wan, Xi, Shao* program (Cai, Gu, 2013; Cai, 2010, Wang, Whyte, Wang, Cai, 2015; Zhao, Zhang, 2018), and only then only one-child policy (Cai, Gu, 2013; Guo et al., 2019; Zhao, Zhang, 2018) played the preeminent role in China's fertility transition during the 1970s.

There is a certain "consensus" in the literature that assumes that the critical decline in fertility in China was caused not so much by restrictions concerning one child as by socio-economic progress (Zheng, Cai, Wang, Gu, 2009). And although there is also criticism of this consensus (Goodkind, 2017), in addition to family planning policies, unusual socio-economic changes are indicated as the reason for the decline in fertility.

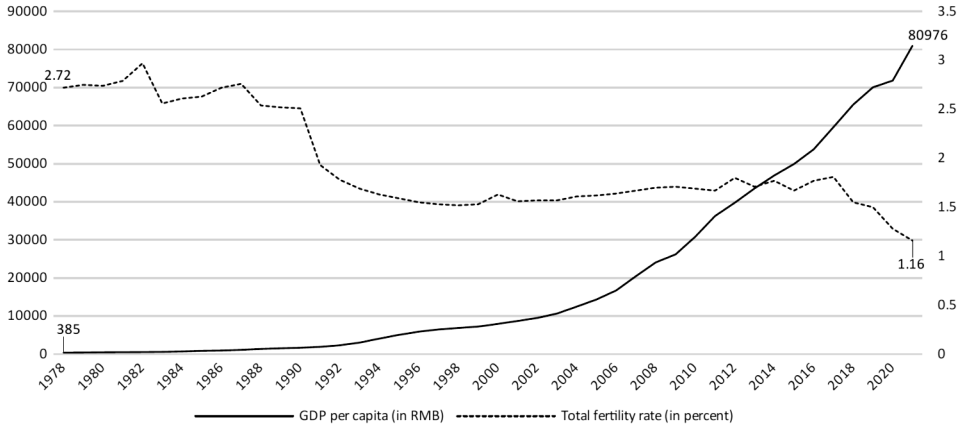
In the literature, many studies refer to the relationship between fertility and socio-economic development, showing a negative relationship between these categories (Cai, 2010; Zhao, Zhang, 2018). A negative correlation between fertility and gross national income or GDP per capita is often observed, especially when fertility rates are relatively high. However, this relationship is not strictly linear (Zhao, Zhang, 2018), especially when fertility intentions are influenced by factors other than just income (e.g., institutions and social policies, gender equality, cultural differences, tradition, etc.) (McDonald, 2006). The negative relationship between prosperity and TFR is justified on the basis of the modern family theory, initiated by Gary S. Becker, among others. According to Becker (1960), the number of offspring is the result of rational economic decisions. As family income increases, the opportunity cost of raising children increases, and parents reduce family size and invest more in each child. Thus, with the increase in the society wealth, the number of offspring decreases, which is beneficial for their quality (Becker, 1960).

Comparisons of the relationship between GDP per capita and fertility rate do not clearly indicate a negative correlation (Graph 4). The fertility rate in the 1990s until the beginning of the second decade of the 21st century stabilized at the level of 1.5–1.8. At that time, GDP per capita began to grow, at first quite slowly, but this growth accelerated in the 21st century. A clearly negative correlation has been observed only since 2017.

The initiation of economic reforms in 1978 by Den Xiaoping, as well as the economic policy of successive leaders of the Middle Kingdom, focused on long-term high economic growth, brought radical socio-economic changes. A consistent economic strategy resulted in extraordinary economic results. The rapidly growing GDP (Graph 4) translated into

Graph 4

GDP per capita at current price (in RMB) and total fertility rate (in percent) in China between 1978 and 2021



Source: own study based on: for GDP per capita data: *China Statistical Yearbook 2022*, op. cit. For 2022's data: http://www.stats.gov.cn/english/PressRelease/202302/t20230227_1918979.html; for TFR data: *World Population Prospects 2022*, op. cit. (10.05.2023).

increasing GDP per capita and income of Chinese people, playing a key role in improving the living conditions of Chinese people and reducing poverty[6].

The economic reforms, especially the agrarian reforms, brought fundamental institutional changes related to families, childbirth and raising children. Decollectivization of the agricultural sector with the liquidation of the collective farming system in the Chinese countryside, as well as the departure from China's "iron-rice bowl"[7], resulting in the suspension of the state-guaranteed employment system and other social benefits were especially important. These changes resulted in a drastic increase in the cost of living, as well as raising and educating children. Funding for these costs was shifted from the state to the family and individuals (Wang, Mason 2008). The reforms also shifted the place of economic decision-making from the state to the family and the individual. Changes in the migration policy, which allowed for more free crossing of administrative borders, resulted in a huge economic migration from the countryside to the cities, which was accompanied by a change in consumer attitudes and demographic behaviour of the society (Wang, Mason, 2008).

The rapidly growing GDP per capita of the society translated into an increase in salaries in the economy, but at the same time into a gradual increase in the cost of living (especially in large cities), the cost of living and educating a child, as well as an increase in prices on the real estate

market. Increasing competition in the labour market and the growing cost of education made childbearing more expensive and created more uncertainty for parents. Low employment stability and stagnation in salaries, especially in lower-paid occupational groups, were also not conducive to decisions on starting or expanding a family. Young Chinese couples face the problem of providing childcare, as well as the lack of good medical care for children.

Since the mid-90s of the twentieth century, the decline in fertility can be treated as a side effect of economic growth. However, apart from socio-economic changes caused by increasing incomes, growing education levels and rapid urbanization (as a result of the policy initiated by the reforms of 1978), ideological changes, and more broadly, socio-cultural changes, played a significant role in lowering the fertility rate in China (Cai, 2010; Whyte, Wang, Cai, 2015; Zhao, 2015; Zheng, Cai, Wang, Gu, 2009). This third group of reasons for the decline in fertility in China is related to the new wave of globalization, which has significantly accelerated economic development of China.

Cultural changes are reflected in other aspects of social and demographic transition, including reproductive behaviour, marriage patterns, postponed marriages, postponed births, fertility, and family size (Zhao, Zhang, 2018). Accelerated socio-economic development brought changes that reduced the wish to have more children. Fertility-related intentions and behaviour have fundamentally changed (Jiang, Li, Sánchez-Barricarte, 2016). The traditional pattern of perceiving marriage has also changed, and thus the approach to having children by Chinese women has. Research shows that marriage postponement significantly reduces the fertility rate (Yang, Jiang, Sánchez-Barricarte, 2022), also in highly developed countries (Santos, Weiss, 2016). Shifting the age of getting married results in postponing the age of having children. In China, the average female reproductive age increased from 25.22 in 1995 to 28.48 in 2015 and 28.8 in 2021 (Yang, Jiang, Sánchez-Barricarte, 2022). The increase in the age of first marriage, the increase in education and postponing the birth of a child after getting married contribute to the decrease in fertility (Zheng, Cai, Wang, Gu, 2009).

The institution of the family and family relations have also fundamentally changed, proving the rapid economic development of the country, but also institutional changes, including a change in worldview and social attitudes. Birth control policies have influenced not only the demographics of Chinese society, but also the worldview of the Chinese people. The one-child policy has permanently entered their consciousness and accustomed them to having one child and small, nuclear families (Ngan-ling Chow, Chen, 1994).

Rapid economic growth of China is accompanied by a spectacular increase in the Chinese people's material aspirations for better living conditions. Many young couples are postponing marriage and motherhood and are voluntarily refrain from having more children in response to economic and social pressures as well as personal career and private life (Zheng, Cai, Wang, Gu, 2009). Research conducted in Jiangsu province in 2007–2009 confirmed that the low fertility rate in China was more the result of the choice resulting from the desire to have children than from political constraints (Zheng, Cai, Wang, Gu, 2009).

Fundamental cultural changes concern the attitude of women and their role in the society. The increase in the number of women educated at all levels of education, the increase in their professional activity, as well as involvement in professional career and personal development means that women who are well integrated into the labour market today are reluctant to give birth to children and are resistant to incentives resulting from the policy of two and three children (Yang, Jinag, Sánchez-Barricarte, 2022). Women's autonomy is also growing, partly due to the increasing individualism and expansion of civil liberties in Chinese society. The gradual departure from traditional Confucian values and traditional intergenerational ties in the family affects women's decisions regarding their future, but also the demographic future of China.

In 2020, the COVID-19 pandemic partially contributed to the decline in fertility, but research shows that weak childbearing intentions were the main determinant of the fertility decline. During the pandemic, economic pressure and the conflict between work and childbearing emerged as the important factors affecting women's fertility intentions and preventing women from having children (Chen, Hou, Wu, Yang, 2022).

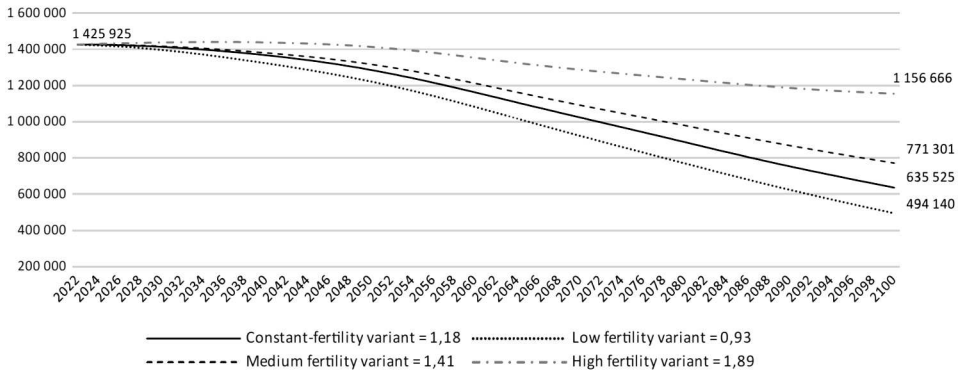
In conclusion, the family planning policy was the key factor behind the decline in the fertility rate in China in the 1970s. In the 1990s, economic factors associated with rapid economic growth contributed to the decline of TFR below the level of generational replacement. With socio-economic development and globalization, cultural factors began to play a special role in demographics and keeping TFR at a critically low level in China.

4. Population projections

The demographic future of economies depends to a significant extent on the trajectory of fertility, therefore projections regarding the size of the population in China vary (Dai, Shen, Cheng, 2022; Guo, Ding, Zhong, Cheng,

Huang, 2019). In the *World Population Prospects 2022* (2022) estimation of the Chinese population, several variants based on various TFR values were adopted (Graph 5). If the Beijing authorities were able to successfully increase the rate to 1.98 (annual average of 1.89 until the end of the 21st century), the population of China would continue to grow until 2035, and in 2100 it would reach 1.15 million people. Even this optimistic variant shows that by the end of the century China's population will decrease by about 270 million. Current data, however, raise doubts about this option. The pessimistic variant, based on a low TFR (0.93 on average), shows that by the end of the century, Chinese society will shrink to about 494 million people, i.e., by over 900 million.

Graph 5
Total population in China annually for 2022–2100 (in thousands)



Source: own study based on *World Population Prospects 2022*, op. cit. (13.06.2023).

The current fertility rate is much closer to the value of 1.2 adopted for the "constant fertility" variant. With this assumption, by the end of the 21st century, the size of China's population will fall to about 635 million. None of the variants assumes the restoration of TFR to the level of generational replacement, so the society of the Middle Kingdom will be shrinking.

China's demographic trajectory is similar to that of other East Asian countries such as Japan and South Korea. These countries have observed a rapid decline in birth rates and their populations are aging and starting to shrink as they get richer. China is following in the footsteps of its Confucian neighbours due to the similarity of structural, institutional, and cultural changes in these countries (McDonald, 2006; Whyte, Wang, Cai, 2015). However, there are two differences. First, Japan and South Korea have seen a sharp decline in TFR due to strong economic growth accompanied by vol-

untary birth planning campaigns; thus, they avoided radical birth control and mass abuses (Whyte, Wang, Cai, 2015; Zhang, Zhao, 2005; Zhao, 2015). According to the researchers, the fertility rate in China, like in neighbouring countries, would start to fall even without the controversial birth policy (Wang, Cai, Gu, 2013). The second difference is that Japan and South Korea achieved high levels of prosperity in terms of purchasing parity before they began to shrink. China began to shrink before it reached the prosperity of high-income countries. There is a risk that Chinese society will grow old before it gets rich.

Conclusions

Low fertility rate is the main cause of the population decline in China. In 2022, it reached a critical value of 1.16 (below the level of generational replacement), which does not allow for social reproduction. The fertility rate is a key factor determining the projected shrinking of China's population, but also demographic aging of the population. China's demographic future depends on the fertility trajectory.

An unprecedented one-child policy that aimed at restrictive birth control was in force from 1980 to 2015, i.e., for more than three and a half decades. On this basis, it can be easily concluded that the low fertility rate is a direct result of this policy, ignoring other factors affecting the reduction of fertility in Chinese society. However, the fertility transition in China is the result of several factors and depends to a large extent on the analysed period.

In the 1970s and 1980s, the sources of the decrease in TFR should be seen in the government's fertility policy, which contributed to critical demographic changes (including: a decrease in birth rate, rapid aging of the population, unbalanced sex ratio at birth, shrinking workforce, changes in family relationships, changes in worldview, etc.,). It is important, however, that contrary to the common belief that the one-child policy has a decisive impact on TFR, the first stage of the birth control policy implemented under the *Wan, Xi, Shao* program had a greater influence.

Since the 1990s, a low TFR has been mainly explained by socio-economic determinants rather than by government birth control policies. This is the result of extraordinary socio-economic changes: a rapidly growing increase in national income and social well-being.

The integration of the Chinese economy with the global system at the beginning of the 21st century accelerated cultural changes, leading to

changes in the worldview and liberalization of attitudes of Chinese society. These changes keep the fertility rate below replacement fertility. Moreover, research shows that the departure from one-child policy and the successive implementation of two-child policy (from 2016) and three-child policy (from mid-2021) has not brought expected results in terms of TFR.

China is also part of global changes regarding fertility. Declining fertility is a major challenge faced by economies struggling with shrinking populations and population aging. The persistence of a low fertility rate and its intensity have a huge impact on the long-term development of the economy.

However, the Chinese case should be considered not only at the macroeconomic level, but also at the global level. The importance of the Chinese case results not only from the size of the population (over 17% of the world's population, which by itself has significant global consequences), but also to the position of the Chinese economy in the global economic system (as the world's factory and the engine of global economic growth). Thus, Chinese demographic transition may have significant consequences not only for the national economy, but also for the global economy.

The long-term socio-economic consequences and economic success of China will depend on the attitude of political decision-makers and the way in which the Beijing authorities will be able to face internal demographic challenges.

NOTES

[1] According to estimates by the UN Department of Economic and Social Affairs, in April 2023 India overtakes China as the world's most populous country with a population of 1.425 billion (UN. Department of Economic Affairs, 2023).

[2] The aim of the Wan, Xi, Shao (Later, Longer, Fewer) program was to encourage married couples to: 1) marry at a later age – at least 25 for women and 27–28 for men in cities and 23 and 25 respectively in the countryside, 2) extend the intervals between the birth of children – at least four years, and 3) have fewer children – no more than two in the case of urban couples and three in the case of rural families (Cai, 2010; Whyte, Wang, Cai, 2015).

[3] In the opinion of some researchers, this program was voluntary and enjoyed social support (Zhao, 2015); according to others, the program was implemented by force (Goodkind, 2017; Whyte, Wang, Cai, 2015).

[4] Studies show that part of the decline in fertility in the 1970s was due to the raising of the marriage age in China under the Wan, Xi, Shao program (Goodkind, 2017).

[5] The phenomenon of missing women, which concerns especially developing countries, is associated with a significant disproportion of girls' births in relation to boys' births, unequal treatment of children already born (in terms of, among others, discrimination of children in the access to food, medical care, education, the right to inherit property, etc.), the excess mortality of girls, the demographic policy of the state, the economic balance and cultural determinants. Amartya Sen, who popularized the concept of missing women,

explained this phenomenon with the nutritional and health deprivation of women and girls. This deprivation results mainly from cultural mechanisms, especially those related to values, customs, and attachment to tradition (Sen, 2001)

[6] Substantial progress in reducing poverty is one of the undisputable successes of China's economic policy. In the last four decades, the number of people in China living on less than USD 1.9 a day (international poverty line until 2015) has fallen by almost 800 million. According to the national poverty line, since 1978 the number of people living in poverty has decreased by over 770 million (Pęciak, 2020). According to official statistics from the National Bureau of Statistics of China, by the end of 2020, extreme poverty had been completely eliminated.

[7] *Iron-rice bowl* (tiě fàn wǎn) – a system of guaranteed lifetime employment, social facilities for workers, state care and pension system introduced during the Mao Zedong era.

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