

Declining Savings: What Influenced Household Savings Rate in China? Based on Culture and Population Fertility Policy

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ABSTRACT

China has historically been the country with the highest saving. Chinese household savings rate not only concerns every family's life in China but also influences the capital investment and development of the national economy. It is critical to know the trend of household savings rate and factors that control and direct China's household savings. From reviewing previous articles about Chinese household savings under population fertility policy, this study gets the basic conclusion about the influence of population policy on Chinese household savings rate. From researching on Chinese traditional collective culture and changes of population policies from one-child policy to the second-child policy, this study concludes that high household savings rate is caused by Chinese collectivism under one-child policy and the trend of decreasing savings rate is influenced by the culture from young generations and the second-child policy. After discussing, the study gets the prediction that Chinese savings rate will continue to be high but have a trend of decreasing slightly.

Keywords: Savings rate, Cultural attributes, Population fertility policy, China

1. INTRODUCTION

Savings rate, the ratio of resident savings in deposit credit institutions rate to resident income has always been regarded as an important issue. Since the main source of capital accumulation is savings, savings rate is as key indicator regarded by many economists and is a very important factor to testify the level of economic growth by testing population satisfactory rate [1]. Since 1980 until now, China has been classified as the country with the highest savings ratio around the world which is a unique phenomenon. However, since 2018. China's savings rate started to decline [2]. This descending trend is a strange phenomenon in China because China's savings rate is mainly influenced by cultural factors. Specifically, Chinese residents have a strong sense of risk aversion. Hence Chinese traditional thoughts of savings must have some changes so that declining savings rate can be explained. To date, it is unclear why Chinese household savings rate declined since 2018 and whether

household savings rate will continue to rise but Chinese household savings rate is an important issue and many scholars have researched on what influenced Chinese household savings rate.

The influences of household savings rate on the economy are multifaceted, many factors can influence the savings ratio and the declining trend in China. This study explained Chinese household savings rate is related to household savings rate by analysing how population fertility policy influences household savings rate by changing the structure of population age and how cultural attributes contribute to Chinese household saving rate [3].

All the previous theories and practices used the analysis and principle of population fertility policies including Chinese one-child policy and the second-child policy to illustrate why China has high household savings rate and why since 2018 household savings rate tends to decrease. However, all the theories put the emphasis on empirical analysis of high savings rate and the fact of

savings rate' descending trend but ignore Chinese cultural attributes' influence on high household savings rate and why household savings rate tends to decline later under the population policy. This study combines the cultural attributes with Chinese population fertility policy to fill this gap. For explaining Chinese high household savings rate, this article demonstrates three unique attributes of Chinese culture: future-orientation, collectivism and uncertainty avoidance to show how Chinese people's traditional thoughts contribute to the high savings under one-child policy since 1980s. In addition, the principle of anti-life cycle is provided to support the cultural influence under one-child policy. Then, for the decreasing of household savings rate, cultural attributes from young generations, self-orientation, collectivism with brothers and uncertainty avoidance with low levels and the second-child policy explain why Chinese household savings decrease. The relationship between cultural attribute and population fertility policy remains unclear in previous studies and research. However, this study can fill the gap about how Chinese household savings rate can be influenced by Chinese cultural attributes and population fertility policy together.

2. DEFINITION OF SAVINGS AND SAVINGS RATE

2.1. *Savings*

Wang defined savings as the portion of the monetary income of the economic entity not used for consumption [4]. The household savings equals to monetary income minus consumption. In this study, Chinese household savings refer to deposit savings into the bank and to receive interests.

2.2. *Savings rate*

This study takes savings as residents' savings deposits in deposit credit institutions. Hence, savings rate refers to ratio of resident savings in deposit credit institutions rate to resident income [4]. This study will discuss why Chinese residents like putting most their savings in deposit credit institutions leading Chinese high household savings rate instead of consuming.

3. CHINESE HIGH SAVINGS RATE AND DESCENDING TREND

From 1980 to 2000, the national total savings rate was about 35 % to 40 % of GDP and in 2008, the national savings rate reached a historical peak, which was 52 % of GDP however, according to macroeconomic data, global national savings rate is 25 % of GDP on average. China's savings rate is about 25 % higher than the world average savings rate, China has been classified as the country

with the highest saving ratio for a relatively long period internationally [5].

Since the Chinese opening and reforming in 1978, the saving rate represented the nation's rising trend for many years. By the end of 2013, the number of Chinese households saving deposit has achieved 45 trillion RMB. Comparing with the previous year 2012, the household deposits increased by 4.8 trillion [6]. People has increasing tendencies to save money and this increase led to the highest level of saving internationally. Since China's reform and opening, the rapid economic growth has always been accompanied by massive investment supported by high savings rate. From 1978 to 2015, the contribution rate of capital to economic growth was as high as 34.86 % [7]. Since the main source of capital accumulation is savings, Chinese high savings rate contributes to the high-speed economy. However, this trend has changed since 2008. From 2008-2016, Chinese rating rate declined from 51% to 45.96% [2].

4. THE INFLUENCING FACTORS OF CHINESE HIGH HOUSEHOLD SAVINGS RATE

4.1. *Cultural attributes*

Culture is the collective design in people's mind that can distinguish members of one group from others [8]. From the previous research, culture influences various economic behaviors including the decision of being self-employed or working for others, people's choices for multinational companies and residents' savings rate [9-11].

The sub-aggregates of cultural values can be classified into future-orientation (FO), collectivism and uncertainty avoidance [12]. All cultural values China have contained the three factors above which lead to Chinese high savings rate.

4.1.1. *Future-orientation*

FO is the level of how their current behaviors can affect their future and that means individuals with future-orientation have the belief that they can plan for their future and review their current behaviors [13]. Chinese suffering from grain-saving period in 1950s to 1960s when the government implemented the planned economy have the tradition of planning for their future and the idea of planning future life has been rooted into Chinese's minds for generations. Young couples plan for their new house for their unborn children at the beginning of their marriage and middle-aged people save money for their old life. To provide the financial supporting for their future plans, people save money. This shows that the cultural tradition of planning for the future contributes to Chinese high household savings rate positively.

4.1.2. Collectivism

Collectivism cultures are the society focusing on the extended families and groups [14]. The collectivist societies such as Chinese society has high levels of savings due to Chinese traditional thought of raising children for old age. Parents take it for granted that they should raise their children until they can get decent jobs and earn money so that children can foster them when they are old [15]. So that both parents and children save money for their families under collectivism and that contributes to Chinese high household savings rate positively.

4.1.3. Uncertainty avoidance

Uncertainty avoidance evaluates the levels of individuals can deal with the unpredictability and results of ambiguity about their future [14][16]. Chinese residents have strong uncertainty avoidance in 1959 to 1961 when people's health and lives were seriously jeopardized by the extreme lack of food. When China has not fully entered the industrial society in the agricultural society in that period, people's survival mainly depends on agriculture. And since agriculture society has a strong uncertainty due to uncertain weather and a series reasons, thrift becomes the virtue in agricultural society for people [17]. Generations of people are still influenced by the three-year catastrophe period and ideas of agricultural uncertainty so that they put savings into banks to avoid uncertain disasters. Cultures containing high levels of uncertainty avoidance cause high savings rates to deal with the unpredicted decreasing in income in the future. Chinese high levels of uncertainty avoidance are related to the high savings rates positively.

The collective discussion of the three cultural factors display that cultural dimensions plays a critical role in Chinese household savings rates in a positive way.

4.2. Family planning policy

From the early days of founding, China has formulated and adjusted a series of population fertility policies. In general, the population fertility policies have four stages from relaxation to tension and then followed by gradual opening [3]. For explaining the high household savings rate, this section will focus on Chinese family planning policy.

In 1954-1969, the government started to consider the population problem and introduced some policies to control the growing population with rapid speed. At that period, the population policies were implemented in some areas but were not implemented completely. With the expansion of population, a series of social issues such as the shortage of urban housing tension arose. Then, the government realized the population fertility issue and began to deal with the problem of high-speed growth of

population and plan to enact policy of population plan. In 1980, Chinese government published a stringent one-child policy, the most well-known part of population fertility policies. One family only could have one child under the strict one-child policy. According to the data of China Statistical Yearbook and China Population Statistical Yearbook [3], in the early days of the one-child policy, China's birth rate began to drop significantly, from 33% in 1970 to 12% in 2014. Obviously, the one-child policy controlled the speed of birth rate and population greatly. With the decreasing of birth rate and population, the change of population structure is significant. Young dependency ratio decreased from 40% in 1987-1999 to 22.1% and conversely, old dependency ratio increased from 8.3% to 13.7%. From the general trend, the change between old dependency ratio and savings rate is synchronous but the change between young dependency ratio and savings rate is reverse. All in all, savings rate increases because of one-child policy.

4.2.1. The principle of Anti-life cycle

In similar vein, the hypothesis of life cycle explains the relationship between population age structure and household savings rates [18-19]. In the research, representatives of consumers will arrange their consuming of various periods with appropriate expenditures according to their expected consuming on average [20] Thus, with the proportion of older people increasing, the household whole consuming has the tendency to increase [20-22], which leads to decreasing household savings ratio. However, many scholars show that the relationship between Chinese residents ages and savings rates represents the U-shaped curve [23]. With increasing age, the savings rate has the tendency to increase first, then decrease and finally increase again. That means for young families and elderly households, household savings rate is relatively high. The lowest household savings rate is in the middle-aged families with 48-year-old householders. The phenomenon opposite to the theory of life cycle is called the mystery of anti-life cycle [24].

The phenomenon why household savings rate is high again in families with elderly people is contributed by both collectivism from the cultural factor and one-child policy. As we discussed in the previous section, in Chinese traditional cultural concept, different from the legal maintenance obligations of adult children stipulated in the law, even though parents have labor ability and no life difficulties, adult children still need to pay maintenance or in person or ask nursing staff to take care of their parents. Because in Chinese traditional collectivist culture, both old members and young members in one family are not independent completely and need to depend on other families financially. As a result, old people are supposed to save less because they have extra income from their children. However, the anti-

life cycle shows the truth is opposite because of one-child policy enacted in 1980s. From the influence on old dependency ratio and young dependency ratio under one-child policy, young dependency ratio decreases while old dependency ratio increases. This means that there are more old people need to be fostered and most families only have one child. Equally important is the consideration of uncertainty, compared with young people, older people are more likely to face uncertain events such as diseases due to physical degradation. So that the savings rate prepared for old people are high. For old people, to have a better and more guaranteed old lives, it is not enough to be supported by their one daughter or son. So that more and more old people save money by themselves simultaneously. Consequently, Chinese household savings rate is high due to the anti-cycle principle contributed both by traditional culture and one-child policy.

5. THE INFLUENCING FACTORS OF DECLINING SAVING RATES

Reviewing Chinese more than 40 years economic development after reform and opening up, the high-speed of economic development companies with Chinese high savings rate [25]. In 1978-2015, high savings capital contributed 34.85 % to economic growth [8]. However, since 2010, national savings began to fall significantly, according to the data from the speech at the 2021 China Finance 40 Forum (CF40) on the theme of 'Decisions and Responses to Savings Rates in the Context of Rapid Aging', national savings rate decreased from 51.8% to 44.4%. There are three reasons that can explain the decreasing of national savings rate: the decline of household savings rate, the decline in the proportion of disposable income in the enterprise sector and the decline in the proportion of disposable income of the government [2]. This study discusses and explains why Chinese household savings rate decreases from cultural attributes and Chinese population fertility policy

5.1. Cultural attributes

Amir Shoham and Miki Malul divided culture into future-orientation, collectivism and uncertainty avoidance and this study have discussed how these cultural attributes contributes Chinese high-savings rate [12]. However, young generations' ideas of saving and consuming have changed with the development of Chinese economy. And that means there are new cultural attributes in young generations. Young generations save and consume money by thoughts of self-orientations focusing on their current lives but not future, collectivism under brothers that they have brothers in families to help save money and uncertainty avoidance with low levels that they do not worry about uncertainties in the future as much as before. All the cultural thoughts of young people contribute to descending savings rate negatively.

5.1.1. Self-orientation

This study mentioned in the previous section that people in 1950s to 1960s tended to save money influenced by Chinese traditional culture of future-orientation. However, young people in modern era consume more instead of saving money than their elder generations due to self-orientation but not future orientation.

Young generations' self-orientation is derived from Chinese high and increasing house prices. Since the house price is much higher than the cost of young people's income, people turn to expand consumption in their existing life also called self-orientation in this study, but not save for the purchase of housing. Lugwig and Sløk take the economic phenomenon that high house prices force young generations to delay or cancel plans of buying houses as substitution effect [26]. Families that stop saving money for buying houses and increase consumption are called desperate households [27]. After an empirical study of the 2015 China Household Finance Survey (CHFS2015), Sun and Xie concluded that every 1% rise in house prices leads to an increase of 0.194% in consumption by desperate households without housing purchase plans and an increase of 0.082% by desperate households with housing purchase plans [28]. Obviously, increasing house prices lead young people to give up the idea of buying house because even if they save all their income, it is still nearly impossible for them to buy a house. Instead, young generation turn to consume focusing on their existing life, for example travelling, exercising and dating with friends. The way of life under self-orientation directs young people to consume more instead of saving. Consequently, Chinese household savings rate starts to decline.

5.1.2. Collectivism under the two-child policy

Under one-child policy, due to traditional collectivism this study discussed before, Chinese save money for their family. On the contrary, in the period of two-child policy, Chinese traditional collectivism with the help of brothers derived from the two-child policy begins to contribute to descending household savings rate. According to Chinese collectivist tradition, it is the virtue of filial piety for adults to support their parents and especially parent expect that male children support the parents but not their daughters [29]. In a study conducted by Zhou, with an additional brother in one family, the individual's household savings rate will be reduced by at least 5% [30]. In his research, brothers of family can help household savings rate decline in two ways: First, brothers provide the source of borrowing in an informal way and that means they share the risks. Second, brothers undertake the expenditure of supporting parents with their other members in one family. Both sharing risks and

borrowing sources with the help of brothers under collectivism contribute to declining savings rate.

Sharing risks

According to the data, recently, Chinese corporate financial markets is underdeveloped [31]. Under this situation, it is difficult for many entrepreneurs to borrow from banks. Instead, they are supported financially by the network of family members [32].

Weina Zhou tested the effect of brother on household with various levels. (1) wage uncertainties (2) health risks (3) regional financial development and (4) income or asset levels [30]. Since 2018, under the second-child policy, every family has the chance to raise one more child than before and the family can save less for old people's risks such as medical costs risk and wage uncertainties due to the adverse economic environment. Thus, brothers under collectivism in the period of the two-child policy lead household savings decline by sharing risks.

Household borrowing resources

In the underdeveloped financial market in China, private entrepreneurs rely on the network from family members and relatives to ask for financial support [31]. Weina Zhou investigated the date from the Chinese Household Income Project and concluded that the family's primary borrowing sources are family members and relatives [30]. More than half of people would like to borrow money from their relatives instead of financial institutions. Another contrast test for all ages researched by Weina Zhou shows that people with zero or only one brother have a higher savings rate than individuals with more than two brothers. Obviously, the relation between the number of brothers and household savings is negative.

In 2016, the two children policy was implemented in most Chinese cities. In addition, in 2021, the government considered to encourage parents to have three kids. These policies make it possible that offspring can have brothers. And brothers share risks of family and provide household borrowing resources. Consequently, Chinese household savings rate will reduce by brothers in the future.

5.1.3. Uncertainty avoidance with low levels

Comparing with elder generations who suffering from natural disasters in 1960s, young people consider uncertain risks in the future less because of Chinese endowment insurance's improvement. Li and her partners discussed the development of Chinese social endowment insurance [33]. To establish a fair and extensive social endowment insurance, since 2015, the government has implemented that public institutions or companies should share the cost of endowment insurance with individuals together. This policy relieves residents' financial pressure of paying endowment insurance's cost. In addition, on 28 October 2010, China promulgated the

Social Insurance Law of the People's Republic of China, which guarantees residents the right to social insurance. So that young generations can have less uncertain risks such as illness in the elderly life and save less money with the support of endowment insurance.

6. THE RELAXATION OF POPULATION FERTILITY POLICY

In the previous section, the study explained how Chinese household savings rate is influenced by one-child policy. In this part, we will continue to discuss how the next population fertility policy stage from one-child policy leads to the decreasing of household savings rate.

In 1991-2015, the population fertility policy entered the open stage from the strict stage known as one-child policy. In 2001, the state promulgated the Family Planning Law of the People's Republic of China. In this policy, citizens are encouraged by the country to give birth to one child but in some special situations meeting the requirements of laws and regulations, people can have two children. This policy indicates the strict one-child policy has been broken. In addition, the population fertility policy has new reform in recent years. In October 2015, The Fifth Plenary Session of the Eighteenth Central Committee announced the new population fertility policy. In order to deal with social issues caused by one-child policy such as Population ageing and declining proportion of working population, Chinese government decided to open the second child policy completely. Every family can have two children. In 2016, the second child policy is in full operation

In 2014-2017, being accustomed to the one-child policy for 36 years, many families have considerations about raising the second child. In the next section of the second-child policy in 2017-2020, the decline of household savings rate caused by the new policy is obvious. According to the VECM model, until 2018, the two-child policy has brought about a supply of about 5.32 million newborns in China, and the young dependency ratio has increased by about 5.43 % [34]. The decreasing of Chinese household savings rate under the second-child policy can be explained by the demand hypothesis of family savings.

6.1. The demand hypothesis of family savings

According to the model of the demand of family savings, children is a way of intertemporal investment [3]. When there are more children needed to be raised in one family, the family savings will decrease. Because parents' idea of providing the education of high quality for children formed in the period of one-child policy and the idea of providing education of high quality for children can explain why the cost of per child does not decrease with the increasing number of children. According to the research, the proportion of parents expecting their

children to reach the education level above bachelor degree is as high as 66.7 % and of which 44.4 % expect their children to reach the education level above bachelor degree [3]. Under the second-child policy, there are extra one child in some families so that parents need to consume for their two kids' education with high quality for example buying school district housings with high price and other activities. Consequently, Chinese household savings rate decreases by the second-child policy.

7. THE PREDICTION OF CHINESE HOUSEHOLD SAVINGS RATE IN THE NEXT 15 YEARS

According to the previous discussions about Chinese traditional culture and the changes of population fertility policy, this study predicts that over the next 15 years, China's household savings rate will remain high but decline slowly. Due to China's unique savings habits and psychology of savings, most Chinese residents tend to save money for risks and uncertainties in the future due to cultural attributes. In addition, Chinese elder people have their unique purpose to keep savings. Such cultural factors will continue to influence household savings rate positively for a relative long time. Under the cultural factors, China's long-term implementation of one-child policy in the past 41 years also guarantee that household high savings rate will continue to maintain.

Although the tendency of high household savings rate will continue in Chinese society for a long time, Chinese household savings rate continue decrease in the future slightly. From 2020 to 2030, the difference of China's household savings rate in the savings rate decline curve gradually will expand from 0.5 to 1.1 percentage points [34]. The second-child policy was implemented on January first 2016 and meanwhile parents who give birth to two kids can receive reward for extended maternity leave. This is conducive to improving national fertility desire. According to the prediction of, since 2016, China's savings rate will decline at a faster rate of 34% for ten years, and then stabilize at a low level of about 11% [35]. The cost of newborns' consumption will increase with increasing high birth rate so raising fertility will reduce household savings. According to young generations' new cultural attributes, self-orientation, collectivism under the two-child policy and low levels' uncertainty avoidance, household savings rate will decline.

The key factor contributing to increasing savings rate is labor force. Although the two-child policy can bring new labor force for society and contribute to economic growth positively by increasing savings, it takes at least 20 years. In the next two decades, as the source of capital accumulation for economy, descending of savings will lead to a decline in economic growth. In addition, a series of social issues will appear in 20 years by descending savings rate.

8. CONCLUSION AND SUGGESTIONS

This study discusses how Chinese household savings rate can be influenced by Chinese cultural attributes and population fertility policy together. After reviewing and analyzing, it is concluded that China's household savings rate will still remain high in the future under the influence of one-child policy and the influence of old people's traditional values, future-orientation, collectivism and uncertainty avoidance, but will fall slightly under the influence of the two-child policy and cultural attributes from young generations.

Based on China's national conditions, this study puts forward the following strategies for the issues caused by the decline of savings rate.

First, delay retirement age. As the two-child policy will take a long time to contribute to economic development by providing new labor force, delaying retirement age can relieve the problem of labor shortage. In addition, elderly people can provide experience for young generations.

Second, improve the social security system and provide more employment opportunities. When more residents can have income from working and guarantee their life by social security, people can increase their savings and then contribute to the development of economy.

Third, adjust the industrial structure and change the production mode. The country should focus on the development of high-tech, thereby reducing dependence on labor and high savings rate. As a result, Chinese economy can have sustainable and healthy development with the support of new industry.

This study provides a direction for scholars to estimate the levels of decreasing and provide solutions to deal with such issues from both perspectives of culture and population policy. By discussing influence from cultural attributes under population policy, there is a better and clearer view on the trend of Chinese household savings rate and solutions about how to solve issues cause by declining savings rate are provided.

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