

Old Before Rich: An Investigation into the Problems and Solutions Regarding China's Pension
System

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Modern International Affairs

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December 20, 2019

The People's Republic of China (PRC) has attempted to govern the size and growth of its population since its founding in 1949. In the face of an exploding population and limited resources, the PRC adopted major population control and economic liberalization policies from the 1980s to the 2000s, culminating in the One-Child Policy and an employer-based social safety net. These policies resulted in falling worker-to-pensioner ratio and a weaker pension system, threatening both the familial pensions and governmental pensions of the elderly population. To solve the issues of population and government spending, China passed the Two-Child Policy, Social Insurance Law and 2018 tax code, all of which help but fail to fundamentally fix a social security system plagued by an imbalanced population pyramid and ineffective tax collection and redistribution system. To address these issues, the retirement age should be raised, a childcare subsidy should be distributed, and the incentive system between the national government and local governments should be restructured to reward the satisfaction of the population rather than GDP growth.

Background: Social

China's issues with social security for the elderly began with the 1980 One-Child Policy and the economic liberalization of the 1990s and 2000s. The One-Child Policy caused population growth to slow, resulting in an imbalanced worker-to-elderly ratio. The economic liberalization programs shifted the burden of pensions and social security from state-owned enterprises to local governments and employers, resulting in a spotty, complicated, and insufficient tax collection and distribution system. "Local governments" refers to provincial, municipal, county, and village governments, as opposed to the central government. Both the One-Child Policy and economic liberalization have threatened the sources of private and public pensions for the elderly.

The One-Child Policy has caused most of the social problems threatening the pension system in China today. In 1980, after decades of voluntary and intermittent birth control efforts, the Central Committee of the People's Republic of China's Communist Party published a letter instituting the One-Child Policy universally among Han Chinese. The policy responded to a rapid birth rate that threatened the stability of China's allocation of food and resources. The national government set population and fertility targets and delegated the responsibility to achieve those targets to local governments.¹ The law awarded stipends and preferential housing, education, and healthcare to families that took a pledge to limit themselves to one child.² The policy demanded that after one child, a woman would have an intrauterine device (IUD) inserted, and after a second child, she would be sterilized, leading to 324 million IUD operations and 107 million tubal ligations throughout the duration of the plan.³ Women who refused were given disadvantageous employment, education, and healthcare.⁴ To meet fertility targets, some local officials performed forced abortions, sterilizations, and infanticide, but such measures disappeared quickly as the population grew to accept the legislation more.⁵

The national government also compelled local officials to monitor childbearing-age women, who could only have state-sanctioned births.⁶ Urban citizens mostly complied, but in rural areas, children were invaluable to work the family business and provide pensions for older

¹ Nancy E. Riley, *Population in China* (Malden, MA: Polity Press, 2017), 43.

² Therese Hesketh and Wei Xing Zhu, "The one child family policy: the good, the bad, and the ugly," *British Medical Journal* 314 (June 7, 1997): accessed December 17, 2019, <https://repository.library.georgetown.edu/handle/10822/752738>.

³ Sui-Lee Wee, "After One-Child Policy, Outrage at China's Offer to Remove IUDs," *The New York Times*, January 7, 2017, accessed December 17, 2019, <https://www.nytimes.com/2017/01/07/world/asia/after-One-Child-policy-outrage-at-chinas-offer-to-remove-iuds.html>.

⁴ Wee, "After One-Child."

⁵ Hesketh and Zhu, "The one child."

⁶ Riley, *Population in China*, 44.

residents, so the policy imposed a major burden on rural families. Rural officials were also more intimately tied to their communities and might allow more children than prescribed.⁷ A solution to the population crisis must address the difference between rural and urban societies in China.

One effect of the policy was a more quickly decreasing birth rate. The One-Child Policy contributed to the fall in the fertility rate from 2.8 births per woman in 1980 to 1.5 births per woman in the 1990s.⁸ However, the fertility rate had already fallen drastically from 5.8 to 2.8 births per woman from 1970 to 1980 before the policy was implemented, likely due to economic development.⁹ Nonetheless, between the Chinese government and other studies, estimates predict that the One-Child Policy and other family planning campaigns prevented 100-400 million births since 1970, which means that despite the already falling birth rate due to industrialization, the One-Child Policy was a major contributor to the current situation.¹⁰

This sudden drop in birth rate creates an imbalance between the elderly and working-age population. The proportion of people above the age of sixty will reach one-third by 2050, and fewer workers will exist to support them.¹¹ In 2017, 2.8 workers supported each pensioner, but by 2050, the ratio will dwindle to only 1.3, compared to a projected 2.0 in the US in 2060.¹² Slower population growth is typical for an industrializing country, but compared to other countries, China's population growth is slowing much faster compared to its level of development, shown by this HSBC table.

⁷ Riley, *Population in China*, 45.

⁸ Charlie Jane Anders, "Did China's One-Child Policy actually reduce population growth?," *Gizmodo*, January 29, 2014, accessed December 17, 2019, <https://io9.gizmodo.com/did-chinas-One-Child-policy-actually-reduce-population-1511784972>.

⁹ Anders, "Did China's."

¹⁰ Anders, "Did China's."

¹¹ Viola Rothschild, "China's Pension System Is Not Aging Well," *The Diplomat*, March 6, 2019, accessed December 17, 2019, <https://thediplomat.com/2019/03/chinas-pension-system-is-not-aging-well/>.

¹² Rothschild, "China's Pension."

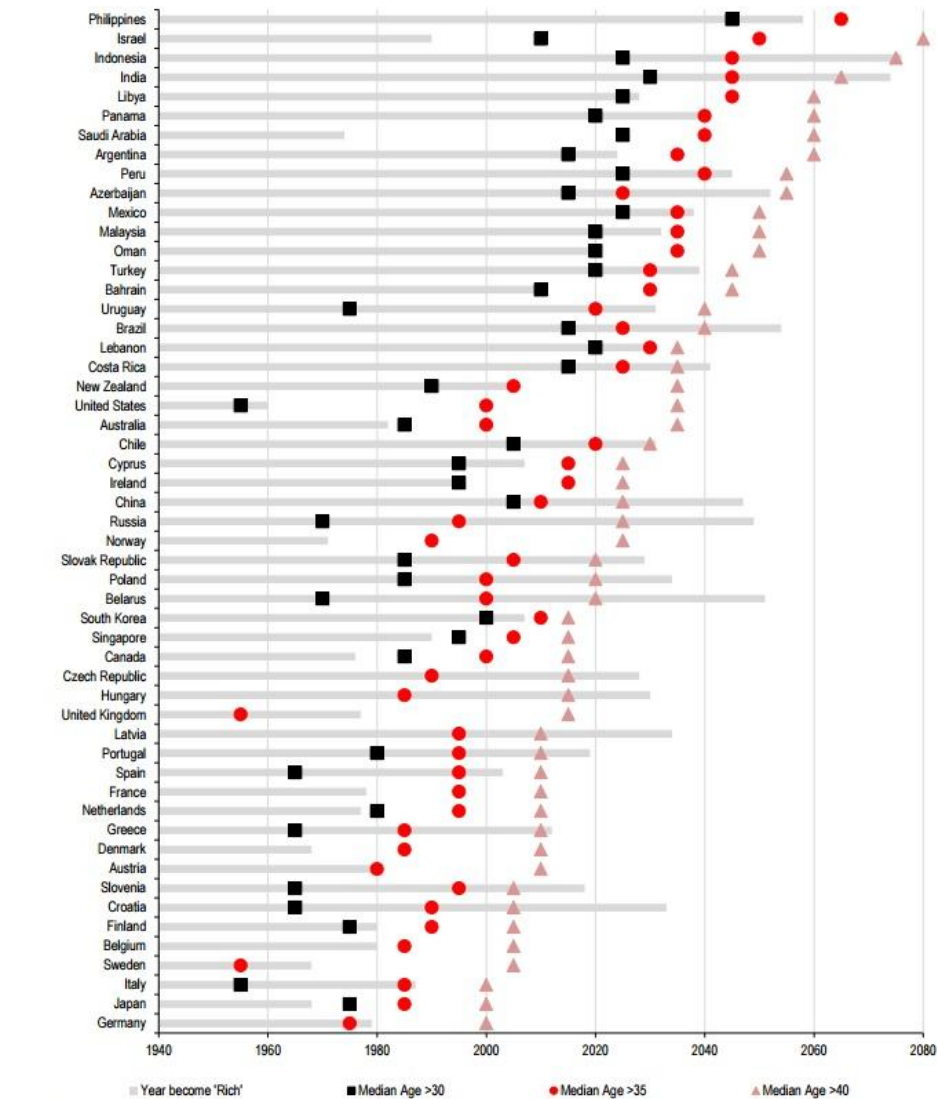


Figure 1, Rate of Ageing and Development of Various Countries, HSBC¹³

For a variety of developed and developing countries, Figure 1 shows the year each country becomes “rich,” defined as having a GDP per capita of \$15,000 USD, and the years each country reaches median age benchmarks of 30, 35, and 40. China will reach a median age of forty years decades before it becomes “rich”, posing problems for future growth.

¹³ HSBC, Rate of Ageing and Development of Various Countries, infographic, Business Insider, May 5, 2016, accessed December 17, 2019, <https://www.businessinsider.com.au/hsbc-emerging-markets-may-get-old-before-they-get-rich-and-that-poses-some-serious-risks-2016-5>.

Background: Economic

China's economic liberalization has presented another issue for the elderly. In the 1990s, Jiang Zemin continued Deng Xiaoping's legacy of liberalization by merging, leasing, and selling state-owned enterprises (SOEs), in which the bulk of China's public pensions were concentrated and fired many workers in the process.¹⁴ Jiang introduced a fundamental shift in pension responsibility from state enterprises to employers, national agencies, and local governments, which has failed to support the population.¹⁵ The new pension system was fragmented into around 2000 social pools under the control of several levels of local government.¹⁶ Despite several attempts to reform the system, local governments still wielded high autonomy in financing and distributing pensions, which resulted in confusing and uneven coverage.

The State Council introduced a nationwide policy attempting to standardize pensions in 1991. The policy called for a basic pension for retired SOE workers and attempted to standardize the system among local governments.¹⁷ However, the policy failed to raise the low retirement age. The Chinese retirement age ranks among the lowest in the world, with men retiring at age sixty and women at fifty-five or even fifty. Furthermore, the 1991 policy did not specify which level of government organizes pension pools and did not standardize the contribution rates of firms and workers across urban and rural regions. The regulations of the 1991 policy have encountered resistance from local governments, which often delay, alter, or even ignore national policies. The attempt to standardize the pension system did not succeed in simplifying the system, which would close loopholes and improve collection and distribution.

¹⁴ Mark W. Frazier, "China's Pension Reform and Its Discontents," *The China Journal* 51 (January 2004): 98, <https://www-jstor-org.puffin.harker.org/stable/3182148>.

¹⁵ Frazier, "China's Pension," 98.

¹⁶ Frazier, "China's Pension," 98.

¹⁷ Frazier, "China's Pension," 102.

In 1998, the State Council shifted the burden of collection and distribution of pensions from enterprises to local governments by issuing a circular.¹⁸ The circular prohibited companies from deducting their contributions to employee pensions from their contributions to local social security services.¹⁹ Later laws and bills issued penalties and fines for refusals. Still, the absence of a national system and incremental reforms did not suffice in fulfilling the needs of pensioners, as evidenced by a series of protests by unpaid pensioners in the 1990s.²⁰

Though a national pension system was absent, local governments have enforced pension collection and distribution at times. Local governments have leveraged licenses to force enterprises to pay their dues, withholding certifications and license renewals and even enforcing stricter safety standards on firms that fail to comply.²¹ Some local governments have broadcasted reports on disobedient firms and performed surprise interviews on directors, which has succeeded in improving compliance.²² In the mid-1990s, Hunan province subpoenaed enterprises into seeking settlements to remit their unpaid fees to local social security officers.²³ In 1998, the Shanghai local government passed a law allowing them to auction firm assets to compensate for unpaid fees.²⁴

Despite these successes, overall the pension reforms of the 1990s failed. In the early 2000s, only one-fourth of the workforce had any pension.²⁵ The coverage was uneven, with only

¹⁸ Frazier, "China's Pension," 105.

¹⁹ Frazier, "China's Pension," 105.

²⁰ Frazier, "China's Pension," 105.

²¹ Frazier, "China's Pension," 106.

²² Frazier, "China's Pension," 108.

²³ Frazier, "China's Pension," 108.

²⁴ Frazier, "China's Pension," 108.

²⁵ Susan Greenhalgh and Edwin A. Winckler, *Governing China's Population* (n.p.: Stanford University Press, 2005), 303.

11% of rural workers receiving pensions compared to 55% of urban workers.²⁶ Many reforms, like a 2004 pension for elderly lacking a son, were means-tested and spotty.²⁷

Because of China's economic liberalization and family-planning policies, China faces a rapidly growing elderly population and a weak social and familial security net. Whether by encouraging public social security distributed by the government or private social security from families, China must address both a ballooning elderly population requiring pensions and a dwindling working-age population that pays for them.

Attempted Solutions: Social

To address the problems of a low birth rate and weak, complicated social security net, China reversed decades of policy by adopting pro-family social laws and unifying economic incentives. The Two-Child Policy and other new policies lifted restrictions on birth and provided monetary incentives to start families. The Social Insurance Law and 2018 tax code attempted to combine tax collection and distribution responsibilities and increase revenue. Though these policies helped the situation, they did not reverse the general trends that jeopardize the social security of the elderly. They also caused new, unexpected problems that a potential policy solution must address.

In October 2015, the government began to permit all couples to have two children to boost the plummeting birth rate; however, the effects were disappointing. The fertility rate is expected to rise from 2.01 to 2.15 in rural regions and from 1.24 to 1.67 in urban regions of China, leading to 60 million new workers by 2050 by one estimate.²⁸ However another estimate

²⁶ Greenhalgh and Winckler, *Governing China's*, 303.

²⁷ Greenhalgh and Winckler, *Governing China's*, 303.

²⁸ Yi Zeng and Therese Hesketh, "The Effects of China's Universal Two-child Policy," *The Lancet* 388, no. 10054 (October 2016): <https://www.sciencedirect.com/science/article/pii/S0140673616314052>.

predicts only 23 million people added by the year 2050.²⁹ By either estimate, the policy will dampen the effects of the One-Child Policy but not reverse the overall trends of a falling birth rate when compared to the 100-400 million prevented births of the One-Child Policy.

One reason is that rising costs of living make having more children unaffordable. A survey of Shanghai parents conducted before the Two-Child Policy found that 45% of parents would not raise a second child if permitted.³⁰ The average cost of raising a child in China is 23,000 RMB, or \$3336 USD, per year.³¹ The cost is equivalent to 43% of the average household income in China, and only 1.45 of the 11 million eligible couples applied to have a second child, mostly younger and wealthier families.³² A solution seeking to increase the birth rate must address the high cost of living in cities.

China has pursued policies to encourage births other than the Two-Child Policy. A new Civil Code set to take effect in 2020 attempts to discourage divorces by requiring a one-month cooling period for a divorce. China's divorce rate has trended upwards, doubling between 2006 and 2016 to three per 1000 people.³³ Authorities hope the high divorce rate will decrease if couples are given time to potentially withdraw their application for divorce.³⁴ Municipal authorities have adopted pro-family policies too, such as those of Lianyungang, Jiangsu, which quizzed couples on each other's birthdays and chores before allowing a separation.³⁵

²⁹ Riley, *Population in China*, 63.

³⁰ Riley, *Population in China*, 64.

³¹ Netease New Media, "Media: Parenting Costs in China Account for Nearly Half of Household Income," NetEase, last modified October 29, 2015, accessed January 13, 2020, <http://news.163.com/15/1029/18/B747SKP50001124J.html>.

³² Riley, *Population in China*, 64.

³³ Phoebe Zhang, "China plans new cooling-off rules to delay divorces as more marriages break down," South China Morning Post, last modified August 28, 2018, accessed December 17, 2019, <https://www.scmp.com/news/china/society/article/2161711/getting-divorced-china-not-so-fast-says-new-cooling-law>.

³⁴ Zhang, "China plans," South China Morning Post.

³⁵ Zhang, "China plans," South China Morning Post.

Additionally, the government of Shanxi province will aid in paying for wedding photography, honeymoon travel, and wedding dresses.³⁶ Jiangsu has also allotted paid leave for pregnant women in their third trimester to try to prevent miscarriages.³⁷ However, maternity leave policies have backfired, causing workplaces to hesitate when hiring women for fear that they will lose money. In fact, a poll found that 75% of firms have become less enthusiastic about hiring women because of the relaxed Two-Child Policy, expecting an additional maternity leave.³⁸ China adopted perhaps its most dramatic family-planning policy yet on January 5, 2019, when it published the official 2019 Year-of-the-Pig sticker featuring a pig family with three piglets.³⁹ The magnitude of the effects of these policies on birth rates are unclear.

Attempted Solutions: Economic

The Chinese government has also expanded pension programs for the elderly. In 2011, the Chinese government passed the Social Insurance Law (SIL), the first comprehensive social security bill, covering both urban and rural residents.⁴⁰ The SIL established a national social security system, allowing individuals to transfer their pension and insurance relationships when they change cities and jobs.⁴¹ It delineated five basic areas of insurance: pensions, medical, work-related injury, unemployment, and maternity, and outlines the rates of contribution for

³⁶ Tara Francis Chan, "Chinese authorities are offering wedding subsidies and cash payments to lure 'high quality' women into having more babies," Business Insider, last modified July 30, 2018, accessed December 17, 2019, <https://www.businessinsider.sg/china-One-Child-policy-implications-women-children-2018-7/>.

³⁷ Chan, "Chinese authorities," Business Insider.

³⁸ James Griffiths and Serenitie Wang, "Faced with falling birth rates, China urges citizens to have more babies," CNN, last modified August 8, 2018, accessed December 18, 2019, <https://www.cnn.com/2018/08/08/health/china-one-child-intl/index.html>.

³⁹ Griffiths and Wang, "Faced with," CNN.

⁴⁰ China Briefing, "New Social Insurance Law Aims to Improve Social Welfare System in China," *China Briefing*, March 8, 2011, accessed December 17, 2019, <https://www.china-briefing.com/news/new-social-insurance-law-aims-for-an-all-round-social-welfare-system-in-china/>.

⁴¹ China Briefing, "New Social."

employers — up to 20% of total wages — and employees — up to 8% of their individual wage.⁴² It creates basic pension pools at the provincial level, which will gradually merge to the national level.⁴³ The law allows social security collectors to confiscate the money and assets of employers with outstanding payments.⁴⁴

Despite the SIL, China's pension system still fails to enforce collection. Often, companies avoid paying social security. A social-insurance provider poll discovered that only 27% of firms in China pay their entire dues to social security.⁴⁵ Companies avoid paying dues by underreporting wages, hiring part-time employees, and manipulating the collection system. The law still held municipalities responsible for collecting social security contributions, so large corporations could negotiate with municipal governments for lenience. Pension deficits due to a low birth rate present a looming problem in China's future, but laws reigning in corporations and centralizing the social security system offer a potential avenue of solution.

In 2018, China released an ambitious plan to unify the tax system, leading to increased revenue but resistance by local governments. The plan attempted to integrate national and local taxation offices, erasing much of the fragments of the social security system.⁴⁶ The State Administration of Taxation reported that it collected 8.2 trillion RMB in the first six months of 2019, an increase of 15.3% from 2018.⁴⁷ However, despite the law decisively easing the complexity of tax collection, that may not be desirable for local governments, which increasingly desperately seek to stimulate economic growth in the face of uncertainty. Corruption exacerbates

⁴² China Briefing, "New Social."

⁴³ China Briefing, "New Social."

⁴⁴ China Briefing, "New Social."

⁴⁵ Rothschild, "China's Pension."

⁴⁶ Xinhua, "China releases tax reform plan," *ENGLISH.GOV.CN*, July 20, 2018, accessed December 17, 2019, http://english.www.gov.cn/policies/latest_releases/2018/07/20/content_281476230107430.htm.

⁴⁷ Xinhua, "China releases."

the problem, creating a conflict of interest where local officials are disincentivized from taxing the businesses that they themselves own or benefit from. None of the ten regions that have released implementation notices have begun to enforce the tax collection to avoid adding financial burden onto businesses.⁴⁸ Considering the increase in revenue but the failure to implement, the success of the tax system is inconclusive, but the funds are desperately needed. Pensions compose almost 70% of China's national social security collections, and China's pension fund deficit is expected to double from 2018 to 2022, from 234 billion RMB to 534 billion RMB (roughly \$76 billion).⁴⁹ The balance between collecting taxes for pensions and generating economic growth must be considered in a policy solution.

The One-Child Policy and economic liberalization of the 1990s and 2000s have created a dire situation for China's elderly population: a dangerously low worker-to-elderly ratio and a weak social security net. In the 2010s, China has attempted to address these issues with a series of social and economic programs, mainly the 2015 Two-Child Policy and the 2017 Social Insurance Law. Other policies include a planned 2020 Civil Code designed to incentivize marriage and births and a 2018 tax reform plan. Each of these policies also exacerbates other issues, such as those of women's rights, or leaves gaps in achieving its goal, which a policy solution must consider.

Policy Solution: Social

The goal of the policy solutions is to provide stable social security to the elderly. The policy solutions must address several key nuances about China. Rural regions of China are more inclined to comply with pro-family policies than urban regions. Rural areas value children as

⁴⁸ Rothschild, "China's Pension."

⁴⁹ Rothschild, "China's Pension."

workers on farms and in factories and as assets to provide pensions to the elderly, who in rural areas rely less on public pensions. In urban regions, the high costs of raising a child disincentivize many couples from starting large families. A sizeable population of workers is necessary to support the growing elderly population. These differences must be addressed by a policy solution.

The national government must consider raising the mandatory retirement age. China boasts one of the lowest retirement ages in the world: 60 for men and 55 or 50 for women. A higher retirement age would inject more workers into the economy and increase the worker-to-pensioner ratio. In fact, a study by Chinese and Australian economists Anping Chen and Nicolaas Groenewold finds that increasing the retirement age would increase the number of skilled workers, increase output of a theoretical good, increase unskilled wages, and increase welfare across coastal and inland regions.⁵⁰ Simply increasing the retirement age to 65 would add about 38.6 million men and between 84 and 144 million women to the economy, depending on how many retire at age 50 versus 55.⁵¹

Simply raising the retirement age would cause problems, however. The study also finds that skilled wages decrease as a result of increasing the retirement age.⁵² Also, Dongbei economists hypothesize that, though in general, older and younger generations do not directly compete in the labor force, China may be an exception.⁵³ In China, retired grandparents often

⁵⁰ Anping Chen and Nicolaas Groenewold, "An Increase in the Retirement Age in China: The Regional Economic Effects," *Economics Discussion / Working Papers*, 2015, <https://ideas.repec.org/p/uwa/wpaper/15-13.html>.

⁵¹ "China 2019," PopulationPyramid.net, last modified 2019, accessed January 11, 2020, <https://www.populationpyramid.net/china/2019/>.

⁵² Chen and Groenewold, "An Increase."

⁵³ Haiyue Yu, Jin Cao, and Shulong Kang, "Labour in the past, present, and future: A trilemma in China," Vox CEPR Policy Portal, last modified December 13, 2018, accessed December 18, 2019, https://voxeu.org/article/labour-past-present-and-future-trilemma-china?utm_source=dlvr.it&utm_medium=twitter.

care for children, which may explain China's high female labor force participation rate. In China, 61.5% of women work, a higher percentage than in Scandinavia or the US, and only 6% of Chinese women stop working when they have a child, compared to 25% of American women.⁵⁴ Chinese women with support from grandparents earn 81% more than those without, especially true for better-educated urban women.⁵⁵ Retired Chinese grandparents provide critical support for the children of working mothers, which cannot be ignored.

Considering the crucial family support net, a retirement age hike must be accompanied by a tax-funded national subsidy for child care. Since mothers pay the entire cost of raising the new labor force but do not receive all of the benefits, a subsidy is necessary to provide the full needed inputs into childcare.⁵⁶ Without a subsidy, the hike would likely cause the birth rate to fall faster because women would have less help raising children. In that case, women wanting children would be forced to quit their jobs or hire nannies, a substantial disincentive, especially for urban women who have the lowest birth rate. Given that urban parents often cite childcare costs as a reason for not pursuing a larger family, a childcare subsidy would help alleviate that burden. Furthermore, without a subsidy, firms would increase discrimination against women, because women would be more likely to stop working after having a child without support from grandparents. The subsidy would be funded by the increase in tax revenue due to the greater workforce.

The cost of the subsidy would be at least partially offset by the retirement age increase. In 2017, the Chinese government paid retirees \$216.77 per year on average.⁵⁷ The saved pension

⁵⁴ Yu, Cao, and Kang, "Labour in the past," Vox CEPR Policy Portal.

⁵⁵ Yu, Cao, and Kang, "Labour in the past," Vox CEPR Policy Portal.

⁵⁶ Yu, Cao, and Kang, "Labour in the past," Vox CEPR Policy Portal.

⁵⁷ Xinhua, "China Raises Minimum Standard of Basic Pensions," China Daily, last modified May 14, 2018, accessed January 11, 2020, <https://www.chinadaily.com.cn/a/201805/14/WS5af9868ca3103f6866ee848a.html>.

payments from the lower estimate of 122.6 million elderly moved to the workforce would be able to pay the full cost for over 6.5 million children raised in expensive Shanghai, \$4,000 per child.⁵⁸ Spread evenly, the saved pension payments would award \$155 per year per child for the 171.5 million children under the age of ten in China.⁵⁹

Overall, raising the retirement age and providing tax-funded childcare subsidies would inject the labor force with workers and raise the worker-to-pensioner ratio. To mitigate the loss of childcare services provided by retired grandparents, the Chinese government would provide a subsidy to childcare, allowing both Chinese mothers and grandparents to achieve the full potential of their careers. The saved pension money alone would offset some of the childcare subsidy costs. Despite their benefits, these policies may elicit drawbacks. Given that urban women depend on the support of grandparents to allow them to advance their careers, the higher retirement age would harm them the most.

Policy Solution: Economic

Another consideration is the relationship between local governments and the national government. The national government incentivizes local governments to report high economic growth by awarding promotions to local officials who meet GDP growth goals.⁶⁰ This has led to spikes of infrastructure investment because local governments compete with each other to report high numbers.⁶¹ The unnecessary overinvestment in infrastructure, though sparking short-term growth, led to ballooning local debt and has correlated negatively with GDP growth.⁶² This

⁵⁸ Riley, *Population in China*, 64.

⁵⁹ "China 2019," PopulationPyramid.net.

⁶⁰ Xun Wu, "China's Growing Local Government Debt Levels," *MIT Golub Center for Finance and Policy*, January 2016, 5, PDF.

⁶¹ Wu, "China's Growing," 5.

⁶² Wu, "China's Growing," 5.

incentive structure has also stalled implementation of more efficient tax collection policies because local governments would rather not dampen economic expansion. This incentive system must be restructured to fit the current needs of the Chinese economy.

The new incentive system should depend on local satisfaction rather than economic growth. Local satisfaction would be measured by compulsory polls and surveys administered by the central government, rather than local governments to avoid conflicts of interest. Local government officials would receive promotions based on their popularity instead of GDP growth. The main benefit is that a satisfaction-based system incentivizes an objectively desirable goal, rather than a proxy such as GDP growth or birth rates. Local governments would no longer be incentivized to inflate short-term GDP growth, which in a slowing economic climate may not be doable without harmful schemes such as overinvestment in infrastructure.

Under this system, local governments would be incentivized to address issues of elderly care. By 2050, one third of all Chinese citizens will be over the age of sixty. Local officials would fail to achieve promotions if they ignored the needs of such a large population bloc under the satisfaction system. The system also allows flexibility between localities. Urban governments could rely on expanding public pension distribution to achieve satisfaction. Since rural areas depend on children for workers and pensions, rural citizens would respond positively to rural governments that encourage births to boost the economy and increase private pension coverage. The local satisfaction system would compel local governments to tend to the population by whichever means fit the locality's situation, rather than achieve economic goals at any cost.

A reorganized incentive system also contains issues. The system does not incentivize local governments to limit deficit spending, so the same issues of massive, expensive projects to

meet GDP targets may persist. The debt issue may even worsen, because a larger GDP mitigates the worst effects of high debt, but a satisfaction-based incentive system does not incentivize either GDP growth or budget surpluses, while the current system at least incentivizes GDP growth. Furthermore, local governments may be disincentivized from enforcing a higher retirement age if it decreases local satisfaction, although the increased labor pool and saved pension costs would compel them to enforce it, especially if the local government officials own or benefit from private businesses. The system also does not prioritize long-term strategy over short-term benefits. Overall, the new system would give local governments the flexibility and incentive to improve the lives of their constituents, which would be more difficult to falsify or scheme than GDP growth numbers.

Despite the issues, in general, a satisfaction-based local government incentive system would complement a higher retirement age and childcare subsidy to achieve a stable social security system in China. Because local governments would seek satisfaction instead of GDP growth, the new incentive system would compel local governments to expand pension and social security distribution and adopt the more efficient tax collection methods of the 2018 tax code. It would prevent harmful overinvestment in GDP growth and discourage an unnecessary obsession with increasing birth rates. The national government should also raise the retirement age and provide childcare subsidies. Though subsidies may increase the debt, a higher retirement age would result in more workers and fewer pensions, a boon for the economy. The subsidies would compensate for fewer grandparents taking care of children and would allow both women and the elderly to take full advantage of their education and potential in the workforce.

Conclusion

China's issues with social security for the elderly began with the One-Child Policy and economic liberalization from the 1980s to 2000s. The One-Child Policy exacerbated the falling birth rate, lowered the ratio of workers to pensioners, and decreased the private transfer of pensions from workers to their parents. The shift of pension responsibility from SOEs to private firms and local governments created an ineffective and complicated social security system, decreasing the public transfer of pensions from the government to the elderly.

To address these problems, China reversed its social and economic policies in the 2010s. China adopted the Two-Child Policy to boost birth rates, and in turn the workforce and tax base. China also passed the Social Insurance Law, which created a national pension system, and a 2018 tax code, which consolidated the spotty tax collection system to ambiguous success. The national government and some local governments also pursued financial incentives to create families, also to ambiguous success. China's solutions have helped, but have not reversed the general negative trend.

A retirement age increase coupled with a childbearing subsidy and reorganized local government incentive system would address the current issues while mitigating negative side effects. First, the retirement age must increase to add workers and subtract pensioners to the economy. However, considering the crucial role of the elderly as caretakers for their grandchildren, a childcare subsidy must accompany the retirement age hike. Finally, local governments must be incentivized to stimulate local satisfaction instead of GDP growth. Such an incentive system would prevent costly overinvestment in infrastructure and instead compel local governments to effectively distribute pensions. Though these solutions may increase debt, they

also increase the tax base and workforce, mitigating it. Overall, they direct China in the direction of a robust pension system for the elderly.

The PRC's family-planning policies and economic liberalization enabled China to control its massive population and rapid industrialization. However, like trying to plug all the holes of a leaky hose, the policies increased the pressure in other areas and also created entirely new issues in Chinese society. No matter the problems facing Chinese society, the construction workers, politicians, teachers, and doctors giving to China should know that China give back to them in their golden years.

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This article goes into detail about how many births were prevented by the One-Child Policy. Anders compares official estimates with independent studies and concludes that between 100 million and 400 million births were prevented. This article will be used to argue that, despite the already decreasing birth rate due to industrialization, the One-Child Policy did have an impact in creating the low birth rates discussed in the paper. Anders is a fiction author not specialized in sociology, however she describes a nuanced view of the One-Child Policy. Along with the actual law, she considers compliance with the law, enforcement of the law, and contextual demographic trends to describe its effect on birth rates.
- Chan, Tara Francis. "Chinese Authorities are Offering Wedding Subsidies and Cash Payments to Lure 'High Quality' Women into Having More Babies." Business Insider. Last modified July 30, 2018. Accessed December 17, 2019. <https://www.businessinsider.sg/china-one-child-policy-implications-women-children-2018-7/>.
The article explains some effects of the two-child policy and other social family-planning policies. One province offers cash subsidies for marriages. Another offers "fetus protection leave" to prevent miscarriages, which has backfired by discouraging firms from hiring women. This article, though not comprehensive, will further delineate some family-planning policies designed to mitigate the effects of the one-child policy and some problems of those policies. Chan is an award-winning international news editor and journalist. Though only providing a cursory description of local family-planning policies, she compares national targets to actual demographic statistics.
- Chen, Anping, and Nicolaas Groenewold. "An Increase in the Retirement Age in China: The Regional Economic Effects." *Economics Discussion / Working Papers*, 2015. <https://ideas.repec.org/p/uwa/wpaper/15-13.html>.
This paper provides evidence of the benefits and drawbacks of raising the retirement age in China. Such a policy would generally increase the labor force, output, and welfare, but it would decrease skilled wages. The paper is used to argue that increasing the retirement age would overall positively impact the Chinese economy. Anping Chen and Nicolaas Groenewold are researchers at the Jinan University School of Economics and University of Western Australia Business School, respectively. Though the paper considers the effects of raising the retirement age across different regions, sectors, and levels of government, the abstract does not provide quantitative information, which makes assessing the benefits and drawbacks difficult.

China Briefing. "New Social Insurance Law Aims to Improve Social Welfare System in China."

China Briefing. Last modified March 8, 2011. Accessed December 17, 2019.

<https://www.china-briefing.com/news/new-social-insurance-law-aims-for-an-all-round-social-welfare-system-in-china/>.

This article elucidates the legal basics of the 2011 Social Insurance Law. The Law provides a more nationalized and comprehensive social welfare system and makes enforcing pension collections easier. This article will be used to explain the Social Insurance Law in the context of the current situation, which consists of several failed welfare reforms in the 1990s and 2000s. China Briefing is a business magazine focused on China. Though the article explains the law in-depth, it does not cover reactions to the law or benefits and drawbacks, which must be inferred or supplemented with outside sources.

"China 2019." PopulationPyramid.net. Last modified 2019. Accessed January 11, 2020.

<https://www.populationpyramid.net/china/2019/>.

This website illustrates the population of China by gender and five-year age bracket. It is used to delineate the elderly population compared to quantify the financial benefits of raising the retirement age. The website also depicts the child population, which is used to quantify the costs of a childcare subsidy. The website uses the United Nations Population Division to outline the population.

Frazier, Mark W. "China's Pension Reform and Its Discontents." *The China Journal* 51 (January 2004): 97-114. <https://www-jstor-org.puffin.harker.org/stable/3182148>.

This journal article delineates the pension reforms of Jiang Zemin and the State Council from the 1990s to the 2000s. The article explains their failures in enforcing a complicated, unstandardized, delegated pension system instead of a national one. It also outlines some success in the local enforcement of pension collection and distribution, but ultimately argues that the reforms failed. This article will be used to set up the current problems of pension collection and distribution that the 2011 Social Insurance Law will attempt to solve. Mark Frazier is Conoco-Phillips Professor of Chinese Politics and Associate Professor at the School of International and Area Studies at the University of Oklahoma. His journal article explains China's pension reform laws in superb detail, along with successes, failures, and reactions by people and firms. However, the article does not quantitatively explain the collection and distribution of pensions, which makes assessing and comparing their success difficult.

Greenhalgh, Susan, and Edwin A. Winckler. *Governing China's Population*. Stanford, CA: Stanford University Press, 2005.

This book is used to delineate the failures of China's pension reforms of the 1990s and early 2000s, citing uneven coverage. The pension system unequally covers rural and urban citizens and provides conditional access to specific segments of the population, like sonless elderly. This source will argue that, despite some successes, the pension reforms of the 1990s and 2000s failed to enforce widespread coverage. Susan Greenhalgh is a professor of Anthropology at Harvard University, and Edwin Winckler is a research scholar at Columbia University's Weatherhead East Asian Institute. Though the book

describes China's biopolitics in incredible detail, the organization of sections makes finding information difficult.

Griffiths, James, and Serenitie Wang. "Faced with Falling Birth Rates, China Urges Citizens to Have More Babies." CNN. Last modified August 8, 2018. Accessed December 18, 2019. <https://www.cnn.com/2018/08/08/health/china-one-child-intl/index.html>.

This source will be used to outline issues with the Two-Child Policy as well as other family-planning solutions. Specifically, the policy disincentivized firms to hire women because of the fear of women taking two maternity leaves. This source will be used to elucidate issues that a policy solution would need to address. James Griffiths is a Senior Producer for CNN International, focusing on Asian politics. Serenitie Wang is an Associate Digital Producer based in Beijing. Though the article provides a very cursory explanation of the Two-Child Policy, it provides a survey of several minor family-planning policies and their issues.

Hesketh, Therese, and Wei Xing Zhu. "The One Child Family Policy: the Good, the Bad, and the Ugly." *British Medical Journal* 314 (June 7, 1997): 1685. <https://www-jstor-org.puffin.harker.org/stable/25174810>.

This article gives the history, benefits, and drawbacks of China's One-Child Policy. Specifically, the article discusses the implementation across urban and rural areas, the benefits to GDP per capita and economic growth, and the issues with the gender imbalance and psychological effects on a generation of only children. This source will be used to summarize the One-Child Policy as a framework for the population issues that threaten China's elderly population and that the Two-Child Policy will attempt to solve. Therese Hesketh is the director of Zhejiang University School of Medicine Center for Global Health. She has served as the head of the China HOPE Foundation's China and Indonesia Children's Health Program. Weixing Zhu is an ecosystem ecologist with broad interests in various environmental issues. The article provides unique perspectives and speculations about children's mental health and people's initial and later reactions to the One-Child Policy. However, these perspectives and speculations are not very substantiated, especially with quantitative data.

HSBC. Rate of Ageing and Development of Various Countries. Infographic. Business Insider. May 5, 2016. Accessed December 17, 2019. <https://www.businessinsider.com.au/hsbc-emerging-markets-may-get-old-before-they-get-rich-and-that-poses-some-serious-risks-2016-5>.

Netease New Media. "Media: Parenting Costs in China Account for Nearly Half of Household Income." NetEase. Last modified October 29, 2015. Accessed January 13, 2020. <http://news.163.com/15/1029/18/B747SKP50001124J.html>.

This article describes the costs of raising a child in various parts of China. For example, raising a child in Beijing costs 2.76 million RMB, or over 20 years of annual household income (50,000 RMB). These data are used to argue the point that costs are the main prohibitive factor to China's pro-family policies. NetEase is a Chinese tech company providing communication and entertainment services.

Riley, Nancy E. *Population in China*. Malden, MA: Polity Press, 2017.

This book details the enforcement of the One-Child Policy in rural and urban China. It details how the policy was delegated from a national to a local level and the difficulty of enforcing it in rural regions. The book will be used to point out that a successful policy must address the issues with enforcement in rural areas of China. Nancy E. Riley is the Chair of the Department of Sociology and an A. Myrick Freeman Professor of Social Sciences at Bowdoin University. Riley provides an accurate description of how the One-Child Policy was implemented, which is difficult to find. It also delineates the difference between urban and rural communities and how it affects the implementation of the policy, crucial to consider for a policy solution. Interestingly, Riley disagrees with Hesketh's estimates of the effects on population of the Two-Child Policy.

Rothschild, Viola. "China's Pension System Is Not Aging Well." *The Diplomat*, March 6, 2019. Accessed December 17, 2019.

<https://thediplomat.com/2019/03/chinas-pension-system-is-not-aging-well/>.

This newspaper article is used to compare China's worker-to-pensioner ratio over time. The article shows a drop from 2.8 in 2017 to a projected 1.3 in 2050. This article will dramatize the issues for elderly support, both public and private, that a low population rate poses. Viola Rothschild is a Fulbright Scholar at Zhejiang University. She illustrates the problems with China's pension system with quantitative data, which is useful for comparing the policy to potential solutions. She paints a substantiated picture of China's future economy, but only briefly explains the current policies addressing the problem.

Wee, Sui-Lee. "After One-Child Policy, Outrage at China's Offer to Remove IUDs." *The New York Times*, January 7, 2017. Accessed December 17, 2019.

<https://www.nytimes.com/2017/01/07/world/asia/after-one-child-policy-outrage-at-chinas-offer-to-remove-iuds.html>.

This newspaper article depicts the extent to which the Chinese government enforced population control as part of the One-Child Policy. Specifically, the article details the forced insertion of IUDs and the associated health risks. This source will elaborate on the means by which the One-Child Policy reduced the birth rate to the problematic low that the paper will discuss. Sui-Lee Wee is a correspondent for The New York Times in the Beijing bureau. The article focuses on the specific measures by which the Chinese government enforced the One-Child Policy, which is useful because most other sources focus on the basic law or effects of the policy. However, the article cites many testimonies of ordinary people to substantiate claims, which may not be trustworthy to depict a broader picture of the Chinese population.

Wu, Xun. "China's Growing Local Government Debt Levels." *MIT Golub Center for Finance and Policy*, January 2016. Accessed January 11, 2020.

<http://gcfp.mit.edu/wp-content/uploads/2016/01/China-Local-Govt-Debt-CFP-policy-brief-final.pdf>.

This policy brief elucidates the incentives of local governments to overinvest in infrastructure. It details how local officials compete for promotions and how such

overinvestment dampens long-term GDP growth at the cost of short-term bursts. The policy brief will outline the problems of the relationship between local governments and the national government to be addressed by the policy solution. Xun Wu is the Director of the Division of Public Policy at the Hong Kong University of Science and Technology. His policy brief crucially delves into China's incentive system between local governments and the central government, which is critical to understanding the issues of tax collection and distribution. He substantiates his claims with data about debt and investment by local governments and compares it to the system in the US.

Xinhua. "China Raises Minimum Standard of Basic Pensions." *China Daily*. Last modified May 14, 2018. Accessed January 11, 2020.

<https://www.chinadaily.com.cn/a/201805/14/WS5af9868ca3103f6866ee848a.html>.

This article outlines how many people are covered by China's pension scheme and how much money they receive on average. The statistics are used to quantify the amount of money saved by raising the retirement age. China Daily is owned and run by the Communist Party of China.

———. "China Releases Tax Reform Plan." *The State Council, the People's Republic of China*, July 20, 2018. Accessed December 17, 2019.

http://english.www.gov.cn/policies/latest_releases/2018/07/20/content_281476230107430.htm.

This article explains China's 2018 tax reform law. The law synthesizes local and national taxation responsibilities, which has increased tax collection by 15%. The law explained in the article addresses some of the issues with the complexity of China's social security system.

Yu, Haiyue, Jin Cao, and Shulong Kang. "Labour in the Past, Present, and Future: A Trilemma in China." *Vox CEPR Policy Portal*. Last modified December 13, 2018. Accessed December 18, 2019.

https://voxeu.org/article/labour-past-present-and-future-trilemma-china?utm_source=dlvr.it&utm_medium=twitter.

This policy analysis by three economists explains the role that retired grandparents play in the Chinese economy. Specifically, retired grandparents take care of children, leading to more successful careers for mothers compared to other countries. This analysis will be used to recommend a childcare subsidy along with an increase in the retirement age and to explain the drawbacks of a simple increase in retirement age. Haiyue Yu is an Assistant Professor at the Dongbei University of Finance and Economics. Jin Cao is a Research Economist at Norges Bank. Shulong Kang is a Associate Professor at the Dongbei University of Finance and Economics. Their paper is very useful for its unique perspective on the elderly in China as caretakers. They explain their role with quantitative data, however, their idea of a childcare subsidy was not quantified, which makes assessing its efficacy difficult.

Zeng, Yi, and Therese Hesketh. "The Effects of China's Universal Two-child Policy." *The Lancet* 388, no. 10054 (October 2016): 1930-38.

<https://www.sciencedirect.com/science/article/pii/S0140673616314052>.

This journal article will provide one set of estimates of the results of the two-child policy. The estimate is 60 million new workers by 2050, compared to another estimate by Nancy Riley of only 23 million by 2050. The article will be used along with Riley's estimate to argue that predicting demographic trends is difficult and unreliable. Yi Zeng is a professor at the National School of Development and Raissun Institute for Advanced Studies at Peking University, Beijing, China. Therese Hesketh is the director of Zhejiang University School of Medicine Center for Global Health. The article addresses the effects on the number of empty-nesters and disabled elderly people, but fails to detail ripple effects or potential or current solutions, which makes integrating them into a policy solution difficult.

Zhang, Phoebe. "China Plans New Cooling-off Rules to Delay Divorces as More Marriages Break Down." *South China Morning Post*. Last modified August 28, 2018. Accessed December 17, 2019.

<https://www.scmp.com/news/china/society/article/2161711/getting-divorced-china-not-so-fast-says-new-cooling-law>.

This article explains China's family-planning policies regarding divorce. It explains a planned Civil Code that will require a one-month cooling period for divorces, and a province quizzes couples before they divorce. The point of the article is to outline current social family-planning policies other than the two-child policy. Phoebe Zhang is a society reporter with the *South China Morning Post*. Though the article effectively summarizes the Civil Code's laws, it uses few and poor sources to gauge the public's response to the code.