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China's One-Child Policy: Some Unintended Consequences

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Abstract

This paper gives a brief overview of the family planning policy of China which, although being recently relaxed, still controls a large swath of the population. Unofficially known as the "one-child policy", the policy resulted when the social strife of the 1970s coupled with a Malthusian pessimism concerning the capability of the still largely closed and isolated Chinese economy to care for itself. In this paper we overview the motivations for the policy, the unfortunate demographic future that it will create, and some policy choices that can be undertaken today to alleviate these issues.

JEL Codes: J11; J13; O21; O53.

Keywords: one-child policy, labor shortage, free immigration, Malthusian.

1. Introduction

Implemented in 1979 in a bid to alleviate social, economic and environmental problems in the People's Republic of China (PRC), the country's one-child policy (1CP) was once heralded as a textbook example of good government policy.¹ Faced with a

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¹ Much of China's recent success is often erroneously credited as being the result of interventionist policies, when in fact its free-market reforms play a much more significant role (Schoolland 2012).

reduction in the availability of health-care services and low savings, the policy decreased the strains on overcrowded hospitals and gave parents a reason to save for retirement. The 1CP, officially called the “family planning policy”, was implemented to slow the rate of population growth and ultimately control the size of total population.

According to this policy, most couples of Han race (which, according to the last census in 2010, account for 91.5% of the population of the Mainland China) are only allowed to give birth to one child. Rare exceptions are most commonly allowed in cases where both of the parents are an only child or when an only child is afflicted with a severe disability. In addition to control over births, the policy pushed back the legal age for marriage to 22 years of age for males and 20 years of age for females in a bid to stymie population growth (Marriage Law of the PRC, ch. 2, clause 6). The non-Han population is dealt with through local policies, with individual provinces deciding population policies for minorities. For many such minorities there are no restrictions on childbirth and some provinces even pursue pro-child birth policies for non-Han citizens. In general, the Han race lives in middle and eastern China, while the minorities live in the districts near the borders to the north, south and west of the country.

Parents who violate the 1CP face punitive and pecuniary penalties. Giving birth to a second child brings a monetary fine (via a social support or compensation fee), which can range from 3 to 6 times the average annual income of each parent, since both are responsible for the birth of the additional child (Law of Population and Family Planning of PRC, ch. 6, clauses 41-42).² Besides these pecuniary punishments, violations to the

² The exact fine depends on the parent’s region of residence, their income, and the number of children already born.

policy also invoke political ire. The extended family can be disadvantaged in its search for politically appointed positions, and suffer obstacles and discrimination when dealing with administrative formalities. This guilt-by-association method implicates the whole family when only one person violates the policy. Local officials who ignore infractions also face punishment. In extreme cases, some women who have been pregnant for several months in violation of the 1CP have been forced to abort their child. In one recently publicized case on 11 November 2011, a young mother in the Hunan province was forced to abort her seven-month-old fetus by injection of an abortifacient (L. Li 2013).

While forced abortions are troubling for all concerned and the rights violation is evident, no less troubling are the voluntarily undertaken abortions. As male children are particularly valued for cultural and historic reasons, sex-selective abortion is commonly practiced as a way to ensure the sole progeny is male. The natural ratio of males to females at birth is 105 to 100, which balances out as these children age because males suffer a higher mortality rate during their early years. According to the National Bureau of Statistics of China, the ratio currently stands at 118 males for every 100 females, leaving many young Chinese men lonely (perhaps hopelessly so) as they enter their marriageable years. As of 2010 this imbalanced sex ratio has created of surplus of 40 million males unable to find an appropriately aged Chinese woman to marry (Poston *et al.* 2011).³

³ There is also evidence that the preference for male heirs is the result of economic liberalization, as “Chinese mothers with higher levels of education are substantially more likely to select sons than less educated mothers” (Almond *et al.* 2013).

While the Chinese government officially implemented the ICP in 1979, the policy was foreshadowed as early as the 1950s. The famous Chinese demographer and economist, Ma Yinchu, proposed population control measures that included promoting later marriages and the widespread availability and use of contraception (though not abortion), which would help control the population (Ma 1957). Furthermore, Ma Yinchu claimed it was “very urgent to control the population, otherwise, the problem in the future will be more difficult to solve” (Xu 2011). In his report entitled “New Population Theory”, Ma Yinchu (1957, pp. 297-317) made the systematic analysis that China’s population was growing too quickly while its rate of capital accumulation was not high enough to maintain a sufficient quality of life. He recommended that China not only strive to accumulate more capital, but also increase its rate of capital accumulation. This could be achieved in absolute terms by producing greater amounts of raw materials, promoting scientific research and limiting consumption (i.e., food) among the population. In per capita terms, it was clear that capital accumulation could be increased by simply reducing the rate of population growth.

Policy recommendations such as this were partly ignored because of the belief held by Mao Zedong, Chairman of the Communist Party of China, that population growth would empower the country, thus preventing the emergence of family planning programs earlier in China's development (Potts 2006). Yet by the late 1970s, population growth had grown to be perceived as a very serious problem. Between 1949 and 1978 the population almost doubled, from 541.67 million to 962.59 million; total fertility averaged around 6 children per woman during this period, a level which started

declining gradually for natural reasons starting only in the late 1960s.

Demographers have estimated that the 1CP has precluded 400 million births between 1979 and 2009, almost 25% of China's present population (Guo 2014; Lu 2013).⁴ The policy is not without its opponents, both domestic and international, due to the heavy-handed manner in which it is implemented, the punishments imposed for infractions, and the rights violations created in cases of forced abortions and female infanticide.⁵ In general, the negative social consequences for not abiding by the law are widely seen as draconian, and better suited, if at all, for a time now past (Hvistendahl 2010). Despite opposition to the general manner in which the 1CP has been implemented, a Pew Research Center survey taken in 2008 found that 76% of the Chinese population supported the policy.

In response to many social factors, not least of which was concern over future population declines, the 1CP has been relaxed in some instances, e.g., when both the husband and the wife are an only child, in which case they were allowed to give birth to two children. By the year 2011, all 31 provinces and municipalities in mainland China had relaxed the policy. More recently, in November 2013, China announced further loosening of the policy, this time allowing for two-child families provided that at least one parent is an only child.

While the tide may be turning on the 1CP, it may be too late. China's boom has

⁴ This number is subject to considerable dispute. Other demographers argue this number ranges from 100 to 200 million, e.g., Wang and Cai (2010).

⁵ Although the policy faces its severest critiques outside of China, it may come as a surprise to some that the core ideas underlying the 1CP came from Western science, in particular the Club of Rome's "world-in-crisis" work of the early 1970s (Greenhalgh 2004).

been driven by the opening of its market to the global economy coupled with its rapid population growth. Low-cost workers were the predictable result of the surplus of labor that resulted from the high total fertility rate of previous generations. However, it is now estimated that by 2026 China's population will peak at 1.396 billion and after that will begin to shrink (Cai 2012). This sobering statistic has grave implications not only for the country's maintained position as a high-growth leader in the 21st century economy, but also for the sustainability of its current institutions. The country's social security system, phased in gradually since 1953 and most fully implemented only in the 1990s, was already underfunded by 35.4% of Chinese GDP by 2012, and this unfortunate statistic is expected to steadily worsen as the country's working population ages (T. Li 2012).

In this paper we address this looming problem by taking a retrospective look at the country's demographic policies. Section 2 assesses whether there ever was a pressing need for population control. Section 3 outlines the effects of the policy, including the imbalances that are increasingly apparent today. In section 4 we analyze how these effects have bred the problems looming in the future, and how a different policy path may have avoided this unfortunate fate. Section 5 concludes.

2. Was the One-Child Policy “Necessary”?

The one-child policy was introduced to alleviate numerous unprecedented social, economic, and environmental problems China faced in the 1970s. Many of these were the direct result of poor policy choices made over the previous two decades.

The Cultural Revolution of 1966 to 1976 was the most ambitious attempt to revive the beleaguered economy. In retrospect this period was an unambiguous failure in terms of economic growth. During the period from 1966-76, nominal GDP growth was relatively stagnant, increasing by 4.5% per year in nominal terms, but hampered by high levels of inflation. By contrast, the period after the end of the Revolution until today has witnessed over 15% annual nominal growth. Indeed, economic growth is not only stronger in the post-Cultural Revolution period (figure 1), but volatility has been smoothed with fewer recessionary periods. The 25-year span of 1952 to 1977 was marked by extreme recessions, most notably in 1961, 1967 and the relatively stagnant period from 1971-76.

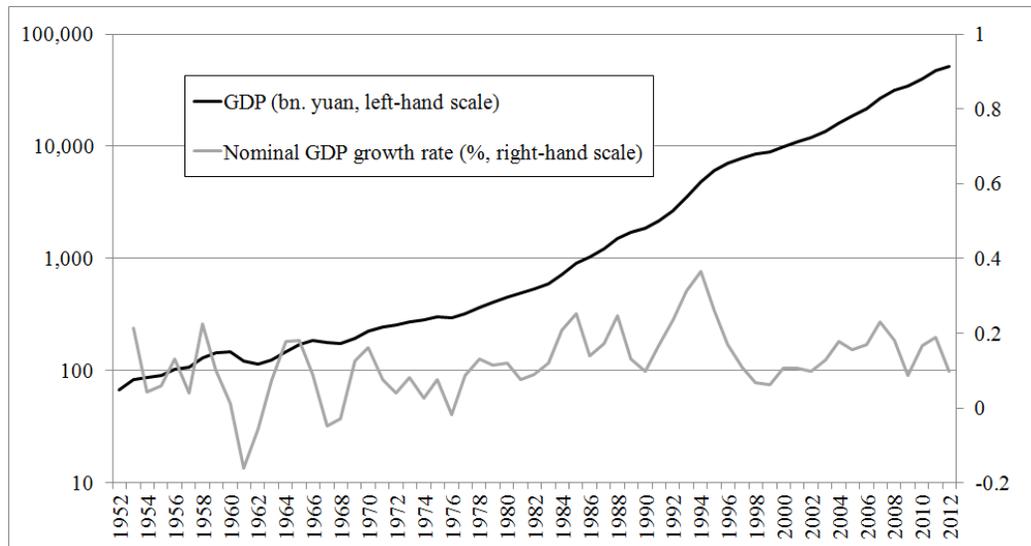


Figure 1: Nominal economic growth
 Source: Federal Reserve Bank of St. Louis, Economic Data

Decades of socialism plunged the country into a destitute situation. The Hukou System (Household Registration System) and the People's Commune System not only removed

private property and initiative from agricultural production, but also confined farmers to allocated lands from which migration was restricted. Technological backwardness, institutional limitations and unsustainable stewardship of its publically-owned natural resources (especially arable lands) left the country with a scarce amount of general supplies, particularly food, to sustain its bulging population. This problem was especially acute as poor monetary management control by the People's Bank of China reduced the purchasing power of the renminbi through high levels of inflation.⁶

After 1956, all the lands were publically owned by either the state or local governments. The farmers of a village were divided into production teams, and how much food they could earn was decided by a points system (e.g., each hour worked for a man earned 10 points, 8 for women and 6 for children). How many resources (such as food) a family received depended on the points earned through this system. Notably, as it was an hourly scale, remuneration was not linked to production or contribution to output, but rather just by having a family member show up for work. Lacking an incentive to not only show up for work, but also to work hard, the system resulted in the low productivity that eventually led to its own demise. By 1978 this problem compounded until land reforms became necessary. Starting that year, farmers could sign long-term contracts with the local government to farm the land and market the

⁶ Before 1978 there was no substantial consumer goods market in China, and we hesitate in making assertions concerning price inflation during the early years of the Communist regime. The quota system distributing goods amongst consumers was hampered by frequent, if not perennial, shortages in the absence of a price system to aid in economic calculation. However, some statistics point to high levels of imputed price inflation throughout the 1950s-1970s, which contributed to the difficulties in the central government supplying adequate rations. The National Bureau of Statistics of the People's Republic of China estimates that prices rose by 50% between 1951 and 1961.

produce.⁷

Unable to produce adequate agricultural resources domestically and unable to import them from abroad left the Communist country in the grips of frequent famines and reliant on the generosity of foreigners to provide aid in the form of food. The World Food Programme (WFP) started to provide food assistance to China in 1979. China received about \$1bn. of aid from this program, including approximately \$830 mn. in food aid which directly benefitted more than 30 million citizens. This kind of aid continued until 2005 when China finally reached food sustainability (J. Xu 2005).

The one element that was produced in large supply throughout the period was children. From 1949 to 1978, the Chinese population increased at an annual rate of 2%, in accordance with Mao Zedong's belief in the 1960s that "the more people, the stronger we are". Such was his faith in the strength of the Chinese population that during his second and last visit to Moscow in 1957 the leader gloated of being able to sustainably lose 300 million citizens (half the country's population) in a nuclear war (Shen 2011). A personality cult surrounding Chairman Mao was evident in China at that time, and the leader's opinion was treated as the supreme command. In addition, food and other basic commodities were distributed according to a quota system linked to the size of the family. Thus one more child meant more resource availability for the family, an outcome that further motivated higher birth rates to alleviate individual scarcity.

The death of Mao Zedong in 1976 accelerated the demise of the Cultural

⁷ More correctly, these contracts were with the so-called "collective", because all land in rural areas of the country were *de jure* "owned" by the village itself while their use was *de facto* controlled by the local government.

Revolution, and national economic policy started to liberalize the economy and allow for the private ownership of capital necessary for economic growth to resume.

Deng Xiaoping, the actual leader of China from 1978 to 1989 (he was never the country's "official" leader), gave the following very accurate explanation behind the perceived necessity of the one-child policy:

In order for China to achieve the four modernizations, it must overcome at least two important roadblocks. The first one is weak economic standing. The second one is a large population with limited arable land. Now the population is more than 900 million, 80 percent of which are farmers. The coin of a large population has two sides. Under the condition of insufficient development, all the problems related to food, education and employment are severe ones. We should deepen the implementation of the family planning policy, and even if the population does not increase in the following years, the problem of population will still exist over a long period of time." (Deng 1979: 163-64)

This kind of pessimism concerning population's strain on resources can be traced back to the 19th century economist, Robert Thomas Malthus. His Malthus (1798, p. 61) main idea of the principle of demographic-induced recessions is that populations naturally grow at exponential growth rates while food supplies increase only linearly.⁸

⁸ Malthus backtracked lightly on his rigid theory of arithmetic resource growth versus geometric population growth in later editions of his book. We thank an anonymous referee for pointing our attention to this point.

According to national statistical data, China was faced with a nearly continual shortage of food from the mid-1950s until at least the late 1970s (figure 2). Rice production per capita was scarcely higher in 1980 than it had been in 1955.

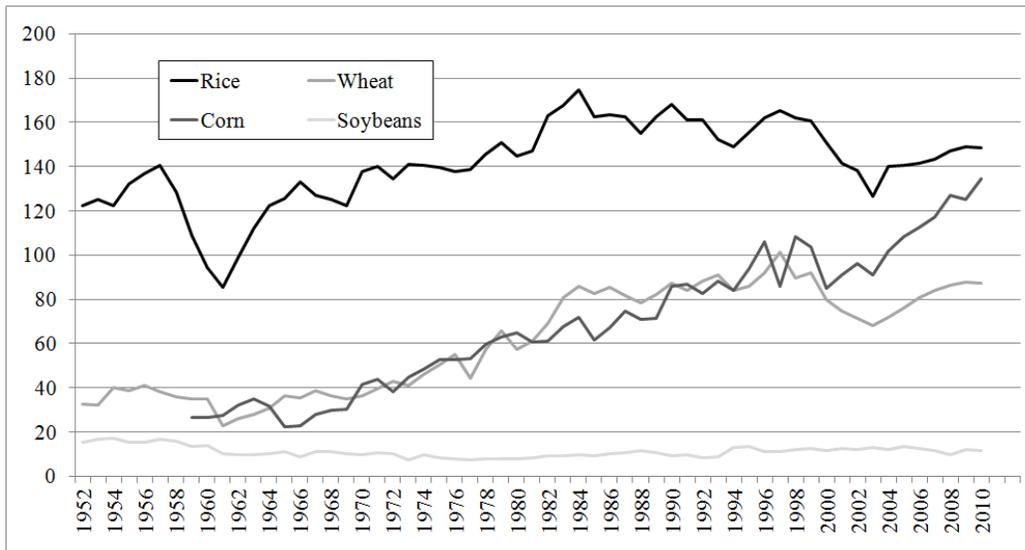


Figure 2: China's agricultural production (tons/capita)

Source: United States Department of Agriculture, China Agricultural and Economic Data. Available:

<http://www.ers.usda.gov/data-products/china-agricultural-and-economic-data>

Annual per capita food production before 1978 rarely exceeded 300 kg, and during the Great Chinese Famine of 1959-1961, this already low figure dropped by a third to around 200 kg (figure 3). This drop was felt asymmetrically across the country. Peasant farmers in the Western reaches and deep interior of the country had their availability of food reduced to compensate those in the wealthier coastal areas. These rural residents had to submit their agricultural production on a pro rata basis in order to first meet the needs of the growing urban population. Since the false yield reports during "Great Leap Forward" (1958-1960), coupled with natural disasters after 1960, farmers in rural areas of the West had to submit food according the exaggerated grain harvests, which led to

almost no stock left for the farmers themselves.

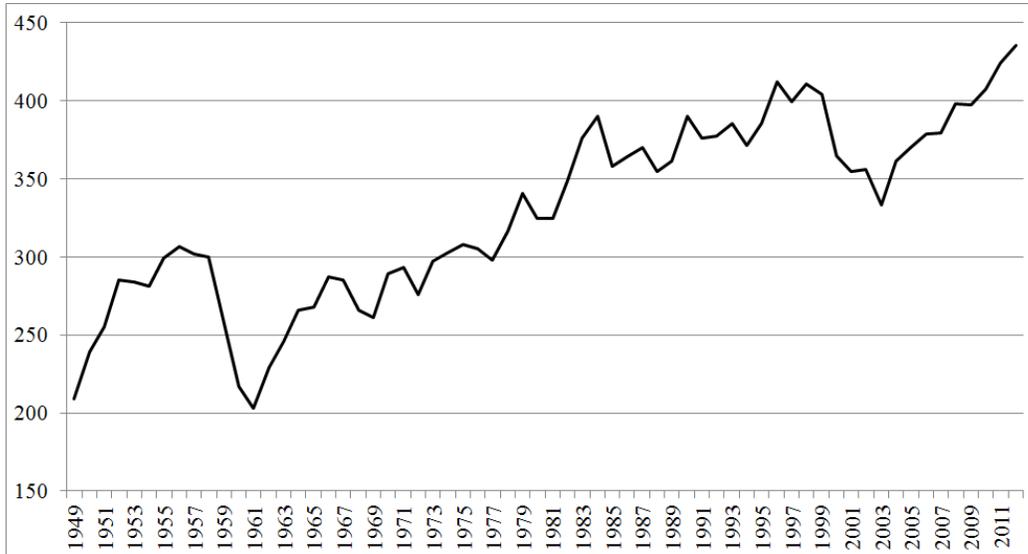


Figure 3: Edible food production (kgs/per capita)

Source: National Bureau of Statistics of the People's Republic of China

The dilemma involving a rapidly expanding population but stagnant gains in food production before 1978 was mainly caused by the ownership system (or lack thereof) of rural land. In 1956, the state claimed ownership of all rural lands through either below market-value compensations or mandatory forfeitures.

While the ownership structure and poor legislation explains some of the food shortages, there are also environmental issues compounding the problems. Several years of poor climate conditions occurred during the droughts in the Yellow River Basin, Southwest and Southern China in 1959 and 1960, successive droughts occurred in the North China Plain and the middle and lower reaches of the Yangtze River in 1961, and during both 1958 and 1962 the majority of China suffered severe droughts. All of these contributed to the Great Chinese Famine. Although per capita food production

increased quickly throughout the 1960s and then slowly throughout the 1970s, total production still remained at dismally low levels. The People's Congress blamed overpopulation for the shortage of food and natural resources, choosing to ignore the crucial reason: the centrally planned economic system. As socialism suppressed the entrepreneurial abilities of people and neglected any concept of dynamic economic efficiency, output failed to keep pace with the demands created by its growing population. In particular, policies that halted industrialization – a main ideology of Maoists shared by such modern Mao-inspired politicians such as former EU president Manolo Barrasso – left the country dependent on agricultural production without the requisite institutional or incentive structure to best take advantage of this arrangement.

By way of contrast, Europe managed to maintain high levels of agricultural growth to keep pace with its strong post-War population growth, bringing the current EU27 population to 501.4 million in 2013, an increase of nearly 100 million citizens since 1962. Increases in total factor productivity have resulted in output increasing by over 3% per year over the past 25 years and higher yet in the transition countries of Eastern Europe due to the catch-up effect (Rungsuriyawiboon and Lissitsa 2006). More striking is that this strong historical output growth has been maintained in spite of the promotion of the agrarian society that Europe's Common Agricultural Policy (CAP) has promoted since 1962. Growing evidence suggests that the CAP actually had the effect of limiting output growth by enforcing a system of tariffs, quotas and price supports aimed at keeping agricultural production from shifting to larger operations able to achieve economies of scale (Ó Caithnia 2011; Rickard 2012). Despite these

restrictions, agricultural productivity growth was still high, largely the result of the ownership structure of agricultural being largely private, thus properly motivating individuals to maximize profits in the context of promoting output.⁹ Coupled with a dedication to mostly free and open markets, European agricultural producers can sell off their excess produce on the world market.

In short, the price system enabled by a market for agricultural produce is able to communicate to consumers and producers conditions surrounding supply and demand of various factors of production and output. The communist regime in China disrupted two important prices with the ensuing chaotic results for food production. On the one hand, the price of having children was skewed as income payments became based on family members (instead of the productivity of labor, as in other economic systems). When this mispricing enticed families to pursue having many children to maximize their earnings potential, food availability was constrained as agricultural resources were not increased commensurately with the population growth. The end result was a lack of resources driven into agricultural production at the time when they were most needed.

3. The Impacts of the Family Planning Policy

According to the sixth census in 2010, the annual average population growth rate from 2001-2010 was 0.57%. The data from 1991-2000 is 1.07%, while that of 1982-1990 is 1.48%. The bulk of China's population growth explosion occurred between 1968 and

⁹ Of course, various price floors also "motivate" production by guaranteeing minimum prices for output.

1978, when annual growth rates remained consistently near 2% each year (figure 4).

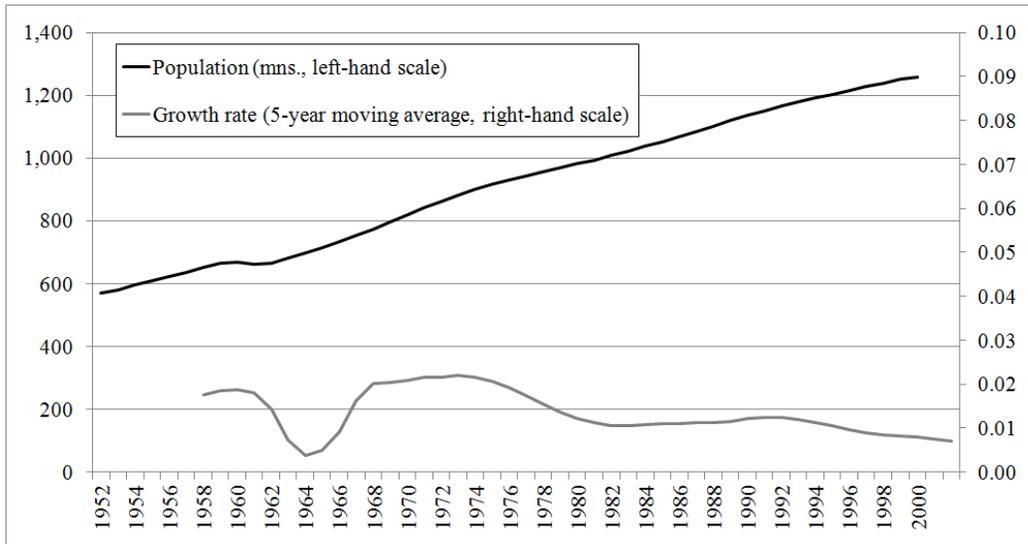


Figure 4: Chinese Population and growth rate¹⁰

Source: Penn World Table, available: <https://pwt.sas.upenn.edu>

The ICP seems to correlate well with reductions in the population growth rate.

Moderate estimates of its influence are that it is responsible for shrinking the population by 200-400 million than would otherwise be the case, based on a counterfactual estimate of birthrates drawn from neighboring countries of similar developmental levels (Liya 2011). If the family planning policy is maintained in the future in its current state, China's population is expected to reach 1.4 billion before commencing a period of rapid decline.

The government considers that the reduction of population has played a very important role in improving the living standards of the Chinese people, and it is commonly viewed as being largely successful. However, it has brought about various

¹⁰ The birth figures come from children registered in the Hukou System, and are generally reliable and comprehensive. Almost all children are born within this system, and illegal immigration in the country (which the statistics would not include) is generally perceived to be quite small relative to the population.

demographic, cultural, economic, social and other far-reaching changes to China that are less clear-cut. The traditional cultural preference for boys has led to self-selective abortions of female fetuses. (Although recent laws have prohibited the use of ultrasound technologies to identify the sex of the fetus, and termination of the pregnancy is also prohibited for sex selection or non-medical needs.) Families are exposed to emotional hardship if the only child of a family passes away. The policy is also often seen as a violation of human as well as civil rights (Freedman and Isaacs 1993). Cases where a second child is born result in difficulties securing a legal identity for the newborn, which exposes the child to a future disadvantaged life marked by discrimination. For the purposes in this article, the most serious effect is the distortion of the population structure. The distorted population structure has two aspects: first is the sex ratio, and the second is the growth and advance of China's "baby boom".

The sex ratio in 1990 was 111 boys for each 100 girls at birth. By 2000 and 2013 this figure reached 116.9 and 117.6 (National Bureau of Statistics of China, all figures per one hundred females at birth). This preference for boys does not seem to disappear with an allowance to have more than one child. From 1990 to 2004, the sex ratios for first-, second- and third-borne children were 106.9, 138.0 and 143.7. This sex-imbalance is expected to create social instability and imbalance.

To get a glimpse of what *may* lie ahead, consider one of the few countries to have a rapid change in the balance of sexes: the Soviet Union immediately following World War II. Early in the War, in 1941, the country could still "boast" a rough balance in the ratio of men to women at 0.96 for the age 20-29 demographic. By 1946 this ratio

declined to 0.70 leaving nearly 23 million more women than men. Over the same period the birth rate fell precipitously, from 34.6 births per 1,000 population to 26.0. The lack of men after the war necessitated economies of scale in birthing, with the result of a steep rise in the number of births out of wedlock (Brainerd 2007). In addition, the Soviet government implemented strong pro-natalist policies such as a tax on single people and married couples with fewer than three children. Fathers of out of wedlock children were legally absolved of any financial responsibilities, with the state providing unmarried mothers a monthly payment until the child reached twelve years of age. The procedure for divorce was made so expensive and complicated that it has been described as a “prohibition” of the practice (Avdeev and Monnier 2000). Indeed, the sex imbalance following the war weakened at least one area of control by the communist regime – the goal of eliminating the traditional “bourgeois” family structure in an attempt to further create equality between men and women. Population controls would return, but not until after a baby boom in the 1950s (Engel 2004). One long-lasting and detrimental outcome of the Soviet sex-imbalance was the increased bargaining power of men in the marriage market (as per Becker 1981), and with it less necessity for men to invest in characteristics that would attract a mate, such as education (Angrist 2002).

As troubling as the imbalance in the sex ratio is the demographic bulge – China’s baby-boom generation – which is now nearing retirement age. Figure 5 shows the Age Pyramid of China in 2012.

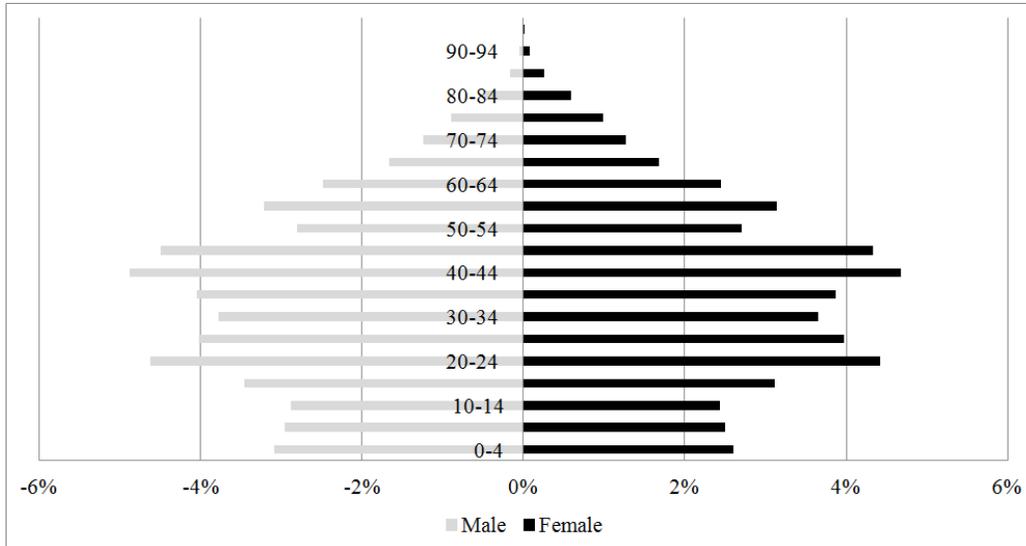


Figure 5: The Age Pyramid of China from the 2012 Population Census
 Source: National Bureau of Statistics of the People’s Republic of China
 Data. Accessed 29 May 2014, Available:
<http://data.stats.gov.cn/workspace/index?m=hgnd>

From these figures, we can see that China has an ageing trend with its “baby boom” currently aged between 40 to 49 years. The number of Chinese citizens in their 40s is almost double the amount of children less than 9 years old. Whilst Western countries worry about their own baby booms straining resources as they enter retirement, in China this eventuality is even more pronounced.

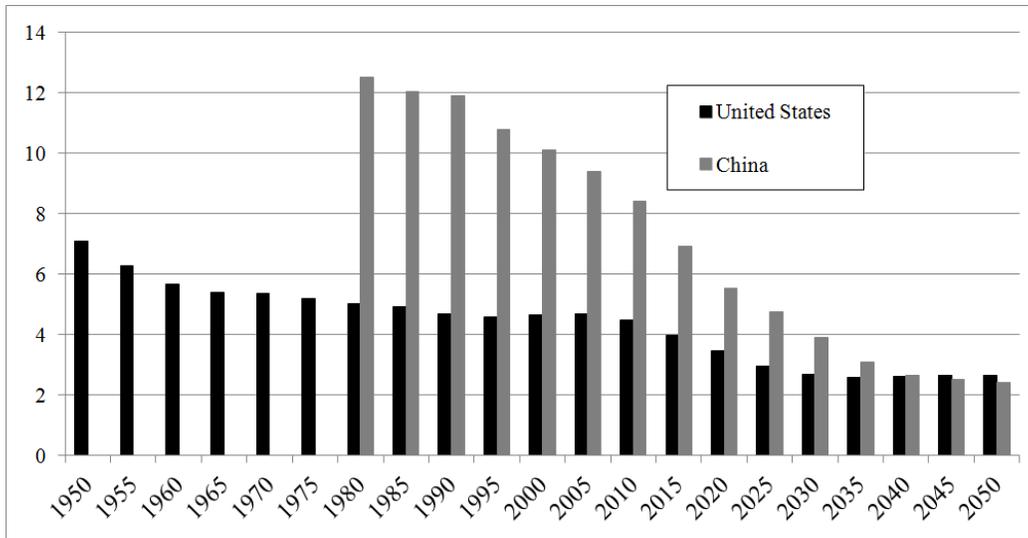


Figure 6: Working-age citizens per retiree

Source: U.S. Bureau of the Census, PRC National Bureau of Statistics¹¹

By way of comparison, in the United States it is expected that by the year 2025, approximately three working-age citizens will support each retiree. In China the expected figure will still be a quite healthy five working-age citizens, but while this ratio will have leveled out in the United States by this time, in China the precipitous fall will continue until 2050. At that time barely two workers will be toiling to support each Chinese retiree. The sharp decline in population caused by the aging effect of the 1CP means that the large amounts of citizens born before the policy took effect (and those born in its early years due to the momentum of the existing generational cohort) will be drawing resources from the economy without commensurately contributing to their production. Most families in China are facing a “4+2+1” situation whereby the family unit consists of four grandparents, two parents and one child. This imbalance exerts much pressure on young parents and their children to care for their elderly relatives

¹¹ Chinese data for 1980 and 1985 are from 1982 and 1987, respectively. Chinese age-specific demographic data is not generally available from before 1982.

(Davis 2014).

In the Western world the problems posed by an aging population are usually phrased in terms of a drain on social security or state medical programs. In China these issues are especially acute as social security is a relatively new phenomenon. Cao Yuanzheng, chief economist at the Bank of China estimates that Chinese pension gap in 2013 will be about 18.3 trillion yuan, or roughly one-third of its GDP (T. Li 2012). By 2033 shortfall is expected to reach 68.2 trillion yuan.¹²

With conflicting official reports, and private analyses mostly pointing to the fact that the pension fund is underfunded, the sustainability of the existing system is tenuous at best. Despite high savings rates by Chinese workers (an estimated 20% of Chinese income is saved versus 4% in America in 2013), the lack of a new generation of working-class savers coupled with only a relatively new social security system will exacerbate the sustainability issue. Furthermore, as most savings are controlled by various public sectors of the government, other more politically sensitive or desirable projects may take precedence over funding the social security system (Luo 2014). As in the Western world, three solutions seem apparent.

The first is delaying the age of retirement and thus resetting the number of years the average retiree can draw on social security services, a politically undesirable goal (as we will see in the next section). Alternatively, increased taxes on workers may fill the gap. However, the tax burden for Chinese citizens is already heavy. According to the

¹² According to official reports, the current social security funds still amount to about \$120 bn., however, this figure is supported by a large number of central and local financial subsidies.

2009 Tax Misery & Reform Index published by Forbes (2009), China ranked second in the world in this regard, just behind France. The ability of Chinese citizens to shoulder a greater tax burden is questionable.

Finally, the Chinese government can choose to inflate its liabilities away, honoring the nominal amount of funding but diminishing the fiscal impact in real terms. This “solution” poses a two-fold problem. First, is the issue of how Chinese workers’ standard of living will be affected through inflation. Second is the impact an inflationary monetary policy will have on the future value of the renminbi, and as a consequence how China’s position as a global exporter will be impacted. Of the two issues related to inflation, the former is the most pressing. Evidence suggests that China’s trade balance is driven not exclusively by price competitiveness, but by its high domestic savings rate (Li and Xu 2011).

4. Solving a Labor Shortage

China is currently facing an acute labor shortage. According to the United Nations, a country with an age structure where more than 10% of the population is older than 60 years of age, or more than 7% of the population is older than 65, is defined as an “aging society”. China's official statistics show that its current elderly population aged 60 and over has reached 185 million, which accounts for 13.7% of the total population (Chen and He 2013). The United Nations estimates that by 2050 one-third of China's population will be over 60 years, and only 48% of the people will be of working age. It is obvious that China has been a graying society for some time now, and that this trend

will not reverse in the near future.

The government has noted the reality of its ticking demographic time bomb and has put forward several new policies. The most discussed of these policies is a relaxation on the restrictions by the family planning policy. Although more families are now permitted to give birth to two children, the 35-year lifespan of the family planning policy has had a profound impact on the culture's fertility rate and the propensity to conceive. With the increasing cost of living and the pursuit for a better life, many families are reluctant to have two or more children because of the perceived drain on their quality of life. Among the chief concerns in this regard is the quality of life at retirement age. The disconnect between current incomes and the perceived future cost of living has reinforced a savings culture among young Chinese as a method to ensure adequate means for retirement. The cost of child rearing will strain finances needed for retirement. By one estimate, the effects of increased expenditures on a single child and the expectation of less care from a single child as parents age is responsible for 30-50% of the rise in Chinese household savings since the 1CP was implemented (Jin and Coeurdacier 2013; Chamon and Prasad 2010).

A decade of rapidly rising housing prices is indicative of the high rate of inflation broadly engulfing the country. It also strains incomes, especially in the newly prosperous coastal cities, and consumes much of the wealth of lower income workers – especially recently arrived migrant workers who lack the knowledge of the local housing markets to secure prices that are more advantageous. Families, especially young and middle-class families, have little income remaining after paying for their

basic cost of living in the present as well as squirreling away something for the future. Under the current one-child policy, many families are able to barely make ends meet with their lone dependent, let alone the brothers and sisters that would be possible if the policy were relaxed.

Despite these financial strains, it is true that relaxing the current policy will have an effect on the birthrate. However, this effect will likely be negligible as those couples who desire more than one child in the current environment can already do so with only some difficulties. Those of wealthier means who want additional children can do so under the current penalty scheme, and parents in rural areas are already bound by a less stringent requirement than their counterparts in larger cities. The rapid industrialization of China over the past decades has reduced the demand for child laborers amongst rural families, with parents today more concerned with their child's education and personal development than using him or her to secure resources for the family. In urban areas the high price of housing means that a child places an unusually high financial burden on his parents as it necessitates more suitable accommodations in an already crowded and expensive real-estate market.

The second policy discussed is to postpone the retirement age. According to the current policy, citizens can begin collecting retirement benefits at age 60 for men, and at age 55 for women. Despite often having retirement privileges (i.e., retirement for section-level officers at age 52), for the staff of government departments, institutions and of state-owned enterprises, the phenomenon of late retirement is very common, with many choosing to work beyond the official retirement age. Many of the workers in

non-state sectors find themselves needing to work beyond the legal retirement age because of the low social security allowance and insufficient savings in the current high-inflation environment.

There have been numerous blueprints to delay the retirement age (e.g., Lian 2013; Pozen 2013). On 1 October 2011, Shanghai implemented a test with flexible delay procedures for applying for the basic pension. The provisions allowed for the delay of the retirement age for men to not more than 65 years of age, and for women up to aged 60. However, after the trial period, it was found that this strategy was not ideal. First, retirees could continue to work while receiving a pension and, second, the flexible retirement age did not adequately motivate people to work later given the only moderate increase in lifetime pay they would receive (Peninsula Morning Post 2013).

While delaying retirement is one way to ease labor shortages in a short period, it is also a way to make up for the shortfall in social security funding. As in many countries, the structure of China's social security plan distills to type of Ponzi scheme. The sustainability of China's plan is even more imperiled than most other developed countries' as it was implemented later, only after its "baby boom" transpired. As a result it now finds itself with many retirees to fund while not having benefitted from payments made by these workers earlier in their lives. Since there are an insufficient number of young people to finance the retirees, it will be necessary to delay the retirement age in the future. In fact, comments from officials continually allude to the government's desire to delay the age of retirement until anywhere from 62 to 65 years of age. One official publically stated that the retirement age would be pushed back to 62

years, but this news brought about widespread opposition by the public. A street survey in Guangzhou made by the “Guangzhou Daily” in January 2014 shows that almost 80% of citizens were against any postponement of the retirement age (Lian 2013; Li and He 2014). The government’s response was immediate and unambiguous: any delay in the retirement age would be suspended for the time being, and on 9 March 2014, Yin Weimin, Minister of People's Insurance Department, declared that any specific scheme to delay retirement would not be put forth before 2020 (Z. Li 2014).

A third possible solution is to relax the country’s immigration policy. The current Chinese law does not allow citizens to hold dual citizenship. Many wealthy businessmen have (illegally) a second citizenship in a more developed country, but rarely return to China or remit funds “home” for fear of being caught. What is more, the policy is stringent about the immigration of other less-developed countries in Southeast Asia, where cheaper labor resources exist. A large number of illegal immigrants gather in various factories in Guangdong province, which is one of the best-developed provinces on the southeast coast. Workers in this region are mostly comprised of laborers from inside China, mostly from the midwest of the country, and are not generally sourced from other southeastern Asian countries. Small numbers of African immigrants have begun to flow into the region, and although they could indicate the early stages of a broader trend they are still in the minority.

Although China has not yet relaxed its immigration policy for foreign citizens, various policies to attract multitudinous high-tech talent to *return* to China have been executed for many years, though with modest success. For example, The Recruitment

Program of Global Experts of 2008 aims at easing entry restrictions for skilled foreign workers under the age of 65. Chinese students who have studied abroad for more than one year gain policy-related privileges, such as tax rebates when purchasing their first car.

Lacking the domestic population to work in its growing economy, China has had to go overseas. This bid has not been, however, an effort to attract foreigners to China. As a simple rule of thumb, if one does not import the complementary goods necessary to meet a domestic shortage production will have to be exported to where the complement is located. Nowhere is this more apparent than in China's labor market.

Unable to get the workers for its factories from inside China, much investment has been in the way of capital exports to where workers are located. In recent years, China has made many investments in Southeast Asian and African countries. Large numbers of cheap labor are located in the former areas, while Africa holds vast mineral riches. China's supply of labor is still sufficient for its growing economy and will be for several years. As a result, the scale of investment in Southeast Asia is not very great to date. However, based on the status of China's aging population coupled with the demand for labor to power its high-growth economy, the export of capital will continue to rise in the coming decades in a bid to find a cheap source of labor.

One reason why China is unwilling to import workers is the perception that foreigners divert resources away from the domestic population. Already in China's larger coastal cities there is much prejudice from the locals to those immigrants with low levels of education from midwest China. The locals emphasize that these

immigrants consume resources and space, while ignoring that these same immigrants provide a workforce and make the division of labor more intensive, and thus more productive. These productivity gains have driven wages higher for all workers, including (or even especially) the Chinese citizens from the coastal regions. The stereotype of immigrants – whether from a foreign country or an interior region of China – will impede the realization of the growing numbers of workers needed to fuel the country's maintained growth into the future.

5. Conclusion

This paper had three goals. First, we have showed how China's family planning policy has had the effect of reducing the country's population far below the level that might otherwise have obtained. Second, we have outlined that this policy was itself a response to the failed central planning policies of the Communist government during its Great Leap Forward. Unable to feed its existing population or produce the basic means of subsistence, the regime sought to deal with the problem through population controls rather than liberalizations that would allow the country to achieve the relative levels of prosperity witnessed in other neighboring countries.

Finally, we have shown that China now faces drastic decisions as the unintended consequences of its family planning policy become apparent. Nearly 35 years after it was implemented the country faces an acute labor shortage that will need to be filled in order to maintain its economic advance. 2012 marked the first year that China's working-age population began to decline. Although the government has relaxed the

family planning policy and has planned to delay the retirement age, these actions are insufficient to deal with the situation that will be faced in the following decade.

A liberalized immigration policy would alleviate labor shortages, but this option is not politically feasible in contemporary China due to social pressures. Lacking a credible method to permit foreign workers to enter the country, businesses have started to export capital where possible, mostly to labor-rich Southeast Asia and resource-rich Africa. As this progress continues, China's growth rates will slow lacking the high levels of domestic capital investment experienced over the past decades. There are many fears that China's fast-paced economy will be unable to maintain its growth into the future – mostly based on a deficiency in domestic demand, a slowing of the world economy, or increased labor cost pressures in over-crowded coastal cities. Despite these dangers, it is the failure of the family planning policy to foster a new generation of Chinese workers that poses the greatest threat to the country's economic miracle.

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