The Impact of Double Reduction Policy on the China's Education System

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Abstract. On July 24, 2021, the General Offices of the CPC Central Committee and The State Council issued the Opinions on Further Reducing the burden of homework and off-campus training for Students in compulsory Education (referred to as the "double reduction" policy). This policy has since dramatically changed the landscape of shadow education in China and has impacted millions of people, including those in the education industry. Chinese shadow education has been decimated and has taken a significant negative hit, requiring rapid transformation and upgrading to meet the challenge. While this policy has had a positive impact, which resulting in a significant reduction in stress for elementary and middle school students in the K-12 education system, however, the need for abundant educational resources for students has still not been effectively addressed. And this situation will continue to intensify as China's fertility rate continues to decline. This paper describes the description and impact analysis of the policy and uses the education reform in Japan as a research precedent to provide possible effect prediction and improvement options for the double reduction policy.

Keywords: Double reduction policy; K-12 education system; List the; keywords covered; in your paper.

1. Introduction

Over the past 20 years, shadow education in China has gradually developed and grown, mainly focusing on providing extracurricular tutoring for primary and secondary school students under the K-12 education system. The role it has assumed is often identified as an institution that helps students achieve academic performance improvement, and some have taken on the function of hosting students. The main purpose of these institutions is to prepare students for the major exams in Chinese education. In these institutions, math, Chinese language, and English are typically taught at a greater degree of difficulty than in mandatory schools.

These education market shares are roughly around $100 billion and have been growing over the decade. This has led to a disorderly expansion of shadow education in China, which in turn has led to increased competition for primary and secondary school exams in China. These educational institutions have their own unique ecological niche in each region, sometimes developing into a vicious competition that burdens parents and primary and secondary students. When the market had reached an unprecedented scale in recent years, and then its own problems have arisen. Like other fast-expanding industries, it is inevitable that there will be internal conflicts in the process of competition. To occupy the market, some head institutions adopt various means to suppress small and medium-sized institutions, and the vicious competition has also laid a hidden danger for their future bankruptcy. In addition, many education companies have started to adopt commercial marketing methods, such as packaging tuition fees as "investment", and even some institutions use "education loans" and other financial means to attract consumers.

Therefore, the Chinese Government published the "Double Reduction Policy" in July, 2021 to curb the chaos happened in the education industry. There are two main objectives for this set of introduced policies. First, to ease the burden of homework on children in obligatory education; second, to restrain the market for education's capitalized expansion. Basic criteria has also been defined by the national government. They made the decision to make the policy's effects considerable over the

long term in practice and to significantly cut the cost of schooling for the typical Chinese household within a year.

Specifically, to reach the goals, they would comprehensively reduce the total amount and length of homework. No written homework will be assigned for elementary school grades 1 and 2; the average time to complete written homework for grades 3 to 6 will not exceed 60 minutes; and the average time to complete written homework for junior high school will not exceed 90 minutes.

This series of policies has been effectively implemented for over a year and is to some extent effective, with many educational institutions disappearing or on the verge of collapse. Most of them are being forced to restructure and transform their business. But most of the existing articles only assess the direct impact of the double reduction policy, ignoring its exogenous factors and the ripple effects it causes. For East Asian education systems, there are some East Asian countries that have implemented similar policies decades ago, such as Japan and South Korea. Additionally, this essay will contrast Japan's education reduction program with the Double Reduction Policy and offer predictions on its future course and wide-ranging effects.

2. Causes

2.1. The Underlying Logic Chain of Chinese K-12 Education

China's K-12 education system is essentially for the Chinese college entrance exam. One of the main goals of compulsory education in China, in addition to producing able-bodied Chinese citizens, is the screening of talents who are suitable for higher education. This is because China's higher education resources are to some extent very scarce, leading to a serious imbalance between supply and demand in China's higher education market for a long time. According to the official website of China's Ministry of Education, Chinese universities are mostly located in regions with high GDP [1]. There is a significant correlation between the concentration of colleges and universities and regional economic development. The universities in China are more densely distributed in the eastern regions with higher GDP such as Beijing, Jiangsu and Shanghai, and less distributed in the western regions with lower GDP such as Tibet, Ningxia, Qinghai, Inner Mongolia, Xinjiang, Guizhou and Guangxi.

These regions have a very uneven distribution of higher education resources due to political history and other reasons, which in turn requires certain selection mechanisms to promote balance. The sheer size of China's population base and the uneven distribution of population across provinces has led to the need for China to use college entrance exams as a filter to select those elite students for higher education in order to maximize the benefits.

Because the effectiveness of the college entrance exam screening mechanism has been empirically proven over decades, many companies in China are very fond of using college entrance exam results to select talent and use them as the basis for wage bargaining. In Ren's article, it is noted that elite qualifications are often seen by company recruiters as a signal that the candidate has good academic credentials and the potential to take on additional workloads [2]. This has led to anxiety among a wide range of Chinese parents because the results of the college entrance exam are highly correlated with the future salary level and social status of their children upon graduation.

2.2. Chaos of Shadow Education and its Economic Value

Back in the early 21st century, tutorial classes gradually came to prominence in China and began to appear in the after-school lives of primary and secondary school students. They were mostly private tuition classes run by public school teachers or small tutoring institutions, and at this time shadow education was on a smaller scale in China. But with the ripple effect of China's economic take-off, the expanding demand for a highly qualified workforce in the marketplace transmitted this signal through universities to primary and secondary schools, causing parents to constantly look for ways to improve their children's grades. At this point, shadow education began to see more significant growth, with institutions beginning to recruit a large number of part-time teachers and growing their scale.

Although many studies have shown that the effect of shadowing on achievement is influenced by multiple factors, overall the length of shadowing is positively correlated with achievement gains [3]. This causes parents to become anxious about their children's schooling, and this anxiety spreads quickly through the population. Many parents become unbalanced when they see other people's children outperforming their own children, and this psychology then leads parents to choose to shadow education for their own children.

These parents' children act as consumers of shadow education, creating a massive $100 billion market that continues to expand over the course of a decade. With it came chaos in the education market. More information reveals that many teachers will deliberately retain knowledge in public school classrooms and put that knowledge in their own privately run after-school tutoring facilities [4]. A portion of the students who choose to attend will benefit as a result, as they gain more advanced knowledge for the test. This is certainly an injustice to public school students who do not participate in shadow education.

This kind of shadow education can seriously affect the quality of education in the K-12 education system in the long run. As the number of students participating in shadow education becomes larger, there is a risk that the teaching standards of teachers in compulsory education will deteriorate as a result, because most of the students in the class have gone through overlearning and hardly need the teacher to explain the topics. Public school teachers are vulnerable to a decline in teaching quality until performance review standards are increased, which in turn exacerbates educational inequality for students not participating in shadow education. These conditions were widely observed in China during the decade, causing popular discontent and government attention.

2.3. The Exogenous Influence of Shadow Education

In addition to causing the gradual failure of the K-12 education system, the frenzied growth of shadow education has had many external effects, the most famous corollary of these effects being the lowering of fertility rates due to the aggravation of shadow education. According to statistical data analysis, in 2022, one-third of Chinese families will spend 1,000-3,000 RMB per month on their children's education, and another third will spend more than 3,000 [5]. Knowing that China's GDP per capita will only be 7,000 yuan per month in 2022, the burden of education spending will still be very heavy in time without considering the gap between the rich and the poor, or gini index.

Such education spending is causing many Chinese families to be very concerned about their financial situation, as shadow education has become almost a necessity for most Chinese families with children. As a result, most families have received an impact on their fertility rate, or have an additional concern as they consider adding new members to their families because they may not be able to afford the marginal cost.

It is noted that shortly after the implementation of the double reduction policy, China's "three-child policy" began to be implemented, and we believe that the two policies may be related. This is because China's population has recently experienced negative growth for the first time, one of the largest shifts in China's population numbers in the last 50 years, and is considered a turning point in population numbers. Given that China's demographic dividend may disappear in the future, and the population will keep decreasing, so the Chinese government is using the policy for aggressive macro-control [6].

In such a macro context, the double reduction policy is given more significance. It may be used to promote fertility, reduce the financial burden of education on families, and thus make families less worried when responding to the "three-child policy".

3. Effect of Double Reduction Policy

When the “Double reduction” policy was introduced, the positive effects of the policy is obvious to predict. In our analysis of the positive effects of this new policy, we take three dimensions into account: Effectiveness, Unintended effects. This allows for a more comprehensive assessment of the positive effects of the double reduction policy.

One of the main targets of "Double reduction" policy is trying to reduce the workloads of courses for high school students and below. In the first year of implementation of the policy, the effectiveness is very obliviously to sense for Chinese residents. Students under high school can generally feel that the difficulty of homework has decreased compared with before. They found that many questions that deviated from the exam syllabus disappeared and many of the unusually complex questions were gradually replaced by the simplified ones. The education industry is no longer barbaric, but more standardized and the cutthroat competition has been rectified. This can be seen in the GDP data in the second half of the paper.

Many peer researchers have conducted empirical studies on the effectiveness of policies. According to a survey based on 400 primary school students in Fuzhou city manifest that 56.5% of the sample students believe they have moderate workload of course capacity and homework, the number was used to be 48% before the policy was put into effect [7]. At the same time, the data of students who consider the amount of homework to be stressful to finish on time drops sharply from 10% to 4%. These surveys revolve around the dimensions of the amount of homework after class, completion time, homework structure, homework quality, and changes in attitudes between teachers and students. So there are certain externalities in the framework of empirical research. To some extent, this shows that the effectiveness of the double reduction policy is approaching the expectations.

The other main target of the double reduction policy is to release the leisure time for both parents and under high school students. For a decade, after-school training once occupied the spare time of many Chinese children and their parents. Many of the city's main office buildings are filled with shadow education institutions. In elite schools, the number of people involved in the study is often the majority. Students' after-school hours range from one hour to eight hours a week, and individual students as outliers can reach an astonishing 18 hours. A large number of tutoring almost occupied all of the free time for students and parents are almost too busy to spare time to rest during the weekends.

Interestingly, one of the unintended effects of double reduction policy may raise fertility. By reducing the stress on students and cracking down on the shadow education industry, it is also sending a signal that having more children does not necessarily entail financial burdens and a decline in the quality of life. Xia's research on Fuzhou city also shows that 83.5% of the students did not participate in off-campus test-related subject training while 63.3% of the students did not participate in non-test-related subject training [7]. This can prove that the situation that students are occupied by extracurricular tutoring has been reduced and the effect is obvious.

As China faces an aging population and a higher risk of future labor shortages, the purpose of the double reduction policy is worth pondering. The fertility rate may be connected to different factors. When a country's economic situation develops, the fertility rate will most likely fall as people's fertility attitudes change and economic pressures increase [8]. In the past few decades, raising children was considered to increase the family returns when the education cost is not as onerous as it is today. Before the double reduction policy came out, the cost of education was growing sharply in the last two decades due to the shadow education. The marginal cost of raising children was becoming a huge burden, which dampened the enthusiasm for childbearing. So up to now, the introduction of the double-reduction education policy is an attempt by the Chinese government to reduce the cost of family education and combat the degree of education privatization. These are the evidences for the unintended effects of double reduction policy.

4. Comparison with the Japanese Education System

Faced with the impact of this education policy, the Chinese education sector is once again in a state of turmoil and undergoing a reshuffle. In the face of this situation, the attention is turned into China's Asian neighbor, Japan.

Japan, as one of the developed countries in Asia, has many advanced experiences in economics development and policies making. In 1977, Japan implemented the "relaxed education" policy, which

was used to solve the tendency of "fill-in-the-bag" education in the past, requiring less knowledge in school curriculum and shorter class time, and more emphasis on students' independent learning and independent thinking. As the pressure of competition for higher education still exists, especially for prestigious schools, many families are forced to place their learning outside of school, and more students are flocking to cram schools, which are experiencing a second explosion. According to data from the Ministry of Education, Culture, Sports, Science and Technology of Japan, the percentage of secondary school students attending off-campus education and training rose from 38.0% in 1976 to 59.5% in 1993 [9]. According to the data of Japan's Ministry of Internal Affairs and Communications, the number of cram schools reached more than 45,000 in 1991 [10]. The Japanese educational and training institutions in this period were clearly pyramidal in distribution, with very few upper-scale enterprises.

After entering the 21st century, the Japanese government implemented the deregulated education to make up for the decline of students' learning ability caused by the past lax period, public education improved the teaching content and quality, and coupled with the fact that Japan entered a child-less society after 1997, the overall demand for study schools gradually saturated, the number declined and the degree of concentration increased. As of now, the number of cram schools in Japan is about 50,000. Since 1986, relevant government departments in Japan have been involved in guiding the development of the cram school industry, constantly regulating and governing the study school institutions and regulating the study school industry. For example, they set the standards for the business activities of the industry, evaluate the business activities of cram schools, train and certify the competence of cram school instructors, etc. For example, in 1999, the Japanese government issued the "Autonomous Guidelines for Standardization of Cram School Business Activities", which stipulates that cram school operations should recognize their responsibility to society and not misleadingly advertise, etc. After entering the 21st century, as the cram school industry matured, Japan also introduced the cram school certification and instructor certification system to improve the teaching quality of cram schools and teachers in institutions.

The major learning schools gradually gained more recognition from schools, parents and students. Public schools are also beginning to explore partnerships with outside learning schools to promote changes in school education. For example, in 2012, Adachi Ward in Tokyo established the "Adachi Soaring School" in cooperation with the cram school Waseda, in which the teachers of the school teach English and mathematics to third grade students in the ward on Saturdays or during the summer vacation, and the expenses are covered by the ward's finance and the students pay no tuition. Japanese public schools and cram schools have gradually evolved into a partnership, with the latter playing a complementary role to school education by providing schools with teaching materials, test questions, teacher training, etc., and advising public schools on their own public interest role and supporting role.

However, the impact of low birth rate in Japan gradually penetrated into the Japanese cram school industry and also restricted the further development of the industry at present. As Japan entered the 1980s, the low birth rate brought about a decrease in the number of students and an increase in personal investment in education, but the decrease in the number of students led to a decrease in pressure to advance to higher education and a resulting decrease in demand for extracurricular tuition and training. Speculative data from the Japanese Ministry of Internal Affairs and Communications shows that the size of Japan's population aged 5-19 shrank by about 11,612,000 from 1986 to 2020. 2016 to date, the number of students enrolled in training in Japan has remained at about 13 million, an increase of almost zero [10].

As a result, Japanese cram schools are starting to look into potential new development sectors. After many years of growth, there are excellent companies in the cram school, higher education tutoring institutions, foreign language learning, professional qualification training or certification examinations, early childhood education, corporate training services, and other segments. The Japanese study school industry is now forwarding a stable and richly diversified orientation to develop.

5. Conclusion

The impact of the Chinese government's introduction of a double reduction policy in education releases multiple signals, on the one hand, to reduce the pressure of further education in the K-12 education system and relieve the pressure on primary and secondary school students and their parents. On the other hand, the introduction of this policy may also be linked to China's recent fertility decline, as the Chinese government is using the double reduction policy to reduce pressure on education while hoping that the fertility rate will increase as a result, in order to maintain the demographic dividend and stabilize economic development. After analysis, we believe that the current double reduction policy in education in China has had some positive effects, as the pressure on primary and secondary school students has been reduced to a certain extent compared to previous years, but this effect may diminish over time.

By comparing with Japan's relaxed education and similar policies, it is found that Chinese shadow education should actively respond to the negative effects of the double reduction policy and try to transform, perhaps the best solution. The state should also give appropriate care policies that make Chinese shadow education as a tool to supplement the K-12 education system and give it room for survival and innovative development. It should also strengthen the public education system and improve the quality of teachers to meet the needs of students and parents for abundant educational resources.

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