

## Assessing the Effectiveness of China's Compulsory Education Reform Policies—Experience from South Korea

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**Abstract:** With the development of economy and society in China, the education policies have changed a lot during these years. Students seem to suffer from increasingly more pressure in terms of their education as they face a more competitive labour market in the near future, they have to study harder to let themselves have more possibilities to win. Recently, based on the current situation, Chinese government has issued a new policy named double reduction policy (Shuang Jian policy) which aims to ease the burden of students for excessive homework and off-campus tutoring for students undergoing compulsory education. This paper focuses on assessing the effectiveness of policies aiming to reduce the involution in the compulsory education level in China. The paper introduces the problems caused by the involution and the current policies implemented by the Ministry of Education of the People's Republic of China. In addition, the similar policies in South Korea are also introduced to make a comparison. The proposed methods used to compare the effectiveness of these policies are questionnaire and a literature review approach. The results obtained in this article indicate that the compulsory education policy in China is less effective in reducing the advanced teaching and excessive extracurricular tutoring compared to South Korea. It should focus on improving the entrance system in middle school and the equal distribution of high quality educational resource, which would also create more opportunities for the expansion in higher education, training and development of teachers, and introduction of new tutoring mechanisms.

### 1. Introduction

Compulsory education refers to a period of education that is required of all people and is imposed by the government (Stephens and Yang, 2014). Compulsory education aims to cultivate students' basic cognitive skills and academic abilities. However, in China, due to the higher requirement of education background and as the top university entrance examination has become more severe, the pressure has been gradually passed down to the compulsory education stage.

There are some underlying issues in the compulsory education system. First, studying ahead, extracurricular makes tutoring-students suffer from too much pressure and fierce competition in entrance examination of schools with better education quality (Zheng et al., 2020). Secondly, selected exams further differentiate good students from poor students, leading to differences in teaching progress and teaching content. And better high schools will repeat this process again, screening out outstanding students through more difficult exams and conducting differentiated education, so as to make them more advantageous in the college entrance examination. Thirdly, the distribution of educational resources is unbalanced (Zhou et al., 2018). This imbalance is mainly reflected in urban and rural education and between different schools. And, because of the downward pressure on the college entrance examination and the unequal quality of education among schools in the compulsory education stage, the supply of schools with high-quality teacher resources and higher high-quality secondary school and university enrolment rates will fall short of demand. Set up various training examinations to select outstanding students. These exams often examine content other than basic courses. Therefore, to enter these schools, students have to study in their spare time and make up a lot of extra lessons. This has caused huge academic pressure and financial pressure on students and their families. However, such a selection system makes the distribution of students more unbalanced, and high-quality teachers will also gather in schools with high-quality students.

This further leads to an unbalanced distribution of compulsory education resources and quality, which is trapped in a vicious circle. Fourthly, the problem of school district housing also exists (Wen et al., 2017). Some schools with high education quality will cooperate with real estate agents to obtain enrolment indicators by purchasing a house. This has caused housing prices in the school district to skyrocket. It makes compulsory education more exclusive and commercialized, and makes competition more unfair, especially for those students who have poor financial conditions but study very hard.

In the past two decades, the Chinese government has put forward many policies to promote universal and balanced development of compulsory education in order to reduce the burden on primary and secondary school students, and solve the housing problem in school districts (Xue and Li, 2021). At present, in the stage of entering junior high school from elementary school, all selective entrance examinations have been cancelled, and all students are enrolled in the nearest school according to the district. At the same time, the implementation of the double reduction policy has also caused a large number of tutoring education giants to stop providing after-school tutoring to students. However, the effectiveness and rationality of the double reduction policy as a new policy proposed this year has yet to be verified. Many tutoring classes are turned online, or one-to-one tutoring is conducted in private homes. The implementation of the double reduction policy has indeed curbed the development momentum of extracurricular tutoring, but it has not yet solved the fundamental problem of compulsory education, that is, the unbalanced distribution of educational resources and the score-oriented form of student ability assessment. As long as the improvement of these problems does not keep up, but only a strong ban on tutoring, the pressure of students and severe competition still exist, such double reduction may add more pressure to the parents of students. However, the compulsory education reform policy implemented by South Korea, which has a similar examination system and excessive extracurricular training phenomenon with China, can provide a lot of effective experience. South Korean students' spending on extracurricular tutoring accounts for a relatively large proportion of annual GDP, but now, with the implementation of a special education decree, South Korea's investment in public schools is increasing, and various forms of extracurricular tutoring are strictly prohibited (Xue and Fang, 2018). And continue to improve the education admission system, so that students can receive more equal education in the compulsory education stage. Although this method sometimes fails to prohibit the guidance of private tutors, and sometimes extracurricular tuition institutions can provide more professional guidance. But at this stage, the Korean education system has created more opportunities for the expansion of higher education, the optimization of the school system, and the introduction of new tutoring mechanisms.

Thus, this paper is mainly going to analyse the effectiveness of China's double reduction policy through the method of conducting questionnaire analysis. And then the effectiveness of China's double reduction policy will be compared with that of South Korea's policies. Finally the article will put forward ideas for reference on the development direction and design mode of China's policies in the perspective of education.

## **2. literature review**

In the literature review part, relevant information about private tutoring and the education policies in both Korea and China will be discussed based on existing research.

### **2.1 Private Tutoring and Demand for Education in South Korea**

Private tutoring is common throughout the world, but it is particularly prevalent in Korea. The fast development of the formal education system, as well as the continuous infusion of government resources, have failed to halt the rapid proliferation of private tutoring services in the South Korea. Heavy government regulations, including the outright prohibition of the practice, have been ineffective in reducing the number of private tutors (Kim and Lee, 2010). Korean children with exceptional academic abilities, affluent families, and parents with advanced degrees are more likely

to invest in private tutoring. Students who live in areas that are not covered by the equalization program and consequently having a greater choice of schools tends to spend less money in private tutoring.

The government's heavy regulation and stringent supervision may only serve to worsen the problem further. It is unclear if the excellent academic achievement of Korean pupils is mostly due to the private tutoring industry or to the traditional schooling system in the country. If schools are subjected to an excessive amount of political, social, and administrative restraints, the average cost of giving education may rise to a level that is higher than the cost of delivering instruction in the private tutoring sector (Kim and Lee, 2010). When compared to the formal school system, private tutoring may give a more specialized education that cannot be provided efficiently through the formal school system. Pupils may consider schools to be uninteresting, and teachers may consider students to be unmotivated and tired.

Considering the Korean experience examined in this essay, it appears that private tutoring should be seen as an integral part of the entire educational system. It is also necessary to introduce tracking according to student ability within schools, so that the education given at school is more appropriate to the levels of pupils that attend that school (Kim and Lee, 2010). In order to achieve an acceptable level of equity among kids, it is not enough to provide equal school inputs to all pupils.

## **2.2 The determinants of demand for private tutoring in South Korea**

The Heckman two-stage sample selection approach is used in this paper to investigate the factors that influence demand for PT. Many of these findings are repeats of findings from previous studies, particularly in terms of student and family factors. The most significant influence on both the selection and the result equations is the individual's family background. Observations based on school characteristics show that the mechanisms of selection and those of the outcomes (expenditure and hours of physical activity) are distinct (Kim and Park, 2010). It is likely that a less active tutoring market would have an impact on participation in the program. Korea's higher education system should be more diverse and should learn from the U.S. academic model to be more competitive. The ability and productivity of job applicants should not be evaluated solely based on whether they graduated from a prestigious university, and employers should discourage this practice (Kim and Park, 2010). The equalization program is based on equality and cannot be abolished politically. However, the existing policy stifles student classification to the point where children abandon school for private tutoring. So the system should allow for additional school options, including high-quality private schools with selective admissions to fulfil various educational demands. There is also a need to track pupils' abilities inside the school so that education is more relevant to their level (Kim and Park, 2010). Increasing the number of universities available to potential students is another option to consider. Korea's higher education system should also become more diverse, borrowing from the U.S. academic model as a model for its own development. As an example, the Ivy League universities in the U.S. are not the only higher education institutions that are highly recognized in their respective fields of employment and research.

## **3. Methods**

The study aims to conduct a comparison of the compulsory education policies between China and South Korea by focusing on both the subjective and objective aspects concerning about the two education policies. For this purpose, the study has applied a mixed-method approach that contains both the qualitative and quantitative data collection and analysis approaches (Shorten and Smith, 2017).

### **3.1 Data collection**

For the collection of quantitative data, the study has used a questionnaire, which was distributed to 300 participants including students, parents, and teachers. To sample selection, the study has used snowball purposive sampling methodology, which involved the purposive distribution of

questionnaire among 5 to 10 participants on a PR basis and they were asked to pass out the same questionnaire to their friends, teachers and family members, who fulfil the inclusion criteria for participation in the given study (Baltar and Brunet, 2012). The collection continued until a target of 300 useful questionnaire was collected. For the collection of qualitative data, the study has used a literature review approach, which involves the collection and critical review of past research studies and policy statements.

Finally, a total of 335 samples were collected in the questionnaire, of which 300 were valid samples.

### 3.2 Main methodology

The research has adopted both the interpretivism and positivism research paradigms. The positivist paradigm enabled the researcher to objectively evaluate the primary data collected from the participants through a questionnaire, and the interpretivist paradigm has allowed the researcher to evaluate the descriptive or qualitative information collected. Moreover, for the interpretation and logical analysis of the collected data, a deductive approach was used for the evaluation and analysis of the quantitative data collected through a questionnaire from the participants. The deductive approach involves evaluation of the collected data, requiring the hypotheses about the subject matter based on past literature, and then test these hypotheses for validity through statistical analysis based on the collected quantitative data (Casula et al., 2020). The results obtained from the deductive evaluation were presented in the form of graphs, charts, and tables, along with their interpretation in the descriptive form to evaluate the possible differences and similarities between the compulsory education policies of the two countries.

## 4. Results

The following is the difference analysis and description of the results of the questionnaire.

Table.1. Analysis of the difference about participating in any form of extracurricular tutoring before the implementation of the double reduction policy and are informants still willing to participate in after the implementation of the policy

	YES		NO
Yes	209 (72.3%)		2 (18.2%)
No	52 (18%)		7 (63.6%)
Maybe	28 (9.7%)		
X <sup>2</sup>		16.405	2 (18.2%)
p		0.000	

Table 1 has shown the chi-square test for the number of people who participated in any form of extracurricular tutoring before the implementation of the double reduction policy and the number of people who are still willing to participate in after the implementation of the policy. The chi-squared test shows that the chi-square statistic is larger than the critical value, and the p-value of chi-square test is less than 0.05, thus there is significant difference between the number of people who has taken the supplementary tutoring before the implementation of the policy and the number of people who still have the willingness to take supplementary tutoring after the policy is announced. From the cross table, the proportion of people who participated in any form of extracurricular tuition and still willing to participate in tuition after the implementation of the double reduction policy is as high as 72.3%, which is higher than the proportion of people who did not participate. In addition, the proportion of people who did not participate in any form of extracurricular tutoring and the proportion of people who did not intend to participate in tutoring was as high as 63.6%, which was higher than the proportion of people who participated in extracurricular tutoring.

Table.2. Analysis of the difference between the score range of the high school entrance examination and whether the teachers of the informants' schools mostly graduated from universities in 211, 985 or QS100

	YES	NO	I don't know
600<	19 (10.4%)	21 (27.3%)	10 (25.0%)
600-670	42 (23%)	22 (28.6%)	12 (30.0%)
670-700		23 (29.9%)	
>700	69 (37.7%)	11 (14.3%)	10 (25.0%)
X <sup>2</sup>	53 (29%)	19.522	8 (20.0%)
p		0.003	

Table 2 has shown the difference analysis of the difference between the score range of the high school entrance examination and whether the teachers of your school mostly graduated from the universities in 211, 985 or QS100. The chi-square test shows that there is significant difference between the high school entrance examination score interval and whether the school teachers mostly graduated in the top universities ( $p < 0.05$ ). From the cross table, the proportion of the students in the score interval  $> 700$  is as high as 29%, which is higher than the proportion of school teachers who are not graduated in the top universities; while the proportion of school teachers who mostly graduated in these universities is only 10.4% in the test score range below 600, Which is lower than the ratio of the number of school teachers who are not graduated universities in 211, 985 or QS100 which also shows that the higher the teacher's educational background, the higher the test score interval in the examinations.

Table.3. Analysis of the impact of the double reduction policy on different forms of tutoring

	Frequency	Percent	Cumulative Percent
No effect	93	31.0	31.0
Cancel	46	15.3	46.3
Tutoring time change	33	11.0	57.3
Tutoring fee change	56	18.7	76.0
Forms change	72	24.0	100.0
Total	300	100.0	

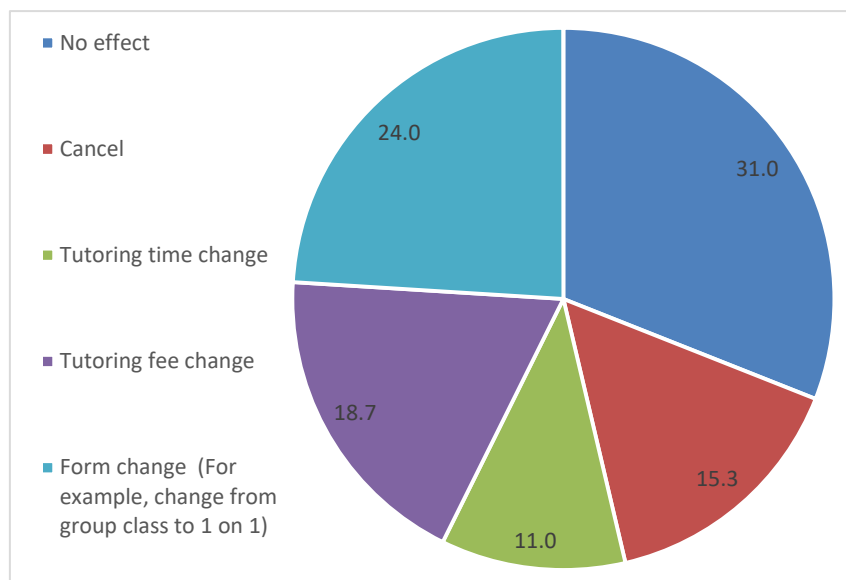


Figure 1. After the implementation of the double reduction policy, has such tutoring been affected

Table 3 and figure 1 have shown the descriptive statistics about the question that whether the tutoring has been affected after the implementation of the double reduction policy. The results have indicated that the proportion of respondents who said that the double reduction policy was completely unaffected after the implementation of the policy is relatively high, as high as 31%, and as high as 24%. Respondents in the questionnaire indicated that the format of cram schools has

become one-to-one or there are other changes. The proportion of people who cancel cram schools directly after the implementation of the policy is relatively low, only 11%.

## 5. Discussion

The findings of the study suggest that quality of education is positively correlated with the teacher's graduation school (teacher level), but negatively correlated with the teacher-student ratio. This result shows that the uneven distribution of educational resources will lead to uneven teaching quality, so parents will try their best to send their children to schools with better educational quality. Within this process the rich tend to have competitive advantage, which ultimately leads to increased competition and inequality in education. Similarly, with regards to the relationship between teaching quality and high school entrance examination scores, it has been found that even if the compulsory education balance policy has been written into the Compulsory Education Law of the People's Republic of China, there are still significant imbalances and unevenness in educational resources and quality, which will be directly reflected in the gap in the results of the high school entrance examination. The shortage of high-quality educational resources will strength the competition, and eventually lead to advanced teaching, excessive extracurricular tutoring, and ignoring the improvement of students' abilities. The problems of educational involution and unnecessary waste of resources have not been solved well to date. The findings of the given study with respect to the quality of education and teacher's qualification level are highly in line with the evaluation carried out by Zhou (2019), who found that teachers' education and training are equally important for improving the quality of education in educational institutions. The author also found that unqualified teachers would confuse the students about their learnings instead of sharing valuable knowledge among them. In addition, the study of Li et al., (2019) found that the recent reforms implemented by the government into the training and development of teachers have been proven quite successful because the training and development provided to teachers have significantly transformed the structural implications of the tutoring fields such as the expansion of learning opportunities, system openness, reorientation of teaching and curriculum and several other positive changes.

With respect to the relationship between the teaching quality and high school entrance examination scores, the findings suggest that although these two variables show a positive correlation, but the Chinese education system still contains several defects and imbalances that cause negative impact on the quality of teaching and learning process. The study of Ma and Shi (2014) found that despite the integration of several reforms in improving the quality of teaching, the national college entrance exam scores are declining with every passing day. The authors also suggest that parents are equally responsible for the decreasing scores of their children in the high school and college entrance examination because most of the students exhibited a lack of suitable study environment in their homes as the main reason behind their failure. Whereas Zhang (2013) found that the quality of teaching is not effectively improved in the public sector educational institutions of the country because the majority of the high scoring students revealed that their high scores in high school and college entrance exams are due to the inputs of their private tutoring. However, in comparison to the Chinese compulsory education policies, the South Korean education policies and reforms are relatively more effective and have brought about significant positive changes in the South Korean education system. The findings of the given study were supported by the evaluation of Kim (2004), who states that compulsory education policies and reforms in South Korea have almost doubled the annual enrolment rate in the country within one year of its implementation. Similarly, Lee (2020) suggested that although South Korean compulsory education policies have also encountered lots of criticism, especially concerning the training and development curriculum for the teachers; however, even then the results turned out quite effective than that of the other developing countries like China, which makes these policies stand out in the region. In addition, in another study conducted by Hultberg et al., (2017), it is found that the education policy of South Korea is based upon the model of human development accumulation, whereas that of the Chinese education policy is based upon the Zhong-Yong model, which is closer to a market-oriented and capital-intensive

model. Therefore, the South Korean education system has better performance compared to the Chinese compulsory education system and created more opportunities for expansion in higher education, optimization of the school system, training and development of teachers, introduction of new tutoring mechanisms, etc.

For the future development of the education system in China, there are some suggestions based on the above analysis. First, as the quality of education is positively correlated with the teacher's graduation school, and negatively correlated with the teacher-student ratio, which might lead to the uneven distribution of education resources as rich parents will have competitive advantage in sending their children to schools with higher education quality and the poor tend to lose the chance to let their children have access to high quality education. Thus, the government of China should think about ways to improve the education equality. For example, they should encourage the standardization of schools which requires to transform weak schools and make teachers, teaching equipment, books, and sports venues basically meet the standards as soon as possible. Moreover, the government of China should make efforts to solve the problem of "school choice fever" by speeding up the reduction of the gap between schools and speeding up the transformation of weak schools. Implement the reasonable allocation of enrolment quotas for high-quality general high schools and high-quality secondary vocational schools to junior high schools in the region. No key schools and key classes may be set up during the compulsory education stage. It is necessary to strengthen the overall management and rational allocation of teacher resources in the region, implement a teacher and principal exchange system within the county (district) area, and gradually explore a regular teacher exchange system in urban areas and rural areas where conditions permit. Innovate teacher supplement and withdrawal mechanisms. Finally, to guarantee the equal rights of children of migrant workers and left-behind children to receive compulsory education. It is necessary to formulate a method for migrant workers to take the local college entrance examination after compulsory education for their children. Focusing on building rural boarding schools in large labour exporting provinces and areas with special difficulties, improve schooling conditions, and give priority to the schooling needs of left-behind children. Secondly, although teaching quality and high school entrance examination scores have a positive relationship with each other, the education system of China still has some defects and imbalances that cause negative impact on the quality of teaching and learning process. Thus, some improvements have to be done to improve the current situation. Except the efforts of government of China, parents are also responsible for the decreasing scores of their children in the high school and college entrance examination because most of the students exhibited a lack of suitable study environment in their homes as the main reason behind their failure. Thus, parents should make efforts in improving their children's high school and college entrance examination scores.

## **6. Conclusion**

The main objective of this paper is to assess the effectiveness of China's double reduction policy by conducting data analysis based on the data collected through questionnaires. The paper also compares the effectiveness of China's double reduction policy with the corresponding policy in South Korea. Finally to put forward ideas for reference on the development of direction and design model of China's policies in the perspective of education. The results have shown that there is significant difference between the number of people who took the supplementary tutoring before the implementation of the policy and the number of people who are still willing to take the tutoring after the implementation of the policy, which indicates the policy is effective in reducing the number of people who participate in the tutoring activities. Also, by conducting the analysis of the difference between the score range of the high school entrance examination and whether the teachers of schools mostly graduated from the universities in 211, 985 or QS100, the results have shown that there is also significant difference between the score range of the high school entrance examination and whether the teachers of schools mostly graduated from the universities in 211, 985 or QS100. Which indicates the higher the teachers' education background, the higher the test score interval in the

examinations. However, by examining the effectiveness of the implementation of the T6 double reduction policy, the results have shown that the proportion of respondents who said that the double reduction policy was completely unaffected after the implementation of the policy is relatively high, as high as 31%, and as high as 24%.

Based on our discussion, we conclude that the education policies including T8 double reduction policy and T6 double reduction policy seem to be of significant use for reducing the involution in the compulsory education level in China. By assessing the effectiveness of China's double reduction policies enables people understand the current situation of China's education system and how it works in China. It can also show people the drawbacks and advantages of China's education system, which will be good for improving the education system in China.

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## **A APPENDICES**

### **A.1 Questionnaire**

**T1. What is your score interval of the high school entrance examination?**

<600

600-670

670-700

>700

**T2. Did you have participated in any form of extracurricular tutoring?**

Yes

NO

**T3. What's your tutoring project?**

Academic

Art

Other forms

**T4. How long is the tuition time per week?**

<2h

2-4h

4-6h

>6h

**T5. Did such tutoring has been affected after the implementation of the double reduction policy?**

No effect

Cancel

Tutoring time change

Tutoring fee change

Form change (For example, change from group class to 1 on 1)

Others

**T6. Is your teacher's graduate school among the universities in 211, 985 or QS100?**

Yes

No

I don't know

**T7. Do you willing to continue the tuition in other forms after the double reduction policy is implemented?**

Yes

No

Maybe

### **Authors' background**

<b>Your Name</b>	<b>Title*</b>	<b>Research Field</b>	<b>Personal website</b>
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