The Mechanism of Over-Equilibrium in China's Shadow Education Market and Its Social Crisis

Abstract: In China, many problems seen in the compulsory education period are caused by the over-equilibrium of the shadow education market, i.e. people’s excess demands for and excess supply of shadow education. The over-equilibrium is the result of excess demand and excess supply in the shadow education market. The excess demand is attributed to unbalanced human capital ROI, strong signal functions of diplomas, vicious competition and ignorance of leisure. The disordered development of capital in the shadow education industry leads to excess supply. The excess demand and excess supply give rise to great scale of shadow education, harming the students, parents, teachers, schools and the society. The policy to ease the burden of excessive homework and off-campus tutoring for students undergoing compulsory education (the “Double Reduction Policy”) is effective in solving the over-equilibrium in the shadow education market from the perspectives of both demand and supply.

Keywords: Shadow Education; Over-equilibrium; Compulsory Education; “Double Reduction” Policy

1. INTRODUCTION

On May 21, 2021, the Opinions on further Easing the Burden of Excessive Homework and Off-campus Tutoring for Students Undergoing Compulsory Education (“the Opinions”) was deliberated and resolved at the 19th meeting of the Central Committee for Comprehensively Deepening Reform. The General Office of the Communist Party of China (CPC) Central Committee and the General Office of the State Council then printed and distributed the full text of the Opinions on July 24, 2021. The Opinions, also known as the “Double Reduction Policy” for short, is aimed to build a high-quality education system, give full play to the role of schools in teaching and education, deepen the regulation of off-campus tutoring institutions, put a resolute stop to any behavior infringing upon the interests of the masses, effectively relieve the anxiety of parents, and build a good ecology of education guided by “Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era”. Specifically speaking, the “Double Reduction” Policy is piloted in nine cities to achieve the goal of “effectively easing in a year and achieving notable results in three years to obviously improve the masses’ satisfaction to education” by “controlling the burden of homework, improving the level of after-school services, and regulating off-campus tutoring”[1]. On January 5, 2024, the Ministry of Education held a national video conference on the “Double Reduction” work, emphasizing once again that “we must further improve our political stance, make the” double reduction ”work a top priority, and resolutely promote it[2].”

The “Double Reduction” Policy, an important decision and deployment made by the CPC and the government, gives effective response and solutions for various problems caused by the disequilibrium and underdevelopment...
in the basic education field in China, especially the issue of fair learning opportunities.[3] Enacted at the strategic height of achieving the Great Rejuvenation of the Chinese Nation, the *Opinions* is conductive to satisfying the people’s demands for education to lead a better life, fulfilling the fundamental task of education to foster virtue through education, facilitating the education ecology, restoring the education equality, and reconstructing the public's social trust in the fair development of national education in the New Era.[4] Briefly speaking, the “Double Reduction” Policy enables the reconstruction of the basic education pattern in China, exerting far-reaching influence. In this paper, it is held that the governance efficiency of the “Double Reduction” Policy lies in its correction to the “over-equilibrium” of the shadow education market in China.

Shadow Education refers to a shadow of the mainstream school education system, i.e. supplementary education activities provided in addition to regular school education for the purpose of improving students' school achievements. Stevenson and Baker proposed this definition based on their observation of the senior high school education in Japan, arguing that “shadow education represents a series of off-campus educational activities for the purpose of improving students educational performance in school,” and that shadow education “roots in private industries.”[5] Mark Bray, a key figure in the field of shadow education research, laid the theoretical foundation for shadow education research. In the *Shadow Education System: Private Tutoring and its Implications for Planners* published by UNESCO International Institute for Educational Planning in 1999, Mark Bray defined the shadow education as follows: Supplementation: it is only concerned with tutoring which covers subjects which are already covered in school. It does not, for example, examine languages classes for minority children whose families are anxious that new generations retain competence in languages not taught in mainstream schools. Privateness: It is primarily concerned with off-campus paid tutoring provided by private entrepreneurs and institutions for profit-making purposes, and is not concerned with unpaid tutoring provided by teacher for responsibility and obligation, or free tutoring provided by relatives and community members. Academic subjects: Tutorial contents refer to academic subjects included in the examination, excluding the training of non-academic subjects such as musical, artistic or sporting skills.”[6]

Scholars in and out of China have made remarkable achievements in shadow education study after the concept of shadow education was proposed. As for foreign literature, study of Bray and Kwok showed that shadow education is the product of school education competition, which involves family education investment and private education costs and benefits.[7] Lee, et al. proved that shadow education can dramatically improve the academic performance based on the data about South Korea.[8] Buchmannn, Watson, Dang, Silova, and Jelani, et al. studies the participation rate of shadow education in each country, and analyzed the influence of such variables as social economic capital, gender, race, educational level and rural-urban differences on the participation rate based on the data about Kenya,[9] Australia,[10] Vietnam,[11] East Europe and Middle Asia,[12] and Malaysia,[13] respectively.

With regard to literature in China, fruitful achievements have been made in research of shadow education. Some scholars hold that shadow education undermines the education inequality. Xue Haiping studied the multilevel model of education production functions, introduced the factor of shadow education, and further expanded the scope of theoretical study on education production functions.[14] He studied the off-campus tutoring of students...
at school based on the data of CFPS2012, urging that the shadow education increases, maintains and transmits the generational and intergenerational inequality, and undermines the effect of policies for facilitating the education equality.\textsuperscript{[15]} Then, Xue Haiping held that the family capital affects the availability of school education and shadow education based on the data of CEPS2014.\textsuperscript{[16]} However, some scholars hold that the shadow education promotes the education equality. For example, Hu Yongmei, et al. found that shadow education has different effects on students’ school performance for mathematics, science and language subjects by applying the dual-horizontal line model and RPSM mode based on PISA2012’s data about Shanghai, urging that the shadow education helps promote the education equality.\textsuperscript{[17]} Li Jiali, et al. studied the beneficiary of the shadow education, drawing similar conclusion.\textsuperscript{[18]} Zhang Wei made comprehensive and detailed review in cooperation with Mark Bray, et al. based on diverse achievements of studies on the shadow education, pointing out that future studies need to place the focus on the influence of new technologies, enhance the interdisciplinary collaboration, and concern more about the definitions and study approaches.\textsuperscript{[19]}

To sum up, there are relatively few studies on the equilibrium of the shadow education market, especially the over-equilibrium of demands and supply of shadow education, even though scholars in and out of China have had in-depth research on shadow education. This paper discussed the role of the “Double Reduction” Policy in correcting the over-equilibrium of the shadow education market in China from the perspective of the basic demand-and-supply theory. First, the author analyzed the mechanism for over-equilibrium of the shadow education market. Then, the paper introduced the social problems caused by such over-equilibrium and the correction role of the “Double Reduction” Policy. Finally, the author drew a conclusion and put forward some reflections.

2. THEORETICAL CONSTRUCTION AND RESEARCH HYPOTHESES

The demand of shadow education refers to the number of shadow education that consumers are willing and likely to purchase at different prices, see Figure 1 for curve of demands for shadow education. Where, P- Price of shadow education; Q- Quantity of shadow education demanded; D- Curve of demands for shadow education; S- Curve of supply of shadow education.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figure1.png}
\caption{Change in quantity of shadow education demanded}
\end{figure}
According to the law of demand, the curve of demands for shadow education has negative slope, i.e. the demands for shadow education increase when the price of shadow education declines. The change in factors other than price will lead to the displacement of the entire demand curve, as shown in Figure 2.

**Figure 2. Change in demands for the shadow education**

Main factors leading to the displacement of curve of the demands for shadow education are as follows:

2.1. Human capital ROI of higher education

Theodore W. Schultz, famous economist and winner of the Nobel Economics Prize, has made pioneering contributions in this regard. In the *Education and Economic Growth* published in 1961, he noted that investment in human resources is the main reason for economic growth. He also wrote in the *Economic Value of Education* published in 1963 that:

“The economic value of education is reflected in this way: people improve their ability as producers and consumers by investing in themselves, while school education is the greatest investment in human capital. The connotation of the proposition lies in that the vast majority of people's economic abilities are not innate, nor are they already possessed when they enter school; in other words, the acquired ability in this area is not trivial. Its great energy can fundamentally change the current standard of savings and capital formation, and even change the wage structure and the relative amount of labor and property income. People's perplexities in economic growth, change in wage structure and personal income can be solved after the concept of human capital is introduced.”

Gary S. Becker published the *Human Capital* in 1964. He emphasized the great importance of human capital formed through formal education and vocational training. He noted that people spend various types of education expenses for themselves and their children for both current and future efficiency and satisfaction. They are willing to pay the cost as long as the present value of the expected earning is greater than the present value of the cost. Becker analyzed the impact of human capital investment on individual's employment and economic
income, and proposed several measures for estimating the amount and earnings of human capital investment to further quantify and refine the human capital theory.

According to the human capital theory, receiving higher education is an investment with very high return. Generally speaking, there is a growing gap between the income of laborers who have received higher education and that of those who haven't received higher education. In the highly competitive labor market, knowledge and skills are core competitiveness of laborers. Parents who know the change in the labor market well are tough minded to help their children compete for the higher education resources even in the basic education stage, so that their children are competitive in the human capital market in the future.

Elementary proposition 1: The higher the return of the human capital of higher education is, the greater the demands for shadow education are, which leads to the right displacement of the demand curve.

2.2. Signal functions of diplomas

As explained by the economics theory, there may be questions about how to transmit and identify information in case of asymmetric information. It is necessary to adjust the direction of measurement when it costs too much to measure an index. In other words, measurement index with high cost is replaced by one with lower cost. For example, measure whether apples are sweet or not. The best solution is to have a bit. However, it is too costly if we bite all apples in a basket for this purpose. The rational practice is that people find out that redder apple tastes sweeter. As a result, the index to measure the sweetness of apple is changed as its color, which reduces the cost. Of course, the red and sweetness must be highly correlated. In the labor market, the information about the employer and that about employee are asymmetric. The employee has more information about his/her production capacity. In this case, it is more reliable for the employer to acquire information about the employee's ability via internship. However, it is a costly practice, as it is impossible to arrange internship for all potential employees. As argued by Michael Spence, one of winners of the Nobel Economics Prize in 2001, diploma is a signal of ability.

According to Spence, diploma delivers the signals of the knowledge and ability acquired by the diploma holder, which includes the learning ability, inter-person ability, self-discipline ability, and IQ. The employer cannot easily identify employees with higher productivity and those with lower productivity in absence of the diploma’s signal functions. As a result, highly capable employees and those with lower ability will get average salary, which will give rise to adverse selection, i.e. highly capable talents may leave the labor market. The diploma is deemed as the signal to show the ability on the following assumptions: Job hunters with higher ability can get better education than those with lower ability, and the diploma has certain correlation with the ability. The diploma is a threshold to certain extent - it may hinder the job hunters from entering some industries and/or enterprises. The threshold effect of the diploma exists for a long time even though diploma is not equal to ability and level. Therefore, the parents purchase shadow education for their children to help them get higher education diploma considering the objective signal function of the diploma.

Elementary proposition 2: The higher the signal function of the diploma is, the greater the demands for shadow education are, which leads to the right displacement of the demand curve.
2.3. Prisoner’s dilemma type vicious competition

Originally conceptualized by Merrill Flood and Melvin Dersher from RAND, “Prisoner's dilemma” was refined and christened by Albert Tucker after “prisoner”.[24] The prisoner’s dilemma is presented as a situation involving two prisoners who are taken into custody for crime, and are separated and approached individually. Each prisoner is told that if both prisoners speak up, they will both be in jail for five years. If both prisoners remain silent, they will each be given a prison sentence of one year. If a prisoner remains silent while another speaks up, the talkative prisoner will go free, while the silent prisoner will be given a prison sentence of ten years. The game matrix between them is as follows:

![Figure 3. Game model of prisoner’s dilemma](image)

Prisoner A starts to consider: if prisoner B speaks up, prisoner A will be given a prison sentence of five years if he speaks up, or a prison sentence of ten years if he remains silent. So prison A chooses to speak up. If prisoner B remains silent, prisoner A will go free immediately, or prisoner A will be given a prison sentence of one year if he also remains silent. Prisoner A also chooses to speak up after weighting the pros and cons. It can be seen that the dominant strategy for prisoner A is speaking up, i.e. It is the best response for prisoner A no matter prisoner B chooses to speak up or stay silent. This is also the case for prisoner B. Therefore, the ultimate Nash equilibrium is that both prisoners speak up (speaking up & speaking up) and receive a prison sentence of five years. However, the best result for them would be that both prisoners keep silent (keeping silent & keeping silent), as this is the best choice for preservation of their collective interests. But the latter is not Nash equilibrium and either party may change the strategy. The reason is that the prisoner who speaks up would go free immediately if the other prisoner remains silent. The result is better than one year of prison sentence. The Nash equilibrium is a combination of the optimal strategies of all participants, and a stable state. Only under the combination of “speaking up & speaking up”, both prisoners have no motive to change their current strategy. The prisoner’s dilemma inspires us that the rationality of individuals may result in the collective irrationality. Both prisoners choose to maximize their interests, but they finally reach the relatively bad situation- both of them are given a prison sentence of five years.

This can be also seen with regard to the demands for shadow education. Under this context, two prisoners are “my child” and “other children” respectively, while speaking up and keeping silent are “purchasing shadow education” and “not purchasing shadow education”. In this case, the Nash equilibrium is “purchasing & purchasing”. The parents’ rational behaviors lead to involution of education and increasing demands for shadow education.
Elementary proposition 3: Involution in education competition increases the demands for shadow education

2.4. Bias in leisure due to ignorance

The economic definition of leisure refers to doing what you like. Leisure can improve the effectiveness of consumers as consumption does.

First, the substitution effect of leisure and study. You can't have your cake and eat it. This also applies to time, an input factor. Students shall also weight between their study and leisure. The basic law of economics is diminishing the marginal returns. In other worlds, as students spend more time on study, the yield of the last unit time decreases over time, and even becomes negative. A teenager has very limited time to study effectively in a day, so it is obviously not rational logic to pursue great school performance through blind off-campus tutoring. What we pursue is happiness. Children are deprived of their rights to enjoy their innocent childhood if study becomes endless forced labor due to excess extracurricular burden. How can we compensate them? This is a group not protected by labor laws. The cognitive bias of the society and parents in leisure leads to serious shortage of leisure time for primary and secondary school students in China. (See Figure 4 and Figure 5)

x- Leisure time; y- Study time; u- Students’ equal utility curve.

![Figure 4. The equilibrium between study and leisure](image)

![Figure 5. Cognitive bias in leisure](image)
Second, the complementary effect of leisure and study. The leisure and study have the following complementary effect: First, accumulative effect of the human capital. Being given enough leisure time, students have more time to participate in recreational and sports activities, which can in turn keep them healthy and energetic, and improve their study efficiency at the same time. Just like learning by doing, learning by playing can also promote the human capital. Particularly, leisure plays a prominent role in helping form the non-cognitive abilities of human capital. Leisure activities can make people happy and in turn dramatically improve the intrinsic income and return of their work productivity, thus bringing more positive interests and welfare. Second, social competence effect. Leisure activities are commonly group activities that can improve students’ social competence and make them more competitive in the labor market. Leisure is society-oriented to a certain extent. Compared with learning at work and through regular education, learning via beneficial and valuable leisure activities are more interesting and meaningful, and can improve the knowledge level and learning ability of individuals. The quality of population and innovation capability of the society will be improved if all individuals learn via leisure activities, while innovation will improve the society’s technological level via external improvement. By participating in daily leisure activities, sports and other healthy activities, people improve not only their mental level and behavioral ability, but also their social communication and cooperation skills. Third, signaling effect. By participating in leisure sports, fitness exercises and other active leisure activities, an individual showcases his/her characters of strong learning ability, great temperament in life and love for life. It also indicates students’ good physical and psychological status, and ensures their abilities in all aspects in addition to good school performance. Ignoring the complementary effect of leisure and learning is an important reason for the continuous expansion of the shadow education.

**Elementary proposition 4:** The larger the cognitive bias in effectiveness of the leisure, the more they are willing to purchase the shadow education.

3. **RESEARCH DESIGN**

3.1 **Research Methodology**

This article innovatively uses a combination of qualitative and quantitative research methods, which uses data related to compulsory education released by the National Bureau of Statistics and the Ministry of Education platform, such as the number of training institutions, participation rate in extracurricular training, student sleep duration, and training market size, to explain the current situation and trend of rapid growth in shadow education supply in China. At the same time, incorporate this trend into the constructed theoretical model and derive the equilibrium point of shadow education from the theory. This method will more intuitively demonstrate the process of supply and demand curve changes in China's shadow education market, and will be more helpful in revealing the mechanism of its excessive equilibrium formation.

3.2 **Data Analysis**

The number of training institutions and the changes in this market size are important indicators for measuring whether the supply of shadow education has increased.
According to data from the National Bureau of Statistics, the number of training institutions in China has significantly increased since 2014, and even during the epidemic period, it still showed a strong upward trend. Correspondingly, the market size of basic training education in China has significantly expanded, from 604.3 billion yuan in 2014 to 762.8 billion yuan in 2019, which showed a slight decline in 2020 due to the impact of the epidemic (see Figure 6).

At the same time, in China, an increasing number of students in the basic education stage receive shadow education. According to the household survey data of China Institute for Educational Finance Research, in 2017, the participation rate of extracurricular tutoring of primary and secondary school students was 48.3%, and the average annual expenditure of students participating in extracurricular tutoring is RMB 5,616 per student. According to the 2020 China Family Education Status Survey Report, even during the pandemic, 60.8% of families enrolled their children in extracurricular tutoring classes. The huge market is bound to attract vast amounts of capital, which further spurs the barbaric growth of the education industry. In 2020, the education sector received the most financing (especially the online education) affected by the COVID-10 pandemic, and the shadow education industry received a total of RMB 116.4 billion of financing, RMB 103.4 billion, or 89%, of which are for online education. As the vast amount of capital enters the shadow education industry, investors began to splash the cash, place a blaze of advertisements, and bombard the society with all kinds of promotion activities. All these publicizing activities ultimately led to the rapid growth of shadow education supply in China.

Due to the increasing pressure of job competition, education has begun to internalize, and parents' expectations of improving their children's human capital have led to an expansion in the demand for shadow education, with the demand curve shifting to the right, forming the new equilibrium point E₁ for the shadow education market. At this time, the equilibrium price and equilibrium demands are both higher than the reasonable equilibrium.

Figure 6. growth of supply of shadow education

![growth of supply of shadow education chart](image)
point E₀, i.e. When the price P of the shadow education product is falsely high, its demand Q is falsely high as well (see Figure 7).

![Figure 7. Over-equilibrium emerges as the demands for shadow education increase](image)

It can be seen on this basis that the supply curve S of the shadow education will also displace rightward if the supply of the shadow education increases rapidly, which further drives the original over-equilibrium point E₁ to the twisted equilibrium point E₂. It can be seen intuitively from the figure that the demand Q has further increased even though price P of the shadow education product at equilibrium point E₂ has dropped (see Figure 8).

![Figure 8. Over-equilibrium is further intensified as the supply of shadow education increases](image)

It is a typical market failure, where the double growth of supply and demand of shadow education has led to a surprisingly huge demand, resulting in many problems. Therefore, the “Double Reduction” Policy is exactly an effective measure to correct the failure of the shadow education market. The “Double Reduction” Policy aims at reducing the demand and supply of the shadow education market simultaneously, and driving them back to the potential equilibrium point.

4. RESULTS

Over-equilibrium of the Shadow Education Market and Correction
Social problems caused by over-equilibrium of the shadow education market

Under the context of over-equilibrium caused by double expansion of both supply and demand, the huge consumption of shadow education throughout the society will surely cause series of problems and exert deleterious effect on students, families, teachers, education system, as well as the long-term development of the society.

4.1. Harming the physical and mental health of students

Studying hard every day, students suffer physical decline due to insufficient sleep and exercise, and may be attacked by various diseases commonly seen on adults, such as hypertension and diabetes, with poor physical quality and conditions. Moreover, students suffer from great mental stress in addition to the physical and mental burden in and out of school. In particular, to finish the assignments in and out school, parents and their children may have conflicts in tutoring process, which may result in tense family atmosphere. Teenagers, whether they are academically gifted or not, suffer from the great competition pressure out of line with their age. According to the data in some areas in China, over 53.95% of teenagers are detected of sub-health symptoms. The latest data indicates that the detection rate of depression among middle school students in Shanghai reaches 36.4%.[29] In recent years, the media have also reported many case of adolescent suicide, arising widespread concern and discussion. All these figures vividly show that heavy burden is very unfavorable for students’ study and growth in the future, as they have no time to approach the nature and society, know more about the world and society, and are lack of wide vision, rich knowledge, innovative thinking and ability.

4.2. Bringing heavy financial and emotional burden to families

Affected by the traditional cultural concept of “To be a scholar is to be the top of society.”, Chinese parents are willing to input vast amount of money and energy on their children’s education. According to the data of China Family Panel Studies (CFPS2018), the per capital tutoring expense for students receiving basic education is RMB 4,951.13 in 2018. Among them, that of students in eastern China (RMB 6,707.57), junior school students and regular senior middle school students (over RMB 7,000) was much higher than the average level of students of all ages throughout China. In reality, many parents would rather set their mind at rest with much money even though they clearly know that the loss outweighs the gain. The expenses for shadow education are even more inconceivable in reports of some media, “In many cities, a family cannot even catch up with the mean line even it pays more than hundred thousand for child’s tutoring classes a year.”[31] Moreover, poor school performance of students further worsens the family atmosphere, intensifies the anxiety and increases the tension with family members, dramatically reducing the family happiness index. The heavy burden of education has also become a vital factor to be considered by many families in their fertility decision-making.

4.3. Corroding the teaching teams and harming the image of teachers

Teaching is rated as “the most sacred cause under the sun” and teachers are honored as engineers of the human soul. However, the over-equilibrium of the shadow education market corrodes the teaching teams. Some teachers have acted against teachers’ code of conducts, laws and regulations for illegal profits. For example, to
earn more interests and attract more students, some in-service teachers cut corners and treat students differentially in normal teaching, thus forcing students to participate their paid extracurricular tutoring. Teachers in mainstream schools have enough strength to give shadow education, but are weak in their normal school education. They give students rich and enough contents in off-school tutoring classes, but intentionally reduce the contents delivered in school classes. As students understand the knowledge to different degrees due to off-school tutoring, it makes classroom teaching in schools even more difficult. Some teachers explicitly or implicitly instruct students to participate in tutoring, harming the overall image of teachers in schools.

4.4. Affecting the normal development and operation of regular education system

Furthermore, over-equilibrium of the shadow education market destroys the ecology of the regular education system, distorts much common sense, systems and norms of regular education, and leads the normal operation of the regular education system to the track of vicious development. First, it undermines the regular education system. Off-school tutoring institutions, mainly subject-oriented tutoring, are exam-oriented, which in turn further strengthens the utilitarian feature and weakens the training function of basic education. Specifically, teaching beyond the schedule and syllabus disrupts the normal rhythm of knowledge imparting in the classroom. To attract more students, all kinds of tutoring institutions play up their role in improving students’ school achievements, downplay the achievements of schools in training students, and compete with schools for high-quality teachers. Second, it distorts the regular education system. As the scale of shadow education expands, the regular education system begins to co-exist with it by exploring many specific forms of cooperation. Such cooperation satisfies the needs for inter-school competition on the one hand, and adapts to the compliance requirements of the regulatory authorities on the other hand, which makes it even difficult to put in place the policies to ease burden. The expansion of shadow education brings out new schooling modes like “school-oriented tutoring institutions” or “tutoring institution-oriented schools”, further distorting the order of the education system and giving birth to all kinds of chaotic phenomena.

4.5. Damaging the potential of social development and aggravating the imbalance of population structure

The essence of the far-reaching influence caused by over-equilibrium of the shadow education market is actually the function imbalance of the education system, which will, in turn, hinder the healthy operation of the whole social system. Some scholars hold that the education system functions to cultivate and screen talents. The two functions are indispensable, and may focus on different aspects in different education stages. However, people often attach more importance to the screening function of the education system under the existing talent selection mechanism. The off-school tutoring dramatically strengthens such utilitarian nature and even spreads it to the basic education stage which would focus more on cultivation. The social harm of the over-equilibrium of the shadow education market is mainly in two aspects. First, it harms the potential in economic development. Shadow education disrupts the balanced development of students in basic education stage, intensifies the clustering of quality education resources, and greatly squeezes the development space and affects the social evaluation of the rural and secondary vocational education, giving rise to the structural problems of supply and demand in the labor market. Second, it intensifies the imbalance of the population structure. The great education
cost, a considerate part of which is for shadow education, will reduce the fertility desire. Ultimately, many families may decide not to raise child, thus further intensifying the sub-replacement fertility.

5. DISCUSSION

The previous parts expound the mechanism for over-equilibrium of the shadow education market, as well as the harms caused by the over-equilibrium. This helps us recognize the importance and pertinence of the “Double Reduction” Policy in a more clearly manner. In this paper, the author holds that the “Double Reduction” Policy focuses on the source of over-equilibrium of the shadow education market, and precisely offers solutions from two aspects by correcting the excess demand and excess supply of shadow education, thus achieving the “systematic, law-based and source-oriented governance and integrated troubleshooting” of several social problems caused thereby.[34]

5.1. Correction of excess supply

To reduce the excess supply of shadow education, the “Double Reduction” Policy follows the basic logic of “Advancement and Withdrawal.” “Advancement” means that efforts are made to give full play to the dominant role of the regular education system, improve the quantity and quality of after-class services of schools, and provides students with more education services in school rather than forcing them to purchase shadow education. Studies have proved that after-class services provided by schools can promote the equality of educational outcomes.[35] This is vividly represented in Part III “Improving the Level of Schools’ After-class Services and Satisfying Diverse Demands of Students” of the Opinions, which puts forward higher requirements for the duration, quality, channels and online services of the after-class services provided by the regular education system. In practice, schools in various places have continuously explored multiple measures, including “flexible work time”, “extended student supervision services”, and introducing retired teachers and volunteers for supplement.

On the other hand, “withdrawal” refers to withdrawing the capital from shadow education market in the compulsory education stage by administrative means. Specific measures include stopping approving new tutoring institutions, changing the nature of existing shadow education institutions (registered as non-profit institutions), preventing subject-oriented tutoring institutions from listing and financing, enhancing the efforts in regulation of violations of the shadow education institutions, raising stricter requirements on qualifications of training staff, contents of training materials, training time and behaviors, etc. All these requirements are highlighted in Part IV “Adhering to Strict Regulation and Regulating the Off-school Tutoring” of the Opinions. Immediate results are achieved once these requirements are put in place, greatly curbing the barbaric growth of the capital and effectively reducing the excess supply.

5.2. Correction of excess demand

Long-term and systematic regulation is needed to correct the excess demand in the shadow education market, which cannot be done overnight. The reason lies in that excess demand is formed under the basic pattern of social development and human capital competition and is affected by the objective population and resource
conditions existing for a long term, as reflected by the four aspects previously mentioned. Therefore, compared with the correction of excess supply, the correction of excess demand shall be aimed at the long-term correction, with the policies and financial resources allocated to safeguard the compulsory and vocational education. Considering the contents and practical measures, the “Double Reduction” Policy works for the governance of sources for excess demand of the shadow education market.

In Part II “Reducing the Quantity and Duration of Homework, and Easing the Burden of Students” and Part V “Improving the Education and Teaching Level, and Ensuring Students’ Study in Schools” of the Opinions, great importance is given to the physical and psychological health of students, the comprehensive talent cultivation is advocated, and the important role of “leisure” is highlighted. With regard to breaking the vicious competition in the compulsory education stage, two effective measures are proposed in the “Double Reduction” Policy to reduce the vicious competition in enrollment, i.e. “advancing the high-quality and balanced development of the compulsory education” and “deepening the reform in enrollment of senior high schools. Moreover, many new policies have been launched recently to match with the “Double Reduction” Policy with a view to solve the excess demands of the shadow education market even though they are not covered by the Opinions. For example, the building of modern vocational education system is advanced to enhance the return of human capital investment for vocational education, and the scope of application of diploma of vocational schools is expanded to eradicate the narrow-minded diploma signal. A series of policy systems covering the “Double Reduction” policy will be bound to comprehensively correct the excess demand of the shadow education market.

6. CONCLUSION

Considering all the above, it is necessary to draw conclusion for main viewpoints, clarify possible misunderstandings, and consider problems to be solved in practicing the “Double Reduction” Policy in the future.

In this paper, the author holds that many problems of the basic education sector are caused by over-equilibrium of the shadow education market, while the “Double Reduction” Policy can effectively correct such problems. The said over-equilibrium is caused by the excess demand and excess supply of shadow education. Reasons for excess demands for shadow education include high return of higher education, signal effect of the diploma, collectively irrational vicious competition of tutoring due to individual rationality, and one-sided talent development idea. The excess supply of shadow education is mainly caused by lack of effective regulation of capital in the shadow education market. All these factors jointly lead to the over-equilibrium of the shadow education market, harming the students, families, teachers, education ecology, and even the healthy operation of the whole social system. The governance effectiveness of the “Double Reduction” Policy lies in that the excess supply and excess demand of shadow education are curbed in a targeted manner, achieving the systematic, law-based and source-oriented governance. Finally, the following reflections are made about the future of the “Double Reduction” Policy:
First, the “Double Reduction” Policy is of far-reaching significance, which not only works for problems discussed in this paper, but also applies to some market failures in the basic education sector in addition to easing the parents’ anxiety. Instead, it is an epoch-making change aimed at promoting the education equality and advancing development with equality in order to achieve high-quality development under the context that China's economic and social development faces great pressure. Therefore, the “Double Reduction” Policy shall be treated from the perspective of national rejuvenation. It matters the lasting development of the state and national rise and fall as the poverty alleviation and environmental protection policies do. According to literature, the overinflated shadow education always exist side by side with regular education system in many backward countries, especially some populous countries (e.g. Japan, South Korea, India, etc.) facing pressure of enrollment. The shadow education market lives on cutthroat competition among students and has been repeatedly banned, but never ceased. As a result, the government has to let it drift. China will surely present the world the Chinese wisdom and proposal worthy of reference, and make great contributions to the education undertaking in China and even the whole world, if it can work out its own path to eliminate the vicious competition in basic education and promote the education equality by leveraging the systematic, comprehensive and source-oriented governance system represented by the “Double Reduction” Policy in the face of diverse difficulties.

Second, it must be clear that, in this paper, the author holds that the “over-equilibrium” of the shadow education market is not one of series problems caused by the market itself. Therefore, the important role of the “Double Reduction” Policy shall be reflected in correcting over-equilibrium of the shadow education, rather than wiping out the market. Admittedly, shadow education may enlarge the gap of educational resources between different social classes and different regions, and aggravate intergenerational inequality. However, compared with allocating educational resources based on non-market rules (such as administrative level or residential area), we should still adhere to the basic position of the market in resource allocation. Particularly, we should know how to recognize the capital. The active role of the capital as an important production factor has been proved by 40 years of practice after the reform and opening up. Therefore, it is necessary to have a correct recognizing and grasp of the characteristics and laws of capital. Although vast amount of capital has flooded in the shadow education market and resulted in excess supply, it can still improve the efficiency of the basic education if capital is strictly regulated, prevented from entering monopolies and vicious competition, and market means are moderately used to promote the rational development of training institutions to survive the fittest.

Third, it should be noted that there will be a period of time to witness the effectiveness of the “Double Reduction” Policy in correcting excess supply and excess demand after it is implemented. Among them, policies for excess supply are more specific and practical, so they can be implemented rapidly with immediate effect, while macro and long-term policies are needed for excess demands, so it is an enduring process. Therefore, the gap of timeliness of these two kinds of policies may result in another kind of over-equilibrium of the market. The market forms equilibrium at point E due to the excess supply and excess demand of shadow education, as shown in Figure 7. In this case, if measures are taken to reduce supply (curve D displaces leftward) without effectively reducing the demands (curve S does not displace), the new equilibrium point E will be formed. 

this time, the equilibrium price $P$ further increases even though the equilibrium demand $Q$ of the shadow education decreases. Considering the actual conditions, if the excess demands of the society for shadow education keep unchanged, there may be more covert and expensive off-school tutoring if policies are launched to reduce the supply of shadow education, which may exacerbate the inequity in allocation of educational resources. This is worthy of vigilance.

In addition to the above, there are also many topics worthy of research and discussion: how to regulate and standardize the shadow education market in the non-compulsory education sector (e.g. senior high school education), how to guide large number of education and training practitioners to transit after the “Double Reduction” Policy is put in place, and how to migrate the risk that the tutoring institutions collect fees in advance, etc. It is believed that there will be more achievements in the influence, effect, summary of gains and losses, horizontal comparison and other aspects of the educational reform launched this time, which will keep deepening the understanding of the objective laws of the basic education in China. Under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics, the implementation and improvement of the “Double Reduction” Policy will surely refresh the basic education pattern in China and empower China’s building of the high-quality education system.

REFERENCES


