

The implementation of the "Double Reduction" policy brings changes to the education and training industry

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Abstract. Homework is an important part of school education and teaching management, but some school homework is of large quantity and low quality, which cannot achieve the expected effect. On July 24, 2021, the general office of the CPC Central Committee and the general office of the State Council officially issued the opinions on further reducing the burden of homework and after-school training for students in compulsory education. The policy clearly aims to reduce students' heavy homework burden and further improve after-school service level; comprehensively standardizing off-campus training behavior; improving the quality of school education and ensuring that students learn fully in school. And in the context of the epidemic, many companies have suffered losses. Based on the classification of relationship interests, this study discusses the factors and results that affect the education and training industry from the perspective of the "Double Reduction" policy and the dual subject relationship of the education and training industry. On this basis, a conceptual model and assumptions are proposed. Taking the "Double Reduction" policy as the independent variable and the epidemic as the adjustment variable affecting the education and training industry, this paper measures the different effects of the "Double Reduction" policy on different education and training companies.

Keywords: "Double Reduction" Policy, Education and Training Industry, Students' Pressure.

1. Introduction

Homework is an important part of school education and teaching management and a necessary supplement to classroom teaching activities. But the problem is that some school homework has too much quantity, low quality, and alienated functions, which cannot achieve the effect of reviewing the past and learning the new, but also takes up students' normal exercise, rest, and entertainment time [1]. For a long time, compulsory education schools, especially elementary schools, have been dismissed at "3:30". The original intention of this policy is to reduce the burden on students, but unexpectedly, the burden on school will be reduced and the burden will be increased outside the school, and the increased burden outside the school is out of control. On July 24, 2021, the General Office of the Central Committee of the Communist Party of China and the General Office of the State Council formally issued the "Opinions on Further Reducing the Burden of Compulsory Education Students' Homework and Off-campus Training" (hereinafter referred to as the "Double Reduction") [2]. This policy proposes several important measures for off-campus training companies and stipulates that off-campus training companies shall not occupy national statutory holidays, rest days, and winter and summer vacations to organize subject training [3]. Clarified the specific goals including reducing the burden of students' heavy homework and further improving the level of after-school service; comprehensively standardizing off-campus training behavior; improving the quality of school education to ensure that students are adequately and well-learned in school. And in the context of the epidemic, many companies have already suffered losses [4]. Therefore, the "Double Reduction" policy seems to be the last straw to overwhelm the already competitive education and training industry. Overnight, various discipline-related education and training companies have closed, and teaching and training personnel have resigned, and the capital market has become empty. The subject education and training industry seems to have come to the end of the industry. Most subject education and training companies have shifted their business, and the corresponding non-disciplinary education and training seem to usher in a new period of the outbreak [5].

2. Model Construction

2.1 Conceptual model

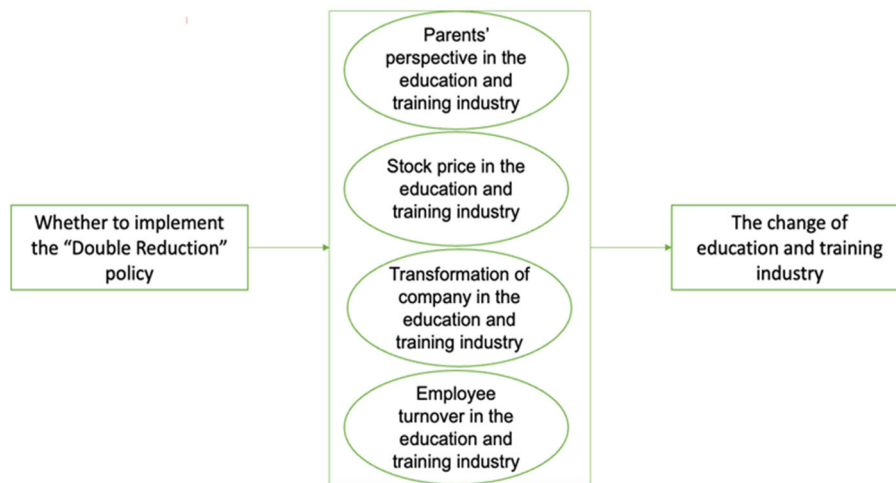


Figure 1 Conceptual model

Based on the classification of relationship interests, this study explores the factors that affect the education and training industry and its results from the perspective of the "Double Reduction" policy and the dual subject relationship of the education and training industry. Based on this framework, a conceptual model and hypotheses are proposed [6]. Taking the "Double Reduction" policy as the independent variable and the epidemic that affects the education and training industry, to measure the different effects of the "Double Reduction" policy on different education and training companies [7]. The research model reflects the interaction between the above variables, as shown in Figure 1.

2.2 Hypothesis

In the face of fierce competition in examinations and comparison of academic performance, parents have a strong awareness of children's education and training. Last year, education and training expenditures accounted for more than housing and became the first expenditure, with an average of ¥44,000 in first-tier cities [8]. Parents had made child training and counseling their top priority, which had led to the brutal development of all education and training companies, and the education and training industry had become a gold-absorbing stone. After the "Double Reduction" policy came out, scholars believed that parents' perspective of teaching training and counseling would become healthier, and they would no longer pay attention to examination results, and their children's concept of school counseling would be weakened [9]. However, some scholars believed that this will not have much effect or have a little negative effect, because the selection system in China has not changed, which will result in the parents' perspective of education and training will not change. Based on this, this article proposes the following hypotheses:

1) The "Double Reduction" policy has a positive impact on parents' perspective of education, training, and guidance.

The stock market is the "barometer" of the economy [10]. The stock market is a window that reflects the state of the national economy. The rise and fall of the stock price in turn also affect the quality and speed of the national economy. The health of the stock market is of great significance to the economy (Yuan, 2008). Before the "Double Reduction" policy was promulgated, the capital market financing amount exceeded ¥144 trillion in the first half of 2020, an increase of 275%. The education sector was also growing savagely [11]. The market value of the three education giants exceeded one trillion yuan, and the stock price was even as high as \$149. After the policy was promulgated, some experts put forward the "stage effect" of the policy. It is believed that the education and training stocks will not fluctuate too much, and consumer confidence is still there [12]. However, this is a heavy blow against the education and training industry, and it will definitely

influence major shocks to the education and training sector. Based on this, this article proposes the following hypothesis:

- 2) The "Double Reduction" policy has a significant negative impact on the stock prices of education and training companies.

On July 24, 2021, China promulgated the highest-level "burden reduction order" in history [13]. The promulgation of the "Double Reduction" policy marked a new historical stage in the management of school burdens in primary and secondary schools. Although this seems to be just an ordinary event in educational affairs, in connection with the previous burden reduction orders since the founding of the People's Republic of China, you will find that the problem of schoolwork in primary and secondary schools has a strong vitality in China's education system, and it is leading to the bottleneck of the current involution of China's compulsory education. There have been five major "burden reduction orders" in the history of education in China. In 1955, they were mainly aimed at the disorderly operation of teaching work. The year of 2021 will be for the entire education ecology and vigorously rectify the off-campus training industry [14]. At present, the academic burden virus of primary and secondary school students in our country is rampant, and the virus of over-education concept is rampant, and viruses such as overwork competitions, advanced make-up competitions, and out-of-school training class comparisons are raging, providing a breeding ground for the crazy development of education and training companies. Before the promulgation of the "Double Reduction" policy, there had been a net increase of 340,000 education and training companies across the country in 2020, and the total number exceeded 3 million. Although the rapid development has been sustained for many years, the growth rate still reached 22.5%. Educational companies have a single business, concentrated on the K12 industry. One business supports the entire market and has quite amazing profits. The "Double Reduction" policy is aimed at the business of extracurricular tutoring [15]. All teaching and training companies will be hit hard, but some researchers have also raised objections, believing that this will optimize the business types of teaching and training companies and make the business of companies more diversified. Based on this, this article proposes the following hypothesis:

- 3) The "Double Reduction" policy has a positive impact on the business types of education and training companies.

Due to the inflow of huge amounts of capital, the wages and benefits of practitioners in the education and training industry are very high, and they have always been accustomed to a high-salary environment. Last year, there were tens of millions of employees in the teaching and training industry, and it became the first choice for many college graduates, even graduates with high degrees such as postgraduates. With the influx of talents from all walks of life, the education and training industry boomed. However, after the "Double Reduction" policy is promulgated, with the withdrawal of capital and the country's strong suppression, education and training practitioners will face a crisis of unemployment [16]. Based on this, this article proposes the following hypothesis:

- 4) The "Double Reduction" policy has a significant negative impact on the talent changes of education and training companies.

2.3 Methodology

By referring to related research on impact in other fields, our team summarize two dimensions that are widely used to study impact: the comparison of stock prices over the same period, the turnover rate of employees in related industries, and innovatively proposed two research impacts. Dimension of: The change in consumer perspective and the change in the development direction of related companies [17]. Therefore, we will measure the changes in the education and training industry under the double-down policy through four dimensions: consumer perspective (parents), stock price changes over the same period, business types, and employee turnover in the education and training industry.

2.3.1 In terms of parents' perspective in the education and training industry

An online survey was conducted parents through wjx (www.wjx.cn) and weibo (www.weibo.com), popular online survey platforms which maintain connections with many parents in China[18]. We collected 1250 questionnaires from 2021.01.14 to 2021.10.23 through the method of the questionnaire survey, which has 2500 data on consumers' perspectives. Each questionnaire can be divided into two parts of data, which are the parents' perspectives before and after the "Double Reduction" policy. We use "0" to express the perspective of parents before the "Double Reduction" policy, and "1" to express the perspective of parents after the "Double Reduction" policy. Average is the average numerical estimate of parents' perspective toward the education and training industry before and after the "Double Reduction" policy. 40 questionnaires were invalid and were eliminated. This resulted in a final sample of 1210(response rate 96.80%). All questionnaires used the Likert five-point method, 1 means lowest, 5 means highest [19]. Parent types were divided into five categories and valid respondents are members of various parents, as shown in Table 1:

Table 1 The survey group segmentation about Parents' perspective

Survey group classification (Total number of respondents: 1250 parents)	Survey group segmentation
Educational level of children	Primary school: 750 parents (60%) Junior high school: 400 parents (32%) Senior high school: 100 parents (8%)
Family year income	Family year income \leq ¥24000: 50 parents (4%) Family year income $>$ ¥24000 and \leq ¥60000: 150 parents (12%) Family year income $>$ ¥60000 and \leq ¥120000: 300 parents (24%) Family year income $>$ ¥120000 and \leq ¥300000: 350 parents (28%) Family year income $>$ ¥300000 and \leq ¥500000: 250 parents (20%) Family year income $>$ ¥500000: 150 parents (12%)
Family living area	Urban: 1150 parents (92%) Non-urban: 100 parents (8%)
Children's grades	Academic performance belongs to the top 20% of the class: 100 parents (8%) Academic performance belongs to the 20%-40% of the class: 500 parents (40%) Academic performance belongs to the 40%-60% of the class: 250 parents (20%) Academic performance belongs to the 60%-80% of the class: 200 parents (16%) Academic performance belongs to the last 20% of the class: 200 parents (16%)
Respondent's education level	Junior high and below: 200 parents (16%) High school, technical secondary school: 250 parents (20%) Bachelor: 200 parents (16%) Master: 500 parents (40%) Doctor or above: 100 parents (8%)

2.3.2 In terms of stock price in the education and training industry

We collected data from 54 listed education companies (108 data in total) about the average share price change of July, August, and September of 2020 and 2021 of education and training companies related to Chinese stocks, U.S. stocks and Hong Kong stocks from Straight Flush (www.10jqka.com.cn), which is an online stock and securities trading analysis software, can conduct data analysis on this basis, and use these data to measure the same period last year and this year's stock price changes and Investors' willingness to invest in the education industry.

2.3.3 In terms of transformation of the company in the education and training industry

The main data about financing amount through the www.199it.com, which was collected on 67 different companies about educational training. We divide them into two parts which is whether the "Double Reduction" policy is implemented or not. We use "0" to express the financing condition of companies before the "Double Reduction" policy, and "1" to express the financing condition of companies after the "Double Reduction" policy. Here is the presentation of our results (Table 2). A popular Internet data consulting platform that contains many experts in different parts of the industry. We search the more detailed data from the official websites of every major company and use their financing scale to reflect the transformation of the company.

Table 2 Transformation of companies

Subject training companies	
Transformational choices	Carrying out quality training such as sound, sports and beauty
	Facilitating community service in school
	Doing a good job of supplementing the delayed service after class
	Using educational technology innovation and new business forms and new models to integrate into school education
	Guiding family education and implementing family education consulting services for parents
	Carrying out subject training for high school students
	Carrying out literacy training and vocational skills training for adults
	Promoting the revitalization of rural education
	Expanding the opening up of education

2.3.4 In terms of employee turnover in the education and training industry

We used employee turnover of related education and training corporations' data from 2021 Education and Training Industry Talent Market Analysis Report and Zhilian Recruitment Online Database 2021(www.zhaopin.com), the report calculated by the Zhilian database, one of the most reliable and authoritative recruitment information platforms in China., which introduces the changes in the number of employees in the company. The total of 114 turnover data from listed education and training corporations are collected, but 10 turnover data lack comparison data before the "Double Reduction" policy is introduced, so they were excluded. This resulted in a final sample of 104 datum (effective data rate 91.2%). The selected listed education and training companies come from different stock exchanges, A-share listing (www.sse.com.cn), U.S. stock listing (www.nyse.com) and Hong Kong stock listing (www.hkex.com.hk). And the business types of these companies are also different, K12, adult education, etc. [20]. Then the implementation of the independent variable "Double Reduction" policy is represented by 0 (policy not implemented) and 1 (policy implementation). There is no employee turnover rate of 100% in the data of all listed education and training companies [21]. We refer to the data statistics time of the Zhilian Talent Report (March and July), because in March all the education and training companies have not been affected by the "Double Reduction" policy, and some of the "Double Reduction" policies have been implemented since April. The July policy officially took effect. We use a ten-point Likert scale to evaluate the changes in employee turnover, dividing the employee turnover rate (100% to -100%) into ten equal scales, each ranging from 20%, as shown in Table 3.

Table 3 the employee turnover rate of education and training companies

Code	Turnover rate
1	100~80% (excluding 80%)
2	80~60% (excluding 60%)
3	60~40% (excluding 40%)
4	40~20% (excluding 20%)
5	20%~0 (excluding 0%)
6	0~-20% (excluding -20%)
7	-20~-40% (excluding -40%)
8	-40~-60% (excluding -60%)
9	-60~-80% (excluding -80%)
10	-80~-100% (excluding -80%)

3. Model solution

Table 4 The table of Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.436a	.190	.187	.688
2	.567a	.322	.316	12.586%
3	.727a	.529	.525	.717
4	.815a	.664	.661	.766

a. Predictors: (Constant), Whether the "Double Reduction" policy is implemented or not
 Note: Model 1: Parents' perspective; Model 2: Stock price; Model 3: Transformation of companies; Model 4: Employee turnover

The model summary table (Table 4) reports the strength of the relationship between the model and the dependent variable. R, the multiple correlation coefficient, is the linear correlation between the observed and model-predicted values of the dependent variable. Its large value indicates a strong relationship. Square, the coefficient of determination, is the squared value of the multiple correlation coefficient. Adjusted R Square is a "corrected" R Square statistic that penalizes models with large numbers of parameters. The smaller the value of Std. The error of the estimate the closer are the dots to the regression line and the better is the estimate based on the equation of the line [22].

Model 1(Parents' perspective): According to the Model 1, R Square is .19, the model fitting effect is better. Adjusted R Square is .187 (model quality score for model fit and complexity). The Std. Error of the model is .68802. It shows a certain correlation appears between the "Double Reduction" policy and the Parents' perspective. The results show that it is consistent with hypothesis one.

Model 2 (Average share price): According to the Model 2, the R>.567 and R Square>.100 indicate fitting degree is good. Std Error of the Estimate is 12.586%. It shows a certain correlation appears between the "Double Reduction" policy and the stock market. The results show that it is consistent with hypothesis two.

Model 3 (Company transformation): According to Model 3, R Square is .529 which represents the fit explained approximately 53% of the variation in the dependent variable, and 47% did not. It shows a certain correlation appears between the "Double Reduction" policy and the company transformation. The results show that it is consistent with hypothesis three.

Model 4 (Employee turnover): According to Model 4, R square=.664 indicates that the regression model can explain 66.4% of the variance of the dependent variable (the employee turnover of the education and training company), and the fit is good. Adjusted R squared is called the correction coefficient of determination, we can find adjusted R Square is .661, it expresses the degree to which the independent variable explains the variation in the dependent variable. The results show that it is consistent with hypothesis four.

4. Conclusions

In conclusion, the study makes four propose and through the parents' concept, stock price, company transformation and employee turnover these four parts to prove there is a deep relationship between the "Double Reduction" policy and education and training industry. Actually, the research still has several flaws. For example, these months education and training companies still suffer from the COVID-19 and it will more or less influence the education industry. We can't ignore its influence but its influence is unpredictable and erratic so the fact may have a difference. But we hope the theory of research may provide some revelations for posterity and the managers of government and education industry could anticipate the future trend to make some decisions according to the research.

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