A Study on the Influence of "Shadow Education" about the Students' Achievements Moderated by the Parents' Expectations in China

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Abstract: "Shadow education", also known as "tutoring" or "private tutoring", is a kind of education style outside of the mainstream official school education, and constantly changes along with the school education above mentioned, it's same as the shadow keeps close to the body, so just called "shadow education". When there are more advocations of reducing the learning burden of the schoolchildren last several years, but on the other hand the demands for"tutoring " have soared in China astonishingly. Because the supplies of "shadow education" is supported practically from the parents in China,this study researches for the influence of "shadow education" about the schoolchildren's achievement moderated by the parents' expectation, by the ways of the adoption of the data from 2013 to 2014 on Chinese family dynamic tracking from the database of ChineseFamilyPanelStudies(CFPS) ,also continuly uses "sample regression" and "threshold effect" to analysis, the conclusions of this study are,it's a significant impact between "shadow education" expenditure and the schoolchildren's academic performance, the shadow education expenditure increase1,000 RMB, schoolchildren's academic performance can increase relatively 0.246 standard deviations. The sample regression about the moderating effect shows there is a moderating effect between the parental education expectations and the schoolchildren's academic performance, shows a positive moderating effect on the whole.The older schoolchildren have the better performances and the greater effects from the shadow education,also the older the schoolchildren are, the better their grades will be, there are threshold effects between the parental education expectations and the schoolchildren's academic performance generally. The results of the "threshold regression" based on the "threshold value ", show that when parents' educational expectations are greater than the "threshold value" and the parents' expectations are less than the "threshold value", "shadow education" expenditures have a significant positive impact on the schoolchildren's academic performance, but the parents' expectations are less than the "threshold value" of the "sample regression", the coefficient is greater, the degrees of positive influence are more greater. It's obviously different "shadow education" expenditure on the schoolchildren's academic performance between urban and rural ,there are the increase in parental education expectations has a greater moderating effect on increasing "shadow education" expenditures to improve the schoolchildren's academic performance in rural areas. It is also found that "shadow education" expenditures will improve the schoolchildren's academic performance , the parental education expectations also give play to positive regulatory effects on the input & output of "shadow education" too. "shadow education"and "school education"still keep a certain complementary effects in this time.Finally,this study will put forward some opinions & suggestions for the governments, schools, families in China.

Keywords: shadow education、student performance、parental education expectations

1. Introduction

1.1The research background

In our family has always attaches great importance to the performance of children, for our children's achievement and entrance are closely linked, according to the 2019 domestic households children education investment shows that family education spending accounts for fifty-two percent of the total household expenses, second only to the family daily expense and rental costs and expenses of the rent of household expenditure on education from parents expectations of children, "high", "looking at a less-pressured" is every parent's expectations, expect their children can get a good result, can have a great future (Zhang Qiling,2019),So how can let the child in the limited public education resources more quickly improve their children's grades, the door to future success towards the ideal school, then parents will choose tutoring for children, so the extra-class continuation education comply the fire, according to incomplete statistics, primary and secondary school tutoring market size of more than 80 billion yuan, the education and training industry market size of more than 800 billion yuan (queena, ZuoRui jia, etc., 2019), in 2014 CFPS2010 and CFPS data survey found thatIn "over the past year the after-school tutoring participants, 20.5% which means every 5 3-18 people, there is one in the recent years bought a tutoring service (hai-ping xue, 2016), extra-class continuation education rapid development behind many problems worthy to be discussed in this context, this article from the Angle of parents to the child's education expect to explore.

1.2Research purpose

1.2.1 Discuss the influence of shadow education on students' performance.

1.2.2 Discuss the influence of parents' educational expectations on shadow education.

1.2.3 To explore the mediating effect of parents' educational expectations on students' performance in shadow education.

1.3The research question

1.3.1 How does shadow education affect students' performance?

1.3.2 How do parents' educational expectations influence the choice of shadow education?

1.3.3 What is the mediating effect of parents' educational expectation on students' performance of shadow education?

1.4Noun explanation

1.4.1The shadow education

Buck (1991) explained that it is a behavior of parents to lay a foundation for their children's future based on their own life experience and knowledge. In this paper, parents' educational expectation refers to parents' hope that their children can have a better future.

1.4.2Education expectation

Shadow education, also known as extra-curricular tutoring or private tutoring, is defined as an education that is attached to the mainstream school education and constantly changes with the mainstream education. It is a shadow of the mainstream education, so it is called shadow education (Bray, 2010).In order to be more precise in this study, the definition of "shadow education" has been narrowed down to fee-paying academic subjects such as languages, mathematics, and Chinese, and other examinable subjects, but not music, art, or physical skills, as it is primarily for entertainment or a more comprehensive form of personal development.

2. Literature review

2.1The influence of the choice of shadow education on their academic performance

Survey data shows, the shadow education on standardized test scores are always has a statistically significant effect, that is to say, the shadow education to buy, the more the achievement of the students will have more and more high (Kim, 2015, Bray, 2014) but also have the choice of shadow education according to the survey data on its study into no, have a reverse effect even for a course grade, buy more shadow education his grades would be worse (Smyth, 2008, KUAN&PING, 2011, Cheo&Quah, 2005) discovered by reading literature,Because the problems involved in the investigation or the questions raised are different, such results will appear. Moreover, the research direction of these studies is relatively broad, so the research direction of this paper is to observe and study from the perspective of parents' expectations.

2.2Parents' educational expectations about their choice of shadow education

If you want to understand parents' expectations for the selection of shadow education, we can from the following several aspects to observe, in 2018 the Ministry of Education issued by the measures for primary and middle school students during the notice, the school must carry on the planning and management to reduce the burden, increase in the number of spare time when to ease the burden on students students, parents, in order to be able to achieve expected will likely in children more free time to choose the shadow education (wise, 2019), so alleviating measures release is parents choose an important cause of shadow education.Another important reason for influencing the choice of shadow education comes from the "mass effect". In today's fierce competition for educational resources, parents are easily influenced by the surrounding environment and then choose shadow education, which is actually a typical subweighting effect (Byun&Baker,2015).Education competition pressure increases, the child's entrance problem has been with us, the parents are hope our children can get better education, quality education resources are limited, however, in order to limited, and we are the mainstream of the education resources and dissatisfaction all requirements, under pressure from the parents to choose the extra-class continuation (Zhang&Bray, 2017).

2.3The influence of parents' educational expectations on students' achievement

The expectations of parents, is parents through accumulated certain experience in social culture and thought or did not succeed in doing things, want to be passed to their children, this is the parents' education expectation (Yamamoto&Holloway, 2010) from the Angle of the theory of social status, go to the parents' education expectation, in a social position higher levels of parents, in order to be able to let the children in the future to continue at the top echelons of the social hierarchy, so they gave high expectations (Utomo, 2017), from the focal point of view, parents' education expectation is to focus on the student's grades or students to gain the

highest institution of higher learning,So the role of parents' education expectation to the child academic record, after decades of research have been recognised by the, psychologists and sociologists and gave a lot of attention, the higher the parents' education expectation will have the higher scores, will also make it easier to enter the ideal school, (Long&Pang, 2016).The influence of parents' educational expectations on students' achievement.

3. The research methods

3.1Source of data

This study is to use CFPS (Chinese family dynamic tracing survey) data in the database, the CFPS are by Beijing university, Chinese Academy of Social Sciences research center, its purpose is to map the modern Chinese society, culture, economy, education and so on characteristics, the change of a certain accuracy and science, in 2010, the organization of many cities across the country will survey plan implementation, will investigate expanded to sixteen thousand households, adopt the method of tracking survey every two years, increase the frequency of updates.The materials and data used in this paper are family questionnaires, adult questionnaires and children's questionnaires in CFPC data from 2013 to 2014. Due to incomplete data, we matched and screened family data, children's data and adult data, and finally got 3888 complete samples.

3.2Explanatory variables

3.2.1Students' academic performance

Explanatory variables in this study is the students' Chinese, maths scores with CFPS2013-2014 children in the questionnaire for 10 to 15 years old students has carried on the investigation and survey, the parents to report the child -- Chinese and math scores (optimal assignment "4", a good assignment assignment "2" in the "3" assignment "1"), we add those two performance variables such as weight, make it on behalf of the students' academic performance.

3.2.2The cost of shadow education

The CFPS2013-2014 survey adopted in this paper describes the expenses of after-class tutoring and tutoring in the past 12 months, which we regard as shadow education expenses and as the main explanatory variable.Shadow education corresponds to the training and counseling part of CFPS2013-2014 Children's Questionnaires. Relevant staff of CFPS divides families' consumption in children's education into two categories, one is selective education consumption and the other is non-selective education consumption.Extracurricular tutoring activity belongs to selective consumption.

3.2.3Educational expectations of parents

This study used a survey to ask parents: "what level of schooling do you want their children to complete at least?" The answers were elementary school, middle school, high school, associate's college, bachelor's degree, master's degree and doctor's degree.According to the answer results, we assign the expectation below high school as "0", which means that parents have low expectations for their children's education.The expected result of junior college or university degree is assigned as "1", which means that parents have moderate expectations for their children's education. The expected result of master's degree or above is assigned as "2", which means that parents have high expectations for their children's education.

3.2.4Other background variables

According to the questionnaire, we select other background variables: personal background variables include: students of census register seat (including rural value of "0", the city value of "1"), the students' gender (female value of "0", the male assignment for "1"), the education of students reading stage (the primary value of "0", middle value of "1"), and family background variables for the parents, the number of children in parents' education, family education time;Characteristics of background variables including school location (rural reading is set to 0, the rural setting to 1), the school is a key school (school (focus on the value of "1", set the non-key school as "5") whether students in the major work class (at major work class value of "1", the major work class assignment for "3"school "is part of the key and the key value of" 5 .

3.3Descriptive statistics

As can be seen from the statistical analysis in Table 3.1, the sample proportion of male students is 53% and that of female students is 47%, so the sample proportion of male students is higher than that of female students. From the perspective of urban and rural distribution, the proportion of urban students is 64%, while that of rural students is only 36%.From the distribution of key schools, 75% of the students attend non-key schools, and 25% of the students attend key schools.From the distribution of schools' locations, 17 percent of students are in non-rural schools and 83 percent are in rural schools.In terms of the stage of schooling, 55% of the students in the sample are primary school students, and 45% of the students are junior middle school students.From the distribution of key classes or not, 70% students reported that the school did not distinguish between key classes and non-key classes, while 11% students studied in key classes and 19% students studied in non-key classes.

Table 3.1 Descriptive Statistics

		Number of samples	The sample proportion
The overall		3888	100%
Gender	girl	1845	47%
	boy	2043	53%
Urban and rural	Urban	2484	64%
	rural	1404	36%
The key school	Yes	957	25%
	No	2931	75%
School Location	Non-rural school	657	17%
	Rural schools	3231	83%
grade	Primary school	2142	55%
	Junior high school	1746	45%
key class	Yes	438	11%
	No	747	19%
	Does not distinguish between	2703	70%

3.3.1Table 3.2 is the descriptive statistics of each variable, where the mean value of shadow education expenditure is 740 yuan, but the standard deviation is 2380 yuan, which indicates that there is a large difference in each family's input to students' tutoring education.The average score of the normalized students is 0.63, and the standard deviation is 0.87.Parents' educational expectations for their children were 0.97 with a standard deviation of 3.54.This indicates that the average educational expectation of parents can reach the level of junior college and undergraduate. The difference between the mean and standard deviation can be seen that there is a large difference in the educational expectation of parents between each family.Fathers are more educated than mothers.According to the statistical table, the average number of children in a family is 1.8, indicating that the average number of children in the surveyed family is two.From the characteristics of schools, the mean value of school address is 0.17, and the standard deviation is 0.37, indicating that most students study in rural schools.The education stage is 0.44, and the standard deviation is 0.5, indicating that there is little difference in the sample size between junior and primary schools.The mean values of whether the school is key and whether the class is key are 4.02 and 4.17 respectively, indicating that most students mainly study in the non-key and non-key classes.

Table3.2 Variable description of statistics

	The variable name	The mean	Standard deviation
Explained variable	Student achievement	0.63	0.87
Main explanatory variable	Extracurricular Tutorial Education Expenditure (unit: ten thousand yuan)	0.74	2.38
Adjust the variable	Educational expectations of parents	0.97	3.54
	Personal characteristics of the studentage		
	age	12.5	1.72

	gender	0.58	0.46
	urban and rural	0.42	0.48
	Years of father's education	8	3.84
	Years of mother's education	6	4.78
	The educational level of the parents	2.6	1.88
	Number of children in a family	1.8	0.98
Control variables	The school address	0.17	0.37
	Education stage	0.44	0.5
	Is the school focused	4.02	1.72
	Is the class focused	4.17	1.37

3.4Research hypothesis

3.4.1This study is to discuss the influence of shadow education expenditure on students' achievement, and to discuss the influence degree of shadow education investment on students' achievement by controlling students' individual, family, school and other related variables.Through empirical analysis, we propose hypothesis H1:The investment in shadow education will have a significant impact on the improvement of students' performance.

3.4.2Parents' education expectation, scholars research found that parents' education expectation and student achievement is not a linear relationship between growth, parents' education expectation when only meet certain characteristics, in order to give full play to its Pygmalion effect, also can understand the students after the given higher expectations, they will be better a phenomenon positive externalities of student performance positively.Although students who are expected by their parents will be more active in learning and courses, excessive expectations may reduce or inhibit the development of students' performance after they cross the "threshold", so we proposed hypothesis H2: There is a threshold effect of parents' educational expectation on students' achievement.

3.4.3There is a moderating mechanism between parents' educational expectation and their children's academic performance when spending on extra-curricular tutoring increases.The attention of education high expectations of parents of student performance will be higher, and the students' learning interest and learning habits to provide more help, will be more willing to plan the students' spare time, are also more likely to extra-class continuation education investment, so we put forward the hypothesis H3: parents' education expectation in tutoring impact on student achievement, the regulating effect(As shown in figure) .

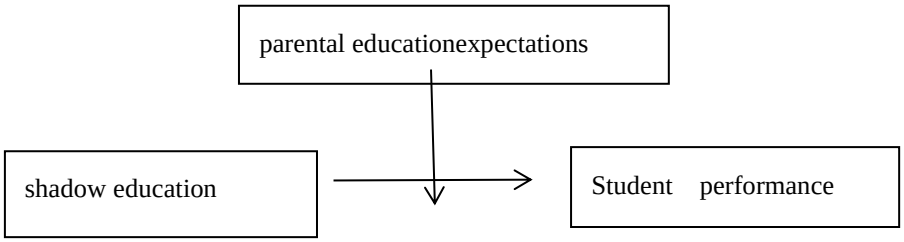

Figure 3.1 The moderating effect of parents' educational expectation on the influence of extracurricular tutoring on students' achievement

3.4.4 City compared to rural, education quality and education level of the city to the rural education quality level has a certain gap, because the countryside student's education quality is low, students to participate in extracurricular cram more to study hard, to the effect of higher than the effect of the urban students, for most economic less developed areas and rural areas, and family economic situation is better than most of the urban families, parents expected increase in children's education, encourage and support in study to your child, family education spending outside of output effect will be better, so we put forward the hypothesis H4: H4: tutoring effect due to the different region,The impact on students is also different.

4.The results of the study

4.1Model setting

4.1.1Threshold Effect Regression

Theory When parents' educational expectation exceeds a certain standard value, will it have a deeper and multiple impact on students' achievement?This phenomenon is known as the threshold effect.According to the definition of Hansen(1996), the basic form of the "threshold effect" model is as follows:

yi＝θ1'xi＋ei, qi≤γ（1）

yi＝θ2'xi＋ei, qi＞γ（2）

In this model, xi is an m-dimensional column vector.qiis the "threshold variable".Hansen(1996) believes that the threshold variableqican be either a regressive element in the independent variable Xi or an independent threshold variable.Based on the "threshold" R, the samples can be divided into "two categories".To convert the equations (1) and (2) into a single equation, we need to define a dummy variable di (r)={qi } r}, where {g} is an indicator function, and set xi(r)=xidi (r)Models (1) and (2) can be rewritten as: yi ＝ θ1'xi+δn'xi(y)+ei(3).Hansen(1996) pointed out that, if the null hypothesis H0is true, in 95% of the case, C (a)=7.35 at the confidence level, the above process is a way of checking with only one threshold value.

4.1.2 Model Construction

Based on human capital accumulation theory and education production function, the following equation is constructed :Yi=β0+β1Ti+β2Xi+ε (8), where Yi is student's achievement of student I, T is student's monthly after-school education expenditure in the previous year, and X is other control variables (including family background, student's individual ability and school characteristics).Because the expenditure of family extracurricular education will be related to the characteristics of individuals and families, it is a random error term.The above is the basic model. In order to study the single threshold effect of parents' educational expectation, the following model is established:Yi=β0+β1Ti+β2Xi＋β3M1i（≤r）＋β4M1i（＞r） ＋ε（9）

Where, Yi is the student achievement of student I, T is the monthly after-school education expenditure of student last year, Xi is other control variables, M1i (≤r) is the educational expectation of parents less than a single threshold value, M1i (> r) is the educational expectation of parents greater than a single threshold value, and 2 is the random error item.In order to study the moderating effect of parents' educational expectations, the following model can be constructed :Yi=β0+β1Ti+β2Xi＋β3M1i（≤r）＋β4M1i＋β4M1*Ti＋ε（10）.Yi is the student achievement of student I, T is the monthly family after-school education expenditure of student last year, Xi is other control variables, M1 is the educational expectation of student's parents, M1*Ti is the cross term between parents' educational expectation and family after-school education expenditure, and ε is the random error term.

4.2The influence of remedial education expenditure on student achievement

4.2.1 Regression Analysis of Influencing Factors of Students' Achievements We first conducted a regression analysis on the samples.The regression results can be seen in Table 4.1. In the way of step-by-step regression, the expenditure on tutoring education, individual characteristics of students, family characteristics and school characteristics are gradually added into Model 1, Model 2, Model 3 and Model 4, respectively.

In Model 2, after adding individual control variables, the regression coefficient still has a significant positive impact on students' performance.The influence coefficient of age on students' performance is about 0.4-0.55, which is significant at the level of 1%, indicating that the influence on students' performance is positive and significant. That is to say, the older the age is, the higher the students' performance will be when the date increases tutoring education and expenditure.The regression coefficient of dummy variables in cities and towns is around 0.51-0.78, which also passes the significance test at the 1% level, indicating that urban students' performance is higher than that of rural students.The regression coefficient of gender is significantly between -0.017 and -0.029, indicating that the regression coefficient of male dummy variable on academic performance is significantly negative, which indicates that female students' academic performance is relatively better.

Family characteristic variables were added into Model 3.From the perspective of family characteristics, the higher the parents' education level, the higher the educational background and the higher the parents' educational expectation for their children, the better the effect of family investment in children's after-school education will be.The regression coefficient of the mother's education level is higher than that of the father's education level, indicating that the mother's education level has a greater influence on the improvement of children's achievement.The coefficient of the variable of the number of children is 0.022, which passes the significance test at the level of 1%, and the impact on students' performance is significantly negative. This indicates that in families with relatively few children, the increase of parents' spending on family after-school education for their children will improve the test scores of children.

In Model 4, school characteristic variables are added, and whether students are in key classes or not has a positive effect on the improvement of students' test scores. This indicates that for students in key schools and key classes, parents increase their investment in extracurricular education, which has a certain effect on the improvement of children's scores. The regression coefficient of variables representing education stage to academic performance is significantly positive, which reflects that students in junior middle school have a better

effect by participating in extra-curricular classes. The regression coefficient of school address is negative, indicating that students from non-rural schools have higher scores.

Table 4.1 Students' grades affect the regression results

Explained variable	Student achievement			
	Model 1	Model 2	Model 3	Model 4
Extracurricular tutoring fees	0.246*** （0.016）	0.231*** （0.015）	0.219*** （0.015）	0.213*** （0.15）
Age		0.052*** （0.011）	0.044*** （0.012）	0.04***
Gender		−0.017*** （0.008）	−0.029*** （0.008）	−0.028*** （0.008）
Urban and rural areas		0.052*** （0.005）	0.078** （0.005）	0.051** （0.002）
Education level of the father			0.006** （0.003）	0.006** （0.003）
Education level of mother			0.007*** （0.001）	0.007*** （0.001）
The educational level of the parents			0.015*** （0.013）	0.015*** （0.04）
Parental expectation			0.082*** （0.025）	0.082*** （0.025）
Number of children				−0.022*** （0.003）
The school address				−0.007 （0.005）
Education stage				0.073*** （0.006）
Key schools or not				−0.004 （0.003）
Is the class focused				0.022* （0.002）
Constant term	0.761*** （0.007）	0.340*** （0.007）	−0.565 （0.008）	0.558 （0.007）
Fitting	0.234	0.288	0.268	0.301
Number of samples	3888	3888	3888	3888

***P＜0.01　**P＜0.05，*p＜0.1

According to the comprehensive data, the increase in investment in extra-curricular tutoring education will lead to the increase in students' performance, so H1 is established.

4.2.2 Test of threshold effect of parents' educational expectations

Table 4.2 Threshold test of parental educational expectations

			临界值		
Model	F	P	1%	5%	10%
A single threshold	14.319*	0.052	28.319	18.982	11.382
Double threshold	9.243	0.324	38.428	23.421	16.332
Triple	3.421	0.445	24.235	13.324	10.843

threshold

To test the impact of parents' educational expectations on students' performance, we conducted a threshold effect test on parents' educational expectations. As shown in Table 4.2, F value is less than 10% of the critical value, indicating that the significance test has not been passed. The F value of the triple threshold is 3.421, and the critical values of 1%,5% and 10% L are 24.24,13.32 and 10.84 respectively. The critical value of F value is less than 10%, indicating that the significance has not been passed. Therefore, there is only a single threshold effect of parental educational expectation. This proves H2: there is a threshold effect on parental educational expectations.

4.2.3Test Table of Moderating Effect 4.5 Parental educational expectation was added to analyze the moderating effect.Model 1 only included the expenditure of family extra-curricular tutoring education, while Model 2 included the expenditure of extra-curricular tutoring education and parents' educational expectation.Model 3 showed the moderating effect of family spending on after-school education and parents' educational expectations.It can be found that in Model 1, the regression coefficient of family after-school education expenditure is 0.252, which reaches the significance level of 1%.After parents' educational expectation is added into Model 2, the regression coefficient of family after-school education expenditure decreases to 0.242, and the regression coefficient of parents' educational expectation is 0.032, reaching the significance level of 1%.In Model 3, after adding the interaction term between after-class tutoring education expenditure and parents' educational expectation, the regression coefficient of family after-class education expenditure drops to 0.231, still significantly positive, and the regression coefficient of parents' educational expectation drops to 0.031.The regression coefficient of the interaction term between family after-school education expenditure and parents' educational expectation is 0.019, which reaches the significance level of 1%.This proves Hypothesis H3: "Parental educational expectation has a moderating effect on the influence path of family extracurricular education expenditure to student achievement, and its influence on student achievement is positive."Was established.

Table 4.5 The moderating effect test of parental educational expectation

Explained variable	学生成绩		
	Model 1	Model 2	Model 3
shadow education	0.252***	0.242***	0.231***
	（0.012）	（0.013）	（0.012）
parental educationexpectations		0.032***	0.031***
		（0.019）	（0.018）
Extracurricular tutoring education * parental education expectations			0.019***
			（0.003）
Personal factor control variable control control control	control	control	control
Control variables for family factors	control	control	control
School factor control variables	control	control	control
Constant term	0.422***	0.566***	0.525***

Fitting	0.242	0.254	0.252
Number of samples	3888	3888	3888

***P＜0.01　**P＜0.05，*p＜0.1

4.3 Analysis of urban-rural heterogeneity

The empirical results show that.In the rural regression model, family expenditure on after-school education in the three models all passed the significance test at the 1% level.In the urban regression model, the three models all passed the significance test, and the regression coefficient in rural areas was higher overall, indicating that the increase of family spending on after-school education by rural families had a better effect on the marginal output of standardized scores.In the regression model of rural and urban areas, the regression coefficients decrease after adding the interaction terms of parents' educational expectation, family after-school education expenditure * parents' educational expectation, but the regression coefficients of family after-school education expenditure remain significantly positive.Extracurricular in 3, the model of rural family education expenditure * parents education expectation of regression coefficient is 0.031, reached the 1% level of significance, the town's family extracurricular education spending * parents education expectation of regression coefficient is 0.026, reached the 1% level of significance, regression coefficient is relatively higher in the countryside, instructions for students in the rural registered permanent residence, parents' education expectation adjustment effect is more apparent than urban students.This proves that hypothesis H4: "family expenditure on after-class education has a significant regional effect on student achievement, and rural family expenditure on after-class education has a more prominent effect on student achievement improvement than urban students" is true.

5.Conclusions and Suggestions

5.1 Research Conclusions

5.1.1 Spending on extra-curricular tutoring has a significant positive impact on students' standardized scores.As can be seen from the results of first-stage OLS regression and moderating effect regression, OLS regression overestimated the influence of after-class education expenditure on students' academic performance. The result was that every 1000 yuan increase in family after-class education expenditure would increase children's academic performance by 0.246 standard deviations.The regression of the moderating effect shows that there is a moderating effect on the influence path of parents' educational expectation on students' achievement, and its influence on students' achievement is positive, showing a positive adjustment on the whole.

5.1.2 In terms of individual characteristics of students, the older the students are, the better their grades will be, and the effect of attending extra-curricular tutoring classes will be better, which is significant at 1% confidence level.In terms of family factors, more children are associated with lower academic achievement.The higher the parents' educational expectation and the higher the parents' educational level, the better the results of students' participation in extra-curricular tutoring, and both are significant under the confidence level of 5%.From the characteristics of schools and classes, students in key classes have relatively higher academic performance, while students in non-rural schools have relatively better academic performance.

5.1.3 There is a threshold effect on the impact of parents' educational expectations on students' performance.The results of threshold regression show that, based on the threshold value, when parents' educational expectation is

greater than the threshold value and when parents' expectation is less than the threshold value, tutoring education expenditure has a significant positive impact on students' achievement. However, when parents' expectation is less than the threshold value, the sample regression coefficient is larger and the degree of positive impact is greater.Extracurricular to join his parents expect education and family education spending after the interaction of the item, is greater than the threshold value and less than the threshold value of parents' education expectation for family extracurricular education spending in the regulation of student achievement effect have passed the test of significance, but parents education expect is less than the threshold value of interaction of regression coefficient is bigger, when his parents expect education in medium, namely to children's education expectations are higher than that of specialized subject and undergraduate course, the education expectation for family extracurricular education expenditure impact on student achievement of greater regulation effect.

5.1.4 Family expenditure on after-class education has a significant impact on students' achievement in urban and rural areas, and the improvement of parents' educational expectations has a greater moderating effect on increasing after-class expenditure to improve students' achievement in rural areas.In rural areas, the regression coefficient of the expenses * parents' education expectation is 0.031, reaching the significance level of 1%. In urban areas, the regression coefficient of family after-school education expenditure * parents' education expectation is 0.026, reaching the significance level of 1%, and the regression coefficient of rural areas is relatively higher.

5.2 Research suggests

5.2.1 improve service quality of school education through the investigation and study, we found that the extra-class continuation education expenditure would increase student performance, it also illustrates the extra-class continuation education and school education has the certain complementarity, in compulsory education stage in our country is not only to improve the quality of our school's teaching management, but also on the outside with implements the management, make it to the benign development, by reducing the continuation education resources possession, ensure that the implementation of the compulsory education fair policy.

5.2.2 Guide Parents to Set Reasonable Educational Expectations At the present stage, parents have too high expectations for their children's education, and some parents impose their unrealized goals on their children, hoping to increase their learning efficiency by putting pressure on their children, so as to increase their academic performance.However, once this way is used improperly, it will give students a sense of disgust, so as to hate learning.Parents should respect the actual choice of their children, not set too high goals too far, according to the children's interests, hobbies, ability to develop effective learning methods.Countries

5.2.3 requires accurate poverty alleviation reducing gap between urban and rural areas of the country's financial institutions should strengthen to the rural education investment, improving the quality of rural public school, adhere to the precision of poverty alleviation, to weak schools configuration more excellent education resources to promote its school-running quality, at the same time can also use the advantage of network teaching development to build more excellent education platform, to free the poor school education resources for learning.

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