The Influence of Families with Low Educational Background on Children's Educational Expectations——Based on Chinese Family Panel Studies (CFPS) Data

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Abstract. Education is one of the decisive factors for individual growth and future economic status. As the key factor of children's success, parents' expectation of education differs from family's educational background. Based on the data of China Family Tracking Survey (CFPS) in 2018, OLS regression analysis, robustness test and heterogeneity analysis were carried out with the help of stata17 software to study the influence of families with low educational background on children's educational expectations. The results show that: (1) In families with low educational background, educational expectation is negatively correlated with educational background;(2) Low educational background has a significant impact on family educational expectations in rural areas, but not in urban areas;(3) The influence of low education families on educational expectations is mainly reflected in "saving education funds" and "children's academic relationship";(4) By allowing low-education families to accept new educational concepts, it can improve the planning of their children's educational expectations.

Keywords: low education family; Children's educational expectations; Urban-rural heterogeneity; CFPS;

1 Introduction

With the continuous development of economy and society, more and more attention has been paid to the role of education. According to the statistics of China Education Tracking Report, 95.7% of parents of students with compulsory education have higher educational expectations for their children than those with a bachelor's degree [0].Education is an important determinant of an individual's economic status[0], and is considered to be an important way for class to maintain the status quo and upward mobility. Therefore, parents at all levels of our country hope to achieve social leapfrog or maintain their social strata through their children's education[0].Educational expectation refers to the hope and expectation for children's future educational achievement[0], and parents' educational expectation is a decisive factor for children's educational success, beyond the influence of social class on children[0].

In view of this, it is of great significance to investigate the influence of family education background on children's education and further explore the possible relationship between them. Based on the data of Chinese Family Panel Studies (CFPS) in 2018, this paper analyzes the relationship between family educational background and children's educational expectations, and explores whether there is a deeper connection between the two.

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2 Theoretical basis and literature review

2.1 Theoretical basis

The expected value theory is one of the representative theoretical achievements of educational expectation at present. This theory explains in detail the formation, change mechanism and significance of educational expectations to educational activities (Ecclesetal.1983).The definition of expectation in this theory is that expectation is an individual's judgment on a specific behavioral process of competence, while value refers to the expected earnings of corresponding behaviors. Both of them jointly determine an individual's behavioral decision-making, practice process and results.

2.2 Literature review

The existing literature mainly analyzes the influence and mechanism of family educational expectation from three aspects: family educational background, cultural capital and family wealth.

In terms of family education background, Liu Baozhong et al. showed that the higher the parents' education level and income level, The higher the expectation of family education[0];The higher education of either father or mother has a negative impact on children's subjective well-being[0]. Andrew & Flashman found that the more educated the family members were, the higher the expectation of family education would be[0]. Jin Zhenzhong et al. found that family background has a significant positive impact on children's educational expectations[0].The above research proves that the higher the family education background, the higher the expectation of children's education. In terms of cultural capital, family cultural capital stock affects parents' educational expectations[0]. Liu Tianyuan et al. found that children whose families have average cultural capital stock are more able to directly perceive educational functions and importance from cultural dilemmas, thus forming good habitus[0].In terms of family wealth, the academic circle believes that family wealth is the main factor affecting children's education. Oh believed that family income was significantly correlated with children's educational achievement[0].

3 Data description and model setting

3.1 Data source and variable description

The data used in this paper are from the China Household Tracking Survey Database (CFPS), and 3810 observational data are obtained after processing. The explained variables of this paper are: expected children's education level (wd2);Core explanatory variables: family education level (cfpsedu);Control variables: Whether they are considering sending their child to study abroad (wd3), whether they are saving money for their child's education (wd4), whether they are concerned about their child's education (wz301), where their child currently attends school (ws1002), whether their child attends school (wt1), whether they will check their child after completing homework (wf802), and how much they spent on education in the past 12 months (wd5total). Descriptive statistics of variables are shown in Table 1.

Table 1. Descriptive statistics of variables

Variable	Sample	Max	Min	Mean	Standard	Median	Variance	Kurtosis	Skewness
wd2	3810	8	1	3.023	1.115	3	1.242	1.473	0.459
cfps2018edu	3810	3	1	1.352	0.571	1	0.326	0.917	1.383
wd3	3810	2	1	1.8	0.4	2	0.16	0.246	-1.499
ws1002	3810	4	1	1.628	0.936	1	0.876	-0.181	1.122
wd4	3810	2	1	1.145	0.352	1	0.124	2.088	2.022
wz301	3810	5	1	2.424	0.788	2	0.621	0.279	0.275
wt1	3810	2	1	1.835	0.371	2	0.138	1.258	-1.805
wf802	3810	5	1	1.848	1.11	2	1.232	1.092	1.405
lnwd5total	3810	11.871	0	7.597	1.315	7.696	1.73	0.288	-0.27

3.2 Model setting

In order to explore the influence of low-education families on children's educational expectations, this paper builds a model:

$$Edu_{i,t}=\alpha+\beta Fedu+\delta X_t+\epsilon_t$$

Where, subscript i represents the sample individual, Edui,t is the parents' expectation of family education for i in year t;βFedu represents the educational background of the family;Delta Xt represents the control variable.

4 Analysis of empirical results

4.1 Correlation test

Conduct correlation test on all data to test the relationship between each variable of the model to see whether there is a significant relationship. The results are shown in Table 2.

Table 2. Correlation test

	wd2	cfps2018edu	wd3	wd4	wt1	wd5total	wd501b	wf802	wz301	ws1002
wd2	1.000	0.053	0.008	0.016	0.020	0.052	0.029	0.024	0.019	0.034
	(0.000***)	(0.001***)	(0.611)	(0.334)	(0.226)	(0.001***)	(0.077*)	(0.141)	(0.231)	(0.034**)
cfps2018	0.053	1.000	0.020	0.034	0.005	0.129	0.123	0.030	0.027	0.046
edu	(0.001***)	(0.000***)	(0.225)	(0.037**)	(0.741)	(0.000***)	(0.000***)	(0.062*)	(0.097*)	(0.005***)
wd3	0.008	0.020	1.000	0.102	0.051	0.011	0.025	0.040	0.047	0.004
	(0.611)	(0.225)	(0.000***)	(0.000***)	(0.002***)	(0.490)	(0.118)	(0.014**)	(0.004***)	(0.801)
wd4	0.016	0.034	0.102	1.000	0.117	0.123	0.047	0.018	0.035	0.058
	(0.334)	(0.037**)	(0.000***)	(0.000***)	(0.000***)	(0.000***)	(0.004***)	(0.266)	(0.030**)	(0.000***)
wt1	0.020	0.005	0.051	0.117	1.000	0.362	0.018	0.020	0.011	0.131
	(0.226)	(0.741)	(0.002***)	(0.000***)	(0.000***)	(0.000***)	(0.260)	(0.221)	(0.498)	(0.000***)

wd5total	0.052	0.129	0.011	0.123	0.362	1.000	0.809	0.036	0.011	0.073
	(0.001***)	(0.000***)	(0.490)	(0.000***)	(0.000***)	(0.000***)	(0.000***)	(0.026**)	(0.490)	(0.000***)
wd501b	0.029	0.123	0.025	0.047	0.018	0.809	1.000	0.013	0.017	0.032
	(0.077*)	(0.000***)	(0.118)	(0.004***)	(0.260)	(0.000***)	(0.000***)	(0.423)	(0.294)	(0.049**)
wf802	0.024	0.030	0.040	0.018	0.020	0.036	0.013	1.000	0.012	0.025
	(0.141)	(0.062*)	(0.014**)	(0.266)	(0.221)	(0.026**)	(0.423)	(0.000***)	(0.441)	(0.130)
wz301	0.019	0.027	0.047	0.035	0.011	0.011	0.017	0.012	1.000	0.030
	(0.231)	(0.097*)	(0.004***)	(0.030**)	(0.498)	(0.490)	(0.294)	(0.441)	(0.000***)	(0.065*)
ws1002	0.034	0.046	0.004	0.058	0.131	0.073	0.032	0.025	0.030	1.000
	(0.034**)	(0.005***)	(0.801)	(0.000***)	(0.000***)	(0.000***)	(0.049**)	(0.130)	(0.065*)	(0.000***)

Note: Regression coefficient is shown in table, clustering robust standard error is shown in brackets, * p < 0.1, ** p< 0.05, *** p < 0.01

There is a significant correlation between each variable, it can be determined that the choice of variables is reasonable and correct. There is a positive correlation between the core explanatory variable and the explained variable, and it is significant at 1%, indicating a high correlation between the two, which has good reference significance for the empirical analysis of the next data.

4.2 Analysis of main empirical results

Table 3 reports the regression results of family education expectation, in which control variables are gradually added into models (1)-(8), and the influence of each variable on education expectation is investigated one by one.

Table 3. Principal positive model

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)
cfpsedu	0.0775***	0.0743***	0.0783***	0.0746***	0.0890***	0.0954***	0.0924***	0.1013***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
wd3		0.0774***	0.0734***	0.0712***	0.0688***	0.0651***	0.0641***	0.0640***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
wd4			0.0440***	0.0374***	0.0301***	0.0302***	0.0272**	0.0247**
			(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
wz301				0.1273***	0.1162***	0.1199***	0.1150***	0.1126***
				(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
ws1002					0.0996***	0.1080***	0.0888***	0.0664***
					(0.02)	(0.02)	(0.02)	(0.02)
wf802						0.0709***	0.0727***	0.0746***
						(0.02)	(0.02)	(0.02)
wt1							0.1618***	0.1261***
							(0.04)	(0.04)
wd5total								0.0000***
								(0.00)

_cons	6.9215***	7.2421***	7.4255***	6.9268***	7.2869***	7.1015***	6.9996***	6.8962***
	(0.04)	(0.06)	(0.07)	(0.11)	(0.12)	(0.14)	(0.14)	(0.14)
N	3810	3810	3810	3810	3810	3810	3810	3810
r2_a	0.0016	0.0161	0.0195	0.0288	0.0354	0.0383	0.0411	0.0424

Note: Regression coefficient is shown in table, cluster robust standard error is shown in brackets, * p < 0.1, ** p < 0.05, *** p < 0.01

The results of regression show that:(1) The coefficient of family education level, the core explanatory variable in this paper, is significantly negative in all models, which is the influence of family education background, indicating that the lower the education level of the family, the higher the expectation of education, (2) in terms of parents' concern about children's homework and children's education, the regression coefficient is significantly positive at the level of 1%. It shows that they have positive effects on children's educational expectations. There was a significant negative correlation in whether to save money for the children, possibly because of a lack of planning awareness.

Due to the difference in the time of data collection, there are some time differences in the data. In order to verify whether the data is affected by the time effect, this paper controls the time effect and carries out the test again. The test results are shown in Table 4.

Table 4. Fixed year inspection results

	Model 1	Model 2		Model 1	Model 2
cfps2018edu	-0.1009***	-0.1013***	wt1	0.1271***	0.1261***
	(0.03)	(0.03)		(0.04)	(0.04)
wd3	-0.0641***	-0.0640***	wd5total	0.0000***	0.0000***
	(0.01)	(0.01)		(0.00)	(0.00)
wd4	-0.0248**	-0.0247**	year	0.1289	
	(0.01)	(0.01)		(0.19)	
wz301	0.1136***	0.1126***	_cons	6.8882***	6.8962***
	(0.02)	(0.02)		(0.014)	(0.14)
ws1002	-0.0660***	-0.0664***			
	(0.02)	(0.02)			
wf802	0.0752***	0.0746***	N	3810	3810
	(0.02)	(0.02)	r2_a	0.0424	0.0424

Model 1 indicates that the year effect is controlled, and model 2 indicates that the year effect is not controlled. From the comparison results of the two, it can be seen that after controlling the year effect, the significance and symbol of regression have not changed significantly, and the significance is still at 1% significance, only R2 and the value of the variable have a small change, but the output of the overall result does not have a great impact and change.

4.3 Robustness test

The robustness test results are shown in Table 5.

1.Replace variable wd5total with wd501b, as shown in Model 1. After variable replacement, the symbols and significance of explanatory variables did not change, and the results were robust.

2. 99% tail reduction is performed on the data, as shown in Model 2. It shows that the results are robust.

3. Add control variables: school education expenditure in the past 12 months (Yuan) (wd501b). The test results are shown in Model 3, which proves that the results are still robust.

Table 5. The results of the robustness test

	Model 1	Model 2	Model 3
cfps2018edu	-0.0958***	-0.0984***	-0.1002***
	(0.03)	(0.03)	(0.03)
wd501b	0.0000**	0.0000	
	(0.00)	(0.00)	
_cons	6.8417***	6.8089***	6.7872***
	(0.13)	(0.13)	(0.13)
N	3810	3810	3810
r2_a	0.0407	0.0411	0.0416

Note: Regression coefficient is shown in table, cluster robust standard error is shown in brackets, * p < 0.1, ** p < 0.05, *** p < 0.01

4.4 Urban-rural heterogeneity analysis

Reform and opening up have achieved great achievements in the development of Chinese economy and urbanization, resulting in unbalanced development of urban and rural areas. Therefore, the heterogeneity of educational expectations may exist in the same educational background. This paper classifies CFPS data according to the location of households, and then carries out regression for households in rural areas and urban areas respectively. The regression results are shown in Table 6.

The results show that the low education family background has a significant positive effect on the rural area, but has no significant effect on the urban family. This is because there are many restrictions in rural areas, unable to timely receive new educational concepts, and the lack of educational resources in rural areas, so the expectation of family education in rural areas is more susceptible to the influence of family education background.

Table 6. Heterogeneity test of urban and rural classification

	Model 1（Urban）	Model 2（Rural）
	-0.0332	-0.1538***
	(0.04)	(0.04)
N	1336	2474
r2_a	0.0372	0.040

Note: Regression coefficient is shown in table, cluster robust standard error is shown in brackets, * p < 0.1, ** p < 0.05, *** p < 0.01

5 Conclusion

Conclusions: (1) In families with low educational background, children's educational expectation is negatively correlated with educational background;(2) Low education family background has a significant impact on family education expectation in rural areas, but not in

urban areas;(3) The influence of low education families on educational expectations is mainly reflected in "saving education funds" and "children's academic relationship";(4) By allowing low-education families to accept new educational concepts, it can improve the planning of their children's educational expectations.

Family education thoughts and expectations are family planning investment for the future. In order to block the intergenerational inheritance of low-education families and realize the upward development of low-education families, we must change the educational ideas and thoughts of low-education families. Changing the educational concepts and thoughts of low-education families can not only help families to move upward, but also accumulate more human capital for the development of the country, help rural revitalization, and promote the realization of the Chinese Dream.

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