

The Influence of Parental Education on the Nature of Children's Work : Empirical Evidence Based on CGSS

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Abstract. This paper uses the survey data of China Comprehensive Social Survey (CGSS) to empirically analyze the influence of parental education on the nature of children's work, and defines the nature of children's work as binary variables: non-agricultural work and farmer. The results show that the father's education level has a significant positive impact on the possibility of their child engaging in non-agricultural work, while the mother's education level has no influence when take the child's own characteristics into consideration. Therefore, the father has a deeper and longer influence on the children than the mother. During the child's training, the father should pay more attention to his role, and spend more time with the children while engaged in their work.

Introduction

As yet, there are many articles on the influence of family background on children: studying the influence of family economic status on children's academic performance; studying the influence of parents' marital status on children's marital status and studying the influence of parents' educational level on children's academic performance or human capital investment and so on. And most of the research focus on the influence of parents' educational level on children's academic performance. Part of these researches distinguish rural and urban areas. The influence of parents' educational level on the nature of their children's work has not been studied. This paper divides the nature of children's work into non-agricultural work and agricultural work and researches how the difference in parental education affects the nature of children's work, how much influence it has, and whether there is a difference in the degree of influence between father and mother. By the Probit model, study the influence of the educational level of parents on the nature of the children's work quantitatively.

The framework of this paper is organized as follows. The second part reviews the research of related literature. The third part is the data analysis and the design of the measurement model. The fourth part is the empirical result analysis. The fifth part is the conclusion and suggestion.

Literature review

Parents are the first teacher of the child. The child stay with their parents for a long time, so the behavior of the parents will influence the children. The influence of parents' education on their children has been involved in many aspects. Y. P. Zhong and G. S. Lu[7]studied the influence of parents' educational level on children's choice of majors, resulting that the higher the level of parental education, the greater likelihood that children will choose a profession with better career prospects; S. J. Zhou[4]studied the influence of parental education on children's high school performance, and concluded that parental education has a greater impact on girls' performance and has different degrees of influence on different disciplines. X. Qi[5]studied the influence of parents' education level on their children's human capital investment, and concluded that the higher the level of education, the more human capital investment in children. Above studies all show that the educational level of parents has a positive correlation with their children.

There are differences in the degree of influence of the education level of the parents on the children. Sathar and Lloyd studied the influence of parents' education level on their children's education investment, and conclude that the children whose mothers are educated receive 60%-75%

more education expenditure than those whose mothers are not. X. J. Xie and P. Du[8]found that father's education affects children's academic performance, the higher educational level, the worse academic performance, while the effect of mother's education was not significant. The influence of parental occupation, family economic status on children's academic performance were also not significant. W. G. Pang[9]found that the level of mothers' education and the learning aids in the family have the most significant impact on children's academic performance. Compared with fathers, the level of mothers' education has a more significant impact on children's academic performance.

Researches above all focus on the parental educational level on their children's academic performance, children's education investment, children's social activities. But there is less research on the impact on children when they went to work. Whether the parental educational level will affect the nature of their children's work. Whether there will be differences in the degree of influence between parents. So this paper researches that how much probability the children will engage in non-agricultural work.

Data source and empirical methodology

Data source. The data used in this paper is the 2013 China Comprehensive Social Survey (CGSS) questionnaire data, which collects data from all aspects of Chinese and society on a regular and systematic basis, summarizing the long-term trends of social change. The questionnaire involves population feature migration, lifestyle, labor market and more. The survey targets involves 28 provinces and cities. Due to research the nature of the work, so the target is limited to 25-60 years old. Considering that there are fewer people starting work below 25, and people over 60 years old have retired, so we exclude these data. We reclassified the nature of children work, assigned a value of 1 for non-agricultural work, and 0 for a farmer. The data was further processed to eliminate the invalid values and missing values of the variables, and finally the relevant data of 6102 respondents were used for research. Table1 shows the descriptive statistics of each variable in the model.

Table 1 Descriptive statistics of each variable in the model

Variable	Definition	Min&Max.	Average (Std. dev.)
job	Nature of work	0-1	0. 78(0. 41)
fed	Father's highest education	1-14	3. 10(2. 19)
med	Mother's highest education	1-14	2. 35(1. 83)
Family characteristics			
lninc	Logarithm of annual household income	6. 49-16. 11	10. 65(0. 92)
wlive	Place of residence	1-5	2. 96(1. 78)
nlive	Number of people living together	1. 00-12. 00	3. 21(1. 32)
Children characteristics			
gender	gender	0-1	0. 50(0. 50)
age1	age	25-60	43. 43(9. 97)
ced	Children's highest education	1-14	5. 32(2. 97)
chea	Health of children	1-5	3. 89(0. 10)
lnpinc	Couples' Annual Income Logarithm	5. 70-16. 12	9. 82(1. 03)
pjob	The Nature of Spouse Work	1-6	2. 20(1. 61)

Table 1 includes the variable name, the maximum and minimum values of the variable, and the mean and standard deviation. It was found that 78% of the people are engaged in non-agricultural work, and the place of residence is basically in the urban-rural integration. The average of father's highest degree of education is the middle school, the mother's of it is the primary school, and the highest education of the child is the high school, which be seen that the education level of the child is improved on the basis of the parents. In the age of parents, the education of boys will be paid more attention. The average age of the interviewers is around 40 years old, and they have been working for many years and have no plans for retirement. In addition, most of children is healthy, and there is no work difficulties due to physical factors. Since the data value of the income spans too much and the value is relatively large, the data of the income is logarithmized, which makes the data distribution smooth and easy to analyze.

Variable selection. The nature of the children's work is explanatory variables. It is defined as a binary variable: non-agricultural work and farming. Classifying the samples that don't work now but ever had non-agricultural work as non-agricultural work. Those who have no work now, only farming before are classified as farming.

The main explanatory variable is the degree of the parents' education. There are 14 levels of education, and research the impact of the highest level of parents' education on the nature of their children's work. Other control variables involve family characteristics: family annual income, place of residence, and the number of people currently living together; children's own characteristics: the age of the child, the gender, the education level of the child, and the physical health of the child. These variables may have an impact on the nature of the children's work .

Considering that most people live with their spouses after work, and what they do will be affected by their spouse. In the robustness test, add the income of the spouse and the nature of spouses' work as the intermediate variable to the model to test the stability of the results.

Empirical model. The nature of work is defined as a binary variable: non-agricultural work and farming. Non-agricultural work is assigned a value of 1, and farming is assigned a value of zero.

Use the Probit model to research the impact of parental education on the likelihood of children engaging in non-agricultural work. The regression equation is:

$$job = \beta_0 + \beta_1 fed + \beta_2 med + \beta_3 fam + \beta_4 chi + \mu$$

Where fed is the education level of the father, med is the education level of the mother, and fam is the characteristics of the family, including the annual income of the family (lnnic), the place of residence (wlive), the number of people living together (nlive);chi is the children's own characteristics including gender (gender=1 male;gender=0 female), age(age1), self-education (ced), own physical health (chea); μ is error terms. In the robustness test, add some intermediate variables to prove the stability of the results.

Results and regression analysis

Results. The job is used as the explained variable, fed and med are used as explanatory variables, and the fam and chi are the control variables. The regression results are shown in Table 2:

Table 2 The impact of parental education on the nature of children's work

variables	Job				
	Probit1 Estimate	Probit2 Estimate	Probit3 Estimate	Probit4 Estimate	Marginal effect
fed	0.1927*** [0.0150]	0.1398*** [0.0167]	0.0958*** [0.0160]	0.0749*** [0.0174]	0.0134
med	0.2003*** [0.0189]	0.0934*** [0.0220]	0.0577** [0.0210]	-0.0083 [0.0231]	-0.0015
lninc		0.3542*** [0.0267]		0.2984*** [0.0292]	0.0534
wlive		-0.3877*** [0.0154]		-0.3745*** [0.0171]	-0.0670
nlive		-0.0059 [0.0156]		-0.0280* [0.0168]	-0.0050
age1			-0.0136*** [0.0024]	-0.0246*** [0.0028]	-0.0044
gender#			0.3495*** [0.0425]	0.5629*** [0.0480]	0.1007
ced			0.3381*** [0.0156]	0.2108*** [0.0173]	0.0377
chea			0.0823*** [0.0202]	0.0256 [0.0223]	0.0046
con	-0.1201*** [0.0395]	-2.0322*** [0.2888]	-0.8613*** [0.1647]	-1.1520*** [0.3553]	
Observations	6102	6102	6122		6,102
LR chi2(9)	747.58	2032.38	1723.45		2,525.09
Pseudo R2	0.1163	0.3179	0.2681		0.3949

Note: (1) Standard deviation in parentheses; (2) # is a dummy variable; (3) ***p<0.01; **p<0.05; *p<0.1

The regression results show that when only includes the education level of the parents, the influence of the parental education level on the children who engaged in non-agricultural work is significant. Positively related at the statistical level of 1%. That is to say, the higher the education level of parents, the children are more inclined to engage in non-agricultural work. Because parents with high education level and with low education level are different in educating their children. And the ideas instilled in children are different. Therefore, the children of high-educated families will have higher ability in work. So there is a greater possibility that they will engage in non-agricultural work. When only add some control variables of family characteristics to regression. The results shows that the educational level of parents are still significant at the statistical level of 1%, but the degree of influence reduce a little. When only add control variables of the child's characteristics to regression, the father's education level still has a significant positive influence on the children's work at the 1% statistical level, but the mother's education level has a significant positive impact on whether the children are engaged in non-agricultural work at the statistical level of 5%. That is to say, if consider the children's characteristics, the influence of the parental education level will be weakened, and the influence of mothers on children has decreased more than that of fathers. Because when children grow up, the time they contact with their parents becomes less, and parents' influence on them will be relatively weaker, which will more depending on themselves.

However, if all control variables of the family characteristics and the children characteristics are regressed together, the results show that the influence of the father's educational level on the nature of the child's work are still significant at the statistical level of 1%, that is, when the father's education is increased by one level, the possibility of children engaging in non-agricultural work

will increase by 1.34%, while the educational level of the mother is negatively related to the nature of the child's work, but it is not significant, that is to say, the educational level of mothers has no effect on whether their children engage in non-farm work or not. This is different from the previous results. And we often think that mother has more influence on the children than father. The reason may be that the mother has a certain influence on the children's character and behavior, because the children stay with the mother for the most of time before working. While the decisive and steady quality of the father will affect the children's choices and views later, so the father's influence is longer than the mother.

Robustness test. The model estimates that the father's education level is significant in the 1% statistical level after adding more control variables. The mother's education level is still significant but will be weakened after adding the children's characteristics. Surprisingly, when all the control variables of family characteristics and child characteristics are added, it is not only insignificant, but also becomes negative. In order to prove whether the result is stable, this paper conducted Robustness test on adding the income and the nature of the spouse's work to regression.

Table 3 Robustness Test - Control Variables

variables	job			
	Estimate	Marginal effect	Estimate	Marginal effect
fed	0.0749*** [0.0174]	0.0134	0.0656*** [0.0193]	0.1182
med	-0.0083 [0.0231]	-0.0015	-0.0021 [0.0258]	-0.0004
lninc	0.2984*** [0.0292]	0.0534	0.4013*** [0.0499]	0.0722
wlive	-0.3745*** [0.0171]	-0.067	-0.3872*** [0.0198]	-0.0697
nlive	-0.0280* [0.0168]	-0.005	-0.0089 [0.0197]	-0.0016
age1	-0.0246*** [0.0028]	-0.0044	-0.0200*** [0.0034]	-0.0036
gender#	0.5629*** [0.0480]	0.1007	0.6134*** [0.0628]	0.1104
ced	0.2108*** [0.0173]	0.0377	0.2129*** [0.0196]	0.3833
chea	0.0256 [0.0223]	0.0046	0.0155 [0.0251]	0.0028
lnpinc			-0.1100** [0.0457]	-0.0198
pjob			-0.1886*** [0.0211]	-0.034
con	-1.1520*** [0.3553]		-0.9958** [0.4412]	
Observations	6102		4,864	
LR chi2(9)	2525.09		2140.61	
Pseudo R2	0.3949		0.4087	

Note: (1) Standard deviation in parentheses; (2) # is a dummy variable; (3) ***p<0.01; **p<0.05; *p<0.1

It shows in Table 3 that after controlling the spouse's annual income and the working nature, the influence of the father's educational level on the children whether engage in non-agricultural work is still significantly and positively correlated at the 1% statistical level. That is to say, the influence of father's education level is stable; the mother's influence is still negatively related to the children,

and it is still not significant, indicating that when the children leave their parents and has his own family, then they will be affected by their spouse. If the spouse has a better work and higher income, then the possibility of engage in non-agricultural work will be lower, and someone may don't go to work. Therefore, the results obtained in the previous are sound. The influence of father's education level on children's engagement in non-agricultural work is positive. But mother's education level has no effect on their children.

Conclusion and suggestions

Conclusion. Based on the above analysis and research, the following conclusions can be drawn:(1)The educational level of parents has a positive impact on the nature of their children's work. The impact may be weakened after their children become married, but during the time that children live with their parents, the impact on subsequent development still exists. (2)The educational level of fathers and mothers has different influences on children. The educational level of fathers has a longer impact on the nature of children's work than mothers. The influence of mother's education level on the nature of children's work may gradually fade away as children become married. The influence of the father's educational level will weaken as the children become married, but the impact will always existed.

Suggestions. The traditional thinking of our country has always advocated the family division pattern and the traditional role concept of “male outside, female inside”, so that the father always focus on the career and neglects the education of the child. In fact, father's participation is important during the child's growth process. If only the mother cultivates unilaterally will cause the child character to be too gentle, calm, lacks father's masculinity and decisiveness, which will have an impact on future career development. Therefore, the father should spend more time communicating with the child and nurturing the child together with the mother so that the child can grow up healthily and comprehensively.

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