Gender Differences and the Effects of Sibling Composition on Parents' Educational Expectations: Findings from a Case of China

Yun Jiang
Nanjing Normal University, China

Abstract.

With rich information from the 2013/14 wave of China Education Panel Survey Data, this study used the ordinary least squares regression with the statistical package STATA to examine the effects of teenager gender, the number of siblings and sibling sex composition on parents' educational expectations in China. Different from previous studies in China, this study found that parents have higher educational expectations for girls than for boys, and a larger return of human capital of girls might be one of the answers to this phenomenon. Additionally, residential areas, parents' educational levels, and father's professional status show a more significant impact on boys than girls on parents' educational expectations. This study also focuses on the sibling composition in the family, which includes the number of siblings and the sibling sex composition. Consistent with the dilution model, a larger number of siblings undermines parents' educational expectations, but it has no gender differences. Due to the previous family planning policy, a large number of Chinese families only have one child. I found that in both only-child families and non-only-child families, parents still have higher educational expectations on girls, and even in non-only-child families this preference for girls is more significant. Different as expected, sibling sex composition does not show any statistically significant influence on parents' educational expectations.

Keywords: Asia; education; family background; reversed gender gap; social class
1. Introduction

Gender equality in education has always been one of the focuses of sociology. China has been closing the wide gender gap in education owing to the expansion of educational opportunities (Lavely et al., 1990; Liu & Wang, 2008) and the decrease of the birth rate caused by the policy of the only child (Ye & Wu, 2011; Wang, 2011). However, the disparity of gender in education still exists in different social groups (Li, 2009; Wu, 2012), and even sometimes the reversed gender gap exists (Li, 2010; Ye & Wu, 2011). Additionally, the implementation of the universal two-child policy will change the family structure of the only child. Therefore, the effects of sibling composition and its influence on gender should also be valued.

Most studies focus on the gender difference in educational attainment, but it is also essential to study the process of establishment of the gap in educational attainment. The family environment is crucial for the development of children (Douglas, 1964; Li, 2009). As one of the parental variables that matter in the family environment, parents’ educational expectations have been demonstrated to act as a mediator, impacting the educational attainment and future socioeconomic status of their children (Campbell, 1983) by influencing educational expectations of children themselves (Bozick et al., 2010; Castro et al., 2015) and investing more financial resources and company to their children (Liu et al., 2014). Therefore, it is of value to pay attention to the educational expectations of parents.

The discussion in China on the relation between gender stratification and the parents’ educational expectations remains much to do. Firstly, most researches lack a systematic theoretical framework when proposing the gender differences in parents’ educational expectations, thus unable to present a reasonable explanation for their observations. The conflicts exist in previous researches, where some researchers found that parents have higher educational expectations for boys than girls (Xu & Zhou, 2017; Cui & Song, 2019), and some found the opposite results (Zhou & Cheng, 2016). Therefore, this research will follow the theory of human capital, the perspective of patriarchal culture to understand more profoundly the gender gap in parents’ educational expectations. Secondly, most previous researches fail to put the gender and other factors of sibling composition or family background in the same analytical framework, so the observation neglects the potential heterogeneity of gender differences among different social groups. Hence, this article will observe the heterogeneous effects of gender differences in different sibling compositions and family backgrounds.
2. Literature Review and Hypotheses

2.1 The Return of Human Capital

The investment of human capital means the activities that influence the individuals’ future income, of which education plays an important role (Becker, 1962). Parents tend to maximize the return of the investment in their children (Becker & Tomes, 1979). Therefore, parents might expect more from children who have a more substantial potential to obtain a higher income in the future.

Women generally hold a disadvantageous status in employment. The Research on Gender Differences in China’s Job Market in 2019 shows that women’s salary in China is only 78.3% of that of men. Additionally, the Glass Ceiling Theory indicates that some higher positions which can bring a higher salary are still tough for women to obtain (Laslett, 1989). Therefore, men are considered to have a better career in the labor market to support their families, so it is necessary to receive more education.

However, some studies argue for the contrary possibilities. Firstly, in a male-dominated working environment where men are better paid, women are aware that education is one of the few opportunities to overcome the structural inequality, while men do not actively seize the educational opportunities exactly because they are of the gender that is traditionally preferred. (Buchmann et al., 2008; Legewie & DiPrete, 2009; Quenzel & Hurrelmann, 2013). Accordingly, a study in China shows that the women’s rate of return to education is larger than that of men, meaning that the positive influence of education on a higher salary is more significant for women than men (Liu, 2008). Secondly, women receiving better education are more likely to have a marriage of higher quality by finding a partner receiving a similar or higher level of education (Buchmann & DiPrete, 2006). As a result, they have more protections from poverty (Fry & Cohn, 2010).

Based on the discussion above, this study has the first hypothesis:

\[ H1: \text{In general, parents have higher educational expectations for girls.} \]

2.2 Dilution Model and Sibling Sex Composition

The ‘dilution model’ of Blake (1981) shows that the larger number of siblings harms the college attainment of individuals. Some studies in China also suggest similar results. (Ye & Wu, 2011; Li & Liu, 2016). Even some research shows that the number of siblings has a severer negative impact on girls than boys both in educational attainment

---

1 The data are from Research on Gender Differences in China’s Job Market, a report written by the research center and the career science lab of Boss Zhipin, one of the largest career consulting companies in China.
and expectations from parents (Wu, 2012; Liu et al. 2014). It is especially worth noticing that the gender gap is closing because of the shrink of family size caused by the policy of the only child in China (Ye & Wu, 2011). The family resources are concentrated only on one child, so girls benefit a lot from this family structure. However, some research found that in the families of the only child, parents have higher educational expectations on boys (Cui & Song, 2019), while some found that the ‘only girl’ in the family receives more expectations than the ‘only boy’ (Liu et al., 2014). The application of different data may attribute to the conflicting results.

Therefore, based on the dilution model, this study has two other hypotheses:

\[ H2a: \text{The individual's sibling number has an impact on parents’ educational expectations, and this impact varies in different gender groups.} \]

\[ H2b: \text{Gender differences in parents’ educational expectations are smaller in families of the only child than those with more than one child.} \]

Sibling sex composition is also proved to affect parents’ educational decisions. A study found that having brothers decreases individuals’ educational attainment while more girls in the family contribute to the increase of children’s educational years, and the disadvantageous sibling sex composition is only harmful to girls (Zheng, 2013). However, does the sibling sex composition also impact on parental educational expectations? The research pertinent to this question remains to be answered.

Therefore, another hypothesis is developed:

\[ H3: \text{The individual’s sibling sex composition has an impact on parents’ educational expectations.} \]

2.3 Patriarchy and Disparity of Rural and Non-rural development in China

China is still a patriarchal society deeply influenced by a preference for boys. Under the traditional view of 'men taking care of the outside and women taking care of the inside', some mothers think it useless for girls to receive much education because they will get married and devote themselves to household chores sooner or later (Li & Tsang, 2003; Hannum et al., 2009). The cultural preference for boys is more evident in rural areas than in non-rural areas because people in rural areas accept more traditional gender roles (Wu, 2012). Certain empirical studies found that girls receive less education than boys in rural areas (Li, 2009; Wu, 2012).

However, another research shows that there exists no significant difference in parents’ educational expectations in China’s rural areas for both girls and boys, and this phenomenon might be attributed to the expansion of educational opportunities and the change of traditional ideas with the modernization (Hannum et al., 2009). Therefore, the fourth hypothesis is made:
H4: Gender differences in parents’ educational expectations are heterogeneous in rural and non-rural areas in China.

2.4 The Family Socioeconomic and Educational Background

The Status Attainment Model proposed by Blau and Duncan indicates that father’s professional status and educational level exert considerable influence on children’s status attainment (1967), during which process parents’ educational expectations act as a mediator of family socioeconomic status on children’s academic outcomes (Campbell, 1983; Neuenschwander et al., 2007). The studies in China show that a better family socioeconomic background is more beneficial to girls than boys to receive more education and even leads to a reversed gender gap (Hannum, 2005; Li, 2009; Wu, 2012).

Parents’ educational level also plays an important role in gender equality of education. According to the gender-egalitarian perspective, higher levels of education lead people to have a more egalitarian concept of gender role (Cherlin & Walters, 1981; Thornton et al., 1983), meaning that parents of more education tend to struggle more to guarantee the equal education to both sons and daughters. Many studies found that girls whose parents receive higher education are more advantageous in education than those whose parents of lower educational levels both in the United States (Buchmann & DiPrete, 2006) and China (Li, 2009; Wu, 2012).

Therefore, two last hypotheses are developed:

H5: Gender differences in parents’ educational expectations are heterogeneous in different socioeconomic family backgrounds.

H6: Gender differences in parents’ educational expectations are heterogeneous in different educational levels of parents.

3. Method

3.1 Data sources

This study is grounded on the 2013-2014 data of China Education Panel Survey (CEPS). This survey was designed and implemented by the Chinese General Social Survey (CGSS) of Renmin University of China, conducted with the 7th grade and the 9th grade as survey objects, which are national representative samples.

The data of students and parents are merged, and the samples are dropped if the gender, family socioeconomic status, the number of siblings, parents’ comments on academic performance and the educational expectations are missing. For the rest of the sample, the missing value of the ethnic group is replaced by ‘Han’, the major ethnic
group in China, the missing value of the highest educational years of parents is replaced by its mean, and that of mother replaces the missing value of the professional status of the father. The sample includes 17216 students from 112 schools in 28 counties in China, based on stratified random sampling.

3.2 Variables

3.2.1 Dependent Variable

Different from other studies focusing primarily on individuals’ educational attainment, this research focuses on the educational expectation of parents on their children. For the convenience of statistics, the educational expectations are transferred into expected years of education.

3.2.2 Primary Explanatory Variables

The priority of this research is to study how gender and different sibling structures influence parents’ educational expectations. Therefore, the primary explanatory variables are gender, the number of siblings, and the sibling sex composition. According to the previous research (Zheng, 2013), three variables are chosen to measure the sibling sex composition: whether having brothers (having brothers = 1), whether having sisters (having sisters = 1) and the percentage of girls.

3.2.3 Controlled Variables

The main controlled variables of this research are gender, registered permanent residence, the family economic status, the highest educational years of parents, the number of siblings, the birth order, the academic year, the ethnic group, the profession of father, parents’ comments on their child’s current academic achievement and the standardized score of cognitive ability test.

---

2 CEPS has divided parents’ educational level into ten levels. ‘Stop education now’ is replaced by 8 or 9 years according to children’s grade, ‘secondary school’ by 9 years, ‘high school’, ‘vocational high school’ and ‘polytechnic school/technical school’ by 12 years as these three levels of education are considered as of the similar value in China, ‘junior college’ as 15 years, ‘Bachelor’s degree’ as 16 years, ‘Master’s degree’ as 19 years and ‘Philosophy of Doctor’ as 21 years.

3 CEPS has divided parents’ educational level into nine levels. The educational level is replaced by calculating the corresponding years of education to make our statistics more explainable. Following the experience of previous study (Wu, 2012; Zheng, 2013), ‘receiving no education’ is replaced by 0 year, ‘primary school’ by 6 years, ‘secondary school’ by 9 years, ‘high school’, ‘vocational high school’ and ‘polytechnic school/technical school’ by 12 years as these three levels of education are considered as of the similar value in China, ‘junior college’ as 15 years, ‘undergraduate education’ as 16 years and ‘graduate education’ as 19 years.

4 CEPS divides the profession of father into 10 categories, which are simplified in this study into two categories in our research drawing on the experience of the previous research (Liu et al., 2015): the higher professional category includes the leader and employee in the government or the state-owned organizations, the manager in the enterprises, the teacher, engineer, the doctor and the lawyer and the lower category includes the technical worker (including driver), the employee in the manufacture, business and service industries, the individual household, the farmer and the unemployed.
3.3 Data Analysis

From the methodological perspective, this study contains three steps: The first part uses the statistical package STATA to determine the ordinary least squares regression for coefficients of the independent variables on the parents’ educational expectations. The second part is to determine the regression in two different groups dependent on whether it is a family of the only child. The third part analyzes how gender interacts with the other controlled variables.

Table 1. Description of Variables

| Variable                              | Mean/Percentage (%) | Notes                                      |
|---------------------------------------|---------------------|--------------------------------------------|
| Parents’ educational expectation      | 15.93               | Standard deviation 2.86                    |
| Sex                                   |                     |                                            |
| Male                                  | 51.31               | Male=0, female=1                           |
| Female                                | 48.69               |                                            |
| Whether having brothers               |                     |                                            |
| Having brothers                       | 31.40               | Having no brother=0, having brothers=1     |
| Having no brother                     | 68.60               |                                            |
| Whether having sisters                |                     |                                            |
| Having sisters                        | 32.91               | Having no sister=0, having sisters=1       |
| Having no sister                      | 67.09               |                                            |
| Percentage of girls                   | 0.29                | Standard deviation 0.25                    |
| Registered permanent residence        |                     |                                            |
| Non-rural                             | 45.56               | Non-rural=0, rural=1                       |
| Rural                                 | 54.44               |                                            |
| Family socioeconomic status           |                     |                                            |
| Very poor                             | 3.68                |                                            |
| Comparatively poor                    | 16.97               |                                            |
| Medium                                | 73.30               |                                            |
| Comparatively rich                    | 5.74                |                                            |
| Very rich                             | 0.31                |                                            |
| The highest educational level of parents | 10.85            | Standard deviation 3.11                    |
| Number of siblings                    | 0.74                | Standard deviation 0.86                    |
| Birth order                           |                     |                                            |
| Ranked as the oldest                  | 71.23               |                                            |
| Ranked in the middle                  | 5.28                |                                            |
| Ranked as the youngest                | 23.49               |                                            |
| Academic year                         |                     |                                            |
| Year seven                            | 52.52               | Year 7=0, Year 9=1                         |
4. Results

4.1 Gender, sibling compositions, and parents’ educational expectations

The first model in Table 2 shows that different from some previous research, parents have 0.195 more years of educational expectations on girls than boys (P≤0.001). Therefore, this research has confirmed the first hypothesis. As expected, the residential areas, the educational level of parents, the father’s professional status, academic achievement, and cognitive ability have a significantly positive relationship with parents’ educational expectations. However, family economic status has no significant results. Although different from the expectation, this find is still reasonable in the cultural context of China. Asian parents tend to value much the education of their offspring, regardless of their economic status (Goyette & Xie, 1999). Commonly, parents from low-income families will also try everything to support their children’s education (Xu & Zhou, 2017).

The number of siblings in Model 1 has a significantly negative influence on parents’ educational expectations (P≤0.01), indicating that the dilution model exists as parents...
have to expect on each child if there are more children to share the limited educational resources. However, in Model 2, the coefficient of the interaction of gender and number of siblings is not statistically significant, meaning that there is no heterogeneity in gender on the effect of the number of siblings. This finding is different from the previous studies on this subject.

Table 2. Gender, number of siblings and parents’ educational expectation

|                                             | Model 1          | Model 2          |
|---------------------------------------------|------------------|------------------|
| Female                                      | 0.195***         | 0.149**          |
|                                             | (4.99)           | (2.95)           |
| Rural residential areas                     | -0.111*          | -0.114*          |
|                                             | (-2.43)          | (-2.48)          |
| Family economic status                      |                  |                  |
| Comparatively poor                          | 0.0724           | 0.0699           |
|                                             | (0.57)           | (0.55)           |
| Medium                                      | -0.0492          | -0.0511          |
|                                             | (-0.41)          | (-0.43)          |
| Comparatively rich                          | 0.0447           | 0.0429           |
|                                             | (0.32)           | (0.30)           |
| Very rich                                   | 0.460            | 0.456            |
|                                             | (1.02)           | (1.01)           |
| Highest educational years of parents        | 0.151***         | 0.152***         |
|                                             | (17.77)          | (17.79)          |
| Number of siblings                          | -0.107**         | -0.136**         |
|                                             | (-3.11)          | (-3.25)          |
| Birth order                                 |                  |                  |
| Ranked in the middle                        | -0.0869          | -0.101           |
|                                             | (-0.74)          | (-0.86)          |
| Ranked as the youngest                      | 0.100            | 0.108*           |
|                                             | (1.84)           | (1.98)           |
| Grade 9                                     | -0.681***        | -0.682***        |
|                                             | (-17.91)         | (-17.93)         |
| Minor ethnic groups                         | 0.301***         | 0.300***         |
|                                             | (4.22)           | (4.21)           |
| Father works as leader or staff in state-owned institutions/in the management layer of enterprises/as intellectual employees | 0.373***         | 0.374***         |
|                                             | (6.61)           | (6.62)           |
| Parents’ comments on their child’s current academic achievement |                  |                  |
Table 3 shows the gender differences in parents’ educational expectations in families of the only child and those with siblings. Same as Liu’s research (2014), the ‘only girl’ benefits more than the ‘only boy’. As can be seen in Model 3, the ‘only girl’ receives 0.093 more years of education than boys in the same family structure (P≤0.05). Surprisingly, the preference for girls remains in families with more than one child, and girls even have 0.262 more years of educational expectations than boys when they have siblings (P≤0.001). Therefore, H2b is confirmed only partially. This finding might be attributed to the decline of traditional patriarchal beliefs and the progress of modernization in China (Wu, 2012).

Table 3. Comparison between the Only Child and the Non-Only Child

|                          | Model 3       | Model 4       |
|--------------------------|---------------|---------------|
| Female                   | 0.0927*       | 0.262***      |
|                          | (1.70)        | (4.68)        |
| Rural residential areas  | -0.294***     | 0.0261        |
|                          | (-4.35)       | (0.41)        |
| Family economic status   |               |               |
| Comparatively poor       | -0.0248       | 0.0855        |
|                          | (-0.09)       | (0.60)        |
| Medium                   | -0.138        | -0.0374       |
|                          | (-0.52)       | (-0.28)       |
| Comparatively rich       | -0.0875       | 0.140         |
|                          | (-0.31)       | (0.79)        |
Very rich | 0.0683 | 0.723
(0.11) | (1.09)

Highest educational years of parents | 0.174*** | 0.126***
(14.83) | (10.20)

Number of siblings | -0.112* | (-2.20)

Birth order
- Ranked in the middle | -0.102 | (-0.84)
- Ranked as the youngest | 0.105 | (1.83)

Grade 9 | -0.846*** | -0.559***
(-15.72) | (-10.47)

Minor ethnic groups | -0.0184 | 0.422***
(-0.15) | (4.83)

Father works as leader or staff in state-owned institutions/in the management layer of enterprises/as intellectual employees | 0.312*** | 0.391***
(4.52) | (3.99)

Parents’ comments on their child’s current academic achievement
- Comparatively bad | 0.659*** | 0.733***
(5.24) | (5.92)
- Middle | 1.605*** | 1.599***
(13.42) | (13.79)
- Comparatively good | 2.466*** | 2.493***
(20.19) | (21.07)
- Very good | 3.142*** | 3.190***
(20.94) | (20.82)

Standardized score of cognitive ability test | 0.298*** | 0.457***
(8.24) | (13.11)

_cons | 12.96*** | 12.93***
(41.32) | (55.47)

N | 7640 | 9576

\( t \) statistics in parentheses
* \( p < 0.05 \), ** \( p < 0.01 \), *** \( p < 0.001 \)

Model 5 to Model 7 in Table 4 shows the impact of sibling sex compositions on parents’ educational expectations. Although the results show that having any brother decreases an individual’s educational expectations from parents while having any sister
and a more significant percent of girls are beneficial to more expectations, all the results are not statistically significant. The third hypothesis has been proved false. In this study, different sibling sex compositions have no significant influence on parents’ educational expectations.

Table 4. Sibling sex composition and parents’ educational expectations

|                                | Model 5  | Model 6  | Model 7  |
|--------------------------------|----------|----------|----------|
| **Female**                     | 0.274*** | 0.270*** | 0.273*** |
|                                | (4.77)   | (4.76)   | (4.78)   |
| **Having any brother**         | -0.0565  |           |          |
|                                | (-0.97)  |           |          |
| **Having any sister**          | 0.0535   | 0.0535   |          |
|                                | (0.92)   | (0.92)   |          |
| **Percent of girls**           |          |          | 0.117    |
|                                |          |          | (1.01)   |
| **Rural residential areas**    | 0.0250   | 0.0246   | 0.0242   |
|                                | (0.40)   | (0.39)   | (0.38)   |
| **Family economic status**     |          |          |          |
| Comparatively poor             | 0.0843   | 0.0849   | 0.0843   |
|                                | (0.60)   | (0.60)   | (0.60)   |
| Medium                         | -0.0398  | -0.0383  | -0.0393  |
|                                | (-0.30)  | (-0.29)  | (-0.29)  |
| Comparatively rich             | 0.136    | 0.137    | 0.137    |
|                                | (0.77)   | (0.78)   | (0.77)   |
| Very rich                      | 0.718    | 0.719    | 0.718    |
|                                | (1.09)   | (1.09)   | (1.09)   |
| **Highest educational years of** | 0.126*** | 0.126*** | 0.126*** |
| parents                        | (10.18)  | (10.18)  | (10.18)  |
| **Number of siblings**         | -0.106*  | -0.121** | -0.122*  |
|                                | (-2.07)  | (-2.33)  | (-2.36)  |
| **Birth order**                |          |          |          |
| Ranked in the middle           | -0.1000  | -0.114   | -0.108   |
|                                | (-0.82)  | (-0.94)  | (-0.89)  |
| Ranked as the youngest         | 0.0922   | 0.0945   | 0.0921   |
|                                | (1.56)   | (1.61)   | (1.56)   |
| Grade 9                        | -0.561***| -0.561***| -0.561***|
|                                | (-10.48) | (-10.48) | (-10.49) |
| Minor ethnic groups            | 0.427*** | 0.425*** | 0.426*** |
|                                | (4.88)   | (4.86)   | (4.87)   |
4.2 The interactive effect of gender and other variables of family background

Model 8 in Table 5 shows that there exist gender differences in how the registered permanent residence influences parents’ educational expectations. Living in rural areas makes boys lose 0.206 years of expectations from their parents ($P \leq 0.001$) than those in urban areas. However, the positive coefficient of the interaction of gender and residential areas shows that the adverse effects of living in rural areas are less harmful to girls than to boys ($P \leq 0.05$). Therefore, there does exist a heterogeneous impact of residence on the relationship between gender and parents’ educational expectations, but surprisingly, girls in rural areas seem not to be influenced by ‘the preference for boys’.

The second part of the interactions is whether the impact of gender varies in different levels of family socioeconomic status, which include family economic status and father’s professional status in this study. The interactive effects of all family economic status are not significant, which are not shown in the table. Model 9 shows the
interactive effect of gender and father’s profession. The main effect of gender is positive, but the interaction of gender and father’s profession is negative and significant (P≤0.001), meaning that father’s higher level of profession on the contrary weakens girls’ advantage in parents’ educational expectations (when girls’ father has a higher level of professional status, they receive 0.276-0.426=0.15 less years of educational expectations than boys in the same situation). Therefore, the fifth hypothesis can be partially confirmed.

Finally, the interaction of gender and the parents’ educational years in Model 10 shows that with the rise of parents’ educational level, the gender gap in parents’ educational expectations is closing because boys, who are initially vulnerable in parents’ educational expectations, benefit more than girls when their parents receive more education (P≤0.01). The sixth hypothesis can be confirmed. The gender-egalitarian perspective might be able to explain the observation. Parents of higher levels of education tend to expect more on boys based on the fact that boys are sometimes more vulnerable in the educational system.

Table 5. The Interactive Effects of Gender and Other Variables of Family Background

|                     | Model 8    | Model 9    | Model 10   |
|---------------------|------------|------------|------------|
| Female              | 0.0907*    | 0.276***   | 0.591***   |
|                     | (1.65)     | (6.31)     | (4.05)     |
| Rural residential areas | -0.206*** | -0.110*    | -0.113*    |
|                     | (-3.35)    | (-2.41)    | (-2.46)    |
| Family economic status |          |            |            |
| Comparatively poor  | 0.0738     | 0.0759     | 0.0768     |
|                     | (0.58)     | (0.60)     | (0.61)     |
| Medium              | -0.0477    | -0.0497    | -0.0462    |
|                     | (-0.40)    | (-0.42)    | (-0.39)    |
| Comparatively rich  | 0.0496     | 0.0447     | 0.0484     |
|                     | (0.35)     | (0.32)     | (0.34)     |
| Very rich           | 0.443      | 0.463      | 0.462      |
|                     | (0.98)     | (1.03)     | (1.02)     |
| Highest educational years of parents | 0.151*** | 0.152*** | 0.169*** |
|                     | (17.80)    | (17.83)    | (15.43)    |
| Number of siblings  | -0.110**   | -0.111**   | -0.110**   |
|                     | (-3.22)    | (-3.23)    | (-3.20)    |
| Birth order         |            |            |            |
| Ranked in the middle | -0.0888   | -0.0883    | -0.0951    |
|                     | (-0.76)    | (-0.75)    | (-0.81)    |
| Ranked as the youngest | 0.108* | 0.108*     | 0.106      |
|                     | (1.98)     | (1.98)     | (1.96)     |
Grade 9  
\[ -0.682^{**} \]  
\[ (-17.93) \]  
Minor ethnic groups  
\[ 0.304^{**} \]  
\[ (4.27) \]  
Father works as leader or staff in state-owned institutions/in the management layer of enterprises/as intellectual employees  
\[ 0.372^{**} \]  
\[ (6.59) \]  
Parents’ comments on their child’s current academic achievement  
- Comparatively bad  
\[ 0.699^{***} \]  
\[ (7.84) \]  
- Middle  
\[ 1.600^{***} \]  
\[ (19.04) \]  
- Comparatively good  
\[ 2.485^{***} \]  
\[ (29.04) \]  
- Very good  
\[ 3.170^{***} \]  
\[ (29.59) \]  
Standardized score of cognitive ability test  
\[ 0.382^{***} \]  
\[ (15.21) \]  
Female * Rural residential areas  
\[ 0.193^{*} \]  
\[ (2.52) \]  
Female * Father works as leader or staff in state-owned institutions/in the management layer of enterprises/as intellectual employees  
\[ -0.426^{***} \]  
\[ (-4.46) \]  
Female * Highest educational years of parents  
\[ -0.0363^{**} \]  
\[ (-2.90) \]  
_\text{cons}  
\[ 12.95^{***} \]  
\[ (73.72) \]  
\[ 17216 \]  
N

\[ 17216 \]

\[ 17216 \]

\[ 17216 \]

\[ t \] statistics in parentheses  
\[ * p < 0.05, ** p < 0.01, *** p < 0.001 \]

5. Discussion

Many studies tried to understand why girls outperform boys through the biological differences and educational system (Gold, 1982; Gurian & Stevens, 2005; Kleinfeld,
and this research provides a new perspective of parents’ educational expectations for this problem. This study shows that parents generally have higher educational expectations for girls, even in families with more than one child. The dilution model has an overall impact but no gender differences. Finally, sibling sex composition shows no significance on parents’ educational expectations.

Gender differences in different social groups on parents’ educational expectations do exist, but advantageous social backgrounds are more important for boys. Living in non-rural areas, father’s higher professional status and higher levels of parents’ education all can help narrow the distance between boys and girls in parents’ educational expectations.

Therefore, the reversed gender gap in education has been proved right. However, the better academic performance of girls can never be seen as the end of gender equality. An increasing body of studies shows that women are much discriminated in employment, although they have obtained a better education than men (Xu, 2010; Li, 2016).

Finally, the reasons why parents pay more educational expectations to girls are still needed to explain. From the perspective of the return of human capital, this study suggests it might because of the higher rate of return to education for girls, but the causal relation still needs to be verified. Additionally, some research suggests that it is because girls are more willing to interact with their parents than boys, which leads parents to involve more into girls’ education (Zhou & Cheng, 2016). Overall, future research may delve into more possible explanations for parents’ higher educational expectations for girls.

Reference

[1] Becker, G. S., & Tomes, N. (1979). An equilibrium theory of the distribution of income and intergenerational mobility. *Journal of Political Economy*, 87(6), 1153-1189.

[2] Blau, P. M. & Duncan, O.D. (1967). *The American Occupation Structure*. New York: John Wiley.

[3] Blake, J. (1981). Family size and the quality of children. *Demography*, 18(4), 421-442.

[4] Buchmann, C., DiPrete, T.A. & McDaniel, A. (2008). Gender Inequalities in Education. *Annual Review of Sociology*, 34(1), 319-337.
[5] Buchmann, C., & DiPrete, T.A. (2006). The growing female advantage in college completion. The role of family background and academic achievement. *American Sociological Review*, 71(4), 515–541.

[6] Bozick, R., Alexander, K., Entwisle, D., & Kerr, D. K. (2010). Framing the future: revisiting the place of educational expectations in status attainment. *Social Forces*, 88(5), 2027-2052.

[7] Castro, M., E. Expósito-Casas, López-Martín, E., Lizasoain, L., Navarro-Asencio, E. & Gaviria, J. L. (2015). Parental involvement on student academic achievement: a meta-analysis. *Educational Research Review*, 14, 33-46.

[8] Campbell, R. T. (1983). Status attainment research: end of the beginning or beginning of the end? *Sociology of Education*, 56(1), 47-62.

[9] Cherlin, A. & Walters P. B. (1981). Trends in United States Men's and Women's Sex-Role Attitudes: 1972-1978. *American Sociological Review*, 46(4), 453-60.

[10] Chermg, H. Y. S., & Hannum, E. (2013). Community poverty, industrialization, and educational gender gaps in rural China. *Social Forces*, 92(2), 659-690.

[11] Cui, S. & Song F.-fang. (2019). Gender Differences in Parental Educational Expectations and Input: Empirical Research based on the Chinese Educational Panel Survey. *Renmin University of China Educational Journal*, (2), 154-166.

[12] Douglas, J. W. B. (1964). *The home and the school: A study of ability and attainment in the primary school*. London: Macgibbon & Kee.

[13] Gold, D. (1982). Male teacher effects on young children: A theoretical and empirical consideration. *Sex Roles*, 8(5), 493–513.

[14] Goldin, C., Katz L. F. & Kuziemko I. (2006). The Homecoming of American College Women: The Reversal of The College Gender Gap. *Journal of Economic Perspectives*, 20(4), 133-156.

[15] Gudrun, Q. & Hurrelmann, K. (2013) The growing gender gap in education. *International Journal of Adolescence and Youth*, 18(2), 69-84.

[16] Gurian, M. & Stevens K. (2005). *The Minds of Boys: Saving Our Sons from Falling Behind in School and Life*. San Francisco: Jossey-Bass.

[17] Hannum, E. (2005). Market transition, educational disparities, and family strategies in rural China: new evidence on gender stratification and development. *Demography*, 42(2), 275-299.
[18] Hannum, E., Kong, P., & Zhang, Y. (2009). Family sources of educational gender inequality in rural China: a critical assessment. *International Journal of Educational Development, 29*(5), 474-486.

[19] Kleinfeld, J. (2009). No Map to Manhood: Male and Female Mindsets Behind the College Gender Gap. *Gender Issues, 26*(3), 171-182.

[20] Lavely, W., Xiao, Z., Li, B. & Freedman, R. (1990). The Rise in Female Education in China: National and Regional Patterns. *The China Quarterly, 121*, 61-93.

[21] Laslett, P. (1989). *A fresh map of life: the emergence of the third age*. Cambridge: Harvard University Press.

[22] Legewie, J., & DiPrete, T.A. (2009). *Family determinants of the changing gender gap in educational attainment. A comparison of the U.S. and Germany*. *Schmollers Jahrbuch, 129*, 169–180.

[23] Li, C.-ling. (2009). Gender Differences in Educational Attainment: Impacts of Family Background on Educational Attainment of Men and Women. *Collection of Women’s Studies, 90*, 14-18.

[24] Li, C.-ling. (2010). Expansion of Higher Education and Inequality in Opportunity of Education: A study on effect of “Kuozhao” policy on equalization of educational attainment. *Sociological Studies, (3)*, 82-110.

[25] Li, C.-ling. (2016). "Boy Crisis", "Leftover Women" and "Employment Discrimination against Female College Graduates": Challenges of Reversed Gender Disparity in Education. *Collection of Women’s Studies, 134*, 33-38.

[26] Li, D., & Tsang, M. C. (2003). Household decisions and gender inequality in education in rural China. *China an International Journal, 1*(2), 224-248.

[27] Li, X., & Liu, H. (2016). Gender differences in the effects of sibship size on educational attainment. *Population & Economics, (3)*, 19-29.

[28] Liu, B.-zhong., Zhang, Y.-yun, Li, J.-xin. (2014). Socioeconomic Status, Cultural Idea and Family Educational Expectation. *Youth Studies* (6), 46-53.

[29] Liu, Y.-shan & Wang, Z.-ming. (2008). Women enter the elite group: limited progress. *Journal of Higher Education, 29*, 49-61.

[30] Liu, Z. (2008). Gender Differences in Rates of Return to Education. *Collection of Women’s Studies, 85*, 28-34.
[31] Luo, K., & Zhou, L. (2010). Effects of birth order and gender differences on educational human capital: an analysis based on family economics. *Economic Science, 32*(3), 107-119.

[32] Murphy, R., Tao, R., & Lu, X. (2011). Son preference in rural China: patrilineal families and socioeconomic change. *Population and Development Review, 37*(4), 665-690.

[33] Neuenschwander, M. P., Vida, M., Garrett, J. L., & Eccles, J. S. (2007). Parents’ expectations and students’ achievement in two western nations. *International Journal of Behavioral Development, 31*(6), 594-602.

[34] Fry, R. & Cohn, D. (2010). Women, Men and the New Economics of Marriage. Pew Research Center. Retrieved from: https://www.pewresearch.org/wp-content/uploads/sites/3/2010/11/new-economics-of-marriage.pdf.

[35] Schwartz, C. R. & Han, H. (2014). The Reversal of the Gender Gap in Education and Trends in Marital Dissolution. *American Sociological Review, 79* (4), 605-629.

[36] Sommers, C. H. (2013). *The War Against Boys: How 15Misguided Policies Are Harming Our Young Men.* New York: Simon & Schuster.

[37] Thornton, A., Alwin D. F., & Camburn D. (1983). Causes and Consequences of Sex-Role Attitudes and Attitude Change. *American Sociological Review, 48*(2), 211-27.

[38] Wang, X.-tao. (2011). Educational Returns to Urban Full-Time Young Workers: An Analysis of Sex and Only-Child Status. *Chinese Journal of Sociology, (4), 158-174.

[39] Wu, Y.-xiao. (2012). Gender gap in educational attainment in urban and rural China. *Society, 32*(4), 112-137.

[40] Goyetteb, K. & Xie, Y. (1999). Educational Expectations of Asian American Youths: Determinants and Ethnic Differences. *Sociology of Education, 72*(1), 22-36.

[41] Xu, A.-qi. (2010). Boy Crisis: An Alarming Pseudo-Proposition. *Youth Studies, (1), 40-46.

[42] Xu, S.-jing & Zhou D.-yang. (2017). A Study on the Mediating Role of Education as the Intergenerational Transmission of Stratum. *Social Science, (9), 91-100.
[43] Ye, H. & Wu X.-gang. (2011). Fertility Decline and the Trend in Educational Gender Inequality in China. *Sociological Studies*, (5), 153-173.

[44] Zheng, L. (2013). Sibling sex composition, intrafamily resource allocation, and educational attainment: an explanation of educational gender inequality in China. *Sociological Studies*, (5), 76-103.

[45] Zhou, F. & Cheng T.-jun. (2016). Gender Differences in Secondary School Students’ Educational Expectations: Analysis of the Impact of Parental Involvement. *Educational Research and Experiment*, (6), 7-16.