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**COLLEGE ASPIRATIONS AMONG RURAL LEFT-BEHIND CHILDREN IN CHINA:
DO PARENTAL INVOLVEMENT AND HOUSEHOLD FINANCIAL
CONTRIBUTIONS MATTER?**

A Thesis in

Educational Theory and Policy

by

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ABSTRACT

The effects of parental migration on left-behind children's educational outcomes are still under debate in China. Employing the Chinese Family Panel Studies wave 2010, this study explored the association between college aspiration of rural Chinese left-behind children (ages 10-15) and parental involvement and household financial contribution to their children's education. This study found that the physical absence of migrant parents does not become a barrier to being involved in their children's education, and there are no significantly lower college aspirations of left-behind children compared with their non-left-behind counterparts. Particular parental involvement behaviors and household financial contribution, for example, communicating with children about school and saving money for their children's future education, help motivate children to pursue higher education, regardless of their parents' migration status. Moreover, parental concern for their children's education has an even stronger association with left-behind children. In order to motivate children's college aspirations, policy makers should encourage rural Chinese parents who are at home or at a distance to develop sufficient parental involvement strategies and financial support for their children's education.

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CHAPTER 1

INTRODUCTION

Beginning in the late 1970s, China's urbanization and economic reform have propelled a dramatic wave of domestic migration: a significant amount of rural laborers pour into urban areas for temporary employment opportunities every year. It is estimated that about 15% of all rural families have at least one member who has migrated to urban areas (Wen & Lin, 2012). As a consequence, a large number of children have been left behind by their migrant parents in their rural hometowns, which has become a severe social problem.

According to *The Situations of Rural Left-Behind Children and Migrant Children in China*, an official report by the All-China Women's Federation (ACWF) in 2013, left-behind children are defined as those who stay in the rural areas where their household is registered, while one or both of their parents have left the registered places for employment opportunities. For those children, they generally have to live with single parents, close relatives, or even by themselves (Biao, 2007; Yeoh & Lam, 2007). Based on China's Sixth Census Data in 2010, the total population of left-behind children reached 61 million, which means of every five children in China, there is one who has at least one parent who is a migrant worker.

The influence of parental migration on their left-behind children is two-sided. On one hand, it is reasonable to believe that left-behind children suffer from parental absence and lack of parental involvement. On the other hand, the income migrant parents bring home could also provide better financial support for their left-behind children's living conditions and personal development. The net effect of parental migration on left-behind children's educational outcomes can be positive or negative due to these two contrasting consequences.

This study intends to explore whether children's college aspirations are affected by parental involvement and household financial support for their education. It will also look at these variables, if any of them generate significant effects, to see if any are correlated with left-behind children.

Educational aspiration is an important educational outcome, especially for left-behind children, because higher educational aspirations could encourage them to pursue more education and decrease their truancy and dropout probabilities. Also, children with higher educational aspiration may make efforts for better academic achievement in order to grasp more educational opportunities, especially when education has become one of the main channels for them to achieve upward mobility nowadays. In addition, investigating the educational aspirations of left-behind children could also shed some light on how parental migration influences familial

decisions on their children's education.

Previous studies have identified many factors that could influence children's educational aspirations. Among them, parental involvement and household educational investment, were particularly emphasized. Evidence has shown that more parental involvement in children's educational development could lead to higher educational aspirations of children (Hoover Dempsey et al., 2005; Hossler, Schmit, & Vesper, 1999; Sewell & Shah, 1968; Trusty, 1998). Moreover, financial supports and resources could also encourage children to aspire for more education (Hoover Dempsey et al., 2005; Hossler et al., 1999; Sewell & Shah, 1968; Trusty, 1998).

To better understand and discuss the relationship between the educational aspirations of left-behind children and their parents' involvement and household financial support, it is essential to compare them with children who have no migrant parents. Such comparisons will reveal whether educational aspirations of left-behind children are more likely to be harmed by the absence of parental involvement behaviors, but ameliorated by better financial security from their income.

In this quantitative study, a sample of 2,449 children aged 10 to 15 was drawn from the Chinese Family Panel Surveys of wave 2010. Two parts of the data were analyzed. The Child Survey provided individual-level data of parents and children, and the Family Survey provided the household-level data. The unit of analysis was the focus of child.

CHAPTER 2

LITERATURE REVIEW

To address the research question, this chapter reviews previous literature that widely explores the relationships between college aspirations, parental migration, parental involvement, and household investment of left-behind children in China. Two parts are included in this chapter. In each part, evidence with regards to China and other countries are provided. In the first part, I discuss previous studies on the educational aspirations of left-behind children. The second part emphasizes the positive and negative effects of parental migration on left-behind children's general educational outcomes. Two direct consequences of parental migration are introduced. They are parental absence and financial contribution to the household. I discuss how these factors may influence children's educational outcomes is also discussed.

2.1 Educational aspiration of left-behind children

The notion of migrant parents influencing left-behind children's education has been discussed for decades by educational researchers (Cortés, 2008; Yeoh & Lam, 2007). The majority of the studies in this field are conducted in developing countries, such as Mexico (Cortés, 2008; Dreby, 2007; Kandel & Kao, 2001), the Philippines (Bryant, 2005; Cortés, 2008; Madianou & Miller, 2011; Yeoh & Lam, 2007) and El Salvador (Edwards & Ureta, 2003), examining the correlation between parental migration, both internal and international migration, and their left-behind children's various educational outcomes.

Among the research on educational outcomes of left-behind children, only a few empirical studies focus on their educational aspiration. One study was conducted in Mexico. Kandel and Kao (2001) analyzed a stratified sample from a migrant-sending state called Zacatecas, and found that international migration experience of family members had negative impacts on college aspiration of all three educational levels of left-behind children. Though this negative coefficient was not significant among primary students, it was significant among secondary and preparatory students. This study provided a possible explanation that though the migration of family members could provide more financial benefits for the left-behind children to gain higher school achievement, the prevalence of migration could also provide children with an alternative option for economic mobility other than education. This study also found that children who had visited the U.S. as a tourist, rather than for other reasons like schooling or employment, were more likely to have college aspirations. These children most likely came from higher SES

families and had parents who emphasized educational attainment and the domestic labor market. This was consistent with their finding of positive correlation between parental education level and children's college aspiration. The reason could be that the parents' expectations encouraged children to have more education.

However, a study of Chinese left-behind children's educational aspirations revealed different results. Chen, Adams, Qu, Wang and Chen (2013) used data from the 2008 Survey of the Development of Disadvantaged Children to compare the school engagement of migrant children in the two districts of Beijing areas, and left-behind children and children from non-migration households in Henan and Shaanxi provinces. Academic aspirations and school-liking were examined to reflect children's school engagement. The main explanatory variables are parental support variables, including material support (having a desk or not), emotional support and parental expectations, and teacher support. Their study showed that left-behind children have lower educational aspirations than children without migrant parents, though the difference is not significant, while migrant children have the lowest level of educational aspiration.

Children's educational aspirations could interact with parental expectations. Li (2002) investigated the influences of migrant parents' expectations on the household decisions of the left-behind children's education. This study provided some explanations for the mixed results of the two studies of left-behind children's educational aspirations discussed above. This was a survey conducted in Hunan, Henan and Jiangxi provinces. Li (2002) showed that parents' migration experience varies and thus their educational expectations for children could be diverse. Three types of migrant parents' expectations are categorized.

The first type of migrant parents has relatively lower educational expectations for their children, and is less involved in their children's education. These migrant parents hold the opinion that higher education brings no economic profits. Since this group of parents has gained much more money through migrant work, they think it is better for their children to be migrant laborers as well to earn money quicker, instead of spending money on education. The second type of migrant parents also has low educational expectations for their children, though they do not deny the importance of schooling, as do the first type of parents. They are willing to fulfill their obligations of supporting their children to finish nine years' compulsory education. However, if children do not perform well in schools, they discourage them from continuing. For these two types of parents, their low expectation stems from the relatively higher economic returns from migration rather than from education, which supports the theory that migration provides an alternative mobility channel, as Kandel and Kao (2001) point out. The last type of migrant parents has high expectation for their children's education. From their own migrant labor

experience, they are fully aware of the significant role that education plays in an individual's development. So these parents highly value education and are actively engaged in their children's education.

2.2 Factors mediating the relationship between parental migration and left-behind children's educational aspirations

Varying results from previous empirical studies showed that educational aspiration of left-behind children are influenced by two factors: parental involvement and support, including parents' emotional support and parental expectations; and household financial support. This section further analyzes the two main direct consequences caused by parental migration: (1) parental absence and (2) household financial support, and then discusses how these two consequences may influence left-behind children's educational outcomes.

2.2.1 Parental absence

Most of the research suggests that, due to such physical absence, parental migration casts a negative impact on children's educational outcomes (Creighton, Park, & Teruel, 2009; Kandel, 2003; Kandel & Kao, 2001). Due to the long-distance caused by migration and compact working time of migrant labors, those parents are more likely to have less supervision of and involvement and assistance in their children's school work. They are less likely to provide a home environment that is conducive for children to learn, and may also have fewer opportunities to communicate with teachers and schools (Creighton et al., 2009; Lu, 2012). The lack of sufficient parental involvements in children's schooling could place the left-behind children at a distinct disadvantage.

In China, how parental absence would influence left-behind children is also debatable. Liang, Hou and Chen (2008) surveyed 3,939 fourth and sixth graders in the Sichuan province and found that the "left-behind" experience of children was negatively associated with their math scores, Chinese language scores, confidence in learning and interest in learning. They concluded that the absence of parents put left-behind children in a disadvantageous family education environment. Since their parents were absent, left-behind children may spend more time than other children on domestic work at home, including doing housework and taking care of other family members, to remedy the absence of non-resident adult labors. Moreover, the guardians of left-behind children are mostly grandparents who have a limited education level to supervise and

tutor children's schoolwork.

However, some studies argued that the physical absence of parents does not necessarily result in inadequate parent-children communication and parenting. For example, migrant parents are able to communicate with their children by phone calls, text messages, letters and other social media that they can access and afford, since they earn a higher income from migration (Bryant, 2005; Wen & Lin, 2012). According to the 2003 Children and Family Survey of the Philippines (Asis, 2006), left-behind children owned more mobile and landline phones than non-left-behind children, which can be used as the communication tools with their absent parents (Yeoh & Lam, 2007). Besides the long-distance parents-children communication through phones and other facilities, migrant parents could also bring home updated information and new ideas from developed cities when they visit home, which could help their left-behind children expand horizons and perspectives (Kandel & Kao, 2001; Wen & Lin, 2012). Hence, to some degree, these forms of parents-children communication and involvement may reduce the negative effects of the physical absence of parents on children's education (Creighton, et al., 2009; Kandel, 2003; Kandel & Kao, 2001; Liang, Hou, & Chen, 2008).

Other studies in China also provide possible alternative explanations about how the negative effects of parental absence could be mitigated by a particular parenting style and parent-child activities. Wen and Lin (2012) suggested that an authoritative parenting style is neither overly restrictive nor neglectful. This kind of parent sets reasonable limits and expectations for children's behaviors. Thus, they suggested that if migrant parents are authoritative, even if they are physically absent, they are still well aware of the importance of parental involvement, and would maintain a high level of communication with their children through telephone, Internet and video chats. Li (2002) found that some migrant parents will reward their children with tours to their migration destinations, which are usually developed regions and big cities, to encourage the children to study hard in school. Therefore, a parenting style or involvement, when applied appropriately, could mitigate the negative effects of the physical absence of migrant parents.

Therefore, previous studies on how physical absence of migrant parents would influence left-behind children's educational outcomes in China and other developing countries showed evidence that the migrant parents' physical absence does not necessarily mean inadequate parental involvement; thus, the physical absence of parents may not always negatively influence their children's educational outcomes.

Parental involvement is often examined as a multidimensionality concept and has been measured by different parenting behaviors and practices across studies (Ho & Kwong, 2013; Ho & Willms, 1996). Epstein (1987) provided the most widely accepted typology of parental

involvement. Her classification included four levels of parental involvement: basic obligations, school-to-home communications, parent involvement at school, and parent involvement in learning activities at home. Other previous researches define parental involvement as parents' concerns for children education and participation in extracurricular activities (McCarron & Inkelas, 2006; Sewell & Hauser, 1975; Wahl & Blackhurst, 2000).

Ho and Willms (1996) tested four forms of parental involvement: home discussion, school communication, home supervision and school participation. By analyzing data from the National Education Longitudinal Study of 1988 with a sample size of 24,599 eighth graders, they discovered that parental involvement at home, such as discussion and supervision of school-related works, has the strongest positive correlation with children's academic achievement. However, parental involvement in school, such as school participation of volunteers and Parent Teacher Organization (PTO), only has a modest effect on reading and even a negligible effect on mathematics.

Ho and Kwong (2013) examined the parental involvement in the primary schools of Hong Kong and categorized parental involvement into five forms: cultural and social communication, education communication, home support, home limitations and school participation. They conducted a large-scale survey of local students, parents and teachers and found that home limitations (controlling time for watching TV and overseeing the relationship with peers) and home support (going for a trip to a public library and reading together) have negative effects on children's Chinese and mathematics, though these two dimensions have positive effects on children's self-concept. The weak and negative effect of parental supervision and limitation at home could be explained by the fact that those children are low achievers in schools in the first place (Ho & Kwong, 2013; Ho & Willms, 1996). They also found that school participation only has a positive association with the English self-concept.

In a meta-analysis work conducted by Fan and Chen (2001), indicators of parental involvement used by previous empirical studies are divided into four dimensions: educational expectation/aspiration for children, communication with children about school-related matters, parental supervision/home structure related to school matters, and other/general parental involvement. Their analyses showed that parental involvement is positively related to children's academic achievement, but such effects vary across indicators. Parental expectation/aspiration of their children has the strongest effect, while parental supervision has the weakest. Similar findings also confirmed that parental expectation is positively and significantly correlated with children's educational aspiration (Hossler et al., 1999; Jacob & Wilder, 2011; McCarron & Inkelas, 2006; Wahl & Blackhurst, 2000).

Therefore, since the effects of parental involvement on children's educational outcomes vary across research, whether lacking parental involvement from migrant parents would negatively influence left-behind children's education needs further study, especially along with the argument that parental involvement is not necessarily insufficient for left-behind children.

2.2.2 Household financial contribution

The second direct consequence of parental migration on children's education is the increased household income through remittances (Kandel & Kao, 2001; Wen & Lin, 2012).

Previous studies on children's education include financial support as a kind of parental support of children's education, such as material and facilities of study, educational resources, and taking children for campus visits (Chen et al., 2013; Ho & Kwong, 2013; Hossler et al., 1999).

Hossler et al. (1999) further indicated that activities related to financial support, like parents saving money for colleges, taking children for campus visits and attending financial aid programs, are tangible forms of parental backing. Other studies also showed empirical evidence of the effects of financial support on students' educational outcomes. Chen et al. (2013) found that having a desk at home has a significantly positive influence on children's interest in school. Ho and Kwong (2013) showed various results with regards to the types of parental investment. Children who had more IT, cultural resources and books at home were more likely to obtain higher achievement in Chinese, while those who had more magazines at home were more likely to achieve lower in the same subject.

In immigration studies, financial support that benefits from parental migration is often regarded as a key positive factor of promoting children's educational outcomes in many countries. Income and remittance gained from migration could provide financial security for children's schooling (Kandel & Kao, 2001; Lu, 2012), avoid the possible dropout due to poverty (Hu, 2012), and purchase better quality education (Chen et al., 2013), enhance academic performance by purchasing health care (Lu, 2012), and general living resources (Wen & Lin, 2012; Yeoh & Lam, 2007), all of which help children perform better in school. Research showed that the function of remittances and income from migration is more than just alleviating the disadvantages of educational outcomes of left-behind children. Financial support can also lead to better achievement of left-behind children than their non-left-behind counterparts. Yeoh and Lam (2007) showed evidence from the 2003 Children and Families Survey of the Philippines that left-behind children, supported by remittance, mainly went to private schools. These relatively financially secure left-behind children received better grades and received more school awards

than children without migrant parents during the elementary years.

Studies in China showed similar findings that financial benefits gained from migration could cast positive effects on children. Hu (2012) used the Chinese General Social Survey (CGSS) wave 2006 with a sample of 866 children between the ages of 17 - 19 to investigate the effects of parental rural-urban migration and remittances on left-behind children's high school attendance. The findings showed that the absence of migrant adult household members has negative impacts on high school attendance of left-behind children in China, while the remittances that were received from migration "partially compensate for this negative effect by lifting the liquidity constraints on the household" (p.409).

In sum, only a few empirical studies of left-behind children have examined their educational aspiration both in China and other countries. Discussions about whether left-behind children's educational performances, including college aspirations, are in jeopardy compared with their non-left-behind counterparts are ongoing. Data used in most of the prior studies on left-behind children in China were regional instead of nationally representative, which could impair the validity of generalizing their results on the effects of parental migration.

Parental involvement and household financial support of children's education are the two factors that could influence left-behind children's college aspirations. Though migrant parents are physically absent, parental involvement on their children's education are not necessarily insufficient and insignificant on children's college aspiration. Migrant parents' financial support for children's education may encourage their children to pursue more education. But this financial benefit gained from parents' migration experience may also stimulate children to follow their parents to be migrant workers immediately after finishing secondary education. This paper aims to study these two factors that could influence college aspirations of left-behind children's college aspiration in China and to answer questions of:

- (1) Are there any differences in college aspiration between left-behind and non-left-behind children in China?
- (2) How do parental involvement and household financial contribution correlate with children's college aspiration in China? and,
- (3) How are these variables, if any of them generate significant effects, correlated with left-behind children?

CHAPTER 3

DATA AND METHOD

3.1 Data

This paper uses data from the Chinese Family Panel Studies (CFPS) wave 2010. Conducted by the Institute of Social Science Survey (ISSS) of Peking University, CFPS is a nationally representative and longitudinal survey that collects individual-, family-, and community-level information on economic activities, family relations, education, migration, and health and well-being of contemporary Chinese families. The baseline survey of 2010 is an implicit stratification sample approach with a total number of 19,986 households sampled from 635 villages of 25 provinces, with 14,690 of them completing the interviews effectively. Among those households, 57,155 individuals were surveyed, including 33,600 adults and 8,990 children.

CFPS wave 2010 includes five different surveys: community, family, family relations, adult and child survey. This paper combines the family and child survey. The former contains sufficient economic related information of households and family members, and the latter provides sufficient data on children's schooling, cognitive development, health, well-being, and basic parental and household characteristics. Households that have children younger than 16 (not including 16) when the survey was conducted were interviewed. The child survey contained two parts. One was completed by the parents, and the other was designed for children aged 10 to 15. Children who were under 10 had the first part completed by their parents.

This paper only analyzes children aged 10 to 15 who completed the children survey. The whole sample includes 3,464 observations. To eliminate the uncertainty and potential bias caused by children's own migration, this study only chooses children whose registered locations were the same as their birthplaces. As a result, 935 children were excluded because they were not holding rural household registration status or *Nongcun Hukou* (n=720) and were registered in locations different from their birthplaces (n=215). Those who never went to school or dropped out of school (n=70), and those whose parents were not living at home for other reasons than migrant work (n=223), are also deleted from the sample. List wise deletion is employed in this study. Therefore, the final working sample has 2,032 children aged 10 to 15. All of the children held *Nongcun Hukou* and lived in rural areas. Among them, 355 are left-behind children and accounts for 17.5%.

3.2 Measurements

3.2.1 Dependent variable

The dependent variable in this study is children's educational aspiration for college. In the child survey, educational aspiration is measured by a self-reported question, "what is the highest level of education that you want to achieve?" Eight options are provided: need no education, primary school, middle school, high school, junior college, four-year university, master's degree and doctoral degree. Based on the interviewee responses to this question, the dependent variable is recoded as a dummy variable. Those who aspired for a post-secondary education, including junior college and beyond, are recoded as 1. And those who aspired for less than a post-secondary education are recoded as 0.

3.2.2 Independent variables

As discussed above, left-behind children are defined as those who were holding rural registration status (*Nongcun Hukou*), living in their rural birthplaces and had parents who migrated for work. Then, in order to examine the effects of parental- and family-level indicators on children's aspiration for college, two sets of independent variables are included. The first is *parental involvement* in their children's education, which includes four variables: communication with children, requirement of homework, rules for watching TV, and care for children's education.

These four variables are measured, respectively, by the responses to the following questions:

- (1) How often do you discuss with your child school related matters in this or the previous semester?
- (2) How often do you ask your child to finish homework?
- (3) How often do you limit or stop your child from watching TV? and,
- (4) To what degree do you agree that you care about your child's education?

All of the variables are ordinal and measured on a five-point scale, ranging from very often (1) to never (5) for the first three variables, and from highly agree (1) to highly disagree (5) for the last variable.

The second set of independent variables is *household financial contribution* to their children's education. Two variables are analyzed: household expenditure on children's education, and parents' actual action of saving money for children's education. Unlike previous studies that

only tested economic income or remittances, this study examines the direct household investment in children's education. This paper also includes parents' actual action of saving money for education, since parents who have already started saving money for their children's education are supposed to have higher educational expectations, and they take it as their responsibility to provide financial security in advance for their children's future education. The household expenditure is measured by the total household education expenditure for the focus child last year, which is transformed by natural logarithm. Parents' actual action of saving money is measured by the question: Have you started saving money, particularly for your children's education?, and recoded into a dummy variable, where 1 is for yes and 0 for no.

3.2.3 Control variables

In this study, two sets of control variables are included: *children's characteristics* and *family's characteristics*. *Children's characteristics* include their age, gender, ethnicity, current school level, and score of a standardized cognitive word test that was conducted by CFPS. Female, ethnic minority and currently study in elementary schools¹ are dummy variables. Cognitive word test scores is a continuous variable. For *family's characteristics*, parental highest educational level and household income of the previous year are used as socioeconomic indicators of the household. The household income is the total annual income of the household in the last 12 months and is transformed by natural logarithm.

3.3 Method

To address the research questions, this paper first provides descriptive and bivariate analyses on left-behind children and their non-left-behind counterparts. Second, by using a step-by-step regression analysis, this paper creates four multiple logistic regression models to examine the correlations of children's aspiration for college. The first model is the baseline one, which only tests the status of left-behind children. Two sets of control variables are added into model 2 and model 3. Model 2 adds the set of children's characteristics and model 3 then adds the set of family's characteristics. Indicators of parental involvement and indicators of household financial contributions are separately included in model 4 and model 5 when holding control variables constant. In final model 6, all independent variables are tested when holding control variables

¹ This study also tested years of schooling of children in regressions. However, no significant difference is shown compared with using whether the child is in elementary or above.

constant. The general model is:

$$\text{logit}(p) = \ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 * X_{lb} + \beta_2 * X_{invo} + \beta_3 * X_{fian} + \beta_4 * X_{control} + \varepsilon$$

where p refers to the probabilities of having aspiration for college and above. X_{lb} indicates the status of being left-behind children. X_{invo} , X_{fian} and $X_{control}$ are three vectors which contain all the variables of parental involvement, household financial contribution and control variables of children's and family's characteristics separately.

And finally, in model 7, interaction terms between the status of being left-behind children and independent variables that showed relatively high significance are created. Taking such interaction terms into consideration can help with answering the question of how college aspiration of left-behind children is correlated with parental involvement and household financial contribution. The model 7 could be shown as:

$$\begin{aligned} \text{logit}(p) &= \ln\left(\frac{p}{1-p}\right) \\ &= \beta'_0 + \beta'_1 * X'_{lb} + \beta'_2 * X'_{invo} + \beta'_3 * X'_{invest} + \beta'_4 * X'_{demo} + \beta'_5 * lb * X'_i + \varepsilon' \end{aligned}$$

where $lb * X'_i$ represent the interaction terms between being left-behind children and independent variables. Only the significant interaction terms will be shown.

CHAPTER 4

RESULTS

4.1 Descriptive results

Descriptive information of all variables is shown in Table 4.1 based on their parents' migration status. According to this table, over half of the children are motivated for colleges and above (58.8%). There is no significant variation shown in college aspirations between rural left-behind children and rural non-left-behind children. Over half of the left-behind children (54.6%) have college aspirations, and the percentage is only slightly lower than that of non-left-behind children (59.7%).

In terms of children's and family's characteristics, average age of the children, sex, word cognitive test scores of the children, children who are currently in elementary school, and parental highest educational level are almost the same between left-behind children and their non-left-behind counterparts. Noticeably, the mean differences of being ethnic minority between these two groups are significantly different. For left-behind children, their proportion of being a minority is significantly lower than that of non-left-behind children. Moreover, the mean logarithm value of total annual incomes of households with migrant parents is significantly higher than that of households with no migrant parents. But whether parental migration can result in more household income cannot be concluded from this evidence, since average size of the households with migrant parents is significantly larger by almost one more person than that of households with no migrant parents.

In the case of parental involvement indicators, the means of frequencies of communicating with children about school, setting requirements on finishing homework and setting TV restrictions show no significant variations between rural left-behind children and non-left-behind children. However, significant lower levels of agreement of parental caring for their children's education existing among parents' of left-behind children compared with parents of non-left-behind children. This could be due to the physical absence of migrant parents.

In terms of household financial contribution, no significant variation is found in the average logarithm value of household expenditure on last academic year's education of children. Though the average annual income of the households with left-behind children is higher than that of the households with non-left-behind children, their average expenditure on education is not. Moreover, significantly less percentage of households with left-behind children (14.4%) started to save money for their children's future education, compared with that of households with non-left-behind children (22.1%). Even though migrant parents actually spend less money on their

children's education and are less likely to save money for children's future education than non-migrant parents, we cannot conclude that the migration of parents in China failed to provide more financial support for children's education. It is possible that the household investment in education of migrant-parents households actually increased compared with the expenditure before their migration.

Table 4.1

Descriptive tabulations of variables

| Variable | Left-behind children (n=355) | | Non-left-behind children (n=1677) | | Total children (n=2032) | |
|--|---------------------------------|-----------|--------------------------------------|-----------|----------------------------|-----------|
| | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. |
| <i>Dependent variable</i> | | | | | | |
| College aspiration | 0.546 | 0.499 | 0.597 | 0.491 | 0.588 | 0.492 |
| <i>Independent variables</i> | | | | | | |
| <i>Parental involvement</i> | | | | | | |
| Communicating with child | 2.823 | 1.193 | 2.963 | 1.203 | 2.938 | 1.202 |
| Setting homework requirements | 3.777 | 1.127 | 3.887 | 1.011 | 3.868 | 1.033 |
| Setting TV rules | 3.321 | 1.266 | 3.432 | 1.162 | 3.413 | 1.181 |
| Caring for child's education | 3.200** | 0.686 | 3.329 | 0.729 | 3.307 | 0.723 |
| <i>Household investment</i> | | | | | | |
| Household expenditure on education (ln) | 5.652 | 1.568 | 5.730 | 1.932 | 5.716 | 1.874 |
| Saving money for education (Not saving money for education=0) | 0.144*** | 0.351 | 0.221 | 0.415 | 0.208 | 0.406 |
| <i>Control variables</i> | | | | | | |
| <i>Children's characteristics</i> | | | | | | |
| Age | 12.501 | 1.747 | 12.592 | 1.722 | 12.576 | 1.726 |
| Female (Male=0) | 0.521 | 0.500 | 0.499 | 0.500 | 0.503 | 0.500 |
| Ethnic minority (Han people=0) | 0.090** | 0.287 | 0.135 | 0.342 | 0.127 | 0.334 |
| In elementary school (Above elementary school=0) | 0.699 | 0.460 | 0.636 | 0.481 | 0.647 | 0.478 |
| Cognitive word test | 20.910 | 6.863 | 21.085 | 7.307 | 21.054 | 7.230 |
| <i>Family's characteristics</i> | | | | | | |
| Parental highest educational level | 2.487 | 0.874 | 2.496 | 0.942 | 2.495 | 0.930 |
| Household size | 5.634*** | 1.917 | 4.862 | 1.425 | 4.997 | 1.550 |
| Household income (ln) | 9.753*** | 0.986 | 9.434 | 1.639 | 9.490 | 1.550 |

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Furthermore, Table 4.2 reports the distribution of parental involvement variables in each

level of frequencies and agreement in percentage and household expenditure on education in quartile. In accordance with this table, left-behind children's parents show less involvement in all of the four parental involvement indicators of this study compared with their non-left-behind counterparts, but the differences are not large. In the case of the parental involvement indicators of parents with left-behind children, higher percentages are reported in “never” or “rarely” in the level of frequencies on communicating with children about schools, setting time limits or no time at all for them to watch TV, and setting homework requirements. Parents of left-behind children also have less agreement on the statement that their family environments indicate that they care for their children’s education. These less frequencies and level of agreement in parental involvement of migrant parents are possibly due to their physical absence. In the case of quartile of household expenditure on education based on parents’ migration status, distributions are almost even. However, households of left-behind children have a lower percentage in upper quartile of expenditure compared with other quartiles and that of upper quartile of households of non-left-behind children.

Table 4.2

Descriptive statistics of parental involvement and household financial contribution

| | Left-behind children (%) | Non-left-behind Children (%) | Total (%) |
|---|-----------------------------|---------------------------------|-----------|
| <i>Parental Involvement</i> | | | |
| Communicating with child | | | |
| Never | 18.9 | 17.2 | 17.5 |
| Rarely | 20.9 | 17.0 | 17.8 |
| Sometimes | 23.4 | 24.0 | 23.8 |
| Often | 33.0 | 36.2 | 35.6 |
| Very often | 3.9 | 5.7 | 5.4 |
| Setting TV rules | | | |
| Never | 14.1 | 10.5 | 11.1 |
| Rarely | 13.8 | 10.8 | 11.3 |
| Sometimes | 11.0 | 16.6 | 15.7 |
| Often | 49.1 | 48.2 | 49.0 |
| Very often | 12.9 | 12.9 | 12.9 |
| Setting homework requirements | | | |
| Never | 8.2 | 5.4 | 5.9 |
| Rarely | 6.8 | 5.8 | 6.0 |
| Sometimes | 7.6 | 7.6 | 7.6 |
| Often | 54.1 | 57.1 | 56.6 |
| Very often | 23.4 | 24.1 | 24.0 |
| Caring for child's education | | | |
| Strongly disagree | 0.3 | 0.6 | 0.5 |
| Disagree | 13.8 | 11.0 | 11.5 |
| Neutral | 52.4 | 46.0 | 47.1 |
| Agree | 32.7 | 40.0 | 38.5 |
| Strongly agree | 0.8 | 2.7 | 2.4 |
| <i>Household financial contribution</i> | | | |
| Household expenditure on education | | | |
| 25% | 25.4 | 24.8 | 25.0 |
| 50% | 29.3 | 24.0 | 24.9 |
| 75% | 26.2 | 25.0 | 25.3 |
| 100% | 19.2 | 26.2 | 25.0 |

Table 4.3 reports correlations among all variables. In terms of parental involvement behaviors, weak positive associations exist between college aspirations and communicating with children about school, setting limitation on watching TV and caring for children's education. Requiring homework completion is also positively correlated with college aspiration and the correlation value is relatively the smallest. Moreover, all of the four parental involvement indicators used in this study are negatively correlated with being left-behind children. With respect to household financial contribution, household expenditure on education and the behavior of saving money for their children's future education are both positively associated with college aspiration. Again, these two indicators of household financial contributions for children's education are negatively associated with left-behind children. Therefore, according to these correlations, children who have college aspirations enjoy higher levels of parental involvement in education and more household financial contributions to education. Moreover, left-behind children have less frequencies of or lower level of agreement on those four parental involvement behaviors and receiving less financial contributions from the household compared with non-left-behind children. Of note is that negative correlation exists between college aspiration and left-behind children. In terms of control variables, having college aspiration is positively correlated with children who are younger, have higher word cognitive test scores, have higher educated parents and have less family members. Being left-behind children is positively associated with being a Han people, currently in elementary school, having household gains of more money, and having more family members.

Table 4.3

Correlation among variables

| | Y | X ₁ | X ₂ | X ₃ | X ₄ | X ₅ | X ₆ | X ₇ | X ₈ | X ₉ | X ₁₀ | X ₁₁ | X ₁₂ | X ₁₃ | X ₁₄ | X ₁₅ |
|-----------------|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Y | 1.000 | | | | | | | | | | | | | | | |
| X ₁ | -0.039 | 1.000 | | | | | | | | | | | | | | |
| X ₂ | 0.154 | -0.044 | 1.000 | | | | | | | | | | | | | |
| X ₃ | 0.007 | -0.040 | 0.229 | 1.000 | | | | | | | | | | | | |
| X ₄ | 0.062 | -0.036 | 0.170 | 0.368 | 1.000 | | | | | | | | | | | |
| X ₅ | 0.134 | -0.068 | 0.179 | 0.122 | 0.127 | 1.000 | | | | | | | | | | |
| X ₆ | 0.085 | -0.016 | 0.141 | 0.082 | 0.046 | 0.111 | 1.000 | | | | | | | | | |
| X ₇ | 0.056 | -0.073 | 0.121 | 0.060 | 0.032 | 0.140 | 0.121 | 1.000 | | | | | | | | |
| X ₈ | -0.060 | -0.020 | 0.034 | -0.063 | -0.025 | 0.053 | 0.162 | 0.042 | 1.000 | | | | | | | |
| X ₉ | 0.030 | 0.017 | 0.029 | -0.016 | 0.028 | 0.028 | -0.002 | -0.042 | 0.007 | 1.000 | | | | | | |
| X ₁₀ | -0.022 | -0.052 | -0.075 | -0.098 | -0.109 | -0.083 | -0.192 | -0.083 | -0.060 | -0.013 | 1.000 | | | | | |
| X ₁₁ | -0.011 | 0.050 | -0.072 | 0.031 | -0.003 | -0.084 | -0.231 | -0.076 | -0.702 | -0.026 | 0.097 | 1.000 | | | | |
| X ₁₂ | 0.141 | -0.009 | 0.169 | 0.079 | 0.084 | 0.185 | 0.234 | 0.076 | 0.463 | 0.094 | -0.205 | -0.462 | 1.000 | | | |
| X ₁₃ | 0.123 | -0.004 | 0.179 | 0.134 | 0.114 | 0.204 | 0.135 | 0.127 | -0.012 | 0.001 | -0.175 | -0.092 | 0.219 | 1.000 | | |
| X ₁₄ | 0.016 | 0.078 | 0.049 | 0.026 | -0.010 | 0.097 | 0.120 | 0.068 | 0.022 | -0.008 | -0.109 | -0.068 | 0.063 | 0.091 | 1.000 | |
| X ₁₅ | -0.073 | 0.189 | -0.135 | -0.041 | -0.062 | -0.112 | -0.130 | -0.108 | -0.036 | 0.092 | 0.087 | 0.111 | -0.186 | -0.104 | 0.084 | 1.000 |

Note. See Table 4.4 for the specific variable names.

Table 4.4

Definition of variables

| Variable name | Definition |
|---|--|
| College aspiration (Y) | =1 if the child has an aspiration for colleges and above |
| Left-behind children (X ₁) | =1 if the child has at least one migrant parent |
| Communicating about school with child (X ₂) | Level of frequencies of communication between parents and their children |
| Requiring homework completion (X ₃) | Level of frequencies of parental requirements on finishing homework |
| Setting limitation of TV time (X ₄) | Level of frequencies of parents stop children or set limitations on time of watching TV |
| Caring about child's education (X ₅) | Level of parents' agreements on they care about children's education |
| Household expenditure on education (ln) last year (X ₆) | Nature logarithm values of the total household expenditure on their children's education last year |
| Saving money for education (X ₇) | =1 if parents start saving money for children's future education |
| Age (X ₈) | Age of the child with a range of 10 to 15 |
| Female (X ₉) | =1 if the child is a female |
| Ethnic minority (X ₁₀) | =1 if the child is an ethnic minority |
| In elementary school (X ₁₁) | = 1 if the child is currently study in elementary school |
| Cognitive word test (X ₁₂) | Scores of cognitive test that conducted by CFPS |
| Parental highest educational level (X ₁₃) | The highest educational degree that either of the parents achieved |
| Household income (ln) (X ₁₄) | Nature logarithm values of the total household income last year |
| Household size (X ₁₅) | Number of people in the household |

4.2 Logistic regression results

Table 4.5 presents the logistic coefficients and standard errors from the seven models. The baseline model 1 suggests that left-behind children are less likely to have aspirations of attending colleges and above than non-left-behind children, even though the difference between these two groups is not statistically significant. In terms of children's characteristics, model 2 reveals that children's age and cognitive word test scores are significantly correlated with the possibility of having college aspiration. Younger children and those who achieved higher word scores are significantly more likely to have higher college aspirations. Children who are females, currently in elementary school or above, and of an ethnic minority do are not significantly different from children who are males, in elementary school, and of the Han ethnicity in terms of their college aspirations. At the family level, model 3 suggests that the highest educational level of parents has a significantly positive correlation with their children's college aspiration. The effects of household income and household size are not significant.

Indicators of parental involvement are added into model 4, and household financial contribution are added into model 5. Model 4 shows that, among four indicators of parental involvement in this study, children are significantly more likely to exhibit higher college aspirations if their parents have more communications with them about schools and have higher agreement on caring about their education after controlling characteristics of children and family. Model 4 also finds that the frequencies of parents' requirements on finishing homework has a significant negative effect on children's college aspirations, and the variable of setting TV restrictions has a non-significant effect. Model 5 shows that, without parental involvement variables, household expenditure on education and saving money for education have positive correlations with children's college aspiration, but the latter coefficient is insignificant.

Model 6 includes all the independent variables and control variables. It is noteworthy that the effects of parental involvement and household financial contribution indicators, like communicating with children, setting requirements for homework, setting rules for watching TV, and household expenditure on education still remain statistically significant and the size of the coefficients remains stable.

Finally, I explored interaction effect on college aspiration between left-behind and all independent variables. Model 7 shows an interaction term between left-behind children and caring for child's education. This is the only significant interaction term found. Notably, higher agreement on parents' caring for their children's education is associated with higher likelihood for left-behind children to have college aspirations, and is significantly more so than non-left-behind

children. Moreover, compared with the average effect of caring for children's education in previous models, the coefficient of the interaction term is even larger. Thus, parents' caring for their children's education generates a greater effect for increasing the likelihood of left-behind children's college aspirations than that of non-left-behind children.

Table 4.5

Estimated Coefficient of Logistic Regression Models Predicting College Aspirations of Chinese Children aged 10-15

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 |
|---------------------------------------|-------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Left-behind children | -0.206 (0.118) | -0.209 (0.120) | -0.178 (0.123) | -0.146 (0.125) | -0.167 (0.124) | -0.142 (0.126) | -0.953 (0.742) |
| <i>Control variables</i> | | | | | | | |
| <i>Children's characteristics</i> | | | | | | | |
| Age | | -0.232*** (0.039) | -0.207*** (0.040) | -0.211*** (0.040) | -0.207*** (0.040) | -0.211*** (0.040) | -0.210*** (0.040) |
| Female | | 0.048 (0.093) | 0.071 (0.094) | 0.042 (0.095) | 0.079 (0.094) | 0.048 (0.095) | 0.036 (0.095) |
| Ethnic minority | | 0.076 (0.141) | 0.158 (0.144) | 0.169 (0.146) | 0.214 (0.146) | 0.214 (0.148) | 0.209 (0.148) |
| In elementary school | | -0.208 (0.139) | -0.148 (0.140) | -0.137 (0.142) | -0.105 (0.141) | -0.100 (0.143) | -0.103 (0.143) |
| Cognitive word test score | | 0.060*** (0.008) | 0.053*** (0.008) | 0.048*** (0.008) | 0.052*** (0.008) | 0.047*** (0.008) | 0.047*** (0.008) |
| <i>Family characteristics</i> | | | | | | | |
| Parental highest educational level | | | 0.179*** (0.053) | 0.127* (0.054) | 0.166** (0.053) | 0.121* (0.054) | 0.117* (0.055) |
| Household income (ln) | | | 0.010 (0.030) | -0.002 (0.031) | 0.001 (0.031) | -0.008 (0.031) | -0.007 (0.031) |
| Household size | | | -0.043 (0.031) | -0.020 (0.032) | -0.033 (0.031) | -0.013 (0.032) | -0.008 (0.032) |
| <i>Independent variables</i> | | | | | | | |
| <i>Parental involvement</i> | | | | | | | |
| Communicating about school with child | | | | 0.205*** (0.041) | | 0.197*** (0.041) | 0.215*** (0.045) |
| Requiring homework completion | | | | -0.150** (0.051) | | -0.156** (0.051) | -0.135* (0.057) |
| Setting limitation of TV time | | | | 0.063 | | 0.065 | 0.068 |

| | | | | | | | |
|--|-------|-------|-------|-------|----------|----------|---------|
| | | | | | (0.043) | (0.043) | (0.043) |
| Caring about child's education | | | | | 0.245*** | 0.236*** | 0.163* |
| | | | | | (0.068) | (0.069) | (0.075) |
| <i>Household financial contribution</i> | | | | | | | |
| Household expenditure on education (ln) last year | | | | | 0.062* | 0.054* | 0.052* |
| | | | | | (0.026) | (0.027) | (0.027) |
| Saving money for education | | | | | 0.165 | 0.092 | 0.103 |
| | | | | | (0.118) | (0.120) | (0.121) |
| <i>Interaction</i> | | | | | | | |
| Left-behind children * | | | | | | | 0.435* |
| Caring for child's education | | | | | | | (0.186) |
| N | 2032 | 2032 | 2032 | 2032 | 2032 | 2032 | 2032 |
| R ² | 0.001 | 0.032 | 0.037 | 0.054 | 0.040 | 0.056 | 0.059 |

Note. Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Interpretation and discussion of key findings

This empirical study highlights that there are no statistically significant differences of college aspirations between left-behind and non-left-behind children in China; even after parental involvement and household financial contribution factors are taken into consideration. This finding is consistent with the results of Chen et al.(2013) who found that in the Henan and Shanxi provinces of China, left-behind children had no significant difference in academic aspirations, compared with children from households without any migrant parents. Some other variables, such as children's age, word cognitive test performance, parental highest educational level, parent-child communication about schools and parental caring for their child's education are more important in influencing children to have aspiration of going to college.

One of the possible reasons could be the self-selection of migrant parents mentioned by Chen et al (2013). Parental absence would be compensated by letting one parent stay at home or finding other caregivers like grandparents. Also, parents can encourage their children to have higher educational aspirations before they migrate.

Another possible explanation could be that in rural areas, background characteristics of children and their family, parental involvement behaviors and household financial contribution do not differ between left-behind children and non-left-behind children. Descriptive tables in this study provide this evidence. Parental involvement of rural left-behind children is not necessarily less or missing, even though migrant parents are physically absent. Zhang and Hao (2006) point out that in rural families of China, families may decide not to send their children to post-secondary school if the parents think that the cost of attending college outweighs the benefits. Compared with children in urban areas, rural families' expectations for children's college education are rather low in the first place regardless of the migration status of parents.

This study also points out that parental involvement and household financial contribution generally help motivate children to pursue higher education. Among the indicators of parental involvement, communicating about schools with children and caring for children's education are the strongest and most stable. This study shows those certain parents' involvement behaviors leads to higher college aspirations, with the exception of requirements on finishing homework. Parental involvement indicated by talking about schools with children, providing support and care for their children's education and saving money for future education is consistent with the results of previous research that children who have more engaged parents will have higher educational

aspirations (Astone & McLanahan, 1994; Hossler et al., 1999). Also, parental care for children's education has the strongest association with college aspirations among left-behind children than among non-left-behind children. However, parental requirements of finishing homework may significantly reduce both non-left-behind and left-behind children's likelihood of having aspirations to attend college. This finding is difficult to explain based on this cross-sectional data. As discussed earlier, financial contribution is another direct consequence of parental migration. As expenditures for their children's education increases, and money is saved for their future education, children are more likely to aspire to attend college.

Based on the above findings, I have found that migrant parents' physical absence does not become a barrier to being involved in their children's education. Parental involvement is essential for their left-behind children's aspirations to attend college, even from a long distance when migrant parents show their concern for their left-behind children's education in order to promote college aspirations.

This study shows that a higher level of household financial contribution generates financial security for children and motivates them for higher education. Therefore, in order to encourage their children to have higher education, migrant parents may also want to have adequate financial support for their children's education.

An implication of this study is that policy makers can help to promote parental involvement and provide financial support to rural children's education in order to promote their college aspiration, regardless of the parents' migration status. Policy makers can help rural households to develop sufficient and effective parental involvement strategies both at home and from a distance. Schools and communities also should approach those rural households and facilitate parents or other caregivers to have assistance with school-related work, have sufficient parent-child communications, set rules for studies and create a caring environment for their children's study.

5.2 Limitations

This study has limitations. First, the data set used in this study, CFPS wave 2010, is cross-sectional, which can hardly lead to any causal inferences. Therefore, this study can only reveal associations between children's college aspirations and their individual characteristics, parental involvement and household investment. Further investigation should be carried out with the longitudinal data to be released in the near future. The second limitation is that most of the survey questions used in this study are self-reported, which means that the results could be biased

for some obvious reasons; for example, parents' estimates of their communication frequencies with children may be inaccurate, and they may exaggerate the actual expenditure on children's education. The third limitation is that this study only analyzes rural left-behind children as a whole. I do not differentiate specific categories based on general migration status, such as father-migrated, mother-migrated, and both-parents-migrated. The effects of parental involvement behaviors and household investment could vary depending on which parent migrates.

For future study, use of the longitudinal survey could be of help to estimate the causal mechanisms. Future study could also take into account the differential structures and trajectories of migrant families, such as which parent migrates, and if other family members migrate, whether the child has migration experience themselves, and how long and how far migration occurs. Finally, this study only examines the left-behind children and non-left-behind children in rural China. Since no significant differences were found among rural children based on their parents' migration status, future study can also expand the comparative studies to urban areas in China and investigate whether significant difference of educational aspirations exists, and how the difference, if there is any, is accounted for by regional factors.

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