How Do Pre-School and/or School-Age Children Affect their Parents' Likelihood of Migration and Off-Farm Work in Rural China's Minority Regions?

Sai Ding
Chinese Academy of Social Sciences

Xiao-yuan Dong
University of Winnipeg, Canada

Margaret Maurer-Fazio
Bates College, USA

Paper prepared for the 2016 Maine Economics Conference
April 30
Bates College

This draft of April 27, 2016 is a work-in-progress. We are posting it here for the participants of the 2016 Maine Economics Conference. We would greatly appreciate receiving your comments and feedback. We do ask, however, that you do not distribute/share/post it further before we have a chance to revise and polish this effort.

How Do Pre-School and/or School-Age Children Affect their Parents' Likelihood of Migration and Off-Farm Work in Rural China's Minority Regions?

by

Sai Ding, Xiao-yuan Dong, and Margaret Maurer-Fazio

1. Introduction

Over the past three decades, China experienced fundamental economic transformations that have both moved laborers from agricultural to non-agricultural activities and rapidly increased rural-to-urban migration. The rapid expansion of off-farm employment fueled sharp rises in the labor productivity and real incomes of China's rural population. It lifted hundreds of millions of rural residents out of poverty. China's rural women are among the beneficiaries of these changes: the rise in rural income and the growth of wage employment in the off-farm sector provide women with a pathway for economic empowerment. However, women's ability to participate in these new income-generating activities is limited by a variety of constraints arising from gender norms and beliefs, women's limited control over resources, and labor market discrimination (Kabeer 2008). Women's socially assigned responsibilities for domestic work and provision of care represent major impediments to women's participation in off-farm employment as it is much more difficult for women to combine income-earning activities with care-giving responsibilities when those activities take place in non-agricultural settings rather than agricultural settings. China's rural women are less likely to be involved in local off-farm work than men (Qiao, Rozelle, Zhang, Yao, and Zhang 2015, Chang, MacPhail and Dong 2011; Mu and Van de Walle, 2011, Xia and Simmons 2004; Knight and Song 2003).

Furthermore, Chinese women's migration options are more limited than men's. Until recent years, female migrants were typically young and unmarried, while male migrants embodied a wider range of ages and marital statuses (Lee and Meng, 2010, Zhang, de Brauw, and Rozzelle 2004; Hare 1999; Shen Tan 1998). The massive migration of labor from rural to urban areas has left many middle-aged, married women to run the farms and to provide care for children, elderly parents, and those in poor health (Connelly and Maurer-Fazio, 2016; Kong and Meng, 2010). Agricultural production has increasingly

become the work of women and the elderly (Connelly and Maurer-Fazio, 2015; Qiao, Rozelle, Zhang, Yao, and Zhang 2015; Chang, MacPhail, and Dong 2011; Chang, Dong, and MacPhail 2011; Mu and Van de Walle, 2011; Liu, Sicular, and Xin 2006).

While a substantial amount of research has focused on gendered patterns of off-farm employment among the Han majority, relatively little is known about how ethnic minority women have fared in terms of access to off-farm employment relative to their male counterparts or about how the gendered patterns of off-farm employment vary across ethnic groups. According to China's 2010 Census of the Population, China is home to an ethnic minority population of approximately 112 million, one of the world's largest ethnic minority populations. The term ethnic minority is used here to refer to the 55 national minorities that, along with the Han majority, make up the 56 ethnic groups officially recognized by the Chinese central government.[1] Considered from a different perspective, the 55 recognized ethnic minority groups constitute only 8.4 percent of the national population. The government classifies 10 of these ethnic minority groups, with a combined population exceeding 23 million, as Muslims with respect to religion.[2] Of

[1] In contrast to many other jurisdictions where individuals self-identify as being a member of an ethnic minority, in China, minority nationality status is assigned at birth, recorded on official identity documents, and in almost all cases fixed throughout one's life (Maurer-Fazio and Hasmath, 2015). Prior to the 1953 elections, a great deal of effort was expended on enumerating the population by means of a census, which collected only a very limited set of demographic data and respondents' self-identified ethnicity. That census resulted in a set of over 400 self-identified ethnic groups, a number considered too large and unwieldy by China's leaders. Subsequently an ethnic classification project was launched with teams composed of ethnologists, linguists, and local cadres sent into regions heavily populated with ethnic minorities to investigate and assess minorities' social history, economic life, language, religion, and ethnic potential. One unusual feature of this classification project was that the classification teams tried to develop a taxonomy based not only on their observations of the characteristics of various communities, but also on their assessment of the state's probability of success at melding subsets of these communities into proposed ethnic groups (Mullaney, 2011). The classification project was effective in reducing the number of ethnic groups officially recognized from the over 400 self-identified candidates of the 1953 census to an initial 39. Additional groups gained official recognition over time, with the 56th, the latest, added in 1979.

[2] The official count of the Muslim population includes as Muslim virtually all members of Muslim-designated ethnic groups (Mackerras, 2005).

these, the Hui and Uyghurs are numerically the most important with populations, according to the 2010 census, of 10.6 million and 10.1 million, respectively.

This paper examines the impact of childcare responsibilities on women's and men's off-farm work in rural China's minority regions. The research question that guides our analysis is the following: How does household composition, in general, and the presence of pre-school and/or school-age children, in particular, affect the likelihood of women's and men's off-farm work in these regions? We explore this question in its larger context, which takes into account: individuals' human capital and productive attributes; households' composition and economic characteristics; local economic conditions (at both the village and the county levels); and cultural/religious/ethnic norms. Our research is comparative in nature--we analyze whether this complex set of factors differentially affects members of China's Muslim and non-Muslim ethnic groups. We investigate whether observed Muslim/non-Muslim differences in the proclivity to engage in local off-farm employment and to migrate for work are best attributed to artifacts of local economic conditions, differences in individual productive attributes, household composition, or differences in cultural and religious norms. Comparing the role that children play in parents' off-farm work decisions between Muslim and non-Muslim households provides a window for observing the intersectionality of religious norms and gender relations across the domestic sphere of the household and the public sphere of work in the context of post-reform rural China.[3]

2. Background

Religion, family, and work are important sites for the formation, negotiation, and change of gender relations. How gender might intersect with religion depends upon its temporal and social contexts. As Spierings (2014) notes, studies that focus on the role of patriarchy

[3] As Kongar, Olmsted, and Shehabuddin (2014) point out, there are very complex relationships between the economic, political, cultural, and religious spheres that affect people's lives and that it is critical to take intersectionality, historical context, and structural constraints into account when considering the multiplicity of women and men's experiences by religion and ethnicity (amongst other factors).

in predominately Muslim countries make use of a notion of "classical patriarchy" based on patrilineality and the idea of the male breadwinner/female homemaker dichotomy. He argues that this notion of patriarchy implies differences in female employment according to women's household composition. Spierings exploits variation in the importance of these two aspects of patriarchy across 28 Muslim-majority countries to form testable hypotheses about differences in women's employment across these countries. In the work that follows, we too, explore differences in the effects of patriarchal norms by investigating how these norms vary across ethnic groups in rural China and in turn affect both women's and men's proclivities to work locally off-farm and to migrate across county and provincial borders in search of employment opportunities.

In traditional/imperial China, both Muslim and non-Muslim women were conceptualized as subordinate to men. A female-inside/male-outside patriarchal dichotomy characterized the gendered division of labor within the household in both traditional Confucian and Islamic family cultures. Appropriate roles for women in both cultures were envisioned as those that supported the family and took place inside the household. Appropriate roles for men were envisioned as those that provided for the family through activities outside of the household. Confucian doctrine espouses an extremely hierarchical view of society in which key relationships link superiors and their subordinates. Sons are subordinate to fathers; subjects are subordinate to rulers; and wives are subordinate to husbands. Ban Zhao, a particularly influential first century female historian and scholar, consolidated these then extant attitudes towards women into a set of prescriptive norms for women's lives, *Nujie,* (Precepts for Women). She unambiguously declared the position of women as lowly and weak and meant to serve others. These norms strengthened over time, especially in the Neo-Confucian era (Lee, 1994). Women's status and societal roles were determined by these Confucian beliefs (Croll, 1995). The traditional Muslim family structure, like the traditional Chinese family, is typically portrayed as based on an authoritarian, patriarchal hierarchy. Xiaowei Zang (2008) notes that its views of women's roles also regard women as the repositories of family honor. The preservation of family honor entails restrictions on women's behavior with regard to dress, mobility, and contact with men outside of their own families. Motherhood takes on an additional special role as

a key safeguard of Islamic culture (Zang, 2008).

After the founding of the People's Republic of China, the Communist Party fought against beliefs that disparaged women and lowered their societal status and instead promoted and promulgated a rhetoric and ideology of gender equality. In the Maoist/socialist era (1949-1976), women's labor force participation increased dramatically and was viewed as a form of liberation. Women were lauded as holding up "half of heaven," a traditionally male realm (Croll, 1995). The discourse of the period suggests that Chinese women's participation in paid labor improved their status markedly. The dual-earner household became the new norm of the Chinese family. Women, however, continued to bear the lion's share of unpaid domestic and care work,

It appears, however, that the Chinese women's emancipation movement did not exert the same degree of influence on Muslims as it did on non-Muslims, especially in the rural sector. Although China's constitution stipulates than all women and men should have equal rights, economically, socially and politically, Chinese policy makers deemed particular gender issues in Muslim areas to be part of Muslim culture not subject to state intervention (Zang 2012). The marriage law of 1950 allowed both polygamy and traditional divorce law in Muslim regions (Barry Sautman, 1998). Although, China's current marriage law stipulates, in general, that the legal age of first marriage is age 22 for men and age 20 for women, it reduces these age limits to age 20 and age 18 for minority men and women, respectively. Autonomous minority regions also have the right to issue legislation allowing even further reductions in the marriage age for their poorer and more remote communities and Xinjiang has exercised this right (Sautman, 1998).

China's birth control policies also differentiate ethnic minorities and Han Chinese and impose stricter limits on the Han. From the inception of the severe family planning policies of 1979 until the end of 2015, most Han Chinese urban couples were allowed to have only one child while rural Han couples were allowed to have a second child under certain conditions such as when the first child was female. For most ethnic minorities the birth control quota was set at two for urban couples and three for rural couples. At

particular times under particular circumstances these less stringent ethnic limits were further relaxed for particular groups (Sautman, 1998). No doubt, state policy is only one of the factors that influence women's fertility decisions. Over time, as women's education and employment opportunities improved, fertility rates for both Muslim and non-Muslim households declined. Nonetheless, the average fertility rate of Muslim families is higher than that of non-Muslim families, as we show in section 5 below.

In the reform and post-reform eras, the declining influence of socialist egalitarian ideology has led both to a resurgence of traditional Confucian culture and an increasing social, political, and religious impact of Islam. The concomitant rise of patriarchal values and norms represents a major setback to Chinese women's hard-won battles for greater gender equality. It has affected Muslim and non-Muslim women differently as Muslim women confront more socioeconomic constraints than non-Muslim women, which make it particularly difficult for Muslim women to break away from patriarchal gender relations. For example, Uighurs, a visible minority, may be more likely than members of most other ethnic minority groups to be subject to Han chauvinism and/or discrimination in the labor market.[4] The Hui, who are ethnically very close to the Han, are distinguished from the Han mainly because of being Muslim (Mackerras, 2005). Even though the Hui are similar to the Han in physical appearance and language, they may still find themselves discriminated against because of dietary customs, dress,[5] or religious practices. In addition, ethnic minorities in rural areas, Muslim and non-Muslim alike, may find their employment options limited by the extent to which they lack an ability to communicate in Mandarin (*Putonghua*) or the local Han dialect. The higher fertility rate of Muslim families may further hinder Muslim women's ability to work outside the home. The intersection of these multiple socioeconomic disadvantages may make it very difficult for women to move away/break away from the legacy of traditional gender role

[4] Maurer-Fazio's resume audit study of job applicants using Internet job boards in 6 large Chinese cities found that college-educated Uyghur women had to put in almost twice as many applications as their equally qualified Han counterparts just to obtain the same number of interview callbacks (Maurer-Fazio, 2012).

[5] In Hui areas, Hui women typically wear headscarves and Hui men white caps. Some family names also signal a strong likelihood of being Hui (Gustafsson and Ding, 2014).

expectations of Muslim families.

3. Literature Review

In this brief review of the related literature, we first review studies of rural households that address the effects of children on parents' decisions about migrating for work and/or working off-farm. We then review a set of studies that add analyses of both the influence of patriarchal norms and of ethnicity. We conclude this section with a set of related, testable hypotheses.

The studies that analyze the effects of children on their parents' off-farm work and migration decisions for rural households have yielded results that vary by the age of the children. Qiao et al. (2015) find that the presence of pre-school-age children in the household effects neither their parents' decisions to migrate or to work off-farm. Although Zhao (1999) also finds that presence of preschool children has no effect on parents' migration decisions, she does find that it decrease parents' participation in local off-farm work. Similarly, MacPhail and Dong (2011) find that the presence of preschool children decreases the number of hours spent on wage employment for both parents. They observe that the effect is larger for mothers than fathers. In contrast, Qiao et al. (2015) find that school-aged children (as opposed to preschool children) increase parents' likelihood of participation in local off-farm work while decreasing their probability of migration

Grandparents play an important role in parents' work and migration decisions. Feinian Chen, Guangya Liu, and Christine A. Mair (2011) demonstrate that grandparent-provided childcare has become increasingly common, in both urban and rural China, in the post reform period. They interpret grandparent-provided care as the outcome of families' decisions to alleviate mothers' burdens to enable them to pursue income-earning opportunities -- thereby maximizing the wellbeing of the larger family. The role of grandparents in childcare is confirmed in the findings of Chang, Dong and MacPhail (2011), which reveal that preschool children increase the number of hours spent on housework and care work by both elderly men and elderly women, again more so for

women than men. Connelly, Roberts and Zheng (2012) claim that with grandparents' participation in childcare, the presence of children is no longer a binding constraint on the migration decisions of rural mothers, although it affects the timing of their migrations. They report that many migrant mothers return to their rural homes around the time that their children begin formal schooling. They do so because the grandmothers providing care for pre-school age children are typically less educated than their daughters and are not considered a good maternal substitute for assisting children with school homework. Qiao et al. (2015) also control for the presence of grandparents in the household and speculate that it is the wide spread availability and willingness of grandparents to care for their preschool grandchildren that explains why the presence of preschool-age children does not affect parents' migration and employment decisions.

We turn next to a subset of the literature that compares reform-era labor market outcomes of China's ethnic minorities and Han majority. Early papers by Gustafsson and Li (2003) and Hannum and Xie (1998) both suggest that minorities did not fare as well as the Han as China transformed its economy from a socialist to a market orientation—the gap between minorities and the Han widened in terms of both rural income and occupational attainment. Gustafsson and Li question whether the fundamental cause of the growth in these gaps is location rather than ethnic discrimination and come down on the side of location. Similarly, Gustafsson and Ding (2008) assert that the rural poverty experienced by minorities is better explained by location rather than by ethnicity. Hannum and Xie argue otherwise and claim that important ethnic differences in labor market outcomes remain even after carefully taking location into account. Connelly, Iannotti, Maurer-Fazio, and Zhang (2015) explore differences by ethnicity in the happiness of rural elders in seven minority-concentrated regions of China. After taking into account the factors that determine elders' co-residency with their adult children and controlling for demographic characteristics and local economic conditions, they find that elders of only two ethnic groups (of the 11 ethnic minority groups included in their study) differed in reported happiness from the Han. The Hui were significantly happier and the Miao were significantly less happy.

Focusing on the urban sector and examining the gendered patterns of labor force participation revealed in the data of China's population censuses of 1990 and 2000, Margaret Maurer-Fazio, James Hughes, and Dandan Zhang (2007) find that minority women experienced larger decreases in labor force participation and had lower rates of participation than either minority men or Han men and women, and the decline was especially pronounced for Hui women. They argue that the decline in Hui women's labor force participation was indicative of a robust cultural or religious difference that surfaced with the relaxation of state control over individuals' lives. In a second paper focused on labor force participation in urban labor markets, Maurer-Fazio, Hughes, and Zhang (2010) lengthen the time period under investigation, include more ethnic minority groups, and control for both demographic factors and local economic conditions. Their analysis indicates that the market and social treatment of Han attributes tend to ease women's entry into the labor force, while minority women appear to be rich in levels of those attributes that discourage market work at the margin. Xiaowei Zang (2012) finds, based on 2005 survey data from Xinjiang's capital, Urumchi, both sizable earnings differentials between Han Chinese and Uyghurs and striking gender differences in the earnings differentials between the two ethnic groups. Zang attributes men's earning differentials primarily to socioeconomic differences between the two groups. He attributes women's earnings differentials not only to differences in socioeconomic status but also to differences in family responsibilities. Zang argues that while both Han and Uyghur women in Urumchi suffer labor market penalties attributable to housework and motherhood, the negative effect is greater for Uyghur women because Muslim family norms strengthen women's attachment to the traditional gendered division of household labor.

Only a handful of studies have specifically investigated how ethnic identity affects rural individuals' participation in off-farm employment and labor migration. They reveal that ethnic minority status generally tends to reduce the probability of participating in the migration process although one or two minorities are observed to have higher probabilities of migration than the majority Han population (Gustafsson and Yang 2015; Howell, Gustasson and Ding 2015; Howell and Fan 2011). Connelly and Maurer-Fazio

(2015), focusing on China's rural elders, find that beyond education, the strongest predictors of labor force participation are age, disability, widowhood, and ethnic minority status. They note that the effects of ethnic minority status on labor force participation are robust and the differences in participation among ethnic groups are sometimes large. Social prejudice, labor market discrimination, lack of skills in, or facility with, Mandarin Chinese (*Putonghua*) language or local Han dialects, and lack of access to social networks at potential destinations are among the main obstacles to ethnic minority workers' entry into the off-farm and urban labor markets (Chen, Lu, and Xu, 2014; Maurer-Fazio, 2012; Gao and Smythe, 2011). Gaining a clear understanding of how gender intersects with ethnicity-based constraints is of critical importance for the design of inclusive employment and anti-poverty strategies and policies.

Spierings (2014) unpacks the notion of patriarchy and builds a theoretical framework that allows for careful analysis of differences in women's employment in Muslim-majority countries. He expands the notion of household composition typically used in empirical work to include more than the standard factors of marital status and the presence/number of children. He expects that having more adult women in a household will increase a women's likelihood of employment, that the presence of more adult men, brothers, boys, and own children will reduce women's employment, and that the stronger the patriarchal norms and institutions in a given location, the lower will be women's employment. In addition, he tests the notion that the effects of household composition will differ according to the strength of the patriarchal context. He reports that the presence of other adult women in the household is one of the strongest positive influences on women's employment—presumably these other women help to alleviate the care burden. And in a similar vein, women in households with elderly co-residents, all else equal, are less likely to be employed. With regard to children, Spierings reports that women's employment decreases with the number of children (under age 13) but that the strength of this effect is determined by the strength of the patriarchal norms in their locations. Spierings also finds that the higher the number of male breadwinners within a household, the lower the probability of women's employment. In the empirical work that follows, we too, explore the effects of similarly nuanced notions of household composition on women's and men's

employment.

In the remainder of the paper we examine, after carefully controlling for household composition and local economic conditions, the impact of having preschool or/and school-aged children on the off-farm work decisions of women and men in China's minority regions and compare the differences in these impacts between Muslim and non-Muslim households. Our analysis seeks to test the following hypotheses:

Hypothesis 1: Due to traditional gender role expectations, children decrease women's willingness and ability to work outside the home, whereas they increase men's desire to seek employment in the off-farm sector, which generates higher earnings.

Hypothesis 2: While we expect as stated above that children negatively affect the off-farm work participation women and positively affect if for men, we expect that the gap in men's and women's off-farm employment to be greater for Muslims than non-Muslims.

Hypothesis 3: Given that women are the main providers of household care work, we expect that women's likelihood of off-farm employment will decrease with the presence in the household of others needing care—elderly and disabled co-residents. We do not expect a significant effect for men.

Hypothesis 4: Women's likelihood of off-farm employment will decrease with the presence in the household of adult men (potential breadwinners in addition to their spouses).

Hypothesis 5: Women's likelihood of off-farm employment will increase with the presence of (other) non-elderly adult female co-residents as these other women will presumably alleviate/mitigate the burden of care for other household members.

4. Empirical Methodology

In the analysis that follows, we focus on married women and men between the ages of 18 and 45. We divide their economic activities into three mutually exclusive categories: farm work, local off-farm work, and nonlocal off-farm work, and define a categorical variable which is equal to zero if the individual participates in farm work only; equal to one if the individual participates in off-farm work within his/her county of residence, and equal to two if the individual migrates out of his/her home county to participate in off-farm work. We assume that individuals compare the benefits and costs of these alternative activities to make choices that maximize their utility. We also assume that these costs and benefits are in turn affected by/determined by the characteristics of the individual and the composition of his/her household and the economic conditions at the village, county, and provincial levels. We thus estimate the determination of women's and men's occupational choices using a multinomial probit model:

$$\ln(\frac{P_j}{P_0}) = \beta_{0j} + \beta_{1j}'C + \beta_{2j}'H + \beta_{3j}'X + \beta'_{4j}Z \qquad (1)$$

In this model, P_0 is the probability of participating in farm work (the reference category) and P_j stands for the probability of the j-th type of occupation with j = 1 for local off-farm work and j = 2 for migration/nonlocal off-farm work. The Greek letters represent unknown parameters. C is a vector of binary variables representing the presence of pre-school and/or school-aged boys and girls. H represents a vector of variables of household characteristics that includes the gender and age composition of other adults in the household and household asset income. X represents a vector of variables for individual characteristics that includes education, age intervals, and a binary indicator of being able to communicate in Mandarin (*Putonghua)* or the local Han dialect. And, Z is a vector of variables for regional/locational characteristics that includes the distance from the village to the nearest bus stop, village per capita farmland and village per capita income, binary indicators for the presence of a kindergarten and/or a primary school in the village, the proportion of migrant workers in the village labor force, county-level per capita GDP, the share of primary industry in county GDP, and provincial fixed-effects. We estimate Equation (1) separately for Muslim women, Muslim men, non-Muslim women, and non-Muslim men.

One of our majors concerns about this regression model is that the variable that represents that individuals have pre-school children may be endogenous. That is, there may be unobserved characteristics that affect both occupational choice and fertility decisions -- the decisions may well be jointly made. Unfortunately, to our knowledge, there are no econometric solutions that adequately address endogeneity bias in a multinomial probit (or logit) model that includes binary endogenous explanatory variables. We carry out a robustness check on our choice to estimate the model with single-stage multinomial technique. We first merge our two classes of off-farm work together and estimate a binary probit model for farm/off-farm work twice—once using a single-stage probit model and one using the two stage residual inclusion (2SRI) method of Terza, Basu, and Rathouz (2008). We use the ages of the individual and his/her spouse, their high order polynomials, and their interactive terms as instruments for the dummy variables representing having pre-school-age boys and pre-school-age girls. Summary statistics for the underlying variables are presented in Appendix Table A1. Comparing the results of the single-stage and 2SRI estimates, presented in the appendix Tables A2 and A3, we find little evidence of endogeneity in the variables representing the presence pre-school children in the household. Given the results of this robustness test, as we proceed, our discussion focuses on the estimates generated by our multinomial single-stage probit regressions.

5. Data

Our analysis employs data from the China Ethnicity Household Survey (CHES) conducted in 2012. The survey group collected information on 14,576 urban and rural households in seven 7 provinces and provincial-level autonomous regions: Inner Mongolia, Hunan, Ningxia, Guangxi, Guizhou, Qinghai, and Xinjiang. Within each sampled region, the sample frame was based on the urban and rural household registries of the Bureaus of Statistics and employed stratified random sampling methods. Project leaders devised a sampling strategy for the included rural and urban areas that ensured a representative sample that included households of the major ethnic groups of each region and also took into consideration geographical conditions and differences in economic and social development. This paper is based on the rural sample, which in total includes over

30,000 individuals of more than 7000 households of hundreds of villages located across 81 counties. The sampled locations tend to be poor, remote, and characterized by low incomes and land shortages. The ethnic composition of the data is approximately 50% Han and 50% minority households. Our analytical sample, which is limited to rural married individuals between the ages of 18 and 45 consists of 897 Muslim women, 916 Muslim men, 3,289 non-Muslim women, and 3,300 non-Muslim men. The data set's information on employment/occupational choice, the focus of this paper, refers to respondents' type of employment in 2011.

In Table 1, we present summary statistics the incomes, poverty rates, and employment patterns of the Muslim women and men and non-Muslim women and men included in our sample. In Table 1, we see that Muslim households have somewhat lower per capita income and somewhat higher rates of poverty (19% versus 16%) than non-Muslim households. We also observe that women (Muslim and non-Muslim alike) are more likely than men to participate in farm work and less likely to participate in off-farm work (whether local or involving migration). The gender gap in off-farm work is noticeably larger for Muslims than non-Muslims. Specifically, 79 % of Muslim men participated in off-farm work while only 23 % of Muslim women did so. For non-Muslims the respective figures are 74% for men and 36% for women. The gender gap in migration/nonlocal off-farm work is also noticeably larger for Muslims than non-Muslims: only 7.9 % of Muslim women and 14.8 % of non-Muslim women migrated for work in contrast to the figures of 34.6 % of Muslim men and 26.9 of non-Muslim men.
(Insert Table 1 here.)

In Table 2, we present some information about the gender and age composition of all members of the households of the individuals included in our analysis. Recalling that the subjects of our analysis are married individuals between the ages of 18 and 45, we note the Muslim women and men have a mean of 1.5 children who are between birth and 14 years of age, while the non-Muslim women and men have a mean of 1.1 children in this age range. We also note that the Muslim households of our sample are somewhat larger

than those of the non-Muslims with 5.4 and 4.9 household members on average, respectively.
(Insert Table 2 here.)

In Table 3, we present some descriptive statistics about the human capital of the individuals in our sample. Our focus here is on education, language capability, and networks used to find employment—both locally and afar. Women, both Muslim and non-Muslim alike, lag behind men in their educational attainment and their language capabilities in Mandarin or the local Han dialect. That said, the gender gaps in these factors are similar for Muslim and non-Muslim households. When searching for off-farm employment, whether local or distant, our survey respondents rely quite heavily on private networks -- those provided by either family and relatives or friends and acquaintances. In this regard, Muslim men and non-Muslims (women and men) rely more heavily on friends and acquaintances than family and relatives. Muslim women, however, rely most heavily on family and relatives when seeking off-farm employment, which is consistent with the notion that their circle of social contacts outside the household is more limited than that of non-Muslim women's.
(Insert Table 3 here.)

6. Results

In this section, we first discuss the factors that affect the occupational/employment-type choices of Muslim women and men. We follow this discussion with a similarly structured one for non-Muslim women and men. We present multinomial probit estimates of the marginal effects of factors affecting occupational choice for Muslim women and men in Table 4 and for non-Muslim women and men in Table 5.

6.a Muslim Women and Men

In Hypothesis 1, we stated that we expected children to decrease women's willingness and ability to work outside the home and that we expected children to increase men's willingness to work off-farm. The estimates presented in Table 4 provide evidence that supports both parts of this hypothesis. In our empirical work we have explored the effects

of children in a relatively nuanced way by disaggregating the category of "children" into four distinct groups—separating pre-school and school-age girls and boys. We find specifically, that having a preschool child of either sex increases Muslim women's probability of working on the farm by 12 percentage points and decreases their probability of migrating/working outside the county by 7 percentage points. In contrast, having a preschool girl or boy decreases Muslim men's probability of participating in farm work by 8 and 9 percentage points, respectively, and increases their probability of participating in local off-farm work by 12 and 13 percentage points. Preschool children do not appear to significantly affect either Muslim men's probability of migrating to participate in nonlocal off-farm work or Muslim women's participation in local off-farm work.

(Insert Table 4 here.)

Having a school-age daughter affects Muslim women's probability of participating in farm work and of migrating for work similarly to that of a preschool child, although the magnitudes of the effects are somewhat muted. School-age daughters increase their mothers' probability of working on the farm by 7 percentage points and decrease their probability of distant off-farm work by 5 percentage points. Surprisingly, having a school-age son seems to have no significant effect on Muslim women's off-farm work decisions. The effects of school-age children on Muslim men's off-farm work decisions are also weaker than those of preschool children-- having a school-age boy has only a moderately significant negative effect on his father's participation in farm work and no significant effect on off-farm work. School-age girls do not appear to affect their father's farm/off-farm work decisions in any statistically significant manner.

We next turn to look at the effects of other gender and age aspects of household composition to gain additional insight into how gender role expectations affect the off-farm work decisions of women and men. Although in Hypothesis 3, we stated that we expected that the presence of co-residents in need of care such as the elderly and the disabled would reduces women's off-farm employment and have no effect on men's, we find somewhat surprisingly, the opposite. The estimates of Table 4 reveal that the

presence of a disabled person in the household affects Muslim men's off-farm work decisions, but not Muslim women's. It increases Muslim men's probability of staying close to home/participating in farm work by 10.8 percentage points. The presence of elderly members of the household, which we have defined as those above age 70 has no effect on either men or women's off-farm work decisions.

Just as Spierings (2014) reports that for the 28 Muslim-majority countries of his study, the higher the number of male breadwinners within a household, the lower the probability of women's employment, we find that presence in the household of men anywhere between 15 and 70 years of age of increases Muslim women's probability of participating in farm work (effectively staying at home) and decreases their probability of participating in local off-farm work. Speirings finds that the presence of other adult women in the household has a very strong positive effect on women's employment. We, too, find that the presence of other women, but just those between 46 70 years of age increases women's probability of migrating/participating nonlocal off-farm work by 5.8 percentage points. Presumably many of these mature women are grandparents providing childcare and alleviating the care burden of prime-age women.

For Muslim men, the presence of other men between the ages of 46 and 70 has a strong significant effect on their off-farm types of employment. The presence in the household of these additional mature, (grandfather age), men decreases our subjects' probability of participation in local off-farm work by 12.6 percentage points, increases their probability of migrating/participating in nonlocal off-farm work by 13.4 percentage points. It has no impact on their probability of farming. Taken together, the above results focused on the effects of household composition suggest that the intergenerational division of labor in Muslim households is segregated along gender lines.

With respect to the effects of individuals' characteristics, we note that for both Muslim women and men, senior high school or post-secondary education lowers the probability of participating in farm work and raises the probability of participating in local off-farm work. However, education does not appear to be an important determinant of the

migration decisions of either sex. While own age appears to have no effect on men's off-farm work decisions, it does have a significant effect on women. Compared with youngest cohort of women in our study, women aged between 25 and 34 are less likely to participate in farm work and are more likely to migrate for off-farm work, whereas women between 35 and 39 are less likely to participate in farm work and more likely to participate in off-farm work, but locally. For both Muslim women and men, whether they can communicate in Mandarin has no effect on their off-farm work decisions.[6]

We next consider the effects of village, county, and provincial characteristics. The estimates of Table 4 reveal that regional economic characteristics are significant determinants of the probability of migrating for off-farm work for men but not for women. Regional characteristics, however, do have significant impact on women's choices between farm work and local off-farm work. The probability that Muslim men migrate for off-farm work decreases with village per capita land, village per capita income, and county GDP but increases with the share of primary industry in county GDP and the share of the village labor force who are migrants. Whether a village has a kindergarten or a primary school seems to exert no effect on the off-farm work decisions of either women or men. In many villages where Muslims live, kindergartens are introduced to mainly to promote Mandarin learning for children a year prior to beginning primary school. The role these kindergartens play in childcare appears to be minimal.

6.b Non-Muslim Women and Men

Table 5 presents the multinomial probit estimates of the marginal effects of factors affecting the occupational choice for the non-Muslim women and men in our study. For the non-Muslims just as for Muslims, the presence of pre-school age children affect parents' off-farm work decisions differently by gender. It decreases women's probability of participating in off-farm work and increases men's. The effects, however, are somewhat smaller in size for non-Muslims than Muslims. While Muslim women's farm

[6] Some ethnic groups such as the Uyghur and Salar tend to migrate and work together in larger cities and in regions where they have private networks. In these cases as long as some group members can communicate in Mandarin others may be able to get along without such skills.

work decisions are affected by the presence of both preschool girls and preschool boys, only the preschool girls and not the boys have a significant effect on non-Muslim women's decisions. The effect of having a preschool girl on the probability of farming is also smaller for non-Muslim women than Muslim women; it increases the probability that non-Muslim women participate in farm work by 7.8 percentage points, which is 4 percentage points less than the effect for Muslim women. It appears to be more socially acceptable for non-Muslim than Muslim women in rural areas (among those with preschool children) to work outside the home. The presence of preschool children of both sexes decreases non-Muslim men's probability of participating in farm work and increases their probability of participating in non-farm work. The preschool children's effects are once again muted for non-Muslim men in comparison to Muslim men.
(Insert Table 5 here.)

There is an interesting difference in the effects of school age girls on their mothers' participation in off-farm work for Muslim and non-Muslim women—the presence in the household of a school-age girl lowers Muslim women's participation in off-farm work but has no equivalent effect for non-Muslim women's. Interestingly, having a school-age boy decreases both parents' probability of participating in farm work and increases their participation in off-farm work. For women, the increase in the likelihood of off-farm work show up in terms of probability of migrating for work, while for men the increase shows up in terms of local off-farm work.

In the previous section we observed that presence of extra men/potential breadwinners in the household has a significant negative effect on Muslim women's probability of participating in off-farm work. In contrast, in this section focused on non-Muslim households, there is no equivalent effect. What we rather observe is that is the presence of co-resident adults of either sex in the grandparent age range (46-70) significantly increases non-Muslim women's probability to work outside the county (migrating for work) and significantly reduces the likelihood that they are involved in farm work.
The estimates also reveal striking differences in effects of household composition between Muslim and non-Muslim households. While Muslim women's probability of

participating in off-farm work clearly decreases with the presence of additional adult men, the presence of extra co-resident adult men, whether as young as 15 or as old as over age 70, raises non-Muslim women's probability of migrating away work. And while the presence of extra adult women in the household appeared to facilitate Muslim women's off-farm employment, the same is truly for non-Muslim women only when the extra women are in the grandparent age-range.

Interestingly while the presence of extra co-resident men and women of the grand parent age range aged (between 46 and 70) appears to assist/allow both prime-age men and women to migrate into nonlocal off-farm work, there are gender differences. For men the increased likelihood of migration seems to come through a reduced likelihood of local off-farm work, while for women the increased likelihood of migration comes from a reduction in probability of farm-work. The estimates of the effects of household composition (in terms of the adults in the household) on types of employment seem to imply more gender neutrality in terms of intergenerational/intra-household allocations among non-Muslim households than Muslim households.

With respect to individual characteristics, the estimates of Table 5 reveal that women with junior high and higher education levels are significantly less likely to be working in agriculture and much more likely to migrate or to work locally off-farm. The same is true of men. These education effects are stronger for non-Muslims than Muslims. While education does not affect the probability of participating in nonlocal off-farm work for Muslims, it does increase the probability for non-Muslims of both sexes.

In contrast to Muslim women for whom the probability of participating in off-farm work is higher for the age groups between 25 and 34, non-Muslim women between the ages of 35 and 45 are more likely than younger women to participate in local off-farm work. A similar pattern is also observed for non-Muslim men. Being capable of communicating in Mandarin has a significant positive effect on non-Muslim women's likelihood of migrating/participating in nonlocal off-farm work. The differences in individual characteristic effects between Muslims and non-Muslims suggest that employment

opportunities in off-farm sectors may more limited for the former than the latter. The effects of village and county economic characteristics appear to be somewhat muted in these regressions for non-Muslims in comparison to the regressions Muslims.

6.c The Effects of Children on Gender Gaps in Employment Type

As discussed above, we initially expected that children would have differential effects on the off-farm work choices of mothers and fathers, that is that they would negatively affect the off-farm work participation of mothers and positively affect if for fathers. Given the ways that patriarchy can exert itself through cultural and religious norms, we expected that the gap in men's and women's off-farm employment would be greater for Muslims than non-Muslims. When we compare the estimates in Tables 4 and 5 and focus on the effects of preschool children (whether male or female) on their parents' employment choices, we find strong support for this contention, expressed as Hypothesis 2 above, that the gender-differentiated effect of children on parents' employment choices is greater for Muslims than non-Muslims.

We see a much more complex and nuanced set of responses to the presence of school-age children on parents' employment choices. For Muslim women, while the presence of school age girls significantly increases their likelihood of doing farm and decreases their probabilities of migrating for work, the presence of school-age boys has no effect. Muslim fathers of sons are significantly less likely to be involved in farming. For both non-Muslim women and men, there are no significant effects on employment-type choices of having a girl in the household while the presence of a boy decreases their likelihood of working on the farm and increases their probabilities of off-farm employment

7. Conclusions

We began this research project, which is focused on rural households in China's minority-concentrated areas, wanting to learn how the presence of pre-school and/or school-age children affect the likelihood of their parents' working off-farm whether locally or in more distant regions. We explore this question in its larger context, which

takes into account not only households' composition and economic characteristics but also individual members' human capital and productive attributes as well as local economic conditions and cultural/religious/ethnic norms. We examine whether this complex set of factors differentially affects members of China's Muslim and non-Muslim ethnic groups. Comparing the role that children play in parents' off-farm work decisions between Muslim and non-Muslim households provides a window for observing the intersectionality of religious norms and gender relations across the domestic and public spheres of work in post-reform rural China.

We find, in accord with traditional gender role expectations, that children generally decrease women's willingness to work off-farm, that is, away from/outside the home and increase men's willingness to do so. And, focusing on the effects of pre-school children, it does appear to be more socially acceptable for non-Muslim than Muslim women to work away from home, at least for the rural subjects of this study. That is, the gender gap in employment-type choices is wider for Muslim parents than non-Muslim parents.

When we turn our attention to school-age children, the gender of the child appears to become as important to the analysis as the gender of the parent. One pattern that clearly emerges for school-age children is that in non-Muslim households, parents of sons, whether mothers or fathers, are more likely to work off farm than parents of daughters. It appears that parents of sons desire higher incomes, perhaps in part in preparation for their educational expenses and perhaps also in preparation for expected expenses associated with their sons' future marriages. According to traditional customs, grooms' families supplies the matrimonial house or apartment. Additionally, bride price (the money given by the grooms' families to the brides' families) has increased very rapidly.[7] That children's gender affects non-Muslim mothers' off-farm work decisions may be explained by elderly rural people's son preference (Connelly, Roberts and Zheng 2012). Mothers of sons find more support from their mothers-in-law to care for their sons, such that their

[7] In 2011 the typical bride price in rural minority areas averaged between 30,000 and 50,000 RMB. By 2015 that typical bride price had increased to between 80,000 and 100,000 RMB.

ability to participate in off-farm work is less constrained than that of mothers of girls.

Turning now to the effects of other issues related to household composition, we find somewhat to our surprise that the presence in the household of a disabled person or one or more person over age 70 has little effect on men's and women's employment-type choices. The one exception to this generalization shows up for Muslim men—they are much more likely to be engaged in farm work when their households include a disabled member. For Muslim households we find a result analogous to that of Spierings (2014) -- the presence of extra adult men (of any age between 15 and 70) in the household reduces the likelihood that Muslim women are engaged in off-farm work and increases their likelihood of working on the farm. Our findings for the effects of extra adult women in Muslim households are much more muted than those of Spierings. The only significant effect that we find is that the presence of a woman of grandmotherly age (between 46 and 70) does support Muslim women's ability to engage in distant off-farm work, that is, their ability to migrate for work. In non-Muslim households we observe that having a potential extra (male) breadwinner between the ages 15 and 45 somewhat reduces women's probability of working on the farm and increases their probability of migrating. For non-Muslim households, grandfathers and grandmothers alike, facilitate the ability of parents (male and female) to migrate to work.

References

Chang, Hongqin, Xiao-Yuan Dong and Fiona MacPhail. 2011. “Labor Migration and Time Use Patterns of the Left-behind Children and Elderly in Rural China.” *World Development* 39(12): 2199-2210.

Chang, Hongqin, Fiona MacPhail, and Xiao-Yuan Dong. 2011. “The Feminization of Labor and the Gender Work-Time Gap in Rural China.” *Feminist Economics* 17(4): 93-124.

Chen, Feinian, Guangya Liu and Christine A. Mair. 2011. “Intergenerational Ties in Context: Grandparents Caring for Grandchildren in China.” *Social Forces* 90(2): 571-94.

Chen, Zhao, Ming Lu, and Le Xu. 2014. "Returns to dialect." *China Economic Review* 30:27-43. doi: 10.1016/j.chieco.2014.05.006.

Connelly, Rachel, Michael Iannotti, Margaret Maurer-Fazio, and Dandan Zhang. 2015. "Coresidency, ethnicity, and happiness of China's rural elders." *Eurasian Geography and Economics*. doi: 10.1080/15387216.2015.1058174.

Connelly, Rachel and Margaret Maurer-Fazio. 2015. “Labor force participation and hours of work of Western China’s rural elders.” IZA Working Paper 9343.

Connelly, Rachel, and Margaret Maurer-Fazio. 2016. "Left behind, at-risk, and vulnerable elders in rural China." *China Economic Review* 37:140-153. doi: http://dx.doi.org/10.1016/j.chieco.2015.10.005.

Connelly, Rachel, Kenneth Roberts and Zhenzhen Zheng. 2012. “The Role of Children in the Migration Decisions of Rural Chinese Women.” *Journal of Contemporary China* 21(73): 93-111.

Croll, Elisabeth. 1983. Chinese Women since Mao. London, UK: Zed Books.

Croll, Elisabeth. 1995. *Changing Identities of Chinese Women: Rhetoric, Experience, and Self-Perception in Twentieth-Century China.* (Hong Kong University Press, Zed Books: London and New Jersey.)

Gao, Wenshu, and Russell Smyth. 2011. "Economic returns to speaking ‘standard Mandarin’ among migrants in China's urban labour market." *Economics of Education Review* 30 (2):342-352. doi: 10.1016/j.econedurev.2010.11.002.

Gladney, Dru C. *Muslim Chinese: ethnic nationalism in the People's Republic*. No. 149. Harvard Univ Asia Center, 1996.

Gladney, Dru C. *Dislocating China: Muslims, minorities, and other subaltern subjects*. University of Chicago Press, 2004.

Gustafsson, Bjorn and Sai Ding. October 2008. “Temporary and Persistent Poverty among Ethnic Minorities and the Majority in Rural China,” IZA Discussion Paper 3791, pp. 1-31.

Gustafsson, Bjorn, and Sai Ding. 2014. "Why Is There No Income Gap between the Hui Muslim Minority and the Han Majority in Rural Ningxia, China?" *The China Quarterly* 220 (220):968-987. doi: 10.1017/S0305741014001131.

Gustafsson, Bjorn and Shi Li, “The Ethnic Minority-Majority Income Gap in Rural China During Transition,” Economic Development and Cultural Change, July 2003, Volume 51, Issue 4, pp.805-822.

Gustafsson, Björn, and Yang, Xiuna. 2015. "Are China's Ethnic Minorities Less Likely to Move?" *Eurasian geography and economics*, 56 (1) p. 44-69

Hannum, Emily and Yu Xie, “Ethnic Stratification in Northwest China: Occupational Differences between Han Chinese and National Minorities in Xinjiang, 1982-1990,” *Demography*, Volume 35, Issue 3, August 1998, pp.323-333.

Hare, Denise. 1999. ’Push’ versus ’pull’ factors in migration outflows and returns: Determinants of migration status and spell duration among China’s rural population. *Journal of Development Studies*, 35(3):45–72.

Howell, Anthony, Bjorn Gustasson, and Sai Ding. 2015. “Investigating the patterns and determinants of Han and ethnic Minority Household Migration in China.” Unpublished mimeo.

Howell, Anthony and C. Cindy Fan. 2011. “Migration and Inequality in Xinjiang: a survey of Han and Uyghur Migrants in Urumqi.” *Eurasian Geography and economics* 52(1): 119-139.

Kabeer, N. 2008. Mainstreaming Gender in Social Protection for the Informal Economy. London: Commonwealth Secretariat.

Knight, John and Lina Song. 2003. “Chinese Peasant Choices: Migration, Rural Industry or Farming.” *Oxford Development Studies* 31 (2): 123-147.

Kong, Sherry Tao and Xin Meng. 2010. "The Educational and Health Outcomes of the Children of Migrants." In *The Great Migration: Rural–Urban Migration in China and Indonesia*, eds. Meng, X., Manning, C., with Li, S., Effendi, T., 135-150. Cheltenham, UK: Edward Elgar Publishing.

Kongar, Ebru, Jennifer C. Olmsted and Elora Shehabuddin. 2014. “Gender and Economics in Muslim Communities: A Critical Feminist and Postcolonial Analysis.” Feminist Economics 20(4): 1-32.

Lee, Lily Xiao Hong. 1994. *The Virtue of Yin: Studies on Chinese Women.* Wild Peony: Canberra.

Lee, Leng, and Xin Meng. 2010. "Why don't more Chinese migrate from the countryside? Institutional constraints and the migration decision." In *The Great Migration: Rural–Urban Migration in China and Indonesia*, eds. Meng, X., Manning, C., with Li, S., Effendi, T., 23-45. Cheltenham, UK: Edward Elgar Publishing

Liu, Xiaoyun, Terry Sicular, and Xian Xin. 2006. “Rising Gender Gap in Non-Agricultural Employment in Rural China,” in Shunfeng Song and Aimin Chen, eds. *China’s Rural Economy After WTO*, pp. 80–94. Aldershot, Hampshire England: Ashgate Publishing Ltd.

Maurer-Fazio, Margaret, James Hughes, and Dandan Zhang. 2007. “An Ocean Formed from One Hundred Rivers: The Effects of Ethnicity, Gender, Marriage, and Location on Labor Force Participation in Urban China.” *Feminist Economics* 13(3/4): 159-87.

Mackerras, Colin. 2005. “Some Issues of Ethnic and Religious Identity among China’s Islamic Peoples.” *Asian Ethnicity*, Volume 6, Number 1, pp.3-18.

Mu, Ren, and Dominique Van de Walle. 2011. "Left behind to farm?: women's labor re-allocation in rural China." *Labour economics* 18 (1):83-97. doi: 10.1016/j.labeco.2011.01.009.

Mullaney, Thomas. 2011. Coming to Terms with the Nation: Ethnic Classification in Modern China. Berkeley: University of California Press.

Qiao, Fangbin, Scott Rozelle, Linxiu Zhang, Yi Yao, and Jian Zhang. 2015. “Impact of Childcare and Eldercare on Off-farm Activities in Rural China.” *China & World Economy* 23(2): 100-20.

Sautman, Barry.1998. "Preferential policies for ethnic minorities in China: The case of Xinjiang". *Nationalism & ethnic politics* (1353-7113), 4 (1), p. 86-118.

Sautman, Barry. 2010. Scaling back minority rights? the debate about china's ethnic policies. *Stanford Journal of International Law* 46 (1): 51.

Spierings, Niels. 2014. “The Influence of Patriarchal Norms, Institutions, and Household Composition on Women’s Employment in Twenty-Eight Muslim-Majority Countries.” *Feminist Economics* 20(4): 87-112.

Terza, Joseph V., Anirban Basu, and Paul J. Rathouz. 2008. “Two-stage Residual Inclusion Estimation: Addressing Endogeneity in Health Econometric Modeling,” *Journal of Health Economics* 27, 531–543.

Xia, Qingjie and Colin Simmons. 2004. “The determinants of labour-time allocation between farm and off-farm work in rural China: the case of Liaoning province”, *Journal of Chinese Economic and Business Studies*, 2(2): 169-184.

Zang, Xiaowei. 2008. "Gender and Ethnic Variation in Arranged Marriages in a Chinese City." *Journal of Family Issues* 29 (5):615-638. doi: 10.1177/0192513X07308039.

Zang, Xiaowei. 2012. “Gender Roles and Ethnic Income Inequality in Urumchi.” Ethnic and racial Studies 35(2): 238-258.

Zhang, Linxiu, Alan de Brauw, and Scott Rozelle. 2004. “China's Rural Labor Market Development and Its Gender Implications.” *China Economic Review* 15(2): 230–47.

Zhao, Yaohui. 1999. “Labor Migration and Earning Differences: The Case of Rural China.” *Economic Development and Cultural Change* 47(4): 767-82.

Table 1 Household Income, Poverty Rates, and Employment Patterns, by Gender

	Muslim		Non-Muslim	
	Women	Men	Women	Men
Per capita annual household income (yuan)	5,835	5,796	6,173	6,169
Poverty rate (%)	19.1	19.3	15.8	16.0
Distribution of occupational/employment type (%)				
Farm work	77.6	21.2	64.3	25.7
Local off-farm work	14.5	44.2	20.9	47.4
Nonlocal off-farm work/migration	7.9	34.6	14.8	26.9

Note: Poverty is defined here as annual income below 2,300 yuan per person.

Table 2 Household Composition, by Gender and Age

	Muslim		**Non-Muslim**	
Household Size and Numbers of Children:	**Women**	**Men**	**Women**	**Men**
Number of household members	5.36	5.49	4.93	4.93
Number of children aged 0-5	0.67	0.73	0.45	0.45
Number of children aged 6-14	0.83	0.84	0.63	0.63
Number of children aged 0-14	1.50	1.56	1.08	1.08
Household Composition:				
% Households with children of age:				
Girl(s) age 0-5	0.263	0.283	0.175	0.174
Boy(s) age 0-5	0.321	0.336	0.238	0.238
Girl(s) age 6-14	0.365	0.364	0.281	0.282
Boy(s) age 6-14	0.369	0.370	0.341	0.340
% Households with Disabled Persons	0.064	0.064	0.044	0.045
% Households with elderly:				
Women over age 70	0.060	0.063	0.091	0.091
Men over age 70	0.084	0.084	0.078	0.078
% Households with Members of Particular Age and Gender Composition				
Women age 15-24	0.476	0.477	0.376	0.372
Men age 15-24	0.417	0.415	0.347	0.349
Women age 25-45	0.777	0.765	0.884	0.881
Men age 25-45	0.842	0.850	0.928	0.933
Women age 46-70	0.346	0.362	0.408	0.413
Men age 46-70	0.352	0.354	0.391	0.389
Number of Observations	896	916	3,277	3,300

Table 3 Education, Language capability, and Social Networks/Means of Finding Employment, by Gender

	Muslim		Non-Muslim	
	Women	**Men**	**Women**	**Men**
Education				
Primary or below	0.582	0.460	0.423	0.301
Junior high school	0.342	0.426	0.505	0.597
Senior high school or higher	0.076	0.114	0.072	0.102
Language Skill				
Can communicate in Mandarin (*Putonghua)* or local Han dialect	0.330	0.374	0.686	0.725
Networks used/means of finding local off-farm work (%)				
Government arrangement	6.6	5.5	3.9	3.5
Employment agency	1.1	1.3	3.0	3.0
Direct application	7.9	3.0	4.9	4.2
Family and relatives	41.6	19.5	25.4	23.2
Friends and acquaintances	38.2	59.3	54.4	59.2
Other	4.5	11.4	8.4	7.00
Networks used/means of finding nonlocal off-farm work/ work migration(%)				
Government arrangement	2.2	1.5	0.8	0.8
Employment agency	2.2	1.7	3.3	3.2
Direct application	6.5	5.5	2.0	1.6
Family and relatives	47.8	33.2	31.8	26.4
Friends and acquaintances	37.0	50.7	56.9	61.7
Others	4.4	7.4	5.2	6.4
Number of Observations	896	916	3277	3300

Table 4 Multinomial Probit Estimates of Occupational Choice for Muslim Women and Muslim Men

(Marginal Effects)

	Muslim Women			Muslim Men		
Explanatory Variables	Farm Work	Local Off-farm Work	Nonlocal Off-farm Work	Farm Work	Local Off-farm Work	Nonlocal Off-farm Work
Girl(s) 0-5 in household	0.117 (0.033)***	-0.045 (0.029)	-0.071 (0.022)***	-0.084 (0.031)***	0.120 (0.034)***	-0.036 (0.029)
Boy(s) 0-5 in household	0.118 (0.031)***	-0.050 (0.028)*	-0.068 (0.020)***	-0.090 (0.030)***	0.127 (0.034)***	-0.038 (0.028)
Girl(s) 6-14 in household	0.070 (0.030)**	-0.024 (0.025)	-0.046 (0.021)**	0.018 (0.028)	-0.011 (0.033)	-0.006 (0.029)
Boy(s) 6-14 in household	0.021 (0.030)	-0.016 (0.026)	-0.005 (0.020)	-0.053 (0.030)*	0.042 (0.035)	0.011 (0.029)
Disabled person in household	-0.009 (0.051)	0.035 (0.044)	-0.026 (0.036)	0.108 (0.047)**	-0.033 (0.058)	-0.076 (0.049)
Female 15-24 in household	0.014 (0.036)	-0.027 (0.031)	0.014 (0.025)	-0.003 (0.033)	-0.036 (0.039)	0.039 (0.033)
Male 15-24 in household	0.068 (0.036)*	-0.073 (0.031)**	0.005 (0.024)	-0.012 (0.034)	-0.006 (0.040)	0.018 (0.034)
Female 25-45 in household	0.034 (0.061)	-0.014 (0.057)	-0.020 (0.034)	-0.005 (0.046)	0.010 (0.053)	-0.005 (0.043)
Male 25-45 in household	0.107 (0.051)**	-0.105 (0.046)**	-0.002 (0.029)	-0.048 (0.059)	-0.018 (0.066)	0.067 (0.053)
Female 46-70 in household	-0.057 (0.041)	-0.001 (0.035)	0.058 (0.025)**	0.030 (0.039)	-0.080 (0.046)*	0.050 (0.037)
Male 46-70 in household	0.076 (0.042)*	-0.091 (0.037)**	0.015 (0.025)	-0.008 (0.041)	-0.126 (0.046)***	0.134 (0.038)***
Female over 70 in household	0.060	-0.058	-0.002	-0.031	-0.031	0.062

	(0.055)	(0.047)	(0.035)	(0.059)	(0.065)	(0.048)
Male over 70 in household	0.010	0.027	-0.037	0.000	-0.030	0.030
	(0.049)	(0.039)	(0.035)	(0.049)	(0.057)	(0.046)
Attained junior high school	-0.027	0.018	0.008	-0.077	0.018	0.058
	(0.034)	(0.028)	(0.024)	(0.029)***	(0.034)	(0.030)*
Attained senior high school or higher	-0.167	0.118	0.049	-0.218	0.221	-0.002
	(0.047)***	(0.039)***	(0.032)	(0.049)***	(0.052)***	(0.045)
Ages 25-29	-0.099	0.039	0.060	0.024	-0.060	0.035
	(0.060)*	(0.055)	(0.033)*	(0.058)	(0.064)	(0.051)
Ages 30-34	-0.187	0.101	0.087	0.034	-0.034	-0.000
	(0.067)***	(0.062)	(0.039)**	(0.069)	(0.077)	(0.062)
Ages 35-39	-0.166	0.151	0.016	0.019	-0.036	0.017
	(0.066)**	(0.060)**	(0.039)	(0.067)	(0.075)	(0.061)
Ages 40-45	-0.082	0.101	-0.019	0.038	0.059	-0.097
	(0.070)	(0.063)	(0.044)	(0.068)	(0.077)	(0.063)
Able to communicate in Mandarin or local Han dialect	0.043	-0.035	-0.008	0.037	-0.055	0.018
	(0.037)	(0.032)	(0.024)	(0.039)	(0.044)	(0.035)
Household's asset income (1000 yuan)	0.133	-0.030	-0.103	-0.016	0.069	-0.053
	(0.090)	(0.049)	(0.103)	(0.051)	(0.065)	(0.068)
Distance from village to nearest bus stop	0.008	-0.006	-0.001	0.004	0.007	-0.011
	(0.002)***	(0.002)***	(0.001)	(0.001)**	(0.002)***	(0.002)***
Village mean per capita land	0.007	0.001	-0.008	0.003	0.003	-0.006
	(0.004)*	(0.003)	(0.005)	(0.003)	(0.003)	(0.003)**
Village mean per capita income (1000 yuan)	-0.020	0.018	0.002	0.007	0.019	-0.026
	(0.012)*	(0.010)*	(0.007)	(0.012)	(0.014)	(0.012)**
County per capita GDP (1000 yuan)	-0.000	0.003	-0.002	-0.003	0.006	-0.003
	(0.002)	(0.002)*	(0.001)	(0.002)*	(0.002)***	(0.002)*
Share of primary industry in county's GDP	-0.090	0.089	0.001	0.004	-0.058	0.053
	(0.024)***	(0.020)***	(0.016)	(0.030)	(0.034)*	(0.024)**
Village has kindergarten	0.034	-0.046	0.011	0.087	-0.120	0.033
	(0.052)	(0.046)	(0.034)	(0.049)*	(0.062)*	(0.055)
Village has primary school	0.042	-0.013	-0.029	-0.002	0.007	-0.005
	(0.032)	(0.027)	(0.021)	(0.034)	(0.038)	(0.033)

Migrants share of village labor force	-0.045 (0.041)	0.012 (0.035)	0.033 (0.028)	0.146 (0.040)***	-0.224 (0.050)***	0.078 (0.041)*
Qinghai	-0.157 (0.055)***	0.123 (0.048)**	0.034 (0.042)	-0.025 (0.032)	0.038 (0.050)	-0.012 (0.052)
Xinjiang	0.122 (0.042)***	-0.039 (0.034)	-0.083 (0.029)***	0.286 (0.048)***	0.120 (0.053)**	-0.406 (0.044)***
Chi2 P value	198.09 0.00	198.09 0.00	198.09 0.00	342.43 0.00	342.43 0.00	342.43 0.00
Number of Observations	897	897	897	916	916	916

* $p<0.1$; ** $p<0.05$; *** $p<0.01$

Table 5 Multinomial Probit Estimates of Occupational Choice for Non-Muslim Women and Men

(Marginal Effects)

	Non-Muslim Women			Non-Muslim Men		
	Farm Work	Local Off-farm Work	Nonlocal Off-farm Work	Farm Work	Local Off-farm Work	Nonlocal Off-farm Work
Girl(s) 0-5 in household	0.078 (0.023)***	-0.040 (0.021)*	-0.038 (0.016)**	-0.047 (0.021)**	0.036 (0.025)	0.011 (0.020)
Boy(s) 0-5 in household	0.014 (0.021)	0.005 (0.019)	-0.019 (0.014)	-0.072 (0.019)***	0.053 (0.023)**	0.019 (0.018)
Girl(s) 6-14 in household	0.027 (0.020)	-0.022 (0.017)	-0.005 (0.014)	-0.029 (0.018)*	0.027 (0.021)	0.002 (0.018)
Boy(s) 6-14 in household	-0.048 (0.020)**	0.023 (0.018)	0.026 (0.014)*	-0.095 (0.018)***	0.070 (0.021)***	0.025 (0.018)
Disabled person in household	0.038 (0.037)	-0.002 (0.033)	-0.036 (0.027)	0.017 (0.035)	-0.012 (0.041)	-0.005 (0.033)
Female 15-24 in household	-0.009 (0.021)	-0.008 (0.018)	0.017 (0.016)	0.011 (0.018)	-0.032 (0.022)	0.021 (0.019)
Male 15-24 in household	-0.020 (0.022)	-0.022 (0.020)	0.043 (0.016)***	0.029 (0.020)	-0.047 (0.024)*	0.017 (0.020)
Female 25-45 in household	-0.024 (0.037)	-0.014 (0.034)	0.038 (0.024)	0.093 (0.031)***	-0.087 (0.035)**	-0.006 (0.027)
Male 25-45 in household	-0.076 (0.039)*	0.045 (0.037)	0.031 (0.026)	0.036 (0.045)	-0.059 (0.053)	0.023 (0.040)
Female 46-70 in household	-0.081 (0.023)***	0.009 (0.020)	0.073 (0.016)***	0.009 (0.021)	-0.067 (0.025)***	0.058 (0.020)***
Male 46-70 in household	-0.076 (0.024)***	-0.036 (0.021)*	0.112 (0.017)***	-0.032 (0.023)	-0.112 (0.026)***	0.143 (0.021)***
Female over 70 in household	-0.035 (0.028)	0.001 (0.025)	0.034 (0.020)*	0.020 (0.025)	0.000 (0.030)	-0.020 (0.026)

Male over 70 in household	-0.014 (0.030)	-0.040 (0.027)	0.054 (0.021)***	-0.021 (0.028)	-0.018 (0.032)	0.039 (0.027)
Attained junior high school	-0.069 (0.018)***	0.026 (0.016)	0.042 (0.013)***	-0.072 (0.016)***	0.033 (0.019)*	0.039 (0.017)**
Attained senior high school or higher	-0.149 (0.033)***	0.089 (0.029)***	0.060 (0.024)**	-0.303 (0.032)***	0.241 (0.033)***	0.061 (0.026)**
Ages 25-29	-0.061 (0.039)	0.018 (0.036)	0.043 (0.025)*	-0.027 (0.043)	0.036 (0.051)	-0.009 (0.039)
Ages 30-34	-0.066 (0.043)	0.040 (0.040)	0.026 (0.029)	-0.060 (0.046)	0.067 (0.055)	-0.007 (0.043)
Ages 35-39	-0.087 (0.042)**	0.078 (0.039)**	0.009 (0.029)	-0.074 (0.044)*	0.122 (0.053)**	-0.048 (0.043)
Ages 40-45	-0.044 (0.043)	0.082 (0.039)**	-0.037 (0.030)	-0.060 (0.043)	0.139 (0.053)***	-0.079 (0.042)*
Able to communicate in Mandarin or local Han dialect	-0.013 (0.018)	-0.014 (0.016)	0.027 (0.013)**	-0.028 (0.016)*	0.005 (0.020)	0.023 (0.016)
Household's asset income (1000 yuan)	0.028 (0.024)	0.009 (0.016)	-0.037 (0.031)	0.027 (0.013)**	0.027 (0.023)	-0.054 (0.032)*
Distance from village to nearest bus stop	0.003 (0.001)***	-0.002 (0.000)***	-0.001 (0.000)*	0.000 (0.000)	0.001 (0.001)	-0.001 (0.000)**
Village mean per capita land	0.005 (0.002)*	-0.002 (0.002)	-0.003 (0.003)	0.006 (0.001)***	0.002 (0.002)	-0.008 (0.003)**
Village mean per capita income (1000 yuan)	-0.003 (0.005)	0.005 (0.004)	-0.002 (0.004)	0.001 (0.004)	-0.006 (0.005)	0.004 (0.005)
County per capita GDP (1000 yuan)	0.002 (0.001)*	0.001 (0.001)**	-0.003 (0.001)***	0.003 (0.001)***	0.004 (0.001)***	-0.007 (0.001)***
Share of primary industry in county's GDP	0.171 (0.071)**	-0.068 (0.059)	-0.102 (0.073)	0.051 (0.056)	-0.050 (0.064)	-0.001 (0.048)
Village has kindergarten	0.014 (0.022)	0.021 (0.019)	-0.035 (0.016)**	-0.004 (0.019)	0.018 (0.023)	-0.014 (0.020)
Village has primary school	-0.013 (0.018)	0.009 (0.016)	0.004 (0.013)	-0.014 (0.016)	-0.023 (0.020)	0.037 (0.017)**
Migrants share of village labor	-0.008	0.003	0.004	0.005	-0.006	0.001

force	(0.006)	(0.005)	(0.004)	(0.005)	(0.007)	(0.006)
Inner Mongolia	0.281	-0.178	-0.103	0.220	-0.039	-0.181
	(0.034)***	(0.030)***	(0.024)***	(0.032)***	(0.038)	(0.036)***
Human	0.015	-0.036	0.021	0.135	0.010	-0.144
	(0.040)	(0.035)	(0.028)	(0.031)***	(0.039)	(0.036)***
Guangxi	0.001	-0.039	0.038	0.121	-0.016	-0.106
	(0.038)	(0.034)	(0.028)	(0.029)***	(0.037)	(0.035)***
Guizhou	-0.062	-0.013	0.075	0.047	0.064	-0.111
	(0.038)	(0.033)	(0.029)**	(0.027)*	(0.037)*	(0.035)***
Qinghai	-0.037	0.068	-0.031	-0.064	0.163	-0.099
	(0.039)	(0.036)*	(0.026)	(0.026)**	(0.038)***	(0.036)***
Xinjiang	0.271	-0.207	-0.064	0.280	-0.039	-0.241
	(0.044)***	(0.032)***	(0.036)*	(0.054)***	(0.056)	(0.051)***
Chi2	588.45	588.45	588.45	765.24	765.24	765.24
P value	0.00	0.00	0.00	0.00	0.00	0.00
Number of Observations	3,289	3,289	3,289	3,300	3,300	3,300

* $p<0.1$; ** $p<0.05$; *** $p<0.0$

Appendices

Table A1 Summary Statistics of explanatory variables (not included in Tables 1-3)

	Muslims		Non-Muslims	
	Women	**Men**	**Women**	**Men**
Age Group Distribution:				
Ages 25-29	0.211	0.224	0.187	0.145
Ages 30-34	0.196	0.202	0.189	0.193
Ages 35-39	0.231	0.259	0.297	0.314
Ages 40-45	0.120	0.177	0.211	0.277
Household's Asset income (1000 yuan)	0.053 (0.299)	0.050 (0.294)	0.111 (0.849)	0.107 (0.835)
Distance from village to nearest bus stop	6.390 (9.757)	6.170 (9.426)	11.086 (17.214)	11.133 (17.329)
Village mean per capita land	3.553 (5.274)	3.488 (5.096)	3.617 (13.919)	3.700 (14.662)
Village mean per capita income (1000 yuan)	4.541 (1.362)	4.528 (1.354)	4.373 (2.432)	4.369 (2.427)
County per capita GDP (1000 yuan)	14.332 (9.113)	14.309 (9.080)	20.358 (23.088)	20.322 (23.000)
Share of primary industry in county GDP	0.453 (0.620)	0.453 (0.623)	0.243 (0.151)	0.242 (0.150)
Share of villages with kindergarten	0.069 (0.254)	0.070 (0.255)	0.153 (0.360)	0.155 (0.362)
Share of villages with primary school	0.768 (0.422)	0.767 (0.423)	0.639 (0.480)	0.640 (0.480)
Migrants share of village labor force	0.438 (0.332)	0.443 (0.331)	0.492 (1.168)	0.492 (1.166)
Distribution of Provincial Locations:				
Inner Mongolia	----	----	0.142	0.142
Hunan	----	----	0.162	0.161
Guangxi	----	----	0.181	0.182
Guizhou	----	----	0.231	0.232
Qinghai	0.226	0.249	0.144	0.143
Ningxia	0.333	0.326	0.084	0.086
Xinjiang	0.441	0.425	0.056	0.056
Number of Observations	897	916	3,289	3,300

Table A2 Single-Stage Probit Estimates Off-farm Work--Marginal Effects

	Muslim Women	Muslim Men	Non-Muslim Women	Non-Muslim Men
Girl(s) 0-5 in household	-0.125	0.089	-0.079	0.051
	(0.031)***	(0.031)***	(0.023)***	(0.022)**
Boy(s) 0-5 in household	-0.118	0.090	-0.014	0.075
	(0.030)***	(0.030)***	(0.021)	(0.020)***
Girl(s) 6-14 in household	-0.063	-0.017	-0.025	0.031
	(0.029)**	(0.029)	(0.019)	(0.018)*
Boy(s) 6-14 in household	-0.022	0.055	0.050	0.094
	(0.030)	(0.030)*	(0.020)**	(0.018)***
Disabled person in household	0.018	-0.118	-0.039	-0.019
	(0.052)	(0.049)**	(0.037)	(0.036)
Female 15-24 in household	-0.023	0.002	0.009	-0.011
	(0.035)	(0.033)	(0.021)	(0.018)
Male 15-24 in household	-0.072	0.002	0.025	-0.025
	(0.036)**	(0.033)	(0.022)	(0.020)
Female 25-45 in household	-0.035	0.012	0.020	-0.095
	(0.056)	(0.045)	(0.038)	(0.031)***
Male 25-45 in household	-0.105	0.045	0.075	-0.041
	(0.047)**	(0.056)	(0.039)*	(0.046)
Female 46-70 in household	0.068	-0.024	0.083	-0.007
	(0.040)*	(0.040)	(0.023)***	(0.022)
Male 46-70 in household	-0.055	0.017	0.082	0.042
	(0.039)	(0.043)	(0.024)***	(0.024)*
Female over 70 in household	-0.069	0.034	0.031	-0.021
	(0.056)	(0.062)	(0.027)	(0.026)
Male over 70 in household	-0.014	-0.004	0.013	0.017
	(0.050)	(0.050)	(0.030)	(0.028)
Attained junior high school	0.014	0.064	0.071	0.071
	(0.033)	(0.030)**	(0.018)***	(0.016)***
Attained senior high school or higher	0.163	0.211	0.147	0.302
	(0.047)***	(0.051)***	(0.034)***	(0.032)***
Ages 25-29	0.096	-0.026	0.072	0.036
	(0.055)*	(0.055)	(0.039)*	(0.044)
Ages 30-34	0.175	-0.042	0.069	0.068
	(0.062)***	(0.067)	(0.044)	(0.046)
Ages 35-39	0.181	-0.023	0.091	0.080
	(0.060)***	(0.066)	(0.043)**	(0.045)*
Ages 40-45	0.077	-0.037	0.054	0.065

	(0.065)	(0.068)	(0.044)	(0.044)
Able to communicate in Mandarin or local Han dialect	-0.041 (0.037)	-0.029 (0.042)	0.013 (0.018)	0.029 (0.016)*
Household's asset income (1000 yuan)	-0.083 (0.050)*	0.034 (0.048)	-0.011 (0.014)	-0.013 (0.009)
Distance from village to nearest bus stop	-0.007 (0.002)***	-0.001 (0.001)	-0.003 (0.001)***	-0.001 (0.000)
Village mean per capita land	-0.003 (0.003)	-0.004 (0.002)*	-0.004 (0.003)	-0.004 (0.001)***
Village mean per capita income (1000 yuan)	0.024 (0.012)**	-0.007 (0.013)	0.001 (0.005)	-0.003 (0.004)
County per capita GDP (1000 yuan)	0.002 (0.002)	0.004 (0.002)**	0.000 (0.000)	-0.001 (0.000)
Share of primary industry in county's GDP	0.096 (0.024)***	0.015 (0.029)	-0.141 (0.084)*	-0.017 (0.038)
Village has kindergarten	-0.024 (0.056)	-0.085 (0.045)*	-0.017 (0.022)	0.004 (0.020)
Village has primary school	-0.045 (0.031)	0.003 (0.032)	0.015 (0.018)	0.018 (0.016)
Migrants share of village labor force	0.040 (0.041)	-0.158 (0.039)***	0.008 (0.008)	-0.005 (0.006)
Inner Mongolia			-0.267 (0.033)***	-0.226 (0.033)***
Hunan			0.001 (0.039)	-0.113 (0.032)***
Guangxi			0.012 (0.038)	-0.102 (0.030)***
Guizhou			0.090 (0.037)**	-0.016 (0.028)
Qinghai	0.187 (0.050)***	0.031 (0.031)	0.040 (0.039)	0.077 (0.027)***
Xinjiang	-0.113 (0.041)***	-0.263 (0.051)***	-0.277 (0.039)***	-0.272 (0.049)***
Chi2 P value	147.36 0.00	126.95 0.00	415.58 0.00	456.14 0.00
Pseudo R2	0.18	0.15	0.11	0.15
N	897	916	3,277	3,300

* $p<0.1$; ** $p<0.05$; *** $p<0.01$

Table A3 2SRI Estimates of Off-farm Work-- Marginal Effects

	Muslim Women	Muslim Men	Non-Muslim Women	Non-Muslim Men
Girl(s) 0-5 in household	-0.377 (0.204)*	0.209 (0.220)	-0.110 (0.196)	0.599 (0.183)***
Residual for girl(s) 0-5	0.255 (0.206)	-0.122 (0.224)	0.035 (0.197)	-0.559 (0.184)***
Boy(s) 0-5 in household	0.406 (0.257)	0.020 (0.214)	-0.121 (0.145)	-0.078 (0.132)
Residual for boys(s) 0-5	-0.529 (0.258)**	0.070 (0.216)	0.110 (0.147)	0.148 (0.135)
Girl(s) 6-14 in household	-0.043 (0.032)	-0.015 (0.031)	-0.036 (0.024)	0.073 (0.022)***
Boy(s) 6-14 in household	0.018 (0.041)	0.059 (0.039)	0.022 (0.034)	0.141 (0.027)***
Disabled person in household	0.032 (0.052)	-0.121 (0.049)**	-0.036 (0.038)	-0.007 (0.036)
Female 15-24 in household	0.018 (0.040)	-0.006 (0.039)	0.002 (0.023)	0.009 (0.019)
Male 15-24 in household	0.005 (0.057)	-0.001 (0.048)	0.003 (0.031)	0.018 (0.027)
Female 25-45 in household	0.004 (0.061)	-0.001 (0.050)	0.020 (0.040)	-0.048 (0.034)
Male 25-45 in household	-0.067 (0.054)	0.055 (0.060)	0.059 (0.044)	0.042 (0.053)
Female 46-70 in household	0.061 (0.040)	-0.027 (0.041)	0.086 (0.023)***	-0.011 (0.022)
Male 46-70 in household	-0.079 (0.041)*	0.023 (0.044)	0.081 (0.024)***	0.051 (0.024)**
Female over 70 in household	-0.021 (0.059)	0.025 (0.068)	0.032 (0.028)	-0.015 (0.026)
Male over 70 in household	-0.044 (0.052)	0.015 (0.061)	0.012 (0.030)	0.025 (0.028)
Attained junior high school	0.025 (0.034)	0.063 (0.031)**	0.070 (0.018)***	0.075 (0.016)***
Attained senior high school or higher	0.139 (0.050)***	0.222 (0.056)***	0.145 (0.034)***	0.330 (0.032)***
Ages 25-29	0.082 (0.056)	-0.045 (0.065)	0.068 (0.039)*	-0.011 (0.048)
Ages 30-34	0.199 (0.066)***	-0.057 (0.073)	0.060 (0.046)	0.020 (0.053)

Ages 35-39	0.233 (0.077)***	-0.028 (0.072)	0.060 (0.054)	0.074 (0.053)
Ages 40-45	0.139 (0.086)	-0.038 (0.088)	0.016 (0.058)	0.082 (0.055)
Able to communicate in Mandarin or local Han dialect	-0.062 (0.038)	-0.018 (0.048)	0.018 (0.018)	0.011 (0.017)
Household's asset income (1000 yuan)	-0.097 (0.051)*	0.036 (0.049)	-0.011 (0.014)	-0.015 (0.009)*
Distance from village to nearest bus stop	-0.006 (0.002)**	-0.001 (0.002)	-0.003 (0.001)***	-0.000 (0.000)
Village mean per capita land	0.001 (0.004)	-0.005 (0.003)	-0.004 (0.003)	-0.004 (0.001)***
Village mean per capita income (1000 yuan)	0.025 (0.011)**	-0.007 (0.013)	-0.000 (0.005)	0.003 (0.004)
County per capita GDP (1000 yuan)	0.002 (0.002)	0.005 (0.002)**	0.000 (0.000)	-0.001 (0.000)
Share of primary industry in county's GDP	0.095 (0.025)***	0.019 (0.029)	-0.130 (0.086)	-0.038 (0.040)
Village has kindergarten	0.006 (0.061)	-0.099 (0.052)*	-0.018 (0.023)	-0.005 (0.020)
Village has primary school	-0.073 (0.034)**	0.006 (0.034)	0.019 (0.019)	0.026 (0.016)
Migrants share of village labor force	0.080 (0.046)*	-0.164 (0.043)***	0.008 (0.008)	-0.003 (0.006)
Inner Mongolia			-0.271 (0.033)***	-0.219 (0.035)***
Hunan			0.000 (0.039)	-0.097 (0.032)***
Guangxi			0.014 (0.038)	-0.103 (0.030)***
Guizhou			0.100 (0.039)**	-0.010 (0.029)
Qinghai	0.178 (0.051)***	0.030 (0.033)	0.041 (0.040)	0.056 (0.030)*
Xinjiang	-0.131 (0.042)***	-0.257 (0.054)***	-0.277 (0.039)***	-0.277 (0.050)***
First-stage test				
Have a boy aged 0-5 χ^2*(8) P value	 16.13 0.041	 13.63 0.092	 49.85 0.00	 70.19 0.00
Have a girl aged 0-5 χ^2*(8) P value	 22.52 0.004	 19.04 0.015	 33.68 0.00	 42.51 0.00

Hausman test				
χ^2*(2)	4.23	0.30	1.07	10.90
P value	0.121	0.861	0.587	0.004
Chi2	153.99	127.51	420.42	480.22
P value	0.00	0.00	0.00	0.00
Pseudo R2	0.18	0.15	0.11	0.15
N	897	916	3,289	3,300

* $p<0.1$; ** $p<0.05$; *** $p<0.01$