

# **Migration, networks and labor allocation in rural China**

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## 1. Introduction

Recent debates on the labor market situation in China and on China reaching the “Lewis turning point” (Fleisher *et al.*, 2011; Knight *et al.*, 2011) have highlighted changing trends in occupational choice. As far as the rural labor market is concerned, Wang *et al.* (2011) underline a structural break in the 2000s when wage earning migration dramatically accelerated while self-employment stagnated, and they explain this change by a shrinking earnings-wage gap that has occurred as the wage rate rose in the 2000s. In this paper, we propose a complementary analysis of the changing patterns by exploring the interrelationship between migration and rural occupational choices. One of the issues to consider is the degree of complementarities and/or substitutability between migration and local off-farm work. Since such decisions usually involve several members of a household, the channels through which migration and rural occupational choices interact may vary a lot. This is particularly the case when considering the gendered and the intergenerational division of labor within the household.

The global net effect of migration on rural labor allocation is theoretically uncertain, as highlighted in the New Economics of Labor Migration (NELM) literature. Various forces are at stake in the impact of migration on the diversification of activities in sending communities (Wouterse & Taylor, 2008). On the one hand, by providing them with liquidity through remittances, migration may enable rural households to overcome credit constraints and invest in more risky activities including self-employment. On the other hand, by releasing the budget constraint and alleviating poverty, migration and remittances reduce the need for rural households to engage in off-farm work in order to diversify and to cope with risks and income variability in agriculture. With income being secured through remittances, the left-behind may thus choose to devote more time to any activity, and possibly farming. Moreover, by reducing the supply of the household labor in the countryside, migration may also compete with other household activities and entail a negative lost-labor effect that increases the time devoted to farming by the left-behinds. The overall net effect of migration on rural occupational choice at the household level is thus an open empirical question, and it may also depend on additional dimensions related to gender, generation and wealth.

In this paper, we propose to test of the heterogeneous effects of migration along various dimensions. Our general aim is to investigate the traits of occupational choice in rural China, and more specifically to focus on an important channel conducive to influencing employment patterns: the family migration situation and history.

We analyze the occupational structure in rural China using multinomial logit models that include measures of gender, educational attainment, and age as individual-level explanatory variables (Schmidt and Strauss, 1975), as well as a number of relevant characteristics of their family situation and background. To estimate the models, we use individual-level data from the Rural Household Survey of the China National Bureau of Statistics for the year 2007.

Our main findings indicate that the occupational choices of individuals in rural China are responsive to migration experience, at both the individual and the family levels. The key results are twofold. First, individual migration experience is positively correlated to any kind of local off-farm work (against farm work), which confirms that return migrants are more likely to opt for non-farm work once back to the village and that they do not return to farming (Démurger & Xu, 2011). In this sense, migration positively contributes to the development of off-farm activities in the countryside. Second, all the household level variables for migration and remittances have a negative correlation with non-farm employment (against farming). In particular, members of a remittances recipient household are found to be less likely to undertake any off-farm work against farm work. This second major result points to the ambiguous impact of migration on the left-behind family and it confirms Mu & van de Walle (2011)'s finding that left-behind women are left behind farming. It also indicates that the overall effect is to drive the left-behind to farming rather than off-farm activities: at the family level, migration and local off-farm work are substitutes rather than complementary, while at the individual level, migration experience favors subsequent local off-farm work. These two major findings may have interesting implications in the light of the changing generations of migrants. In particular, as the younger generation of migrants, born in the 1980s, more urbanized and less obedient, is not willing to go back to cultivating farmland as their parents do<sup>1</sup>, such results indicate that rural development may lag behind in the future if left-behind reallocate to farming ('only') while returning migrants no longer drive non-farm activities.

Contributions of the paper: 1) consider various indicators for migration; 2) separate own account owners and entrepreneurs; 3) include a comprehensive set of controls (spouse characteristics, family background, social network).

The remainder of the paper proceeds as follows. Section 2 provides the theoretical framework and estimation strategy. Section 3 describes the data and we report the main results in Section 4.

## **2. Framework**

(to be completed)

## **3. Migration and rural labor allocation: a description**

We use data from the Rural Household Survey carried out by the National Bureau of Statistics under the Rural-Urban Migration in China (RUMiC) project<sup>2</sup> in 2008. The survey covers 8,000 rural

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<sup>1</sup> A survey conducted by the Chinese Academy of Social Sciences in spring 2011 in 60 enterprises in Chongqing and Tianjin, and covering 1,200 workers reports that "only 17 percent of the young migrant workers surveyed (aged 24 and under) were willing to return home if they could not survive in cities. More than 80 percent of these young migrant workers wanted to stay in cities no matter what happened to them." (*China Daily*, 22 July 2011).

<sup>2</sup> See <http://cbe.anu.edu.au/schools/eco/rumici/>.

households in nine provinces (Hebei, Jiangsu, Zhejiang, Anhui, Henan, Hubei, Guangdong, Chongqing and Sichuan).

Table 1 presents the occupational distribution by gender. Unsurprisingly, men and women work patterns differ<sup>3</sup>. Housework is mostly done by women: 15% of women are engaged in housework against 3% of men. About half of women and 40% of men are employed in farming activities. Men are much more involved in off-farm work than women, both locally and as migrants. Finally, gender differences in labor allocation are also obvious regarding self-employment, with men being more likely to be self-employed than women. Figure 1 illustrates how occupational distribution varies with age, for men and for women. As widely documented, migrants are found in the youngest cohorts for both men and women, with substantially higher shares for men up to the age of 35. Likewise, older age cohorts tend to be employed in agriculture. For middle-age cohorts, an interesting gender difference arises, which certainly reflects the higher incidence of migration among men: women aged 35 to 45 are much more likely to work in agriculture than men in the same age cohort<sup>4</sup>.

As a background to the analysis of the impact of migration on rural labor allocation, Table 2 reports allocation across activities by gender according to remittance reciprocity. Both left-behind men and women in remittance-receiving households work much more in farming and much less in local off-farm and self-employment activities than men and women in non remittance-receiving households.

Table 3 displays rural household income by source. Although farm income still represents more than 40% of households' annual income in 2007, for those households with income from a specific source, off-farm income is highly remunerative. In particular, while remittances account for 20.1% of total income for the total sample, they represent almost half of the income for households with migrant members. Family non-farming activities, which include self-employment, also turn out to be an important source of income for households involved in such activities: the derived annual income from family non-farming activities is as high as 6,386 yuan on average or 24.9% of total income.

#### **4. Empirical analysis**

##### *Estimation strategy*

To investigate the determinants of rural individual occupational choices, we consider a choice set comprised of five alternatives: farming, domestic work, local wage work, own account work and entrepreneur. Since the decision is made among more than two alternatives with no obvious ordering, we use a multinomial logit model. The framework for the occupational choice model is the following.

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<sup>3</sup> The gendered household division of labor in rural China has been highlighted by a number of studies (Chen, 2005; Chang *et al.* forthcoming, Knight & Song, 2003). Likewise, the intergenerational division of labor is documented in De Brauw *et al.* (2008).

<sup>4</sup> Mu & van de Walle (2011) find similar gender/age-related profiles.

Each individual  $i$  is assumed to choose her occupation by comparing the utility levels  $U_{ij}$  of each alternative  $j$ :

$$U_{ij} = X_{ij}\beta_j + \varepsilon_{ij} \quad (1)$$

The alternative providing the highest level of utility will be chosen. If the error terms  $\varepsilon_{ij}$  in (1) are assumed to be independent and identically distributed with a Gumbell distribution, and with a normalization at  $\beta_0=0$ , the choice probabilities can be specified as follows:

$$P(Y_{ij} = m|X_i) = \frac{\exp(X_i\beta_m)}{1 + \sum_{j=1}^4 \exp(X_i\beta_j)} \quad (2)$$

where  $P(Y_{ij} = m|X_i)$  is the conditional probability of occupational attainment in occupation  $m$  for an individual  $i$  with the given vector of explanatory variables  $X_i$ .

Although the  $\beta$  coefficients themselves cannot easily be interpreted, the ratio of the probability of choosing one outcome category over the probability of choosing the reference category can be easily computed:

$$\frac{P(Y_{ij} = m|X_i)}{P(Y_{ij} = 0|X_i)} = \exp(X_i\beta_m) \quad (3)$$

$\exp(X_i\beta_m)$  is commonly referred to as the odds ratio (or the relative risk ratio). If the computed odds ratio is above 1, it means that the variable  $X_i$  increases the probability that alternative  $m$  is chosen instead of the baseline alternative.

The vector  $X$  of explanatory variables includes individual characteristics such as age, the square of age, years of schooling, and training. We further include indicator variables measuring gender, marital status, household head and individual migration experience. The vector also includes family characteristics such as spouse occupational dummies (for migration, self-employment and local wage work respectively), whether the father and the mother of the household head holds an off-farm occupation, the household size and composition (with the number of old and young dependent members), land endowment, housing value, the number of migrant members, whether the household receives remittances and social network indicators. Social network is measured through two indicators: 1) the total number of people to whom the household sent greetings during the past Chinese New Year (including visiting/phone call/mail/e-mail, etc.); 2) the total number of people who have helped the household in the past 12 months (including lending money, introducing to a job, taking care of children, or giving advice regarding difficulties encountered). Finally, to account for location differences, we also include a dummy variable for villages in coastal provinces.

#### *Migration and rural occupational choice*

The impact of migration is captured through the following set of variables. Individual migration experience is measured by an indicator variable for whether or not the individual has ever

migrated. Family-level migration situation is measured by an indicator for a migrant spouse and by the number of current migrants (in 2007) in the household. Moreover, an indicator for whether or not the household receives remittances is also introduced.

The relative risk ratios for the migration variables are reported in Table 4. The distinction between an individual own migration history and her family migration situation points to the fact that migration may affect household labor and liquidity constraints differently and reveals heterogeneous effects on rural occupational choice. Individual migration experience clearly increases the likelihood to engage in off-farm work against farm labor in rural areas. Indeed, the probabilities of choosing local wage work, own account work and entrepreneurship over farming are respectively 3.2, 2.6 and 4 times higher for individuals with a migration experience. Moreover, a comparison across off-farm occupations shows no significant difference in the impact of migration experience, except for the choice between own account work and entrepreneurship. In that respect, an interesting difference can be highlighted across gender since migration experience is found to increase the likelihood to become an entrepreneur over an own account worker for men but not for women. Likewise, the positive responsiveness of entrepreneurship to migration experience over farm labor seems stronger for men than for women (with odds ratios of respectively 4.2 and 2.7).

The relationship between an individual occupation and her spouse migration status is found to differ depending on the type of occupation. Individuals whose spouse is a migrant are 1.5 times more likely to be local wage workers than farmers. However, they are significantly less likely to be involved in a self-employed activity (notably own account work).

Regarding family-level migration situation, the probability of participating in local wage work over both farm work and housework significantly decreases with the number of migrants in the household and it is smaller in remittance recipient households. Inasmuch as migration enables households to overcome liquidity and/or risks constraints, this finding is consistent with the hypothesis that it does not fully compensate the negative loss-of-labor effect, which entails that the left-behind family is left to farm.

#### *Gender and age-group patterns*

Table 6 and Table 7 display separate estimations by gender and by age-group respectively. The full set of factors influencing occupational choice is reported. For age-group estimations, we put together own account work and entrepreneurship as “self-employment” because of a limited number of observations for the youngest and the eldest cohorts in this type of occupation.

As far as age is concerned, Table 7 first confirms the positive impact of individual migration experience and the negative impact of family migration situation on local off-farm choice over farm, whatever the age. Second, it reveals heterogeneous age-related profiles regarding the impact of one’s spouse migration status. Interestingly, the migration status of the spouse is not significantly related to self-employment choice over farm work, and slightly positively related to local wage work choice

over farm work for the 25-41 years old cohort. The correlation is substantially different for the older age cohort (41 to 60 years old), with a significant and positive effect for local wage work choice and a significant and negative effect for self-employment choice (over farm work). Inasmuch as migration is mainly undertaken by the 25-41 years old cohort, these findings suggest that migration as a diversification activity entails risk and costs. When one spouse migrates, the left-behind will be more likely to opt for a remunerating non-risky activity such as local wage work. This finding highlights another facet of the relation between migration and rural occupational choice: besides the fact that migration represents a loss of labor force, it also entails a certain amount of risk that may require the household to secure income with diversified off-farm activities, notably in the wage sector.

#### *Other determinants of occupational choice*

The determinants of rural occupational choice identified in Table 5 are generally consistent with the findings of the empirical literature on off-farm employment. Amongst individual characteristics, there are significant gender differences in occupational choice. Men are much more likely to engage into any off-farm activity over farm work than women, holding other variables constant. Years of education and training also increase the probability to engage in off-farm work as opposed to farm work, and reduce the probability to do domestic work. Interestingly, marital status only affect the own account work choice (over farm work), married people being 2.6 times more likely to engage into own account work than single people.

Amongst the spousal characteristics, having a spouse in local wage work or in self-employment significantly reduces the probability to be farming over any activity including housework, implying that a certain degree of substitutability between farm and off-farm activities. The very high relative risk ratios of having a spouse in self-employment for the own account work or entrepreneurship choice are consistent with the fact that most small businesses in rural China are family-run businesses.

#### **References**

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**Table 1 – Occupational distribution by gender**

Occupation	Women	Men	Total
Housework	15.15	3.45	9.12
Farming	48.58	40.66	44.50
Local wage work	10.26	15.71	13.07
Own account	2.34	4.73	3.57
Entrepreneur	0.46	1.30	0.89
Migrant	23.22	34.15	28.85
No. observations	11,382	12,094	23,476

**Table 2 – Occupational distribution (excluding migrants) by gender and remittance receipt**

Occupation	With remittances			Without remittances		
	Women	Men	Total	Women	Men	Total
Housework	17.31	6.20	12.32	21.89	4.53	13.22
Farming	73.69	72.69	73.24	53.97	53.80	53.88
Local wage work	7.06	15.50	10.85	18.99	29.93	24.46
Own account	1.60	4.83	3.05	4.33	8.89	6.61
Entrepreneur	0.34	0.78	0.54	0.82	2.84	1.83
No. observations	4,120	3,354	7,474	4,619	4,610	9,229

*Note:* “With remittances” indicates that the individual belongs to a remittance-receiving household.



**Table 3 – Household income by source, 2007**

	Mean (Sd. Dev.)	Share in total income	% of households with income from the source	Among households with income from that source:	
				Mean	Share in total income
<b>Total income</b> (in yuan)	19,451 (15,967)				
Per capita income	5,236 (4,329)				
<b>Farm income</b>	6,686 (8,681)	41.8%	95.5%	7,003	43.7%
<b>Wage income</b>	8,819 (10,157)	42.4%	86.4%	10,206	49.1%
Local wage work	3,957 (7,532)	18.4%	62.6%	6,320	29.4%
Remittances	4,061 (7,179)	20.6%	47.9%	8,468	42.9%
<b>Family non-farming income</b>	2,388 (8,908)	9.3%	37.4%	6,386	24.9%
<b>Other income</b>					
Property income	654 (5,822)	1.7%	38.8%	1,684	4.4%
Transfer income	904 (3,236)	4.8%	76.3%	1,185	6.3%

*Source:* RUMIC rural household survey 2007.

*Notes:* The total number of households is 8,000.

**Table 4 – Relative risk ratios for rural occupational choice – The impact of migration variables**

	(1) All	(2) Men	(3) Women
<b>Local wage work versus farm work</b>			
Migration experience	3.244*** (14.19)	3.014*** (11.87)	3.283*** (8.45)
Migrant spouse in 2007	1.518*** (3.42)	1.406 (1.64)	1.909*** (3.99)
Number of migrants in the household in 2007	0.870*** (-3.51)	0.974 (-0.51)	0.754*** (-4.61)
Remittance recipient household in 2007	0.532*** (-9.00)	0.526*** (-7.36)	0.564*** (-5.19)
<b>Own account versus farm work</b>			
Migration experience	2.636*** (7.74)	2.568*** (6.78)	2.607*** (3.98)
Migrant spouse in 2007	0.411*** (-3.11)	0.594 (-1.28)	0.318*** (-2.67)
Number of migrants in the household in 2007	0.988 (-0.24)	1.085 (1.18)	0.876 (-1.23)
Remittance recipient household in 2007	0.529*** (-6.19)	0.532*** (-4.81)	0.541*** (-3.04)
<b>Own account versus local wage work</b>			
Migration experience	0.813* (-1.68)	0.852 (-1.18)	0.794 (-0.96)
Migrant spouse in 2007	0.271*** (-4.50)	0.423** (-2.13)	0.167*** (-4.09)
Number of migrants in the household in 2007	1.135** (2.21)	1.114 (1.44)	1.162 (1.29)
Remittance recipient household in 2007	0.995 (-0.05)	1.011 (0.08)	0.959 (-0.19)
<b>Entrepreneur versus farm work</b>			
Migration experience	3.996*** (6.89)	4.232*** (6.66)	2.715** (2.16)
Migrant spouse in 2007	0.597 (-1.06)	0.691 (-0.59)	0.440 (-1.04)
Number of migrants in the household in 2007	0.925 (-0.70)	1.033 (0.25)	0.765 (-1.40)
Remittance recipient household in 2007	0.388*** (-3.95)	0.290*** (-4.79)	0.979 (-0.05)
<b>Entrepreneur versus local wage work</b>			
Migration experience	1.232 (1.07)	1.404 (1.62)	0.827 (-0.41)
Migrant spouse in 2007	0.393* (-1.91)	0.492 (-1.14)	0.230* (-1.84)
Number of migrants in the household in 2007	1.063 (0.55)	1.061 (0.46)	1.015 (0.07)
Remittance recipient household in 2007	0.729 (-1.32)	0.551** (-2.29)	1.736 (1.37)
<b>Entrepreneur versus own account work</b>			
Migration experience	1.516* (1.89)	1.648** (2.19)	1.042 (0.08)
Migrant spouse in 2007	1.451 (0.69)	1.164 (0.22)	1.382 (0.37)
Number of migrants in the household in 2007	0.936 (-0.54)	0.952 (-0.37)	0.873 (-0.65)
Remittance recipient household in 2007	0.733 (-1.20)	0.545** (-2.25)	1.810 (1.41)
<b>Housework versus farm work</b>			
Migration experience	0.899	0.704	0.968

Migrant spouse in 2007	(-0.81) 1.681 <sup>***</sup>	(-1.48) 2.050 <sup>*</sup>	(-0.21) 1.660 <sup>***</sup>
Number of migrants in the household in 2007	(4.69) 1.006	(1.86) 0.953	(4.34) 1.004
Remittance recipient household in 2007	(0.15) 0.805 <sup>***</sup>	(-0.66) 1.123	(0.11) 0.730 <sup>***</sup>
	(-2.71)	(0.75)	(-3.85)
<b>Housework versus local wage work</b>			
Migration experience	0.277 <sup>***</sup> (-9.03)	0.233 <sup>***</sup> (-5.96)	0.295 <sup>***</sup> (-7.00)
Migrant spouse in 2007	1.107 (0.70)	1.458 (0.90)	0.870 (-0.80)
Number of migrants in the household in 2007	1.156 <sup>***</sup> (2.94)	0.978 (-0.26)	1.333 <sup>***</sup> (4.53)
Remittance recipient household in 2007	1.513 <sup>***</sup> (4.29)	2.134 <sup>***</sup> (4.47)	1.295 <sup>**</sup> (2.14)
<b>Housework versus own account work</b>			
Migration experience	0.341 <sup>***</sup> (-6.22)	0.274 <sup>***</sup> (-4.85)	0.371 <sup>***</sup> (-3.69)
Migrant spouse in 2007	4.085 <sup>***</sup> (4.78)	3.451 <sup>**</sup> (2.27)	5.219 <sup>***</sup> (3.82)
Number of migrants in the household in 2007	1.018 (0.30)	0.878 (-1.35)	1.147 (1.23)
Remittance recipient household in 2007	1.521 <sup>***</sup> (3.37)	2.112 <sup>***</sup> (3.80)	1.350 (1.43)
<i>N</i>	14,102	6,726	7,376

Note: The relative risk ratio for a one unit change in a variable is the exponential value of the corresponding coefficient ( $\exp(b)$  rather than  $b$ ). Standard errors and confidence intervals are similarly transformed. Individual decisions are not assumed to be independent across members of a given household. Standard errors are adjusted for clustering by households. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

**Table 5 – Relative risk ratios for rural occupational choice – Full estimation**

	(1) Local wage work	(2) Own account	(3) Entrepreneur	(4) Housework
Male	2.464*** (10.26)	5.681*** (9.04)	5.257*** (6.61)	0.343*** (-9.03)
Age	1.022 (1.27)	1.063* (1.81)	1.112 (1.16)	0.957** (-2.28)
Age <sup>2</sup>	0.999*** (-3.40)	0.999*** (-2.88)	0.998* (-1.82)	1.001*** (3.89)
Years of education	1.076*** (4.37)	1.042* (1.79)	1.261*** (4.51)	1.014 (0.69)
Training	2.121*** (10.84)	2.339*** (8.40)	2.158*** (4.28)	0.552*** (-5.31)
Married	1.087 (0.64)	2.621*** (3.42)	2.080 (1.44)	1.172 (1.03)
Household head	1.451*** (3.80)	1.388* (1.73)	2.513*** (3.36)	0.759** (-2.22)
Migration experience	3.244*** (14.19)	2.636*** (7.74)	3.996*** (6.89)	0.899 (-0.81)
Migrant spouse in 2007	1.518*** (3.42)	0.411*** (-3.11)	0.597 (-1.06)	1.681*** (4.69)
Self-employed spouse in 2007	4.115*** (11.05)	48.43*** (21.72)	33.03*** (12.66)	2.862*** (8.44)
Spouse in local wage-work in 2007	9.089*** (21.89)	4.663*** (10.64)	4.396*** (5.64)	2.435*** (9.90)
Father's occupation	1.675*** (5.12)	1.476*** (2.65)	1.975*** (3.22)	1.183 (1.37)
Mother's occupation	1.108 (0.89)	1.223 (1.27)	1.575** (1.96)	1.599*** (3.66)
Household size	1.032 (0.92)	0.987 (-0.25)	1.028 (0.26)	1.113*** (2.84)
# old dependent	2.484*** (7.07)	2.288*** (4.14)	2.440*** (2.15)	4.246*** (11.91)
# young dependent	0.895** (-2.45)	1.066 (0.95)	0.953 (-0.39)	0.821*** (-3.48)
Household land	0.924*** (-8.79)	0.929*** (-6.19)	0.866*** (-4.49)	0.964*** (-4.07)
Log (housing value)	1.455*** (11.12)	1.468*** (7.82)	1.795*** (5.15)	1.160*** (4.23)
Number of migrants in the household in 2007	0.870*** (-3.51)	0.988 (-0.24)	0.925 (-0.70)	1.006 (0.15)
Remittance recipient household in 2007	0.532*** (-9.00)	0.529*** (-6.19)	0.388*** (-3.95)	0.805*** (-2.71)
Social network	1.000 (0.50)	1.001*** (2.79)	1.000 (0.27)	1.000 (-0.71)
# helping people	1.003 (0.68)	0.997 (-0.44)	1.018* (2.44)	0.996 (-0.80)
Coastal village	2.427*** (13.79)	1.432*** (3.75)	1.941*** (3.05)	2.302*** (10.74)
<i>N</i>	14133			
Pseudo R <sup>2</sup>	0.261			

Note: see Table 4. Reference category: farmer.

**Table 6 – Relative risk ratios for rural occupational choice – Gender differences**

	(1) Men	(2) Women
<b>Local wage work</b>		
Male		
Age	1.091 <sup>***</sup> (3.75)	1.077 <sup>**</sup> (2.29)
Age <sup>2</sup>	0.999 <sup>***</sup> (-4.69)	0.999 <sup>***</sup> (-3.77)
Years of education	1.075 <sup>***</sup> (3.33)	1.086 <sup>***</sup> (3.10)
Training	1.961 <sup>***</sup> (8.48)	2.285 <sup>***</sup> (6.98)
Married	1.339 <sup>**</sup> (1.99)	0.655 <sup>**</sup> (-2.12)
Household head	0.612 <sup>***</sup> (-3.92)	1.282 (1.13)
Migration experience	3.014 <sup>***</sup> (11.87)	3.283 <sup>***</sup> (8.45)
Migrant spouse in 2007	1.406 (1.64)	1.909 <sup>***</sup> (3.99)
Self-employed spouse in 2007	11.57 <sup>***</sup> (6.19)	3.921 <sup>***</sup> (8.33)
Spouse in local wage-work in 2007	13.04 <sup>***</sup> (17.05)	9.751 <sup>***</sup> (20.56)
Father's occupation	1.686 <sup>***</sup> (3.91)	1.611 <sup>***</sup> (3.12)
Mother's occupation	1.125 (0.81)	1.082 (0.44)
Household size	0.923 <sup>*</sup> (-1.85)	1.090 (1.64)
# old dependent	1.514 <sup>***</sup> (2.67)	3.473 <sup>***</sup> (7.57)
# young dependent	1.042 (0.70)	0.782 <sup>***</sup> (-3.30)
Household land	0.944 <sup>***</sup> (-5.24)	0.892 <sup>***</sup> (-7.07)
Log (housing value)	1.343 <sup>***</sup> (6.95)	1.585 <sup>***</sup> (8.74)
Number of migrants in the household in 2007	0.974 (-0.51)	0.754 <sup>***</sup> (-4.61)
Remittance recipient household in 2007	0.526 <sup>***</sup> (-7.36)	0.564 <sup>***</sup> (-5.19)
Social network	1.001 (1.05)	1.000 (-0.77)
# helping people	1.003 (0.53)	1.002 (0.33)
Coastal village	1.766 <sup>***</sup> (7.07)	3.916 <sup>***</sup> (12.78)
<b>Own account work</b>		
Male		
Age	1.125 <sup>***</sup> (2.66)	1.004 (0.07)
Age <sup>2</sup>	0.998 <sup>***</sup> (-3.43)	1.000 (-0.44)
Years of education	1.046 (1.51)	1.036 (0.80)

Training	2.631 <sup>***</sup> (8.06)	1.495 <sup>*</sup> (1.87)
Married	3.114 <sup>***</sup> (3.38)	1.676 (1.01)
Household head	0.826 (-0.82)	1.183 (0.35)
Migration experience	2.568 <sup>***</sup> (6.78)	2.607 <sup>***</sup> (3.98)
Migrant spouse in 2007	0.594 (-1.28)	0.318 <sup>***</sup> (-2.67)
Self-employed spouse in 2007	132.8 <sup>***</sup> (13.00)	39.43 <sup>***</sup> (17.55)
Spouse in local wage-work in 2007	5.812 <sup>***</sup> (8.62)	4.136 <sup>***</sup> (5.71)
Father's occupation	1.248 (1.08)	1.957 <sup>***</sup> (3.00)
Mother's occupation	1.406 (1.61)	0.977 (-0.09)
Household size	0.881 <sup>*</sup> (-1.84)	1.050 (0.54)
# old dependent	1.728 <sup>**</sup> (2.40)	2.594 <sup>***</sup> (3.19)
# young dependent	1.319 <sup>***</sup> (3.22)	0.799 <sup>*</sup> (-1.80)
Household land	0.943 <sup>***</sup> (-4.10)	0.908 <sup>***</sup> (-3.66)
Log (housing value)	1.405 <sup>***</sup> (5.55)	1.549 <sup>***</sup> (4.98)
Number of migrants in the household in 2007	1.085 (1.18)	0.876 (-1.23)
Remittance recipient household in 2007	0.532 <sup>***</sup> (-4.81)	0.541 <sup>***</sup> (-3.04)
Social network	1.002 <sup>**</sup> (2.37)	1.001 (1.48)
# helping people	0.992 (-0.95)	1.005 (0.57)
Coastal village	1.361 <sup>**</sup> (2.46)	1.288 (1.47)

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### Entrepreneurship

#### Male

Age	1.210 <sup>*</sup> (1.84)	0.923 (-0.57)
Age <sup>2</sup>	0.997 <sup>**</sup> (-2.44)	1.001 (0.34)
Years of education	1.175 <sup>***</sup> (3.14)	1.637 <sup>***</sup> (5.37)
Training	2.691 <sup>***</sup> (4.97)	0.551 (-1.23)
Married	2.346 <sup>*</sup> (1.75)	1.691 (0.46)
Household head	1.518 (1.00)	1.719 (0.93)
Migration experience	4.232 <sup>***</sup> (6.66)	2.715 <sup>**</sup> (2.16)
Migrant spouse in 2007	0.691 (-0.59)	0.440 (-1.04)
Self-employed spouse in 2007	82.79 <sup>***</sup> (10.04)	38.71 <sup>***</sup> (8.22)
Spouse in local wage-work in 2007	6.083 <sup>***</sup>	2.833 <sup>*</sup>

	(5.88)	(1.76)
Father's occupation	1.596*	3.404***
	(1.87)	(3.21)
Mother's occupation	1.659*	1.477
	(1.82)	(1.04)
Household size	0.953	1.028
	(-0.42)	(0.15)
# old dependent	1.632	3.782*
	(0.99)	(1.70)
# young dependent	1.086	0.810
	(0.55)	(-0.96)
Household land	0.879***	0.848**
	(-4.05)	(-2.21)
Log (housing value)	1.803***	1.520**
	(4.94)	(2.01)
Number of migrants in the household in 2007	1.033	0.765
	(0.25)	(-1.40)
Remittance recipient household in 2007	0.290***	0.979
	(-4.79)	(-0.05)
Social network	1.000	1.001
	(0.08)	(0.58)
# helping people	1.021**	1.010
	(2.26)	(0.73)
Coastal village	1.720**	1.988*
	(2.23)	(1.83)
<b>Housework</b>		
Male		
Age	0.939	0.948**
	(-1.58)	(-2.44)
Age <sup>2</sup>	1.001**	1.001***
	(2.43)	(3.90)
Years of education	1.031	1.011
	(0.77)	(0.55)
Training	0.390***	0.641***
	(-4.54)	(-3.39)
Married	0.960	1.294
	(-0.16)	(1.42)
Household head	1.077	0.924
	(0.26)	(-0.41)
Migration experience	0.704	0.968
	(-1.48)	(-0.21)
Migrant spouse in 2007	2.050*	1.660***
	(1.86)	(4.34)
Self-employed spouse in 2007	2.71e-18***	2.713***
	(-126.26)	(7.67)
Spouse in local wage-work in 2007	1.861	2.324***
	(1.61)	(8.91)
Father's occupation	1.771**	1.113
	(2.40)	(0.83)
Mother's occupation	1.088	1.690***
	(0.32)	(3.63)
Household size	1.270***	1.096**
	(3.39)	(2.36)
# old dependent	7.027***	3.483***
	(10.39)	(10.55)
# young dependent	0.528***	0.890**
	(-5.35)	(-2.08)
Household land	0.995	0.949***
	(-0.37)	(-5.33)

Log (housing value)	1.031 (0.50)	1.223*** (5.38)
Number of migrants in the household in 2007	0.953 (-0.66)	1.004 (0.11)
Remittance recipient household in 2007	1.123 (0.75)	0.730*** (-3.85)
Social network	1.001 (0.86)	0.999 (-1.36)
# helping people	0.990 (-1.00)	0.998 (-0.36)
Coastal village	1.587*** (3.12)	2.666*** (12.61)
<hr/> <i>N</i>	6740	7393
<hr/> Pseudo R <sup>2</sup>	0.239	0.260

Note: see Table 4. Reference category: farmer.



**Table 7 – Relative risk ratios for rural occupational choice – Age-group differences**

	(1) 16-25	(2) 26-40	(3) 41-60	(4) Above 60
<b>Local wage work</b>				
Male	1.023 (0.13)	2.220 <sup>***</sup> (6.49)	4.278 <sup>***</sup> (6.82)	2.759 <sup>**</sup> (2.03)
Years of education	1.055 (0.97)	1.079 <sup>**</sup> (2.47)	1.113 <sup>***</sup> (5.60)	1.084 (1.33)
Training	1.368 (1.56)	2.976 <sup>***</sup> (8.54)	1.827 <sup>***</sup> (6.54)	2.259 <sup>***</sup> (3.59)
Married	0.924 (-0.31)	1.256 (1.03)	1.089 (0.30)	0.918 (-0.24)
Household head	1.030 (0.03)	1.328 <sup>*</sup> (1.74)	1.193 (0.86)	1.637 (1.18)
Migration experience	3.663 <sup>***</sup> (5.97)	2.886 <sup>***</sup> (7.74)	3.465 <sup>***</sup> (10.98)	3.911 <sup>***</sup> (3.78)
Migrant spouse in 2007	2.24e-15 <sup>***</sup> (-33.11)	1.517 <sup>*</sup> (1.92)	2.049 <sup>***</sup> (4.48)	0.615 (-0.74)
Self-employed spouse in 2007	1.594 (0.32)	2.261 <sup>***</sup> (3.71)	7.707 <sup>***</sup> (11.70)	11.75 <sup>***</sup> (3.57)
Spouse in local wage-work in 2007	2.413 (0.60)	5.926 <sup>***</sup> (9.35)	15.56 <sup>***</sup> (20.04)	8.443 <sup>***</sup> (4.47)
Father's occupation	3.435 <sup>**</sup> (2.52)	1.187 (0.92)	1.781 <sup>***</sup> (5.05)	1.555 (1.36)
Mother's occupation	0.594 (-0.92)	1.365 (1.42)	1.126 (0.92)	1.441 (0.98)
Household size	0.869 (-1.25)	1.239 <sup>***</sup> (3.16)	0.862 <sup>***</sup> (-3.87)	1.022 (0.18)
# old dependent	0.854 (-0.48)	1.810 <sup>***</sup> (3.62)	5.014 <sup>***</sup> (4.59)	2.500 (1.64)
# young dependent	0.874 (-0.91)	0.770 <sup>***</sup> (-2.94)	1.053 (0.91)	1.137 (0.65)
Household land	0.951 <sup>**</sup> (-2.00)	0.896 <sup>***</sup> (-6.24)	0.941 <sup>***</sup> (-5.85)	0.909 <sup>**</sup> (-2.00)
Log (housing value)	1.574 <sup>***</sup> (4.21)	1.638 <sup>***</sup> (7.70)	1.376 <sup>***</sup> (8.48)	1.269 <sup>***</sup> (2.27)
Number of migrants in the household in 2007	1.100 (0.67)	0.664 <sup>***</sup> (-4.38)	0.965 (-0.83)	0.773 <sup>*</sup> (-1.70)
Remittance recipient household in 2007	0.334 <sup>***</sup> (-4.83)	0.560 <sup>***</sup> (-4.58)	0.568 <sup>***</sup> (-7.22)	0.545 <sup>**</sup> (-2.25)
Social network	0.999 (-0.71)	1.001 (0.84)	1.001 (1.09)	0.998 (-1.19)
# helping people	1.001 (0.11)	0.989 (-1.41)	1.007 <sup>*</sup> (1.79)	1.012 (0.69)
Coastal village	2.503 <sup>***</sup> (4.18)	2.469 <sup>***</sup> (7.47)	2.051 <sup>***</sup> (10.13)	3.697 <sup>***</sup> (5.24)
<b>Self-employment</b>				
Male	2.872 <sup>**</sup> (2.40)	4.090 <sup>***</sup> (7.22)	10.22 <sup>***</sup> (5.91)	2.915 (1.06)
Years of education	1.123 (1.04)	1.113 <sup>***</sup> (2.79)	1.106 <sup>***</sup> (3.93)	1.087 (1.12)
Training	2.067 <sup>*</sup> (1.83)	2.674 <sup>***</sup> (5.99)	2.137 <sup>***</sup> (6.04)	2.865 <sup>***</sup> (2.78)
Married	2.448 <sup>*</sup> (1.77)	4.177 <sup>***</sup> (3.44)	1.190 (0.39)	2.854 (1.02)
Household head	4.16e-15 <sup>***</sup> (-30.51)	1.973 <sup>***</sup> (3.04)	1.186 (0.47)	2.419 (0.84)
Migration experience	3.848 <sup>***</sup> (3.21)	2.803 <sup>***</sup> (5.77)	3.020 <sup>***</sup> (7.58)	1.296 (0.36)

Migrant spouse in 2007	5.36e-15 <sup>***</sup>	0.671	0.433 <sup>**</sup>	4.54e-19 <sup>***</sup>
	(-21.18)	(-1.11)	(-2.21)	(-46.16)
Self-employed spouse in 2007	0.309	14.92 <sup>***</sup>	105.2 <sup>***</sup>	152.6 <sup>***</sup>
	(-0.64)	(10.20)	(19.09)	(6.46)
Spouse in local wage-work in 2007	4.19e-15 <sup>***</sup>	2.238 <sup>***</sup>	9.056 <sup>**</sup>	3.839 <sup>*</sup>
	(-28.00)	(3.30)	(12.54)	(1.76)
Father's occupation	1.314	1.349	1.641 <sup>***</sup>	1.099
	(0.27)	(1.33)	(3.33)	(0.13)
Mother's occupation	1.068	1.668 <sup>**</sup>	1.368 <sup>*</sup>	0.852
	(0.07)	(2.03)	(1.95)	(-0.23)
Household size	0.797	1.093	0.876 <sup>**</sup>	1.137
	(-1.09)	(1.02)	(-2.27)	(0.81)
# old dependent	0.829	1.730 <sup>**</sup>	4.756 <sup>***</sup>	1.494
	(-0.29)	(2.21)	(3.63)	(0.40)
# young dependent	1.192	0.878	1.231 <sup>***</sup>	0.763
	(0.68)	(-1.11)	(2.72)	(-0.87)
Household land	0.908 <sup>*</sup>	0.883 <sup>***</sup>	0.946 <sup>***</sup>	0.909 <sup>**</sup>
	(-1.80)	(-6.27)	(-4.02)	(-1.96)
Log (housing value)	1.356	1.754 <sup>***</sup>	1.465 <sup>***</sup>	1.542 <sup>**</sup>
	(1.05)	(6.90)	(7.28)	(2.53)
Number of migrants in the household in 2007	1.132	0.900	1.065	0.797
	(0.62)	(-0.88)	(1.12)	(-1.16)
Remittance recipient household in 2007	0.336 <sup>**</sup>	0.429 <sup>***</sup>	0.551 <sup>***</sup>	0.527 <sup>*</sup>
	(-2.28)	(-4.78)	(-5.42)	(-1.93)
Social network	0.999	1.002 <sup>**</sup>	1.001 <sup>*</sup>	0.999
	(-0.21)	(2.06)	(1.87)	(-0.66)
# helping people	0.884 <sup>**</sup>	1.002	1.002	1.010
	(-2.31)	(0.29)	(0.26)	(0.55)
Coastal village	1.802	1.326 <sup>*</sup>	1.502 <sup>**</sup>	1.098
	(1.29)	(1.79)	(3.80)	(0.26)
<b>Housework</b>				
Male	0.539 <sup>**</sup>	0.336 <sup>***</sup>	0.354 <sup>***</sup>	0.187 <sup>**</sup>
	(-2.20)	(-5.22)	(-5.17)	(-4.96)
Years of education	0.928	1.030	0.947 <sup>**</sup>	1.084
	(-0.94)	(0.70)	(-2.22)	(1.37)
Training	0.267 <sup>***</sup>	0.655 <sup>*</sup>	0.562 <sup>***</sup>	0.524 <sup>*</sup>
	(-2.70)	(-1.90)	(-3.72)	(-1.96)
Married	2.769 <sup>***</sup>	1.988 <sup>**</sup>	0.643	0.764
	(3.50)	(2.07)	(-1.61)	(-1.06)
Household head	4.71e-15 <sup>***</sup>	1.296	0.695 <sup>*</sup>	1.285
	(-46.76)	(0.98)	(-1.84)	(0.75)
Migration experience	1.042	0.939	0.703 <sup>*</sup>	0.805
	(0.11)	(-0.31)	(-1.72)	(-0.42)
Migrant spouse in 2007	1.169	1.385	1.664 <sup>***</sup>	1.036
	(0.08)	(1.44)	(3.77)	(0.05)
Self-employed spouse in 2007	1.01e-14 <sup>***</sup>	2.554 <sup>***</sup>	2.724 <sup>***</sup>	4.864 <sup>***</sup>
	(-13.62)	(3.95)	(6.38)	(3.14)
Spouse in local wage-work in 2007	1.80e-15 <sup>***</sup>	1.896 <sup>***</sup>	2.236 <sup>***</sup>	3.744 <sup>***</sup>
	(-29.97)	(3.10)	(7.56)	(4.16)
Father's occupation	1.800	0.951	1.288 <sup>*</sup>	0.552
	(1.21)	(-0.20)	(1.68)	(-1.48)
Mother's occupation	1.867	2.353 <sup>***</sup>	1.370 <sup>**</sup>	1.104
	(1.27)	(3.19)	(2.00)	(0.22)
Household size	0.865	0.981	1.253 <sup>***</sup>	1.263 <sup>***</sup>
	(-0.91)	(-0.26)	(4.95)	(2.70)
# old dependent	1.282	1.651 <sup>**</sup>	4.019 <sup>***</sup>	25.69 <sup>***</sup>
	(0.58)	(2.23)	(4.42)	(7.61)
# young dependent	1.185	0.610 <sup>***</sup>	0.681 <sup>**</sup>	0.938
	(0.72)	(-3.75)	(-5.73)	(-0.45)
Household land	0.978	0.968 <sup>*</sup>	0.955 <sup>***</sup>	0.980

	(-0.57)	(-1.73)	(-4.27)	(-0.88)
Log (housing value)	1.189	1.069	1.144***	1.250**
	(1.22)	(0.93)	(3.06)	(2.38)
Number of migrants in the household in 2007	0.923	1.121	0.954	1.004
	(-0.48)	(1.08)	(-0.99)	(0.04)
Remittance recipient household in 2007	0.871	0.666**	0.780**	0.934
	(-0.45)	(-2.46)	(-2.53)	(-0.31)
Social network	0.989***	1.001	1.000	0.996**
	(-2.65)	(0.96)	(-0.37)	(-2.17)
# helping people	0.952	0.993	1.000	1.009
	(-1.62)	(-0.74)	(0.03)	(0.74)
Coastal village	1.443	2.282***	2.537***	2.746***
	(1.24)	(5.12)	(9.63)	(4.70)
<i>N</i>	1131	3254	8048	1700
Pseudo R <sup>2</sup>	0.182	0.244	0.277	0.357

Note: see Table 4. Reference category: farmer. Self-employment includes both own account work and entrepreneurship.

**Figure 1 – Occupation shares by age and by gender**

