

## **Gender and Labor Time Allocation of Chinese Rural Households in Low Income Regions**

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Abstract: It is well appreciated that women's access to financial resources has a positive effect on their ability to bargain for an improvement in their own or their children's welfare. However, women in rural areas are often observed assuming a larger share of labor on farming activities which generate lower income relative to non-farm activities. This paper examines the gendered patterns of time allocation among farming activities, non-farming self-employment, and wage employment. The data used in this paper are derived from a rural household survey that was conducted in four state-designated poor counties in Gansu, Guizhou, Sichuan, Shaanxi province in 2001. Our analysis reveals that there are strikingly large gender differences in time allocation. We find that other things being equal, women, on average, spent 243 more hours per year on farming activities but 165 and 667 hours fewer on non-agricultural private business and wage employment than did men.

### 1. Introduction

It is generally accepted that there are gender differences in labor time allocation among farming activities, non-farming self-employment, and wage employment due to many factors in rural low income regions. These differences also give rise to gender income disparity because of different rewards of the three kinds of activities. In this paper we establish the gendered patterns of time allocation to find some evidence that income of female labors is lower than that of male labors, thus reveal gender income disparity in rural low income regions from a new view. This paper managed to identify gender disparity in labor time allocation by controlling some variables, such as cultivated land per capita, family size, and number of family members aged 0-5 years old, age and schooling years attained of labor force, ect., which affect the time allocation among farming and non-farming activities. These variables could be put into three categories: region characteristics, family characteristics and personal ones.

The rest of the paper is organized as follows. In section 2, we briefly review the relative literature. In section 3, we describe the data. Section 4 analyzes the gendered differences of time allocation among farming activities, non-farming self-employment, and wage employment. Section 5 concludes.

## **2. Review of Relative Studies**

Few papers studied gendered difference of labor time allocation of Chinese rural households in low income regions from the view of gender in the past.

Some literatures have researched influencing factors of labor time allocation of Chinese rural residents in low income regions. Du (2000) found some features of labor supply in low income regions by observing rural households and their members' behavior changing with shadow wage ratio and shadow price. Firstly, production decision and consumption decision depend on each other in rural households. Secondly, labor supply of family members is jointly decided when labor market runs not very well. Thirdly, shadow price has a positive effect on labor supply. Li (2001) developed a theoretical model of labor division intra-household in "Employment and Income of Rural women". He argued that labor division between man and woman intra-household mainly lay on the objective function of maximizing family welfare. And the two decisive factors of family welfare are family revenue and labor according to classical economics theories. Yang (1998) deemed that the phenomenon that farmers deal with the concurrent business was the result of many factors, such as natural resources, human capital resources, economic geographical location, rural economic status and so on, therefore, concurrent business differs in different villages mainly because of diverse factor endowments. Kimih (2004) discovered that education level had a positive effect on employment, especially on non-farm employment. He also found that the larger family size was, the less farming activities the family member had, and the farther from town, the less non-farm employment. Чаянов( 1996 )deemed that magnitude of farming activities is related with family size and structure.

## **3.Data Resource and Description**

The data used in this paper are derived from a rural household survey conducted in four state-designated poor counties in January 2001, and the four counties were Tongwei county Gansu province, Weining county Guizhou province, Qu county Sichuan province, Shangzhou county Shaanxi province.

The survey data include a mass of variables, such as schooling years attained and age of household members, cultivated land, income from different resources, time allocation of labor force, household property, and so on. Those information can be used to analysis what factors affect labor time allocation and whether there are gender division on different labor activities. We divided all family members into two groups: family members staying at home for six months or more and those off-home more than six months. The individual information about the first group was collected in our survey. Based on the sampled households of Rural Survey Organization of National Bureau of Statistics, we followed the random sample principle to choose 5 more

households, and so 15 households were sampled in one sample village. The survey was conducted by the form of questionnaire, at last we got valid questionnaires of 592 households in forty villages.

Table 1 shows average income per unit time, number of participators and per capita annual work hours of different activities by gender. The sample used to calculate the table contained all male and female farmers who work. The rewards of different activities decrease as wage employment, non-farm self-employment, and farming activities in turn. In 592 households, the number of female participators in farming activities is 1432, but the number of male is 1376. Meanwhile labor time of female participators is also higher than that of male, the difference between female and male is 202 hours in the whole year, and significant at 1% level. From this table, we found that the difference of the number of male participators is obviously higher than that of female ones. We can observe distribution of different activities time by gender from Figure 1, Figure 2 and Figure 3.

Table 2 explains the main variables used in simulations. Table 3 shows descriptive statistics of variables, the sample used to calculate the table contains the observations who is younger than 61 and older than 15. The same sample is also used in following simulation.

#### 4. Estimates and Results

In order to reveal gender disparity in labor time allocation in China poor rural areas, We established Tobit models and Probit models of annual hours employed with wage, non-farm self-employment time, and farming activity time to examine magnitude and significance of the coefficients on gender dummy variable.

##### 4.1 Estimates of Wage Employment Time

Average income per unit time from wage employment activities is highest among three kinds of labor in low income rural areas. Whether having members employed with wage is so important for a rural household to improve its welfare level. So every person hope to get such opportunity to earn more money in the local labor market. Therefore, we take region characteristics and family characteristics into account, besides the most import personal characteristics. We used Tobit models and Probit modesl to estimate annual hours employed with wage respectively.

In Tobit model ,  $y$  is the observed response in terms of an underlying latent variable  $y^*$  :

$$y^* = \beta_0 + X\beta + u, \quad u | x \sim Normal(0, \sigma^2)$$

$$y = \max(0, y^*)$$

We often assume that observations are independent in Probit models , this assumption, however, does not hold in our research. The reason is that the labor supply of labors from a same household is likely to be correlative. Therefore, robust standard errors are calculated in these estimates. Table 4 shows Tobit estimation of

annual hours employed with wage, table 5 Probit estimation of whether participating in wage employment, and Table 6 partial effects in Probit models of whether participating in wage employment.

According to estimate results of the Tobit models, the coefficient on gender dummy variable is -4685.05, and significant at 1% level when county fixed effect is controlled. Starting at the mean values of all explanatory variables, being female is estimated to decrease expected work time with wage 667.2776 hours for all work force. And the partial effect is 877.5915 for the subpopulation of labor force with  $T_w > 0$ . In other words, holding other factors fixed, expected work time with wage of female is less 877.5915 hours than that of male for those people employed with wage. While controlling fixed effects of county, town, or village respectively, the coefficients on gender variable change a little. That is, the phenomena that work time with wage of female is lower exist no matter within a county, or a town, or a village, and no big difference among them.

As the results in Table 5 and Table 6 show , the probability of wage employment participation of female is 28.31 percent lower than that of male when county fixed effect is controlled. The probability is 28.04 percent lower than that of male when town fixed effect is controlled. While the probability is 28.31 percent lower than that of male when village fixed effect is controlled. That is, the probability of wage employment participation of female is lower no matter within a county, or a town, or a village, and no big difference among them. However, the difference increases to 61.86 percent when household fixed effect is controlled. It indicates that the probability of wage employment participation of female is reduced largely because of work division intra-household.

We divide the Tobit coefficients on gender dummy variable in Table 4 by  $\hat{\sigma}$ , and obtain -1.4773, -1.5230, and -1.5391. Compared with the Probit estimates of -1.0114, -1.0256, and -1.0426, they are the same sign and no huge difference, so Tobit model is appropriate. It also indicates that gender factor has effects on both employed probability and how many hours employees do in rural low income regions.

#### 4.2 Estimates of Non-farm Self-employment Time

Average income per unit time from Non-farm self-employment activities is comparatively higher than that from farming activities. And the farmers are often taken family as a whole to compete in this labor market. Therefore, the region characteristics and family characteristics are supposed to be more important than personal ones, which also play some role in market competition. We used Tobit models and Probit models to estimate annual hours spending on non-farm self-employment, denoting as  $T_s$ , respectively. The same reason as the above estimates, robust standard errors are calculated when we estimate Probit models.

Table 7 gives Tobit estimation results of annual hours spent on non-farming self-employment activities, Table 8 Probit estimation results of whether participating in non-farming self-employment, Table 9 partial effects in Probit models of whether

participating in non-farming self-employment.

According to estimates of the Tobit models, the coefficient on gender dummy variable is -1420.698, and significant at 1% level when county fixed effect is controlled. Starting at the mean values of all explanatory variables, being female is estimated to decrease expected time on non-farm self-employment 165.3228 hours for all work force. And the partial effect is 251.0314 for the subpopulation of labor force with  $T_S > 0$ . In other words, holding other factors fixed, expected work time of female is less 251.0314 hours than that of male for those people participating in self-employment activities. While controlling fixed effects of county, town, or village respectively, the coefficients on gender change a little. That is, the phenomena that non-farm self-employment time of female is lower exist no matter within a county, or a town, or a village, and no big difference among them.

As the results in Table 8 and Table 9 show, the probability of self-employment participation of female is 11.01 percent lower than that of male when county fixed effect is controlled. The probability is 12.59 percent lower than that of male when town fixed effect is controlled. While the probability is 12.75 percent lower than that of male when village fixed effect is controlled. That is, the probability of self-employment participation of female is lower no matter within a county, or a town, or a village, and no big difference among them. However, the difference increases to 44.49 percent when household fixed effect is controlled. It indicates that the probability of self-employment participation of female is reduced largely because of work division intra-household.

We divide the Tobit coefficient on gender dummy variable in Table 7 by  $\hat{\sigma}$ , we obtain -0.7502, -0.9130, and -0.9102. compared with the Probit estimates of -0.4285, -0.5084, and -0.5197, they are the same sign and no huge difference, so Tobit model is appropriate. It also indicates that gender factor has effects on both non-farm self-employment participation of labor force and how many hours they do in rural low income regions.

#### 4.3 Estimates of Farming Activity Time

Average income per unit time from farming activities is lowest among three kinds of labor in low income rural areas. Residents in rural areas take part in farming activities universally. And region characteristics, family characteristics, and personal ones will simultaneously affect farmers' time allocation. We established Tobit models and controlled region fixed effects.

Table 10 gives the estimate results of farming activity time model. The coefficient on gender dummy variable is 254.9546, and significant at 1% level when county fixed effect is controlled. Starting at the mean values of all explanatory variables, being female is estimated to increase expected time on farming activities 242.814 hours for all work forces. And the partial effect is 208.1761 for the subpopulation of labor force with  $T_S > 0$ . In other words, holding other factors fixed, expected farming labor time of female is less 208.1761 hours than that of male for

those people participating in farming activities. It implies that gender factor has effects on both farming activities participation of labor force and how many hours they work in rural low income regions. While controlling fixed effects of county, or town, or village, or household respectively, the coefficients on gender variable change a little. That is, farming activity time of female is lower no matter within a county, or a town, or a village, or a household, and no big difference among them.

## **5. Conclusions**

The main empirical findings of this paper are as follows. First, work time with wage of female is lower than that of male no matter within a county, or a town, or a village, and no big difference among them, and so do participation probability. But work division intra-household expands the difference largely. Second, female participation status is similar in the both non-farm self-employment and wage employment market, and the participation probability of female is reduced largely because of work division intra-household in non-farm self-employment market too. Third, woman do more farming labor no matter within a county, or a town, or a village, or a household. All in all, women in rural areas often assume a larger share of labor on farming activities which generate lower income relative to non-farm activities.

## Reference Literature

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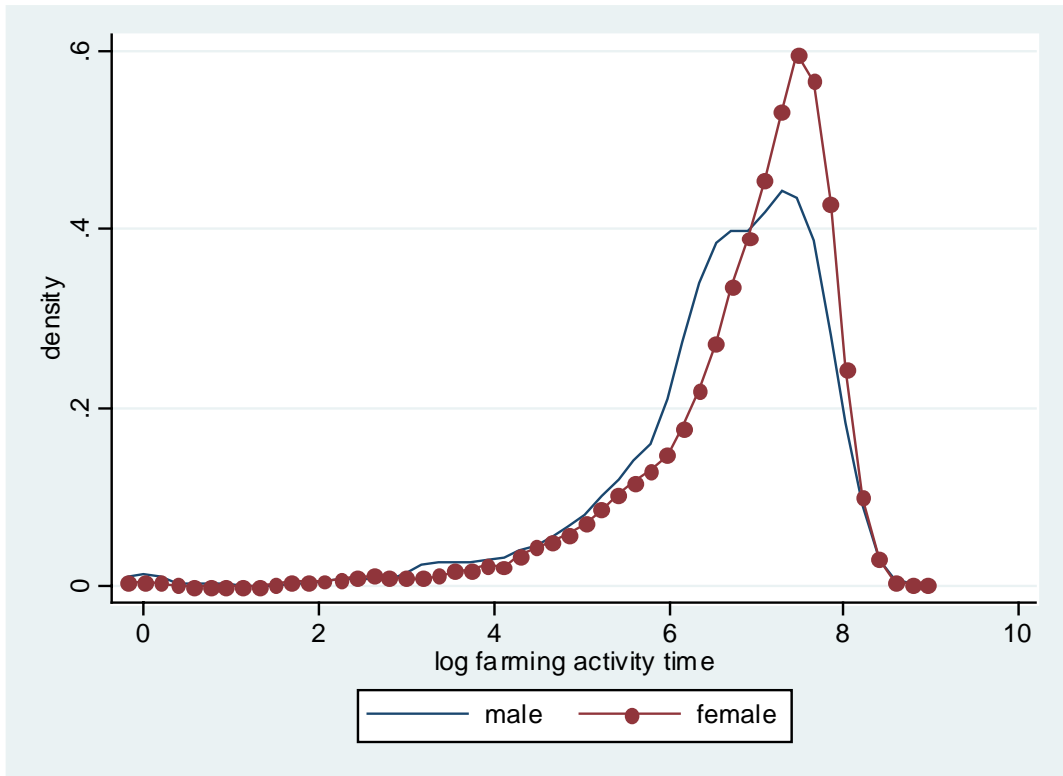


Figure 1 Kernel Density of Farming Activities Time by Gender

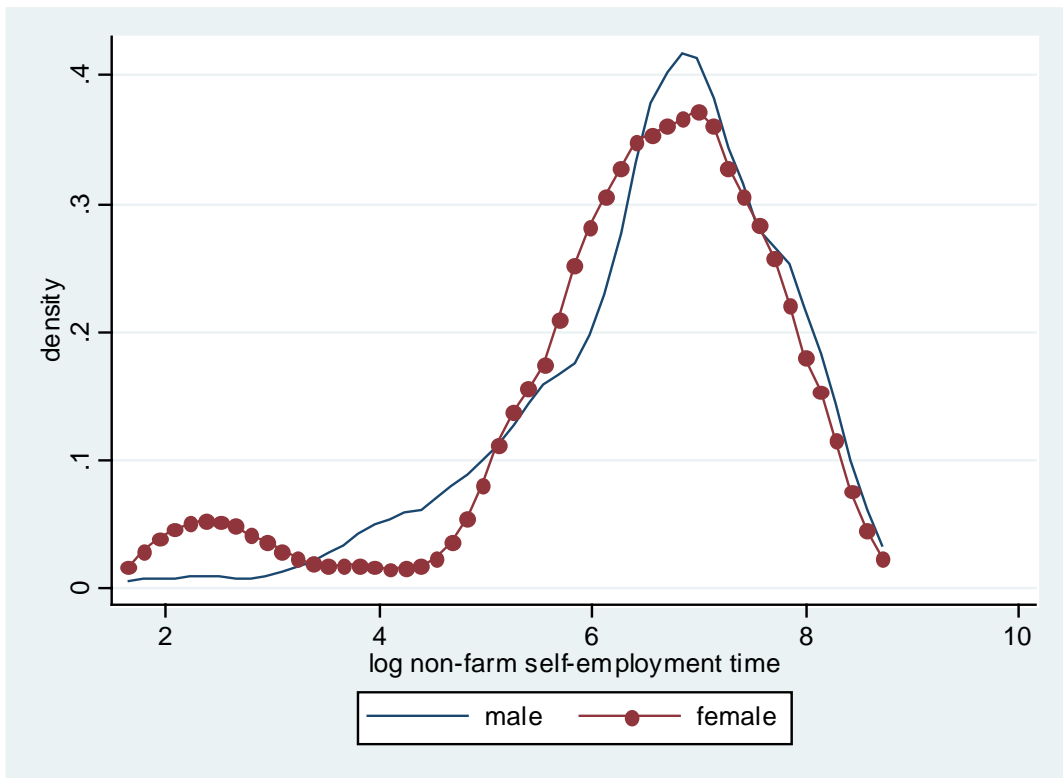


Figure 2 Kernel Density of Non-Farming Self-employment Time by Gender



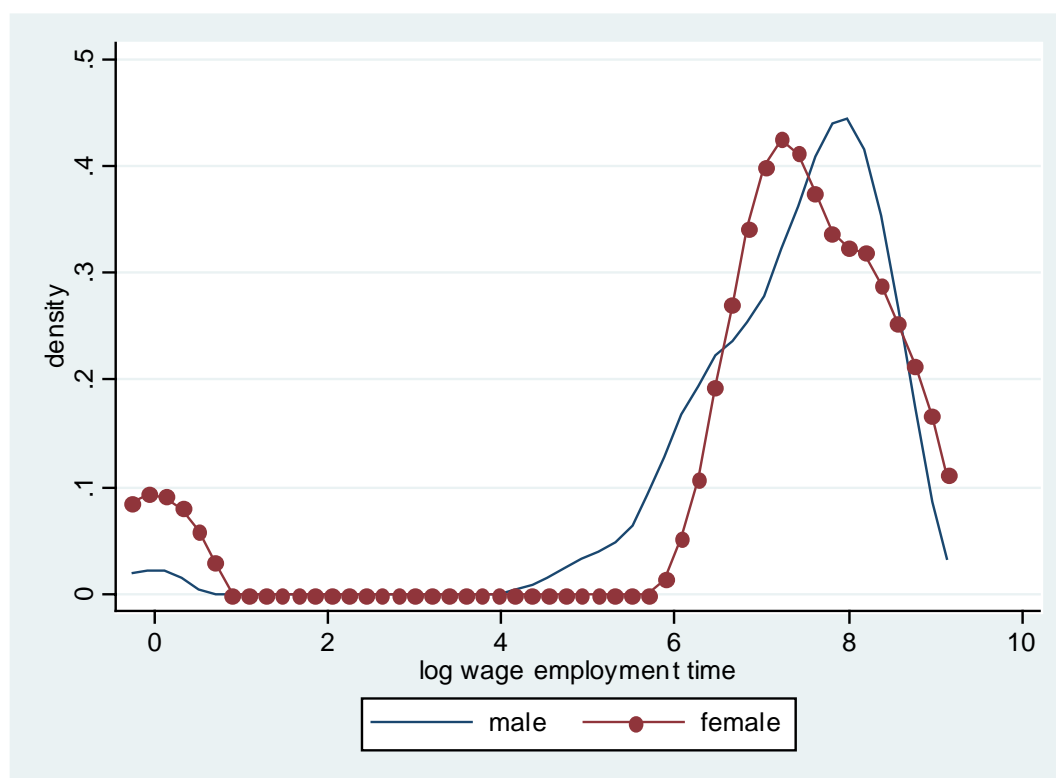


Figure 3 Kernel Density of Wage Employment Time by Gender

Table 1 Statistical Gender Disparity of Labor Time Allocation

Categories of Labor	Average Income per Unit Time (RMB/hr) (1)	Observations of Male Participants (2)	Average Male Labor Time (hrs/year) (3)	Observations of Female Participants (4)	Average Female Labor Time (hrs/year) (5)	Gender Disparity (hrs/year) (6)
Farming activity	0.42	1376	1125.92 (851.7868)	1432	1328.076 (876.0186)	-202.1561 (6.1964)***
Non-farm self-employment	0.75	284	1167.556 (1037.493)	92	1021.522 (874.2363)	146.0346 (1.2171)
Wage employment	0.96	438	2337.288 (1943.984)	50	2590.4 (1811.682)	-253.1123 (0.8781)

Notes: Non-farm activities income is net income after tax in column (1). Figures in column (3) and (5) are standard error, Figures in column (6) absolute values of t statistic; \*\*\*, \*\*, and \* denote statistical significance at the 1, 5, and 10 percent levels.

Table 2 Variable Description

Variable name	Description
$T_f$ (hour)	Farming activity time: The summary of time spending on planting, forestry, and stockbreeding in the whole year
$T_s$ (hour)	Non-farm self-employment time: Time spending on non-farm self-employment in the whole year
$T_w$ (hour)	Wage employment time: Time spending on wage employment in the whole year.
wage-earning	Whether participated in wage employment? 1=yes, 0=no
self-employment	Whether participated in non-farming self-employment? 1=yes, 0=no
land(mu/per person)	Cultivated land per capita
age(year)	age= birth year-2000
edu(year)	attained years of schooling
exp(year)	Labor experience: $\begin{cases} exp = age - edu - 6, & edu + 6 \geq 16 \\ exp = age - 16, & edu + 6 < 16 \end{cases}$
property(hundred RMB)	All household assets over RMB 30
distc-mkt(km)	Distance to the nearby market, km
distc-road(km)	Distance to the nearby road for motor vehicles
number0-5(person)	Number of family members aged 0-5 years old
number6-12(person)	Number of family members aged 6-12 years old
gender dummy	Sex, 0=male, 1=female
spouse dummy	Whether have a spouse? 1=yes, 0=no
Family size	Number of family members staying at home for six months or more

Table 3\_1 Descriptive Statistics of Variables (Male)

Variable	Obs	Mean	Std. Dev.	Min	Max
T <sub>f</sub> (hour)	1188	1143.582	851.0366	0	5160
T <sub>s</sub> (hour)	1188	270.5606	707.2783	0	4500
T <sub>w</sub> (hour)	1188	804.9428	1452.557	0	7200
edu(year)	1202	5.8918	3.3423	0	13
exp(year)	1202	23.0117	11.7602	0	44
land(mu/per person)	1255	0.9483	1.0028	0.0416	9.375
property(hundred RMB)	1257	11.3429	14.9814	0	157.75
Family size ( person )	1257	8.4216	2.7177	2	16
distc-mkt(km)	1257	4.0403	3.0735	0.1	25
distc-road(km)	1257	1.2660	2.9274	0	60
age(year)	1257	38.2705	12.3155	16	60
number0-5(person)	1257	0.9642	1.4993	0	8
number6-12(person)	1257	0.9865	1.5039	0	6
spouse dummy	1257	0.8083	0.3938	0	1

Table 3\_2 Descriptive Statistics of Variables (Female)

Variable	Obs	Mean	Std. Dev.	Min	Max
T <sub>f</sub> (hour)	1244	1416.528	827.5107	0	4355
T <sub>s</sub> (hour)	1244	67.7492	337.7294	0	3600
T <sub>w</sub> (hour)	1244	86.1736	561.8432	0	6000
edu(year)	1278	3.1252	3.3613	0	12
exp(year)	1278	21.8310	11.363	0	44
land(mu/per person)	1336	0.9660	1.0006	0.0416	9.375
property(hundred RMB)	1338	11.3335	17.7995	0	301.802
Family size ( person )	1338	8.4155	2.8444	2	16
distc-mkt(km)	1338	3.9932	3.1301	0.1	25
distc-road(km)	1338	1.3815	3.7419	0	60
age(year)	1338	37.1330	11.8375	16	60
number0-5(person)	1338	1.0404	1.5177	0	8
number6-12(person)	1338	1.0792	1.5241	0	6
spouse dummy	1338	0.8729	0.3332	0	1

Table 4 Tobit Estimation of Annual Hours Employed with Wage

	Model of Controlling County Fixed Effect ( 1 )	Model of Controlling Town Fixed Effect ( 2 )	Model of Controlling Village Fixed Effect ( 3 )
gender dummy	-4685.05 (314.8806)***	-4652.35 (313.7447)***	-4648.756 (313.2284)***
edu	152.0143 (36.9558)***	175.3618 (37.3019)***	169.6107 (37.5170)***
exp	-17.5499 (314.7546)	-110.3322 (321.2296)	-223.8563 (322.1338)
exp <sup>2</sup>	-5.2483 (1.0567)***	-4.4524 (1.0608)***	-4.2914 (1.0628)***
age	217.7749 (306.0168)	273.7171 (311.826)	382.025 (312.4203)
land	-690.0068 (176.2162)***	-779.4933 (198.9216)***	-756.2418 (200.4604)***
property	3.2147 (7.6732)	1.7599 (7.6649)	-0.1175 (7.7945)
family size	45.9211 (47.0591)	40.7389 (47.3228)	36.4845 (47.3166)
distc-mkt	-23.5984 (33.9147)	-103.2156 (53.1455)*	-126.8447 (61.9314)**
distc-road	21.6010 (29.9530)	4.1097 (31.4262)	0.2841 (31.9732)
number0-5	-304.3652 (84.4185)***	-302.2164 (84.6239)***	-300.895 (84.5220)***
number6-12	-131.0114 (78.81852)*	-121.8938 (79.2354)	-94.4697 (79.9985)
spouse dummy	688.2658 (420.1537)	862.7065 (422.922)*	945.2103 (423.275)**
constant	-5362.455 (4920.211)	-3760.292 (5065.395)	-8340.96 (5028.062)*
/sigma	3171.441	3054.82	3020.525
Pseudo R2	0.0590	0.0670	0.0688
LR chi2	604.10	686.55	704.64
observations	2348	2348	2348

Notes: \*\*\*, \*\*, and \* denote statistical significance at the 1, 5, and 10 percent levels. Figures in parentheses are standard error.

Table 5 Probit Estimation of Whether Participating in Wage Employment

	Model of Controlling County Fixed Effect ( 1 )	Model of Controlling Town Fixed Effect ( 2 )	Model of Controlling Village Fixed Effect ( 3 )	Model of Controlling Household Fixed Effect ( 4 )
gender dummy	-1.0114 (0.0706)***	-1.0256 (0.0715)***	-1.0426 (0.0715)***	-1.8130 (0.1234)***
edu	0.0240 (0.0110)**	0.0306 (0.0113)***	0.0299 (0.0114)***	0.1312 (0.0281)***
exp	-0.0632 (0.1033)	-0.0699 (0.1069)	-0.1139 (0.1067)	0.4478 (0.2440)*
exp <sup>2</sup>	-0.0002 (0.0003)	-0.0001 (0.0003)	0.0000 (0.0003)	-0.0003 (0.0006)
age	0.0716 (0.1011)	0.0724 (0.1049)	0.1122 (0.1049)	-0.4349 (0.2408)*
land	-0.1655 (0.0569)***	-0.2303 (0.0704)***	-0.2162 (0.0677)***	-
property	0.0017 (0.0022)	0.0027 (0.0023)	0.0029 (0.0023)	-
family size	0.0020 (0.0143)	0.0029 (0.0148)	0.0030 (0.0149)	-
distc-mkt	-0.0043 (0.0096)	-0.0343 (0.0145)**	-0.0546 (0.0182)***	-
distc-road	0.0116 (0.0063)*	0.0062 (0.0070)	0.0033 (0.0077)	-
number0-5	-0.0210 (0.0248)	-0.0215 (0.0254)	-0.0230 (0.0253)	-
number6-12	0.0209 (0.0225)	0.0170 (0.0227)	0.0194 (0.0231)	-
spouse dummy	-0.1075 (0.1156)	-0.0984 (0.1225)	-0.0809 (0.1222)	-0.4217 (0.2730)
constant	-1.3491 (1.6028)	-0.7208 (1.6771)	-1.4321 (1.6748)	8.2164 (3.8817)**
Pseudo R2	0.1368	0.1656	0.1724	0.4146
Wald chi2	338.89	406.12	433.97	516.49
Observaitons	2476	2476	2580	1160

Notes: The same as Table 4.

Table 6 Partial Effects in Probit Models of Whether Participating in Wage Employment

	Model of Controlling County Fixed Effect ( 1 )	Model of Controlling Town Fixed Effect ( 2 )	Model of Controlling Village Fixed Effect ( 3 )	Model of Controlling Household Fixed Effect ( 4 )
gender dummy	-0.2831***	-0.2804***	-0.2831***	-0.6186***
edu	0.0067**	0.0083***	0.0081***	0.0507***
exp	-0.0177	-0.0191	-0.0309	0.1730*
exp <sup>2</sup>	-0.0001	0.0000	0.0000	-0.0001
age	0.0201	0.0198	0.0304	-0.1680*
land	-0.0464***	-0.0629***	-0.0586***	
property	0.0005	0.0007	0.0008	-
family size	0.0006	0.0008	0.0008	-
distc-mkt	-0.0012	-0.0094**	-0.0148***	-
distc-road	0.0033*	0.0017	0.0009	-
number0-5	-0.0059	-0.0059	-0.0062	-
number6-12	0.0059	0.0046	0.0053	-
spouse dummy	-0.0311	-0.0277	-0.0225	-0.1662

Table 7 Tobit Estimation of Annual Hours worked On Non-farming Self-employment Activities

	Model of Controlling County Fixed Effect ( 1 )	Model of Controlling Town Fixed Effect ( 2 )	Model of Controlling Village Fixed Effect ( 3 )
	-1420.698	-1598.74	-1578.356
gender dummy	(155.8130)***	(155.7950) ***	(156.0421) ***
	61.0505	37.7714	39.9524
edu	(23.7709) ***	(23.1959)	(23.2969)*
	277.9259	354.5737	314.8523
exp	(214.1332)	(210.2712)*	(214.8684)
exp <sup>2</sup>	-1.9858	-2.2154	-2.2484
	(0.6623) ***	(0.6599) ***	(0.6673) ***
age	-203.9062	-280.6135	-239.2201
	(208.3429)	(204.0273)	(208.2262)
land	-393.3485	-136.2729	-77.2385
	(137.4489) ***	(136.8806)	(138.2102)
	31.7204	22.3697	20.6822
property	(3.9276) ***	(3.9042) ***	(3.9141) ***
	-19.6408	-24.8738	-23.1477
family size	(29.7077)	(29.9609)	(30.4438)
distc-mkt	-63.3355	-52.4455	-50.6539
	(21.6932) ***	(31.5947)**	(36.9861)
distc-road	12.8922	32.8405	35.0366
	(14.5301)	(13.9592)***	(14.9716) **
number0-5	44.5423	66.2835	72.0270
	(50.9118)	(50.2413)	(50.9116)
number6-12	149.3320	127.0403	135.6845
	(46.6799) ***	(46.4213) ***	(47.3999) ***
spouse dummy	519.5145	499.8505	510.75
	(270.4377)*	(264.4132)*	(265.9166)*
	1086.353	1751.683	1276.862
constant	(3326.361)	(3254.122)	(3319.419)
sigma	1893.881	1751.161	1733.997
Pseudo R2	0.0431	0.0628	0.0658
LR chi2	327.25	476.64	499.77
样本数	2348	2348	2348

Notes: The same as Table 4.

Table 8 Probit Estimation of Whether Participating in Non-farming Self-employment

	Model of Controlling County Fixed Effect ( 1 )	Model of Controlling Town Fixed Effect ( 2 )	Model of Controlling Village Fixed Effect ( 3 )	Model of Controlling Household Fixed Effect ( 4 )
gender dummy	-0.4285 (0.0696)***	-0.5084 (0.0715)***	-0.5197 (0.0711) ***	-1.1990 (0.12354) ***
edu	0.0404 (0.0110) ***	0.0328 (0.0113) ***	0.0315 (0.0113) ***	0.0359 (0.0257)
exp	0.0953 (0.1064)	0.1605 (0.1115)	0.1187 (0.1132)	0.6317 (0.2205) ***
exp <sup>2</sup>	0.0000 (0.0003)	-0.0000 (0.0003)	-0.0000 (0.0003)	-0.0006 (0.0007)
age	-0.0948 (0.1043)	-0.1604 (0.1092)	-0.1182 (0.1107)	-0.6060 (0.2151) ***
land	-0.1473 (0.0581) **	-0.0635 (0.0626)	-0.0327 (0.0604)	-
property	0.0126 (0.0019) ***	0.0103 (0.0018) ***	0.0099 (0.0018) ***	-
family size	-0.0042 (0.0143)	-0.0045 (0.0153)	-0.0020 (0.0158)	-
distc-mkt	-0.0232 (0.0106)**	-0.0291 (0.0153)*	-0.0361 (0.0180)**	-
distc-road	0.0159 (0.0071)**	0.0251 (0.0074) ***	0.0235 (0.0081) ***	-
number0-5	0.0473 (0.0244)*	0.0601 (0.0252) **	0.0628 (0.0255) **	-
number6-12	0.0961 (0.0228)***	0.0917 (0.0236) ***	0.0912 (0.0241) ***	-
spouse dummy	-0.1764 (0.1199)	-0.2109 (0.1275) *	-0.2423 (0.1279)*	-0.6667 (0.3036)**
constant	0.6082 (1.6656)	1.8110 (1.7460)	1.1391 (1.7695)	10.8192 (3.4552)***
Pseudo R2	0.0890	0.1281	0.1358	0.2213
Wald chi2	188.62	293.11	311.20	248.09
样本数	2476	2476	2476	794

Notes: The same as Table 4.



Table 9 Partial Effects in Probit Models of Whether Participating in Non-farming Self-employment

	Model of Controlling County Fixed Effect ( 1 )	Model of Controlling Town Fixed Effect ( 2 )	Model of Controlling Village Fixed Effect ( 3 )	Model of Controlling Household Fixed Effect ( 4 )
gender dummy	-0.1101***	-0.1259***	-0.1275***	-0.4449***
edu	0.0103***	0.0081***	0.0077***	0.0141
exp	0.0244	0.0395	0.0289	0.2485***
exp <sup>2</sup>	0.0000	0.0000	0.0000	-0.0002
age	-0.0242	-0.0394	-0.0288	-0.2384***
land	-0.0376**	-0.0156	-0.0080	
property	0.0032***	0.0025***	0.0024***	-
family size	-0.0011	-0.0011	-0.0005	-
distc-mkt	-0.0059**	-0.0072*	-0.0088**	-
distc-road	0.0041**	0.0062***	0.0057***	-
number0-5	0.0121*	0.0148**	0.0153**	-
number6-12	0.0246***	0.0226***	0.0222***	-
spouse dummy	-0.0479	-0.0558*	-0.0642*	-0.2604**

Table 10 Tobit Estimation of Annual Hours worked On Farming Activities

	Model of Controlling County Fixed Effect ( 1 )	Model of Controlling Town Fixed Effect ( 2 )	Model of Controlling Village Fixed Effect ( 3 )	Model of Controlling Household Fixed Effect ( 4 )
gender dummy	254.9546 (36.2299)***	276.6896 (35.1932)***	270.738 (34.5512)***	274.0265 (25.5050)***
edu	-7.7841 (5.9096)	-5.0153 (5.7812)	-5.5553 (5.6882)	-7.7028 (5.2983)
exp	288.1158 (62.6080)***	277.8111 (61.6534)***	290.9582 (60.7896)***	180.4427 (51.3541)***
exp <sup>2</sup>	-0.7079 (0.1512)***	-0.7194 (0.1477)***	-0.7753 (0.1450)***	-0.61400 (0.1437)***
age	-245.0673 (61.4475)***	-233.1795 (60.4712)***	-243.8024 (59.6165)***	-139.9789 (50.4542)***
land	238.0316 (23.7357)***	148.462 (25.6783)***	135.9019 (25.5409)***	-
property	-7.0636 (1.2620)***	-5.5637 (1.2924)***	-4.6195 (1.2902)***	-
family size	-6.5196 (7.5535)	-8.6826 (7.5216)	-9.6659 (7.4114)	-
distc-mkt	26.0086 (13.1028)**	25.5200 (12.7937)**	22.4849 (12.5891)*	-
distc-road	30.8808 (12.4782)**	32.2532 (12.2318)***	25.3498 (12.1432)**	-
number0-5	58.1203 (63.3998)	69.3296 (62.1349)	68.9998 (60.9379)	48.36155 (57.8266)
constant	4441.956 (982.3243)***	4280.557 (965.5378)***	5044.34 (958.8096)***	4647.965 (865.347)***
sigma	769.5998	738.1362	722.0122	449.4053
Pseudo R2	0.0141	0.0194	0.0220	0.0809
LR chi2	530.93	726.36	826.45	3036.38
样本数	2348	2348	2348	2350

Notes: The same as Table 4.