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EGALITARIAN LAND DISTRIBUTION AND LABOR MIGRATION IN RURAL CHINA

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Labor migration is an important component of the transformation of the Chinese agriculture. However, it is a disputable issue that whether the current land tenure in rural China characterized by egalitarian land distribution deters labor migration. There are several reasons that a "yes" answer seems to be granted. First, more land substitutes for migration in an economy characterized by land market imperfections, so egalitarian land distribution reduces the willingness of the households that otherwise would have less land and prefer to engage in migration. Second, the lack of a land sales market deprives farmers of selling off their land to finance their settlement in the city (Yang, 1997). Third, there is a risk that a family with more migration would end up with losing land in the next land reallocation so its incentive to engage in migration is dampened. While the second reason has some theoretical merit, empirically it may be a far-reaching conclusion. With the deterioration of the terms of trade for agricultural goods, agricultural land price in rural China would be quite low even if land sales were allowed. It is hard to imagine how the sale of about one fifteenth of a hectare (average per-capita landholding in China) would help much for a peasant to settle down in a city. Similarly, no empirical evidence has been found to support the third reason despite its theoretical possibility (Liu, Carter and Yao, 1998). The first reason stands, but it only articulates one aspect of land in relation with migration. The other aspect is that land also has an income effect that mitigates the risk faced by a migrating family.

In the literature, some authors characterize China's current land tenure as a response to market imperfections. Dong (1996) argues that the current two-tier land ownership characterized by collective legal ownership and individual use rights is a rational choice amid the imperfections frequently observed in Chinese agricultural markets. Kung (1994) argues that the current Chinese land tenure is a device for the peasants to pool their income risk in order to meet the subsistence constraint. Burgess (1998) shows with empirical data that egalitarian land distribution has contributed significantly to Chinese farmers' higher nutritional intakes than their counterparts in India.

This paper follows the above studies to link land's insurance functions with migration. Land is a kind of wealth as well as a productive input. Therefore, it has both an income effect (when it is a kind of wealth) and a substitution effect (when it is an input). The relationship between landholding and migration thus is shaped by the interaction between the two effects. As the income effect tends to be more significant for households' with small landholding and the substitution effect tends to more significant for households with large landholding, it is quite possible that it is the households with medium size landholding that are more likely to migrate. A corollary to this result is that egalitarian land distribution would encourage migration instead of hinder it.

A theoretical model is built to study the relationship between land distribution and migration. In the model, migration is characterized as a risky activity and land can serve as a potential insurance device against that risk. Several empirically testable hypotheses are developed and empirically tested by data from a recent 814 farm household survey done in 6 provinces. The most important result coming out of the test is that a household in a village with more equal land distribution is more likely to engage in migration. Another result is that the expectation of a land reallocation plays a different role than land distribution itself. While more equal land distribution increases the probability of migration for all the households, the expectation of a reallocation has different impacts on households with different sizes of landholding. Lastly, Initial financial wealth is found to increases a household's chance to migrate.

The paper is arranged as follows. Section 1 puts forward a theoretical model of land and migration and proposes four testable hypotheses. Section 2 implements an econometric test of the four hypotheses. Section 3 concludes the paper by a discussion of its policy relevance.

1. A model of land and migration

Consider a two-period model in which a household endowed with W amount of initial monetary wealth, L_0 household members, T_o amount of land and L amount of labor can engage in either local agricultural production or migration activities. The labor/household member ratio and land/household member are $\ell = L/L_0$ and $t_0 = T_0/L_0$. Agricultural production employs two inputs, labor and effective land, that is, land augmented by land-specific investment, to produce a single output, grain, say. Let K denote this investment, then effective landholding of the household at the beginning of the first period is $T_1 = KT_0$. Per-capita effective landholding of the household thus is $t_1 = KT_0/L_0$. The household can also make a monetary investment (such as education) M in migration to enhance its position in the outside labor market (the exact form of enhancement will be discussed shortly).

In the first period, the household makes the two investment decisions. The per-capita income left for consumption in the first period is $y = (W - p_kK - M)/L_0$, where p_k is the price of K. The utility for each household member is $u_1(y)$, where u_1 is a strictly concave function.

At the end of the first period, there is probability θ that the land will be reallocated (and the probability of no reallocation is $1 - \theta$), a decision made by the village. At the beginning of the second period, the reallocation decision is revealed. If reallocation happens, the household gets the village average per-capita effective land $\bar{t}$; if it does not happens, the household keeps its own land.

In the second period, the household allocates its labor between agriculture and migration. Let L_f and L_m denote the amount of labor devoted to these two activities. There is a local land rental market. Let T_r denote the net rented-in land of the household. Then the total amount of land used in agricultural production is $T_f = T_2 + T_r$. Here T_f and T_r are both in terms of effective land, T_2 is either T_1 or $L_0\bar{t}$ depending on whether the allocation is made. The land endowment for the second period is $t_2 = T_2/L_0$. Unless otherwise noticed, all the notations regarding land will be in terms of effective land.

The rental market is not perfect, there are extra costs in addition to the rent r. Assume that the total cost (including land rent) is an increasing function of $|T_r|$ and is homogenous of degree one. Denote this function by $c(|T_r|)$, c', $c'' > 0$.

Agricultural production function is $F(T_f, L_f)$, a constant- return-to-scale function. Migration pays a wage of w_m to unit of labor. However, the wage is not certain, but subject to fluctuation. We assume that the fluctuation is mean-preserving and the mean increases with M. For simplicity, we assume $w_m = \beta M + e$, where β is a positive number and e is a random variable with a mean of zero and known distribution. The household's per-capita net income in the second period is

$$(1)\quad \pi = \frac{1}{L_0}[F(T_f, L_f) - c(|T_r|) + w_m L_m] = t_f f(\ell_t) - c(|t_r|) + w_m \ell_m,$$

where $t_r = T_r/L_0$, $t_f = T_f/L_0 = t_2 + t_r$, $\ell_m = L_m / T_2$, $\ell_t = L_f / T_f = (\ell - \ell_m)/t_f = \ell_f / t_f$, and $f(.)$ is the unit production function. The expected utility of each household member is $Eu_2(\pi)$, where u_2 is a strictly concave function and the expectation is taken on w_m.

The household maximizes the sum of the discounted expected utility of each household member in the two periods $U = u_1 + \delta Eu_2$, where δ is the discount factor. We solve the problem backward, starting with the second-period problem. Conditional on a certain amounts of land-specific investment K and investment in migration M, the household's problem is

$$(2)\quad \begin{aligned} &\underset{t_r, \ell_m, \ell_f}{Max}\ Eu_2(\pi) \\ &s.t.\quad \ell_f + \ell_m \le \ell \end{aligned}$$

regardless whether a land reallocation happened or not. The case of unbinding constraint on labor is not interesting here, so we only consider the case of a binding labor constraint. In this case, ℓ_f can be substituted by $\ell - \ell_m$, and the above problem becomes a two-variable unconstrained maximization problem. The first-order conditions for t_r and ℓ_m are

$$(3)\quad Eu_2'\{f(\ell_t) - f'(\ell_t)\ell_t - [\pm c'(|t_r|)]\} = 0,$$

(4) $Eu_2'(w_m - f'(\ell_t)) = 0$.

In equation (3), $c'(|t_r|)$ takes the positive sign when t_r is positive, and the negative sign when t_r is negative. The second-order conditions hold under the assumptions made above. In the appendix, it is established that

(5) $$\frac{\partial \ell_m}{\partial t_2} = \frac{1}{|H|}[-Eu_2'(f''\ell_t / t_f - c'')(f - f'\ell_t)Eu_2''(w_m - f') + Eu_2'c''Eu_2'f''\ell_t / t_f].$$

In the equation, H is the Hessian for the first-order conditions. Its determinant $|H|$ is positive. Since the effective land is proportional to land, the above derivative also represents the property of land. The second term in the bracket is negative. It can be interpreted as the substitution effect of per-capita landholding on the household's migration time. Note that this effect exists only when the land rental market is imperfect in the sense that the cost of land rental is nonlinear and convex in the amount of land involved. The first term in the bracket can be interpreted as the income effect of per-capita landholding. Its sign is determined by $Eu_2''(w_m - f')$ because the rest together yields a positive sign. By the standard result developed by Pratt (1964), this term is positive, zero, or negative if the household exhibits DARA, CARA, or IARA. That is, the income effect depends critically on the household's attitude toward risk. If the household exhibits CARA or IARA, more land implies less migration. However, if the household exhibits DARA, the relationship is undetermined. One plausible scenario is that the income effect is larger than the substitution effect when per-capita landholding is small whereas the relationship is reversed when per-capita landholding becomes large. Under this scenario, the relationship of per-capita landholding and migration exhibits an inverse U curve.

If the inverse U-shaped relationship holds, a corollary then is that households with medium level of landholding are more likely to engage in migration. To the extent that the medium level landholding is close to the village mean, a further corollary is that there will be more migration in villages with more egalitarian land distribution

The above results are summarized into the following two testable hypotheses:

H1. The relationship between per-capita landholding and migration is either a downward sloping or an inverse U curve, however, the downward slope will be reduced as the land market becomes more efficient.

H2. If the inverse U relationship is found, then households in villages with more egalitarian land distribution are more likely to migrate.

There is a possibility that H2 is driven by the prospect of a land reallocation because egalitarian land distribution is likely to be a result of land reallocation.

However, as we will show later, the prospect of a land reallocation does not increase all the households' willingness to migrate. Therefore, H2 is a result that only concerns with the result of land distribution.

With the second-period problem settled, we now turn to the first period to determine the household's decision on its investments to land and migration. The household maximizes the sum of discounted utility

$$U^m(W,\theta;\Omega) = \underset{K,M}{Max}\ u_1[(W - p_k K - M)/L_0] + \delta[\theta E u_2(\pi(\bar{t}, w_m)) + (1-\theta) E u_2(\pi(t_1, w_m))]. \quad (6)$$

In the equation, Ω summarizes all the other parameters that are not listed but relevant to the first-period problem, $\pi(\bar{t}, w_m)$ and $\pi(t_1, w_m)$ are the second-period profits with and without a land reallocation. The first-order conditions for the problem are

$$-u_1' p_k + \delta(1-\theta) E u_2' f_T' = 0, \quad (7)$$

$$-u_1' + \delta[\theta E u_2'(\pi(\bar{t}, w_m))\beta L_m^R + (1-\theta) E u_2'(\pi(t_1, w_m))\beta L_m^N] = 0. \quad (8)$$

In the second equation, L_m^R and L_m^N are the amount of migration time with and without a land reallocation, respectively. With similar comparative statics used in the appendix to arrive at equation (5), we can establish

$$\frac{\partial M}{\partial \theta} = \frac{1}{|H|}\left\{-\frac{\partial^2 U}{\partial K^2}\delta[E u_2'(\pi(\bar{t}, w_m))\beta L_m^R - E u_2'(\pi(t_1, w_m))\beta L_m^N] - \frac{\partial^2 U}{\partial K \partial M}\delta E u_2'(\pi(t_1, w_m))\right\}, \quad (9)$$

where now H stands for the Hessian of (7) and (8). Its determinant is positive. It can also be established that both $\partial^2 U/\partial K^2$ and $\partial^2 U/\partial K \partial M$ are both negative. The two terms in the curve bracket represent two effects of an increased prospect of land reallocation: the first represents the effect resulted from changed landholding, the second represents the effect resulted from reduced incentive to invest in land (and thus increased incentive to invest in migration). While the second effect is unanimously positive for all the households, the first effect depends on a household's initial landholding. For a household with above-average initial landholding, $\bar{t}$ is less than t_1, so $\pi(\bar{t}, w_m)$ is less than $\pi(t_1, w_m)$ and L_m^R is greater than L_m^N, and the nature result is that the effect is positive. The intuition is simple: for a household with above-average initial landholding, a stronger prospect of reallocation means that this household is more likely to get less land in the next period, so it is better for it to invest more in migration. For a household with below-average initial landholding, the reverse is true. Therefore, $\partial M/\partial \theta$ is negative for a household with above-

average initial landholding and is not clear for a household with below-average initial landholding.

With some small technical qualification, it can be shown that $\partial M/\partial W > 0$. Since a larger M means a higher expected migration wage, which in turn leads to more migration, we have the following two testable hypotheses:

H3. A household with a larger endowment of wealth is more likely to invest in migration.

H4. In a village with a larger probability of reallocation of land, households with above-average per-capita landholding will be more likely to engage in migration, but the behavior of households with below-average per-capita landholding is not clear.

H4 and H2 enable us to distinguish between two effects of land reallocation. H4 shows the effect of the prospect of a land reallocation, and H2 shows the end effect of the land distribution resulted from land reallocations. The former is driven by the household's portfolio choice under the prospect of a land reallocation whereas H2 is driven by the insurance property of land distribution. To be able to distinguish between those two effects is a nice property of our model.

2. Empirical results

In this section, we will empirical test the four hypotheses proposed in the last section. The data come from a village and household survey on 824 households of six provinces in 1999.[1] Those households were sampled from 93 groups in 36 villages most of which are located in purely rural areas.[2] The survey was designed to study the impacts of China's current land tenure on land productivity and labor mobility and thus provides rich information encompassing from village land tenure arrangements to household labor allocation. Most data are for the year of 1998, but retrospective information was collected on land tenure arrangements. In what follows, we will first describe the variables to be used in the test, and then present the test strategy and empirical results.

[1] The survey was conducted by the Rural Development Research Center, Ministry of Agriculture. The six provinces covered are Zhejiang, Anhui, Hunan, Hebei, Shannxi and Sichuan.

[2] A group is a sub-unit under the administrative village and coincides with the production team in the commune era. In many cases (especially in southern China), a group is a natural village. The population of a group can range from less than 100 people to over 200 people, depending on the size of the administrative village.

Variables

Consistent with the theoretical model, we use the household as the decision unit in the econometric test. All the regressions will revolve around one dependent variable, working days that a household allocated to migration in 1998. Migration is defined as working days during which a person does not stay overnight in the house. In 1998, there were 247 households (about 30% of the sample) engaging in migration, with an average of 73.7 days.

For the explanatory variables, we will first discuss those that are critical for the four hypotheses. The first is household land endowment. This is measured by a household's per-capita landholding (mu) in 1998. It only includes land allocated by the village. H1 indicates that the relationship between per-capita land and migration exhibits an inverse U curve, so in the regressions per-capita landholding squared may also be added to accommodate this relationship. For H2, we need a variable to measure the dispersion of village land distribution. Since land allocation is usually within a group,[3] we use the coefficient of variation (CV) in a group in 1998 to measure the dispersion of land distribution. For H3, we need a variable to measure a household's initial wealth. For that purpose, we sum up household bank savings and the monetary values of its productive equipment, houses, and consumer durables in 1998 to form a single variable "Initial wealth". Finally, we need a variable to represent the probability of a land reallocation in a group in order to test H4. We choose the number of reallocations having happened in the group since the HRS was established. Although there is a risk that more reallocations in the past would imply a smaller probability of an immediate reallocation, this is the only sensible variable that can be obtained from the data. To complete the test of H4, we also need to distinguish between households with above-average landholding and households with below-average landholding because the probability of a land reallocation has different impacts on them. Thus we create a dummy variable ABOVE to distinguish those two groups of households: a value of 1 indicates a household with a landholding above the group mean, and a value of zero indicates a household with a landholding equal or below the group mean.

In addition to the key variables discussed above, we also include a group of variables on household characteristics and another group on village characteristics. Among the household variables, there are the age of the head, the highest educational achievement in the household (years in school), household population, and the ratio of the number of children under age 16 to the number of household laborers (children/labor ratio). Among the village variables, there are two variables indicating the village's geographical conditions: distance from the county site (kilometers) and the difficulty to

[3] In this survey, only a few villages broke the boundary of groups and distributed land among households in the administrative village.

reach a bus. The difficulty to reach a bus line is rated by the numbers 1 to 5, with 1 = very convenient, 2 = convenient, 3 = average, 4 = less convenient, 5 = very inconvenient. In addition, per-capita income of the village (yuan), local wage rate (yuan) and tax burden per-unit of land (yuan/mu) are added to control for general local economic conditions. Higher local income and wage rate may halt migration, but higher tax may push migration. Here tax includes the agricultural tax and the so called "*santi wutong*", that is, local surcharges whose major purposes are to support local governments (at township and village level), education, basic health care and village accumulation. Although the charge base of the surcharges is not necessarily land, most villages do so.

Lastly, five provincial dummies are added to the regressions (xxx is left as the reference province). Table 1 presents the means and standard errors of the variables.

Results

As only 30% of the households engaged in migration, a tobit model is proper. We group the test of the four hypotheses into two sets of regressions. One is to test H1, H3 and H4, the other is to test H2. This is because H2 is a corollary to H1. The first set includes two regressions, R1 and R2 in Table 2. They are quite the same except R1 has only land endowment whereas R2 also includes its square. Since H4 predicts that the impact of the prosperity of a land reallocation is different for households with above-average and below-average landholding, we add the cross product of the dummy ABOVE and the number of reallocation in the history in addition to the second variable itself. The coefficient for the number of reallocations captures the impact on households with below-average landholding, and the coefficient of the cross product captures the impact on households with above-average landholding.

As R1 shows, land endowment has no significant impact on migration although it has a negative sign. R2 then shows that there is a weak inverse U curve for land endowment, but neither land endowment nor its square is significant. Therefore, H1 is not confirmed. For H3 concerning initial wealth, we find statistically significant effect in both regressions although the magnitude of the effect is small: one thousand yuan of more wealth only increases one more migration day. As for H4, the number of reallocations has a significantly negative impact on migration days, one more reallocation reduces about 7 migration days. This means that for a household with below-average landholding, the negative effect of expecting more land may be greater than the countervailing effect of increased incentive to invest in migration. On the other hand, the cross-product of the number of reallocations and the dummy ABOVE has a strong positive effect on migration, indicating that households with above-average landholding indeed behave like what the theory predicts. Therefore, as far as R1 and R2 are concerned, H3 and H4 are verified.

To test H2, we run three regressions, R3, R4 and R5. R3 only has the CV of group land distribution, the number of reallocations and its product with ABOVE, and the provincial dummies. Although the two other variables are not significant, the group CV has a strong negative effect on migration. This strong effect remains in R4 and R5 where household and village characteristics are added, respectively. In addition, the product of ABOVE and the number of reallocations turns significant. These two results indicate that the expectation of a land reallocation and the end result of land distribution indeed have different impacts on labor migration.

The proof of H2 that unequal land distribution hinders migration seems to be contradictory to the failure to prove H1. However, to the extent that no significant negative correlation, but a weak inverse U relationship is found between land endowment and migration, this contradiction is much lessened. However, questions still remain. The most serious question is whether the causality is the reverse, that is, whether more equal land distribution is caused by more out-migration, after all, there is speculation that out-migration would cause a family to lose land. However, the chances of such events are low, if there is any. A survey in 1994 on 83 villages in 8 provinces found virtually no such cases (Liu, Carter and Yao, 1998). Interviews done in various field trips by this author confirm this result.

For the household characteristics, education and population are consistently found to have significant impacts on migration. One more year in school of the person with the highest education in the household implies that the household has about 6 more migration days, and one more household member implies about 20 more migration days. In addition, children/labor ratio has a significantly negative impact. The point estimate is about -73 days, which means that for a typical family of two laborers and one child, one more child will reduce this family's migration by 35 days.

Among the village characteristics, only per-capita income is significant, one thousand more of income implies about 15 days less migration for each household in the village. Since the highest income is about 7 times of the lowest income among the sample villages, this means that a household in the least affluent village tends to have about 90 days more in migration than a household in the most affluent village. Therefore, local income opportunity plays an important role to hold back out-migration.

The result shows that geographic conditions are not vital for out-migration. The insignificance of local wage rate may be caused by its positive correlation with local income. The insignificance of tax contradicts people's perception that high taxes drive farmers out of land. Lastly, the estimates for the five provincial dummies conform with casual observations as Anhui, Hunan and Sichuan provinces are among the largest exporters of labor.

To summarize the results, we have found strong evidence supporting H2, H3, and H4 but only quite weak evidence for H1. The most important result is

that more equal land distribution increases the chance of migration for the households in a village. In addition, we have found different impacts of land distribution and the expectation of a land reallocation. Lastly, a larger initial financial endowment also helps a household to engage in migration.

3. Conclusions

The empirical results of this paper have strong policy implications. Legal experts in China are trying to propose a specific law and a chapter in the Property Law to govern the rural land tenure. The major aim put forward by the experts is to individualize land ownership (Liang, 1998). To the extent that the current land tenure dampens farmers' incentive to invest in land (e.g., Li, Rozelle and Brandt, 1998; Yao, 1998), this aim is justified. However, if we extend our discussion beyond agriculture and take into account of the transformation of peasants into industrial workers, the justification is blurred. At this conjecture, our result that more egalitarian land distribution promotes labor migration is remarkable and merits serious consideration. As a government funded social security is still out of the sight in the rural area, perhaps a better choice is to find a land tenure system that accommodates both the efficiency and insurance considerations.[4]

This paper also adds to the literature on equality and economic development. Labor migration moves workers from agriculture to industry that has much higher productivity, so it contributes to economic growth. From this perspective, egalitarian land distribution has a positive effect on economic development. If the loss due to reduced agricultural investment is smaller than the benefit brought by labor migration, there is a net gain in more equal land distribution. An integrate analysis of the economy-wide effects of land distribution thus is warranted.

[4] For a proposal of such a land tenure system, see Yao (2000).

Appendix

Let g be the vector containing the left-hand side of the first-order conditions (3) and (4). Its Hessian is

(A1) $$H = \begin{pmatrix} EU'(f''\ell_t/t_f - c'') & EU'f''\ell_t/t_f \\ EU'f''\ell_t/t_f & EU''(w_m - f')^2 + EU'f'' \end{pmatrix}.$$

The determinant of H is positive. In addition

(A2) $$\frac{\partial g}{\partial t_0} = \begin{pmatrix} EU'f''\ell_t/t_f \\ EU''(f - f'\ell_t)(w_m - f') + EU'f''\ell_t/t_f \end{pmatrix}.$$

Using Cramer's rule, we have

(A3)

$$\frac{\partial \ell_m}{\partial t_0} = \frac{1}{|H|}\begin{vmatrix} EU'(f''\ell_t/t_f - c'') & -EU'f''\ell_t/t_f \\ EU'f''\ell_t/t_f & -EU''(f - f'\ell_t)(w_m - f') - EU'f''\ell_t/t_f \end{vmatrix}$$

$$= \frac{1}{|H|}[-EU'(f''\ell_t/t_f - c'')EU''(f - f'\ell_t)(w_m - f') + EU'c''EU'f''\ell_t/t_f].$$

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Table 1. Descriptive statistics of variables

Variable	Mean	St. Dev.
Migration days	22.17	43.54
Land endowment	1.13	1.01
Initial wealth	8643.05	11956.75
Number of reallocations in group	2.32	1.42
CV of land dist. in group	0.54	0.53
Age of head	47.00	10.77
Highest school years	6.04	2.41
Population	4.22	1.36
Children/labor ratio	0.35	0.39
Distance to county site (km)	30.63	20.89
Difficulty reaching a bus line	1.79	1.04
Village per-capita income (yuan)	2210.51	1614.19
Local wage rate (yuan)	16.22	11.24
Tax (yuan/mu)	108.69	68.37

Table 2. Regression results

Variable	R1	R2	R3	R4	R5
Constant	-107.69**	-112.59**	10.19	-107.40**	-86.22**
	(44.36)	(44.72)	(18.89)	(36.41)	(44.70)
Land endowment	-8.93	11.72			
	(7.07)	(19.58)			
Land endowment squared		-6.48			
		(5.92)			
Initial wealth (1,000 yuan)	1.00**	1.04**		0.65*	0.99**
	(0.37)**	(0.37)		(0.35)	(0.37)
Number of allocations	-7.39*	-7.01*	-5.32	-6.30*	-5.29
	(4.06)	(4.07)	(4.02)	(3.83)	(4.01)
ABOVE*Number of allocations	9.14**	8.53**	4.18	6.08*	6.35**
	(3.50)	(3.58)	(3.37)	(3.23)	(3.20)
CV of group land distribution			-43.34**	-37.14**	-30.93**
			(12.89)	(12.21)	(12.08)
Age of head	0.05	0.02		-0.02	0.10
	(0.50)	(0.50)		(0.50)	(0.50)
Highest schooling years	5.63**	5.62**		5.42**	5.92**
	(2.07)	(2.07)		(2.07)	(2.07)
Population	20.16**	20.09**		19.58**	19.34**
	(3.44)	(3.44)		(3.46)	(3.43)
Children/labor ratio	-73.02**	-72.96**		-72.45**	-71.48**
	(14.44)	(14.43)		(14.48)	(14.38)
Distance to county site	0.23	0.22			0.19
	(0.22)	(0.22)			(0.22)
Difficulty to bus line	2.23	1.85			3.32
	(5.14)	(5.15)			(5.08)
Village per-capita income	-15.67**	-15.68**			-13.26**
(1,000 yuan)	(4.70)	(4.71)			(4.72)
Local wage (yuan)	0.53	0.57			0.71
	(0.46)	(0.46)			(0.44)
Tax (yuan/mu)	0.00	-0.01			-0.03
	(0.09)	(0.09)			(0.08)
PROV1	-12.94	-17.09	-54.70**	-25.19	-44.40*
	(22.18)	(22.67)	(20.25)	(19.66)	(23.13)
PROV2	-73.37**	-80.68**	-87.72**	-64.75**	-104.92**
	(26.50)	(27.29)	(22.17)	(21.53)	(28.17)
PROV3	-24.75	-28.72	-44.78**	-10.87	-51.64**
	(23.86)	(24.23)	(18.84)	(18.80)	(24.44)
PROV4	20.90	15.07	21.31	39.31**	-3.88
	(21.79)	(22.37)	(18.90)	(18.95)	(23.06)
PROV5	-28.40	-34.37	-42.59**	-26.94	-52.79**
	(20.20)	(20.86)	(18.58)	(18.39)	(21.63)
Sigma	94.54**	94.52**	102.24**	95.14**	93.97**
	(4.89)	(4.88)	(5.23)	(4.92)	(4.85)