**Roles of children and elderly in migration decision of adults: case from rural China**

**Extended abstract:**

Urbanization has been taking place in many of today's developing countries, with surging rural-urban migrations. Previous studies often focused on the implications of these surging migrations to receiving places. Only recently, there has been growing attention paid to migration effects in sending communities, particularly, how children and the elderly who stay behind fare as a result of migration of family members, usually the adult males. As these studies have been showing inconsistent findings, some arguing how the left-behind benefit from the economic gains from migration, while some suggesting detrimental effects of migration on the wellbeing of children and the old, we cannot help wondering: how do migrants foresee these outcome in the first place when they make migration decisions? What are their family considerations in migration decision-making? Studies on migration decisions or determinants are not rare, but they often focus on the economic incentives; the family considerations in migration decision-making are still under-explored. With the varying effects of migration on family member wellbeing, the question of how family demography influences migration decisions worth further, more careful investigation. This paper attempts to focus on the role of children and the elderly, to explore how presence of young children, or the elderly in the household affects adult's migration status, and if the effects vary with specific household demographic situations.

The study looks at the case of rural China, which is undergoing significant socioeconomic, as well as demographic transitions. With the transition from planned to market economy, and the relaxation of state controls on population mobility, internal migration has been surging in China since early 1980s. The size of the temporary migration stock grew rapidly from around 30 million in 1982 to about 100 million in 1997 (Chan 2001). The 2000 census estimated around 144 million migrants in China (Liang and Ma 2002), defined as those who left their places of residence registration for more than six months, and the majority of the migration flow is from rural to urban. Another important demographic change is the declining fertility, as a result of the effective state birth planning policy. The lowering fertility has important implications to family: household size has become smaller, and extended families are being more and more taken place by nuclear families. Then what are the implications of the changing household structure/size to migration and urbanization? Particularly, in rural China, where established social support system is not in place and, family is still the primary or probably only resource for child care and old age support, out-migration of adult family members undoubtedly tends to impose threats to the wellbeing of children and the elderly. Then how do these family demographic situations influence migration decisions of rural adults? This is the major focus of the current study. Specifically, the study asks the following the questions:
1. Does presence of children or elderly has a negative effect on adult migration?
2. Does the above effect differ for men and women?
3. Does the effect of presence of children differ by the presence of elderly in the household?

4. Does the effect of presence of children/elderly vary by the number of working adults in the household?
5. And do the above interactions differ for men and women?

Informed by previous relevant studies, we expect that presence of either children or the elderly tends to reduce the probability of migration, and the negative effects tend to be larger for women compared with men, since it was found in earlier research that women, rather than men, usually take the major share of work in family care. Given many studies and reports suggesting that children of migrants are often left behind, being taken care of by grandparents, we hypothesize that for migrants who have elderly at home, the negative effect of presence of children on migration will be reduced. And the negative effects on migration of presence of either children or elderly also tend to decrease when there are more working adults in the household, who may help to take care of the young and the old for migrants. And these interaction effects will be more significant for women, who are usually held more responsible for providing child care and old age support.

**Data and Methods**

**Data description:** The China Health and Nutrition Survey (CHNS) is an ongoing international collaborative project designed to examine a wide range of social, economic, and health effects of the social and economic transformation of Chinese society during its reform era (Popkin 1994). The survey follows a large sample of communities, households, and individuals over time starting from 1989, a time when the sweeping effects of reforms began to show prominently in China, and internal migration had already begun to grow, just starting to rocket. The timing is perfect for tracking changes in internal migration flow and in household structure, studying possible effects of family demography on migration.  After the first round in 1989, five additional panels were collected, respectively in 1991, 1993, 1997, 2000, and 2004. The longitudinal design of the survey permits correct temporal sequencing of events and allows valid inferences about causal determinants of migration in sending areas (Popkin 1994).

The study population was drawn from both rural and urban areas of altogether nine provinces that vary substantially in geography, economic development, public resources, and health indicators, thus provides a nationally representative sample of the Chinese population. Sampling within each province was done using a stratified multistage, random cluster technique. This sampling procedure keeps the random sampling principle, while also ensures the diversity of the surveyed population at the same time.

**Methodology:** The study applies random effects models to examine the probability of migration for an adult male or female. Given that migration status of an individual at different time can be interrelated, individual is taken as a group variable, and the random intercepts that vary over individuals across time are also estimated. To avoid the simultaneity bias, that is, some individual and household characteristics can be a result of rather than determinants of migration status, the models regress the migration status of time t on time t-1 covariates, including individual, household, as well as community

characteristics. The statistical package STATA is used for fitting logistic random intercept models.

<u>Dependent variable</u> Each wave of the household survey asked how many complete months each household member did not live at home. Thereby, those who had been away from home for one month or more and were not currently in school at the time of the survey form the sample of migrants. Since the round of 1997, survey questionnaires also asked the specific situations of not living at home. Given the special interests in labor migration of this study, for the 1997, 2000 and 2004 waves those who were identified as not currently living at home and seeking employment elsewhere are defined as migrants. Thus, a dummy variable is created indicating migration status for rural adults 16-60 years old, with being a migrant in one wave equals 1, and a non-migrant equals 0. The same method of coding is performed for each wave. It should be that since the migrants are still considered members of the household, their migration status is more reflective of their temporary, rather than permanent migration status.

<u>Explanatory variables</u> Given our focus on family demography as determinant of migration, our key independent variables are two dummy variables: presence of children under school age (7 years old), and presence of elderly parents of 60 years old or older at home (1=yes, 0=no), in addition to number of adult family members contributing to household income at home. Other household-level variables are: number of family members who were temporary migrants in the immediate previous survey, and natural log of per capita household annual income in the immediate previous wave.

Individual characteristics under control here include basic demographic variables, like age, gender, educational level, and marital status, and a variable on individual previous temporary migration experience, whether he/she migrated in the previous wave, and if the migration was short-, mid-term or long-term (defined as over 1 month, 6, and 12 months respectively). It is expected that even though the individual may not migrate to the same destination as before, the prior migration experience tend to reduce the obstacles to migration, by providing more knowledge about the outside world, and making the individual better prepared for the move.

At the community level, population size, per capita annual income, and percentage of migrants in the community are controlled. In addition, community location (whether it is close to a trade center), road conditions (from bad to good), and existence of rural enterprises in the community are also included in the model.

**Preliminary Findings**

Logistic random intercept models suggest that family demography does matter: presence of children and elderly does have a negative effect on migration; while numbers of working adults and migrants in the household have positive effect on migration. The effect of household income is washed off by community income, which has a negative effect on migration, suggesting that it is the poor who are more likely to migrate. Consistently, those from communities close to trade centers are also less likely to migrate.

Community migration rate, as expected, has a positive effect. As for individual characteristics, younger, single males, with higher education and previous migration experience (of any length) are more likely to migrate.

Focusing on our core question about the roles of children and elderly, the effect of presence of children does differ by gender, with a significantly greater negative effect for women than for men. This supports our hypothesis that women take more responsibility of taking care of the young, and thus are more likely to be influenced by the presence of under school-age children when making migration choices. However, no significant effect is observed for the interaction between presence of elderly in the household and gender. Does this suggest that maybe men and women take relatively equal roles in terms of taking care of the old? Separate models by gender suggest that, in fact, none of the family demography variables matter for men, except for the number of migrants in household in the previous wave, nor is marital status of rural men; whereas for rural women, family demography is important for their migration status, while none of the community characteristics matter, except for community location. Different mechanisms might be at work for male and female migrations in rural China, possibly with the former focusing more on the economic incentives, while the latter more on family considerations.

In the analysis on how the effect of presence of children differs by presence of elderly, we examine men and women separately. It is found that for neither men nor women does the effect of presence of children differ by whether or not having any elderly at home. This does not support our hypothesis that grandparents may help to take of under school-age children, and with their presence, having young children at home may have less effect on reducing migration probability. The truth seems to be that the elderly also need care, and plays the role of people in need of care, rather than providing care.

The effect of presence children also does not differ by household labor size, and neither for men nor women. Given that family demography has no significant effect on migration of rural men, with possible reasons as alluded above, we understandably do not expect any of the interactions between family demography variables would have any significant effects. As for rural women, it is possible that the responsibility of taking care of their own children cannot easily be shifted to other relatives, since they see themselves as the main or sole care givers for their own children. But in terms of taking care of the old, siblings or other relatives can also take the responsibility, as suggested by the significant negative effect of the interaction between presence of elderly and household labor size.

The findings may have important implications to the development of social support system in rural China. Given that family is still much relied on as primary provider of support for either children or the elderly, the presence of children or elderly tends to discourage rural laborers' participation in labor migration, particularly females' migration participation. And this effect tends to intensify with the changing household structure in the low fertility regime, and may affect labor market. Improvement in the social support system is needed for promoting more gender-balanced migration, for ensuring wellbeing of family members staying behind, and for the development of urbanization. And of course, further study on migration effect on family member wellbeing is warranted.

(Note: closer examination is to be made on if the gender of children, the elderly, or the working adults would have any different effects on migration probability).