

**The Effect of Labor Migration on Household and Family Structure
in Nang Rong, Thailand**

Extended Abstract

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The effects of demographic change, especially aging, on family and household structures in developed countries are at this point extremely salient, and innumerable structural and cultural changes have occurred in recent decades in order to deal with these changes. Thanks to dramatic declines in fertility and mortality, changes in age structure have been even more rapid in developing regions. The impact of these changes has been exacerbated by economic changes in these regions, which have led to massive population redistributions, as multitudes from rural agricultural communities move to large regional cities, where demand for labor is high.

There has been much speculation, as well as some empirical research, regarding the consequences of outmigration on sending regions in less developed regions. Much of the research that does exist has focused on migration's direct impact on economic development. Some research (e.g., Hugo's work on Indonesia) has also examined the effects of migration on demographic structure and the family, but empirical analyses on this topic are sparse, due largely to limited data resources. We are interested in examining how these changes are affecting those 'left behind' in the sending regions. Given that demographic and household structures have socio-economic and normative implications, our results will provide the first step in a comprehensive analysis of the consequences of migration on aging, caregiving, and intergenerational relationships within families in rural sending regions.

We examine the effect of labor migration on the age structure, generational structure, dependency ratio, and sex ratio within those households and communities 'left behind' in rural sending regions of Thailand. Thailand has been typified by extended families living in the same, or adjacent, households but increases in migration and urbanization have led to growing concerns about the plight of those 'left behind'. Findings regarding the prevalence of these changes in household and family structure thus far have been mixed, and are quite contingent upon the definition of 'household' (Hermalin 2000; Bongaarts 2001; Knodel et al. 1999; Knodel and Chayovan 1997; Knodel and Saengtienchai 1998), but there is some evidence that elderly parents, who used to be cared for by co-resident adult children, are left to care for themselves, and sometimes the children of their migrant children, as well (Richter 1996; Hermalin et al. 1998; Smit 2001; Hugo 2002; Kanaiupuni 1999).

We suspect that high levels of migration at the village and household level will thus be associated with major changes to the traditional household structure: smaller households, fewer generations within households, and increases in the proportion of elderly living alone, or living only with their young grandchildren (Hugo 2002). Rural labor out-migration in Thailand is disproportionately practiced by persons in the prime working ages. As a result, the demographic and household structures in the sending regions undergo major alterations. At the village level, the age structure likely bifurcates, leading to relatively high proportions of children and the elderly. In other words, migration leads to a higher proportion of dependents in the sending regions. To the extent that labor migration is sex-specific, the consequential sex ratio in the community will also change.

At the household level, these demographic trends likely lead to important transformations of family structure and familial roles, most notably the disproportionate burden on the elderly of 1) caring for themselves and 2) caring for their migrant children's children. The little evidence that does exist on the prevalence of 'the left behind' in rural Thailand is mixed, but by analyzing a unique dataset which includes a complete census of several sending communities during the 1980s and 1990s, we are able to better evaluate migration's consequences on family structure, and on village-level age and sex structure, in sending regions.

Data and Methods

In order to conduct our analyses, we use a unique longitudinal dataset from Nang Rong, a well-established migrant sending region of Thailand. The Nang Rong Surveys are a longitudinal panel data collection effort conducted by the Carolina Population Center at the University of North Carolina and the Institute for Population and Social Research at Mahidol University in Thailand.¹ We employ the first three waves of data (collected in 1984, 1994, and 2000) for our analyses. The 1984 data collection was a census of all households and individuals residing in 51 villages within Nang Rong. It included information on individual demographic data, household assets and village institutions and agricultural, natural, economic, social, and health resources. The subsequent surveys followed all 1984 respondents, including those who had migrated outside their original rural village, and also obtained any information for new persons born into, or who had moved into, one of the original villages. We consider how the prevalence of migration affects age and sex distributions at the village level and the household level. This provides information on the village-level dependency ratios, and the prevalence of 'left behind' households. We also examine how village-level and household-level migration prevalence affects the likelihood of residing in a 'left behind' household, as defined by the age and generational structure of the household (e.g., households containing only grandparents and young grandchildren).

Variables

Table 1 provides a summary of the key variables to be used in the analyses, and includes information regarding the household characteristics of individuals in the sample.

¹ The data and information about the surveys are available at <http://www.cpc.unc.edu/projects/nangrong/>.

Table 1. Variables and Mean Values

Proportion of people living in a household with migration experience, 1994	.5070 (.0957)
Respondent Age, 1994	31.79 (21.48)
Proportion Female Respondents	.54
Proportion Female in Household, 2000	.5206 (.1840)
Average Age of Household Residents, 2000	32.0915 (11.20)
Dependency Ratio (Proportion less than 14 or over 60) of Household, 2000	.3542 (.2480)
Number of Persons Residing in Household, 2000	4.58 (1.64)
Number of Generations Residing in Household, 2000	2.29 (.61)
Proportion of Households with a 'Skipped' Generation, 2000	.0462 (.2100)
N (individuals)	23,602

Preliminary Analyses

At this point, we have conducted preliminary analyses, linking individuals across years (the 1994 and 2000 waves only), in order to get a sense of the association of living in a migrant household (that is, a household with migration experience), and subsequent changes in household structure. Each cell in the table below represents key results from one OLS regression model, which controls for household clustering. Though ultimately, analyses will be conducted at the household and village level, these preliminary analyses are actually individual-level analyses, examining how being a member of a migrant household, or a village with a high/low prevalence of migration in 1994, affects the type of household structure an individual experiences in 2000. All models also include controls for an individual's sex and age, and in order to reduce problems with omitted variable bias, all models are lagged panels. In order to reduce omitted variable bias, each regression also controls for the relevant household characteristic in year 1994 (i.e., these are lagged panel models). All dependent variables are measured in year 2000, and all independent variables are measured in 1994.

Results in Table 2 are indeed suggestive of the impact that out-migration has on household structure. The higher the proportion of migrant households in a sending community, the higher the proportion of females per household. The dependency ratio also increases markedly with higher levels of migration. Migration seems to lead to familial nucleation, as the number of generations residing in a household decline as levels of migration rise. Surprisingly, though, there seems to be no significant effect of migration on the likelihood of living in a household with a ‘skipped’ generation (for instance, a household where grandparents care for grandchildren).

Table 2. Preliminary Regression Results, Individual-Level Analyses

	HH Percent Female 2000	HH Dependency Ratio 2000	Number Persons in Household, 2000	Number of Generations in HH 2000	Skipped Generation in HH 2000
Proportion of Migrant Households in Village, 1994	.3445**	.1234*	1.9958*	-.8458**	.0299

***p<.0001, **p<.01, *p<.05, +p<.10

All models control for individual sex and age, and the dependent variable in 1994. All significance tests correct for the non-independence of the sample.