

The Effect of Migration on Health of Adults Left Behind in Indonesia

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Introduction

The importance of migration, both as loss of local support and labor, and as a means of diversifying and enhancing household livelihood through remittances, has provoked interest in the migration-health relationship for the left-behind population. A few recent papers have examined the impact of parents' migration on the health of children left behind. Kanaiaupuni and Donato (1999) find higher rates of infant mortality in communities experiencing intense U.S. migration, but they can be largely moderated by remittances. Frank and Hummer (2002) conducted a study using a nationally representative sample, and claim that the risk of having a low weight infant was reduced for pregnant women living in migrant households in Mexico. Hildebrandt and McKenzie (2005) examined the effect of migration on low birth weight and child mortality, and found evidence of a positive effect of migration on these health measures.

In contrast, very few studies have looked at the impact of adult children's migration on the health of their older parents, or more generally on the effect of migration on the health of other adults in the household. Kuhn (2005) addresses this crucial intersection by modeling the impact of adult children's migration on the health of their parents living in a rural area of Bangladesh. This study finds a strong positive effect of adult children's migration, although the mechanism is not examined. By contrast, the negative impacts of migration on those left behind can be clearly viewed in a study on STDs. Roy and Nangia (2005) use data from rural India to show that wives left behind by migrant men report a significantly higher prevalence

of reproductive morbidity. They attribute such findings to the lack of social support when husbands are absent.

Results from previous studies are inconsistent, and depend on the subgroup of people and the specific aspect of health examined. The inconclusive findings may also result because there tend to be offsetting consequences of migration and potential endogeneity of migration, which are seldom evaluated. This chapter attempts to extend the core focus of earlier work on children to the adult population, by examining the effect of migration on various dimensions of health, and also to study different mechanisms of the migration effect.

Data and the Indonesia Context

Indonesia is the fourth most populous nation in the world. Not only has the economy grown rapidly over the last quarter century but there also have been dramatic demographic and social changes. Over the past few decades there have been concomitant improvements in access to health care and in common measures of health such as life expectancy and the infant mortality rate. With respect to migration, Indonesia is one of the world's major sources of unskilled international migrant workers and the internal migration stream is also substantial.

This study uses data from the 1993, 1997, and 2000 waves of the Indonesia Family Life Survey (IFLS), a panel survey of individuals, households and communities that represents over 83 percent of the Indonesian population. The first wave of IFLS was fielded in 1993 and interviewed over 20,000 individuals in more than 7,200 households. The second and third waves, fielded in 1997 and 2000 respectively, successfully re-interviewed over 94 percent of households and over 90 percent of targeted individuals in the original sample (Frankenberg

and Thomas 2000, Strauss et al. 2004). Overall, the IFLS attrition rate is very low, and it represents one of the first efforts in social surveys to track migrants, which permits studying migration and health as a dynamic process.

The IFLS collected a broad array of demographic, health and economic information on individuals, households and communities, and repeated much of this information across waves of the survey. In addition, the survey included many retrospective questions. In particular, the IFLS contains a detailed migration history, and extensive measures of health status. Because health is composed of distinct components, we examine various dimensions of health separately and expect that they are likely to affect migration differently.

Analytic Strategy

I will first evaluate the gross effect of migration on each of the available health measures for people left behind. To determine whether the household sent out migrants, I will incorporate information from the household roster and non-coresidence section of the data. Specifically, I define migrant households as those that reported having members who are not living in current household.

The analysis employs the 1997 and 2000 wave of the data, in which the health status of family members measured in 2000 will be modeled as a function of household migration status and a set of controls. The control variables include age, gender, education, marital status, working status, log per capita annual household income, and previous migration experience. The key test is the statistical significance of household migration status in each model.

I will address the potential endogeneity to isolate the true effect of migration. To do this, instrumental variable (IV) models will be exploited. Specifically, I use two-stage least-squares (2SLS) to implement the IV approach when the outcome is continuous. I propose to incorporate contextual data as instruments, by drawing the rich community data from IFLS. Specifically, I will follow early work using community-level out-migration rates and geographic distance of the community to the provincial capital center as instrument to capture exogenous variation in household migration status. But because they are measured as macro-level contexts, both instruments tend to be independent of the health status of individual household members and household preferences for health, apart from their influence through migration. I will test for weak instruments before carrying out the analysis. If the IV turns out to be weak, they will be interacted with certain household characteristics to guarantee the variability of the instrument at the household level because the two instruments are constant among individuals living in the same community.

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