Migration decisions of households in Guizhou province, South-West China: Do household demographics and health matter?

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Introduction

Migration makes important contributions to livelihoods of rural households in south western China. At the same time, there are accounts of a likely interplay between household demographics and health which influences households’ migration decisions:

- Young people without dependants in principle decide freely whether to migrate. Children or parents in need of support may constrain their choice.
- Division of labor within the household facilitates migration. Elder take care for children, allowing young couples to migrate.
- Here, grandparents’ health status may be of crucial importance a household’s migration decision.

Objective

To explore the effect of household demographics and health on migration decisions of rural households.

Methodology

- Logistic regression model of household migration decisions, using household data from a 2006 village survey (N = 827).
- Use of dummy variables to capture the presence of children and elder as well as the health status of the elder.
- Test for equality of coefficients on hh composition and health dummies. If coefficients are equal, combine dummies to consolidate the model.
- Replace household composition dummies with share variables to increase information content.

Results

1. Full model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-2.708 **</td>
</tr>
<tr>
<td>Hh composition and health dummies</td>
<td>1.589</td>
</tr>
<tr>
<td>Children, no elder</td>
<td>-3.950 ***</td>
</tr>
<tr>
<td>Children, healthy elder</td>
<td>-3.407 **</td>
</tr>
<tr>
<td>Children, all elderly chronically ill</td>
<td>-0.944</td>
</tr>
<tr>
<td>No children, healthy elder</td>
<td>-0.427</td>
</tr>
</tbody>
</table>

Control variables

- Hh size: 0.566 ***
- Share married in hh: -1.433 **
- Share males migration age: 0.910 **
- Labor market experience of hh head: 0.025 **
- Value of durable assets/capita: 0.000
- Contract land/capita: 0.098
- Communist party member in hh: -0.156
- Ethnic minority hh: 0.613 **
- Migration experience in hh: 1.104 ***

LR = 127.56 **
McFadden- R² = 0.252

2. Neglect health

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-2.753 **</td>
</tr>
<tr>
<td>Hh composition and health dummies</td>
<td>-1.578 ***</td>
</tr>
<tr>
<td>Children, no elder</td>
<td>-3.458 ***</td>
</tr>
<tr>
<td>Children, elder</td>
<td>-0.717</td>
</tr>
</tbody>
</table>

Control variables

- Hh size: 0.587 ***
- Share married in hh: -1.492 **
- Share males migration age: 0.901 **
- Labor market experience of hh head: 0.026 **
- Value of durable assets/capita: 0.000
- Contract land/capita: 0.095
- Communist party member in hh: -0.162
- Ethnic minority hh: 0.585 **
- Migration experience in hh: 1.140 ***

LR = 123.87 ***
McFadden- R² = 0.245

3. Replace dummies with shares

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-1.624</td>
</tr>
<tr>
<td>Shares for hh composition</td>
<td>-4.015 ***</td>
</tr>
<tr>
<td>Share of children</td>
<td>-4.096 ***</td>
</tr>
</tbody>
</table>

Control variables

- Hh size: 0.377 ***
- Share married in hh: -1.977 **
- Share males migration age: 0.854 *
- Labor market experience of hh head: 0.028 **
- Value of durable assets/capita: 0.000
- Contract land / capita: -0.213
- Communist party member in hh: -0.251
- Ethnic minority hh: 0.751 **
- Migration experience in hh: 1.136 ***

LR = 125.39 ***
McFadden- R² = 0.248

4. Use dependency ratio

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-1.239</td>
</tr>
<tr>
<td>Dependency ratio for hh composition</td>
<td>-4.038 ***</td>
</tr>
</tbody>
</table>

Control variables

- Hh size: 0.338 **
- Share married in hh: -1.984 **
- Share males migration age: 0.847 *
- Labor market experience of hh head: 0.028 **
- Value of durable assets/capita: 0.000
- Contract land / capita: -0.213
- Communist party member in hh: -0.253
- Ethnic minority hh: 0.710 **
- Migration experience in hh: 1.136 ***

LR = 125.33 ***
McFadden- R² = 0.248

Negative effect of children on migration.

Are coefficients for healthy and ill elder significantly different from each other?

- For hh with children: LR-test cannot reject H₀ of equal coefficients.
- For hh without children: Both coefficients not different from 0.

⇒ Elders’ health status does not help to explain hh’s migration decisions.
⇒ Collapse dummies: Drop differentiation between healthy and sick elder.

Negative effect of children on migration.

Presence of elder does not counteract negative influence of children. Hh with children and elder even less likely to migrate.

No significant impact of presence of elder in hh without children.
⇒ Share variables for children and elder should capture the same effects while increasing the information content.
⇒ Replace household composition dummies with share variables.

Higher shares of children or elder decrease probability to migrate.

Are the coefficients different from each other?

- LR-test cannot reject H₀ of equal coefficients.
⇒ For migration decisions it does not matter whether a dependant is a child or elder.
⇒ Combine share variables into dependency ratio.

Conclusions

Accounts of an interplay between migration, household demographics and grandparents’ health in Guizhou province, China, are not reflected in the data. Grandparents’ health does not contribute to explaining households’ migration decisions. Household composition, however, is an important determinant of migration.

In addition, household size, marital status, gender composition, migration experience and ethnicity have been identified as factors which influence the migration decision.

Results should be checked for robustness, reverting to the use of a panel dataset.

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