Migration, Remittances, and Human Capital of Children: A Case Study of Tajikistan

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Map of Central Asian Region:
Mapsof.net
The Times Atlas of the World
Historical background: mobility

- Conquered, reconquered over centuries
- 19th c – early 20th c: Great Game, UK vs RU
- USSR: borders defined by titular majorities,
- Post USSR: migration periods
  - 1996–99: economic reasons to move to RU and KZ
  - 2000–2005: rules in RU, restrict refugees, illegals
  - 2008–present: recession, return to Russia
Figure 1. Net external migration from Central Asia.

- Kazakhstan
- Kyrgyzstan
- Tajikistan
- Uzbekistan

Year

<table>
<thead>
<tr>
<th>Men</th>
<th>Russia</th>
<th>Kazakhstan</th>
<th>Tajikistan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(29.4 ruble=$1)</td>
<td>(120.3 tenge=$1)</td>
<td>(3.4 somoni = $1)</td>
</tr>
<tr>
<td>Total</td>
<td>588</td>
<td>505</td>
<td>48</td>
</tr>
<tr>
<td>Construction</td>
<td>633 [1.1]</td>
<td>678 [1.34]</td>
<td>137 [2.87]</td>
</tr>
<tr>
<td>Hospitality</td>
<td>391 [.67]</td>
<td>535 [1.06]</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>442 [.75]</td>
<td>298 [.59]</td>
<td>22 [.47]</td>
</tr>
<tr>
<td>Education</td>
<td>384 [.65]</td>
<td>287 [.57]</td>
<td></td>
</tr>
</tbody>
</table>
Corruption & Instability

- International Crisis Group Report, TJ, February 2009: weak state, failure of leadership
  - “Migrant-funded welfare system”
  - Remittances comprise 35% of GDP (2010, WB)
  - Labor market: no opportunity

- Transparency International, TJ, 2008:
  - Ranks 157 out of 180 countries (least to most corrupt countries)
Dushanbe: Palace, March 2009
Dushanbe: below palace, 3/09
Purpose of this paper

- Evaluate which households send migrants and receive remittance income: 2007

- Outline ways migration could affect life in Tajikistan

- Focus on the effects on those left behind: children and women
Theory of migration

1. Population movement
   - Push–pull: Todaro (Russia – TJ wages)

2. Individual/family migration: benefits and costs
   - Sjaastad, Becker: investment, LR
   - Mincer, 1978: family problems

3. Insurance: Paulson, 2000, Thailand
   send someone to a less volatile market
Theory: who moves

- Chiswick (many papers): risk takers
- Borjas (many papers): US–Mexico, lowest skill today, highest skill in the 1950s
- Stark (2005): brain drain/gain
Recent Evidence from Tajikistan

- ADB remittance data, 2007: TJ
  - Brown, Olimova, Boboev in TJ (ADB, 2008)

- ACTED: Summer 2009
  - return migrants (KG, TJ) & migrants in RU

- IOM, 2007: Khatlon oblast, TJ, 2005
- IOM, 2004: 3 districts
- Haqnazar, 2004: Badakshan, MSDSP

- Shemyakina and Justino, 2010: conflict and Labor supply
Remittances increased the following:

- Total household investment
- Savings
- Expenditures on education
- Access to medical services
- School quality (2003 study)
Literature Results

- Remittances decreased the following:
  - Poverty
  - Income inequality (opposite for KG)
  - Business ownership
  - Absenteeism from school
  - Wage employment (number employed in the household; no effect on individual employment)
Education
- Rural China, lower high school enrollment for boys
- Rural Pakistan, more education for girls
- Philippines, remittances increase education and reduce work
- Vietnam: no effect on education, more work for boys

Health
- Pakistan: increased height and weight for girls
- Tonga: improved nutrition
- Nairobi slums: increased mortality, worse health
Our Research

- Qualitative
  - Survey of return migrants in GBAO, June 2009

- Analytical with survey data for TJ
  - 2007 and 2009 TLSS (World Bank, National Statistics Committee)
    - Family effects: health, education, work of children left behind
GBAO Interviews

- Jobs:
  - Men: construction, warehouse
  - Women: cafes, nannies/domestics, laborer
  - Both: professional

- Monthly wages: $1000/month typical

- Hours of work: 6 days/week, 12 hours/day

- TB! 12 cases from one village with 100 households; crowded flats, dormitories
GBAO Interviews

- To stay in Tajikistan:
  - Need $500/month or 50% of the normal wage

- Discrimination worse in Moscow

- Long periods of absence from family:
  - They don’t see too many problems as long as there is a strong male figure in the household.
  - Some communities: all elderly adults and children
Child Level model: TLSS 2007

- Education, child-specific expenditures on education, health status and health care depend on:
  - Migration (instruments needed); remittances
  - Supply of schools/health care in community
  - Parent education, age
  - Wealth of household and community
  - Child demographic characteristics
Explanatory Variables

- Child: age, ethnicity (Tajik or Uzbek)
- Parents: completed secondary or higher education of mother & father; age of mother; missing data on father
- Household: family composition; electricity in winter; social benefits eligible
- Community: distance to school or health care; water from river; sewage system
Migration variables

- Household has at least one migrant in last year: internal (TJ), external (Russia/ KZ), or living abroad (temporary or permanent)

- Household received remittances last year
  - Similar results, but not reported here

- Two measures highly correlated.
Method

- **Dummy variable (0–1) outcomes:**
  - Linear probability models with IV

- **Continuous variable outcomes:**
  - Regression and IV regression

- **Instruments:** migration rate in community (excl. hh), community risk, someone in household needs health care (R–square < .06)
Sample

- Tajik and Uzbek ethnicities only
- Mother in the household (lose 59 households) so there are no missing data on the mother
- Mother at least 15 years older than children.

Children:
- Health model: aged 0–22
- Education model: aged 3–6, 7–22
## Descriptive statistics: n=4644

<table>
<thead>
<tr>
<th>Region</th>
<th>Migrant HH</th>
<th>Remittance HH</th>
<th>External Migrant</th>
<th>Migrant with Higher Educ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>.251</td>
<td>.273</td>
<td>.240</td>
<td>.036</td>
</tr>
<tr>
<td>Dushanbe</td>
<td>.158</td>
<td>.174</td>
<td>.148</td>
<td>.033</td>
</tr>
<tr>
<td>RRP</td>
<td>.300</td>
<td>.326</td>
<td>.294</td>
<td>.043</td>
</tr>
<tr>
<td>Khatlon</td>
<td>.264</td>
<td>.290</td>
<td>.248</td>
<td>.030</td>
</tr>
<tr>
<td>Sogd</td>
<td>.258</td>
<td>.275</td>
<td>.242</td>
<td>.034</td>
</tr>
<tr>
<td>Badakhshan</td>
<td>.272</td>
<td>.286</td>
<td>.265</td>
<td>.041</td>
</tr>
<tr>
<td>Location:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>.290</td>
<td>.205</td>
<td>.170</td>
<td>.036</td>
</tr>
<tr>
<td>Urban</td>
<td>.181</td>
<td>.312</td>
<td>.178</td>
<td>.035</td>
</tr>
</tbody>
</table>
## Model Results, Children < age 7: Migrant vs Non-migrant HH

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>In preschool</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Illness/Injury</td>
<td>−0.023</td>
<td>−0.027</td>
<td>--</td>
</tr>
<tr>
<td>Good health</td>
<td>0.024</td>
<td>0.036</td>
<td>--</td>
</tr>
<tr>
<td>Health improved</td>
<td>--</td>
<td>--</td>
<td>−0.058</td>
</tr>
</tbody>
</table>
## Results, Young Children: Migrant vs Non-migrant HH

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin A shots: number given</td>
<td>-1.4 (IV)</td>
<td>-1.8 (IV)</td>
<td>-1.2(IV)</td>
</tr>
<tr>
<td>At least one polio vaccine</td>
<td>0 to 0.329(IV)</td>
<td>0 to 0.348 (IV)</td>
<td>0 to 0.333 (IV)</td>
</tr>
<tr>
<td>At least one measles vaccine</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>
## Education Results, Children 7–22: Migrant vs Non-migrant Households

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weeks missed of school: 7–22</td>
<td>0.156</td>
<td>0.175</td>
<td>0.142</td>
</tr>
<tr>
<td>Has job/family business: 15–22</td>
<td>0.027/−0.026</td>
<td>--/--</td>
<td>0.040/−0.039</td>
</tr>
<tr>
<td>In school: 15–17</td>
<td>−0.040</td>
<td>−0.044</td>
<td>--</td>
</tr>
<tr>
<td>Complete sec.: 18–22</td>
<td>0.208</td>
<td>0.044 (IV) to 0.366 (IV)</td>
<td>--</td>
</tr>
<tr>
<td>In higher ed: 18–22</td>
<td>0.077</td>
<td>0.159 (IV)</td>
<td>--</td>
</tr>
</tbody>
</table>
## Expenditure Results (0–1), Children 6–18, enrolled: Migrant vs Non-migrant Households

<table>
<thead>
<tr>
<th>Probability of expenditure on:</th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td>0 to 0.117(IV)</td>
<td>0 to 0.147(IV)</td>
<td>--</td>
</tr>
<tr>
<td>Cash/kind gifts</td>
<td>-0.157</td>
<td>-0.147</td>
<td>-0.167</td>
</tr>
<tr>
<td>Fees</td>
<td>-0.328</td>
<td>-0.359</td>
<td>-0.304</td>
</tr>
<tr>
<td>Food</td>
<td>0.019</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Uniforms</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>School building</td>
<td>0.055 to 0.313(IV)</td>
<td>0.052 to 0.308</td>
<td>0.058 to 0.281(IV)</td>
</tr>
<tr>
<td>Other</td>
<td>--</td>
<td>--</td>
<td>0 to -0.136(IV)</td>
</tr>
<tr>
<td>Total</td>
<td>0.050(IV)</td>
<td>0.049</td>
<td>0.052(IV)</td>
</tr>
</tbody>
</table>
### Health Results, Children 7–22: Migrant vs Non-migrant Households

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic condition</td>
<td>0 to −0.071(IV)</td>
<td>0 to −0.071(IV)</td>
<td>0 to −0.084(IV)</td>
</tr>
<tr>
<td>Illness/injury</td>
<td>--</td>
<td>0 to −0.083</td>
<td>--</td>
</tr>
<tr>
<td>In poor health</td>
<td>0 to −0.020</td>
<td>0 to −0.003(IV)</td>
<td>0 to −0.025</td>
</tr>
<tr>
<td>Health improved last year</td>
<td>−0.045 to −0.028(IV)</td>
<td>−0.040 to −0.305(IV)</td>
<td>−0.055 to −0.259(IV)</td>
</tr>
</tbody>
</table>
Conclusions

- Migration has affected education and health of children

- Gender differences in the effect of migration on the education of older children:
  - male advantage in enrollment in higher education and completion of secondary education
  - Increase in absences esp. for men; men less likely to enroll in high school, 15–17
  - More expenditures on food, books, school building; less expenditure on fees and gifts. Total expenditures increase with migration for boys and girls.
Conclusions

- Health: small children
  - More likely to receive polio vaccines
  - In better health, less injury or illness if male, but health did not improve over the year
  - But, less vitamin A for boys and girls.

- Health: older children
  - Less likely to be in poor health, to have a chronic health condition, to be ill or injured (boys)
  - But, less likely to have improvement in health.
Conclusions

- Migration:
  - more positive than negative impact on human capital of TJ children; results are similar for remittance receiving; IV sensitive
- Propensity score matching: not robust
- Future research:
  - compare to 2009 and 2007;
  - compare to other countries in the region (UZ, KG)
- Preliminary UZ results: no impact of remittances on education and health of young or older children.
What does matter to education and health?

- Parental education: stronger effects of father’s education than mother’s education on completion of education.

- Mother’s education more important on school expenditures decisions.

- Large differences across regions:
  - GBAO healthier and better educated.