Migration and Development: Implications for Rural Areas

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Motivation: Voluntary Migration plays Central Role in Development

• Countries with Higher GDP have lower share of labor in agriculture
  – Migrants may go to either urban or rural areas
Illustration: GDP and Share of Labor in Agriculture

Source: World Development Indicators (2016)

- Ethiopia
- Vietnam+Bangladesh
- India
- Pakistan
- Nigeria
- Indonesia
- China
- Mexico
- Brazil
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  - Migrants may go to either urban or rural areas
- International Migration more complicated (from rural perspective), but...
  - Many small countries rely on remittances for a substantial share of GDP
  - Migration quite important to some large economies (Bangladesh, Pakistan, Philippines, Mexico)
  - International migrant origin often from rural areas
## Remittances as a Share of GDP

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<tbody>
<tr>
<td>Nepal</td>
<td>28.5 m</td>
<td>81.4</td>
<td>31.7</td>
</tr>
<tr>
<td>Liberia</td>
<td>4.5 m</td>
<td>50.3</td>
<td>31.2</td>
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<tr>
<td>Tajikistan</td>
<td>8.5 m</td>
<td>73.2</td>
<td>28.8</td>
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<tr>
<td>Kyrgyz Republic</td>
<td>5.9 m</td>
<td>64.3</td>
<td>25.7</td>
</tr>
<tr>
<td>Haiti</td>
<td>10.7 m</td>
<td>41.4</td>
<td>25.0</td>
</tr>
<tr>
<td>El Salvador</td>
<td>6.1 m</td>
<td>33.3</td>
<td>16.6</td>
</tr>
<tr>
<td>Senegal</td>
<td>15.1 m</td>
<td>56.3</td>
<td>11.9</td>
</tr>
<tr>
<td>Albania</td>
<td>2.9 m</td>
<td>42.6</td>
<td>9.2</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>161 m</td>
<td>65.7</td>
<td>7.9</td>
</tr>
<tr>
<td>Morocco</td>
<td>34.3 m</td>
<td>39.8</td>
<td>6.9</td>
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Source: World Development Indicators (2016)
International Migration from Rural Areas

The graph shows the percent of international migrants from rural areas for different countries. The x-axis represents the percent of the population in rural areas, while the y-axis shows the percent of international migrants from rural areas. Countries are represented by their respective abbreviations:

- ALB
- BAN
- CRC
- DOM
- ECU
- ELS
- HON
- IDO
- KYR
- PHL
- SEN
- TJK
- VNM

The data points for each country are plotted on the graph, allowing for a visual comparison of the rural migration trends across different countries.
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• International Migration more complicated (from rural perspective), but...
  – Many small countries rely on remittances for a substantial share of GDP
  – Migration quite important to some large economies (Bangladesh, Pakistan, Philippines, Mexico)
  – International migrant origin often from rural areas
• But what are the effects of increasing migration on rural economies?
Outline of Talk

• The Rural-Urban Labor Productivity Gap
  – Is it due to migrant selectivity or due to costs or restrictions against migration?

• How should migration affect rural economies?
  – Conceptual framework – how to think about potential effects of migration on rural households

• Describe some evidence related to effects of migration on:
  – Agricultural Production;
  – Investments;
  – Risk Coping

• Conclusions related to policy
Evidence: Ag-Non Ag Productivity Gaps

- Gollin, Lagakos and Waugh (QJE; 2014) show large gap between ag and non-ag output, even accounting for hours worked and human capital
  - Agnostic about how gap occurs- whether through selectivity or through migration restrictions
- Young (QJE; 2013) argues this gap can fully be explained by selectivity
- Similarly, Hicks et al. (2017) argue that selectivity can explain gap through individual level panel data
- On other hand, Bryan and Morten (2017) show that in Indonesia migration “costs” play important role in explaining the wage gap
Conceptual Framework: Household Perspective

• How can migration potentially affect agriculture or non-farm rural activities?
  – If a migrant is sent out, they lose labor on the farm,
  – But migrant may send back remittances (which can be invested on or off farm, or can add directly to consumption)
  – Further, agricultural production is uncertain, so migration plays a role in diversifying that production risk
Theory: Implications

1. If choose to send out a migrant (or migrants), could be a lost labor effect on ag production
   - But several adjustments that can be made to reduce impact of lost labor (change composition of family labor force, hired labor, capital)

2. Migration could lead to investments
   - Could be productive (e.g. farm, non-farm investment)
   - Could also be in durables (which really lead to a stream of consumption)
   - Longer term– human capital investments

3. Could affect the way households deal with risk
Evidence: Agricultural Productivity

• Any evidence of lost labor effects in agriculture?
  – In general, challenging problem due to endogeneity of migration so little convincing evidence in the literature

• But lots of papers from China...

• Outside China:
  – De Brauw (2010) shows suggestive evidence of a shift from labor-intensive to land-intensive crops in northern Vietnam
  – Quisumbing and McNiven (2010) find a null result in the Philippines in a small panel
Evidence from China: Agriculture

- Meanwhile, plot level productivity in grains from China National Rural Survey, 2000 and 2008 (includes HH level fixed effects)

<table>
<thead>
<tr>
<th></th>
<th>All counties</th>
<th>Poor counties only</th>
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<tbody>
<tr>
<td>Time Dummy (2008=1)</td>
<td>0.253***</td>
<td>0.304***</td>
</tr>
<tr>
<td></td>
<td>(0.058)</td>
<td>(0.076)</td>
</tr>
<tr>
<td>Number of Obs</td>
<td>4821</td>
<td>3298</td>
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Adapted from de Brauw et al. (2012)
Evidence: Investments (through Remittances)

• Back to the model: Investments in \textit{production} can occur, but are inherently risky (agriculture)
  – Less risky are investments in consumer durables and housing (especially if migrant is planning a return)
• Another investment more complicated- schooling
  – Could be a credit constraint to investment in schooling- higher income -> more schooling
  – Also an opportunity cost for higher levels of schooling (if work opportunity exists, so more migration -> less schooling)
• Statistical identification is a major issue in this literature
Mixed Evidence on Investments in Production

- Woodruff and Zenteno (2007) find long term migrant networks lead to higher investment in microenterprises in Mexico.
- On the other hand,
  - Gibson et al. (2011) show negative effects on agriculture, livestock in the short term from emigration to NZ from Tonga.
  - De Brauw and Giles (2018) find positive impacts on productive investment among relatively well off in China, but not among the poor (who migrate).
Evidence: *Casas de remesas*

- Potentially “safer” investment: housing
  - De Brauw and Giles (forth.) show stronger housing investment among poor migrant HHs in China
  - Erval (2012)- qualitative research on Pakistani migrants in Norway

Source: *BBC Mundo*
Evidence: Investment in Schooling

Positive Impacts

• Yang (2008) finds increase in educational expenditures, girls enrollment w exchange rate shock
• Theoharides (2017) also finds migration demand increases sec school enrollment by 3.5% (also Philippines)
• Dinkelman and Mariotti (2016) find higher schooling levels in Malawi where access to mines was easiest relative to poor access areas

Negative/Neutral Impacts

• McKenzie and Rapoport (2011) find reduction in enrollment among boys in Mexico
• De Brauw and Giles (2017) find reduction in HS enrollment in China
• Gibson, McKenzie and Stillman (2011) find non-result in Tonga among children left behind
Evidence: Investment in Young Child Nutrition

• Nutritional status among young children has been linked to positive outcomes (including wages) later in life (Hoddinott et al., 2008; Gertler et al., 2014)

• Could be improved outcomes from migration through:
  – increased income
  – more decision making power among women, but
  – Decreased time to care for children (negative)

• Mu and de Brauw (2015) show positive impacts on child weights in rural China

• Carletto, Covarrubias, and Maluccio (2011) also find positive impacts on height in Guatemala (US migration)

• Gibson, McKenzie and Stillman (2011b) find opposite in Tonga
Evidence: Migration and Risk

• “Old” idea: Migration advantageous to rural households because covariance of incomes lower than for local off-farm labor (e.g. Rosenzweig and Stark, 1989)

• Poor potential migrants may not leave due to risk at destination (e.g. Bryan, Chowdhury and Mobarak, 2014)

• Yet can be a more complicated relationship
Evidence: Migration and Risk (cont.)

• Risk-sharing relationships provide imperfect insurance in many contexts (e.g. Udry, 1994)

• Morten (2017) studies how seasonal migration affects risk-sharing in source community in India
  – Idea- with more migration, due to covariate risk households might have less need for insurance
  – Finds evidence consistent with this idea- migration substitutes for local insurance mechanisms

• Policy implications suggest workfare (MNREGA) has a lower welfare gain in the presence of both informal insurance and temporary migration
Summary: Evidence on Rural Impacts of Migration

1. Rural-urban migration a feature of the development process
   - Robust debate over how large the non-ag. “premium” is for labor
2. Impacts on investments are context specific
   - Durables a secure investment, so positive impacts in several places
   - Productive investments risky but some clear impacts on entrepreneurship
   - Human capital investments are mixed
3. Migration has complex interacts with risk profiles of households and communities
Summary: Policy Implications

• Policies to hinder migration may also hinder increases in returns to labor on average
  – Even if migration largely according to Hicks et al. (2017), movement of labor out of agriculture is at worst neutral for labor returns
  – Policies should at worst embrace migration- realizing that there is a rationale for it even in a revealed preference sense

• Other policies may foster rural investment in either housing or productive investments
  – For example easing international remittances- lots of interest in this idea (e.g. IFAD’s FFR)
• Policies seemingly unrelated to migration may have important interactions with migration
  – MNREGA or similar policies (e.g. PSNP in Ethiopia) may not have the same welfare enhancement in high (temporary) migration areas
  – Policies that change expected returns or variance of returns to agriculture may also have interactions with migration
    • Land tenure reform an example
  – Basic income grant is “hot”, but how would it influence migration?