Assessing the Impacts of Remittances on Poverty using Household Survey Data: Some Lessons from Asia and South Pacific

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Prepared for IOM Interagency Seminar Series, Geneva, 1 June 2010

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Preliminary comments:

• Interest in migrants’ remittances relatively recent, for some

• Recognition of scale: relative to ODA, FDI, exports

• Concern with uses and economic impacts: consumption vs saving; investment; growth

Why these issues? Research questions change when HH income crosses borders

Preoccupation with saving, investment and growth in assessment

Remittances informal, family-based social protection

Need to re-think questions asked and criteria applied in analysis and assessment
REMITTANCES IN PACIFIC ECONOMIES

Our research:

Based on surveys in 2005 for World Bank
• Fiji
• Tonga

Survey instrument similar to World Bank’s living standard surveys but also focuses on migration from and remittances to migrant-sending households

Analysis on amounts, channels, determinants and impacts of remittances at household level

Currently working on similar study for ADB in Central Asia and South Caucasus based on surveys undertaken 2007
• Armenia
• Azerbaijan
• Kyrgyzstan
• Tajikistan
SOME METHODOLOGICAL CHALLENGES

1. Measurement Issues:

Remittances take many forms, cash and in-kind

• formal bank transfers
• informal cash transfers eg couriers or hand carried
• in-kind transfers eg. clothing
• payments on behalf of third parties
• donations to organisations eg. Churches; relief funds
• migrants’ own assets eg. real estate; savings accounts

Remittances sent through a variety of channels, formal and informal - one-third to one-half of total through banking system
NON-MIGRANT HOUSEHOLDS ALSO BENEFIT

2. Capturing all recipients:

- Most migrants remit, even the poorest. In Tonga, most households receive remittances (>90%), even those without migrants (78.5%)
- Fiji, despite being most developed Pacific island country, is becoming increasingly dependent on remittances - over 40% of households, including non-migrant households (20%)
- Migrants also remit to non-household institutions (eg. Churches, social organisations, relief funds, etc)
- Migrants also remit to themselves (own asset accumulation, investment)
- Remittance recipients also make internal transfers to non-migrant households
REMITTANCE MOTIVATIONS AND SOCIAL PROTECTION

What drives remittances?

Two principal motivations hypothesized in migration literature are ‘altruism’ and ‘exchange’. Why should we care?

Altruism:

• Migrants care about their families’ welfare
• The lower the household’s income, the higher the remittances received
• Implies social protection and possibly less inequality

Exchange:

• Migrants buy services from their families (e.g. insurance, property maintenance) or buy the right to inherit
• The higher the household income, the higher the remittances received
• Implies wealthier benefit most, possibly more inequality

Other: eg. Loan repayment (Brown and Poirine, *IMR* 2005)
REMITTANCE DRIVERS: MIXED MOTIVATIONS

Altruism holds at lower welfare levels, exchange dominant at higher levels
Proposed and tested empirically by Cox et al. and others using some absolute income level as knot point (poverty line)

Figure 1 Relationship between Transfers and the Subjective Income Gap

SUBJECTIVE WELL-BEING APPROACH

How to determine threshold level of income?

Cox et al. derive ‘best-fit’ knot-point (K) using non-linear least squares, with threshold income level unknown.

Why same absolute threshold for all HHs?

Ignores relative deprivation.

We introduce subjectively assessed welfare into model.

Difference between HH ‘required income’ and ‘actual income’ (IGAP).

Advantage is that the threshold is no longer at fixed absolute income level for all HHs.
SUBJECTIVE WELL-BEING APPROACH

“REQUIRED INCOME TO GET BY”

Households were asked:

• “How much money does a family like yours require just to get by?”

• Whether or not their pre-transfer income was the same/more/less than required

Households then classified into 3 categories, where actual income excluding remittances was:

Less than required Income
Same as required income
More than required income
SUBJECTIVE INCOME GAP

More than required

Same as required

Less than required

FIJI: 258

TONGA: 174

0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
TONGA: INCOME AND REMITTANCES
(Per capita, US$ 2004)
REGRESSION RESULTS: PREDICTED REMITTANCES

Figure 2: Predicted Transfers and the subjective income gap: Tonga

Source: Brown and Jimenez (2008b)
REGRESSION RESULTS

• Altruism: $100 decrease in subjective income gap leads to $30-47 remittances increase in Tonga and $8-$9 in Fiji

• Exchange: $100 increase in subjective income gap leads to $6-11 remittances increase in Tonga and $1 in Fiji

Other significant motivators:
• Presence old person increased remittances by U$562 in Tonga, but not in Fiji
• Major social ceremony increased remittances by $1518 in Tonga and $354 in Fiji
• The number of HHM with medical incapacity for more than 30 days increased remittances ($300) in Tonga, but had no significant effect in Fiji
EVOLVING PATTERN OF REMITTANCES

• Evolving motives and uses over time

• Limited to cross-sectional data – length of migrant’s absence or age proxy

• Hypothesize 3 distinct phases in migrant’s life:
  • Phase I: return on parents’ investment use = informal pension (consumed)
  • Phase II: invested in next generation = loan (human capital investment)
  • Phase III: invested/saved in own asset = future retirement fund (consumed)

• Using data from a survey of Tongan and Samoan migrants in Australia we are able to disaggregate their remittances by relationship to recipient (Brown and Poirine, 1998)
Remittances to parents essentially return on past, migration-induced human capital investment ('loan repayment')

Remittances to next generation finances human capital investment, relieving credit constraint ('new loan to next generation')

Remittances to self finance own assets as pension fund
Remittances to poor provide social protection – increase when they suffer negative income shocks

Poverty alleviation role? Possible crowding-out could offset other transfers

Need to estimate effects on poverty and income distribution – depends on distribution of remittances across HHs
IMPACTS ON POVERTY

Need to compare poverty rates with and without remittances

Methodological issues:
- treat remittances as exogenous additions to income, or
- account for opportunity cost of migrants’ forgone contribution to HH income?
- Net effect depends on opportunity costs of migration and indirect effects of migration and remittances on other sources of income

We do both and use two methodologies to predict incomes without migration and remittances
REMITTANCES AND POVERTY

• Alternative methodological approaches given challenges to estimating what incomes would have been in absence of migration and remittances

• We use a range of methods to estimate ‘counterfactual income’ following methodology used elsewhere (eg. Richard Adams at World Bank)

• As in almost all other cases, we find that remittances reduce incidence and depth of poverty

• Also, as in many other instances, the effects on inequality are ambiguous
TONGA: % CHANGE IN AVERAGE INCOME

When Including Remittances

When including Remittances + Net transfers

Individual income quintile

1st. 2nd. 3rd. 4th. 5th. Total

639% 104% 81% 40% 17% 45%
713% 113% 82% 41% 12% 44%

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FIJI: % CHANGE IN AVERAGE INCOME

<table>
<thead>
<tr>
<th>Individual Income Quintiles</th>
<th>When Including Remittances</th>
<th>When including Remittances + Net transfers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>98%</td>
<td>98%</td>
</tr>
<tr>
<td>2nd</td>
<td>82%</td>
<td>82%</td>
</tr>
<tr>
<td>3rd</td>
<td>14%</td>
<td>14%</td>
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<tr>
<td>4th</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>5th</td>
<td>-5%</td>
<td>3%</td>
</tr>
<tr>
<td>Total</td>
<td>7%</td>
<td>2%</td>
</tr>
</tbody>
</table>

When including Remittances

When including Remittances + Net transfers
## POVERTY AND INEQUALITY: COUNTERFACTUAL INCOME ESTIMATES

Table 3 Poverty and Income Inequality Indicators with and without Remittances

<table>
<thead>
<tr>
<th></th>
<th>Without Migration</th>
<th>Counterfactual</th>
<th>With Migration</th>
<th>Observed Income Including Remittances</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Method 1</td>
<td>Method 2</td>
<td>Method 2</td>
<td></td>
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<tr>
<td>Observed income</td>
<td></td>
<td>An income</td>
<td></td>
<td></td>
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<tr>
<td>without remittances</td>
<td></td>
<td>counterfactual</td>
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<tr>
<td>Povert Headcount Ratio</td>
<td>38.4%</td>
<td>42.9%</td>
<td>34.1%</td>
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<tr>
<td>Fiji</td>
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<tr>
<td>Tonga</td>
<td>54.7%</td>
<td>62.1%</td>
<td>32.4%</td>
<td></td>
</tr>
<tr>
<td>Poverty Gap Ratio</td>
<td>18.2%</td>
<td>17.3%</td>
<td>15.1%</td>
<td></td>
</tr>
<tr>
<td>Fiji</td>
<td></td>
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<tr>
<td>Tonga</td>
<td>27.5%</td>
<td>27.1%</td>
<td>11.6%</td>
<td></td>
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<tr>
<td>Gini Coefficient</td>
<td>0.51</td>
<td>0.47</td>
<td>0.50</td>
<td></td>
</tr>
<tr>
<td>Fiji</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bias Corrected+</td>
<td>0.47 – 0.54</td>
<td>0.43 – 0.52</td>
<td>0.47 – 0.54</td>
<td></td>
</tr>
<tr>
<td>Tonga</td>
<td>0.53</td>
<td>0.42</td>
<td>0.46</td>
<td></td>
</tr>
<tr>
<td>Bias Corrected+</td>
<td>0.47 – 0.59</td>
<td>0.39 – 0.47</td>
<td>0.42 – 0.51</td>
<td></td>
</tr>
</tbody>
</table>

* Estimated poverty line in Fiji = US$765 and US$879 in Tonga per adult per annum.
+ At 95% confidence interval
Source: Brown and Jimenez (2008a)
REMITTANCES AND WEALTH

Fiji: Average Wealth Index by Remittances Recipient

Tonga: Average Wealth Index by Remittance Recipients
CONCLUSIONS

In assessing economic effects of migration and remittances too much stress on investment and growth impacts

Remittances provide informal, family-based social protection in times of hardship and reduce poverty

By attempting to formalize remittance flows we run risk of undermining a system that seems to working quite well

Other parts of study also show that remittances:
  • contribute positively to household material wealth
  • result in higher education among those remaining
  • contribute to improved health of those remaining
THANK YOU!
SOME REFERENCES


