COMMENTS ON
LUETH, ERIK AND MARTA RUIZ-ARRANZ,
“MACROECONOMIC DETERMINANTS
OF WORKERS’ REMITTANCES”

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Comments on Lueth, Erik and Marta Ruiz-Arranz,

“Macroeconomic Determinants of Workers’ Remittances,”

by

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Contributions of the paper:

(1) A unique bilateral remittance data set
(2) A gravity model applied to the determinants of remittance flows
(3) Several interesting findings

My comments on the paper:

(1) Estimation results seem to be consistent w/ altruism
(2) Data and econometrics
(3) Internal inconsistency
(4) Limitations of the macro-analysis
(5) Other minor comments (will skip)
Altruism and the necessity of a theory

● It has been emphasized that altruism may be less of a factor than commonly believed. Yet, estimation results seem to be consistent w/ altruism!! A theory is need to interpret empirical results properly.

● Robust negative coeff. on log per capita GDP, i.e., log $y_i$, can be interpreted as altruism.

● Suppose a standard private transfer model by Becker (1974) JPE, Cox (1987) JPE, and others:
  - Under altruism, remittances from $j$ to $i$ so that: $U'(C_j)=U'(C_i)$,
  - Cet. par., budget constraints: $C_j = y_j - R_{ij}$, $C_i = y_j + R_{ij}$.
  - Hence, $U'(y_j - R_{ij}) = U'(y_j + R_{ij})$.
  - Now, Suppose CARA utility function. Then, we have: $\gamma_j (y_j - R_{ij}) = \gamma_i (y_i + R_{ij})$ and thus,

\[
R_{ij} = \left[ \frac{\gamma_j}{\gamma_j + \gamma_i} \right] y_j - \left[ \frac{\gamma_i}{\gamma_j + \gamma_i} \right] y_i
\]
Technical note:

Yet, is altruism perfect (and Pareto efficient)? Probably NOT according to the int’l consumption risk-sharing literature [Lewis (1996) JPE etc.]

In fact, we can derive the gravity equation for remittances from the full consumption risk-sharing model. Such an econometric model has been formulated by Ichimura, Sawada and Shimizutani (2006) in the context of the Chuetsu earthquake. In other words, this model is similar to the one developed by Fafchamps and Lund (2003) JDE but w/o the aggregation assumption.

(2) Data and econometrics

- Under-reporting bias of remittances suspected

  - Example: “Mangyongbong 92,” a cargo-passenger ship between Japan and North Korea

  "There is a suspicion of illegal remittances from Japan to North Korea using Mangyongbong 92"

  「この万景峰号を利用して多額の現金を持ち出しているのではないかという不正送金疑惑・・・」

    - From minutes of a meeting at MOF < http://www.mof.go.jp/singikai/kanzei_taiwa/gijiroku/ka150423.htm>
Disaster variables unclear and problematic

- An indicator variable for “earthquake, floods or windstorm” seems to be constructed using EM-DAT database. But these variables should be included simultaneously. Also, need to add more disaster variables & intensities (rather than 1/0 variable).
- Earthquake damages are highly localized, so need alternative aggregate shock variables to test altruism w/ macro-data

Table 1 Number of Natural Disasters by Type of Triggering Hazards: Regional Distribution 1995-2004

<table>
<thead>
<tr>
<th>Regional Distribution</th>
<th>Hydro-meteorological disasters</th>
<th>Geological disasters</th>
<th>Biological disasters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Floods</td>
<td>Wind</td>
<td>Droughts &amp; Landslides</td>
</tr>
<tr>
<td>Africa</td>
<td>277</td>
<td>70</td>
<td>123</td>
</tr>
<tr>
<td>America</td>
<td>269</td>
<td>298</td>
<td>205</td>
</tr>
<tr>
<td>Asia</td>
<td>444</td>
<td>326</td>
<td>229</td>
</tr>
<tr>
<td>Europe</td>
<td>180</td>
<td>86</td>
<td>156</td>
</tr>
<tr>
<td>Oceania</td>
<td>35</td>
<td>68</td>
<td>37</td>
</tr>
<tr>
<td>World</td>
<td>1205</td>
<td>848</td>
<td>750</td>
</tr>
</tbody>
</table>

Endogeneity bias considered

Sample selection bias suspected: Data is from only “11 (recipient) countries” in Asia and Europe over 1980-2004 (200 country pairs and 1650 obs).

Identifications:
- In Page 9: “However, depreciation of the home country’s currency reduces remittances as less dollars buy the same goods basket as before the depreciation.”
- In page 15: “Remittances fall when the exchange rate weakens”
- Really? Is the natural experiment in 1997 anomaly?

The Financial Crisis as a Natural Experiment:
Remittances to the Philippines in USD, 1977-2003

(3) Internal Inconsistency

- Remittances are NOT necessarily positively correlated with real GDP.

- From gravity equation, the effect of GDP on remittances is (based on Table 6):

\[
1.623 \log Y_{it} - 3.137 \log \left(\frac{Y_{it}}{L_{it}}\right) = -1.514 \log Y_{it} + 3.137 \log L_{it}
\]

- So, this NEGATIVE correlation is inconsistent with the co-integration equation result for Sri Lanka.
(6) Limitations of the macro-analysis

- It is said that, in order to enhance positive impact of remittances, policies should be directed at reducing transaction costs, promoting financial sector development, and improving the business climate.

- This policy is likely to generate an adverse distributional impact because:
  - In the Philippines, for example, the transfer income from abroad of the poorest of the poor, who belonged to the lowest income decile, was less than 1% of the total income, whereas the transfer income of the highest income decile was about 14% of the total income in 2000 (Table below). This implies that the ultra poor were excluded from remittance.

- w/macra analysis, we cannot discuss heterogeneity and distributional aspects of remittances

| Share of transfer income from abroad in total income, by income decile, the Philippines, 2000 |
|-----------------------------------------------|---|---|---|---|---|---|---|---|---|
|                                              | I Poorest | II | III | IV | V  | VI | VII | VIII | IX  | X  | Richest |
| Share (%)                                    | 0.62       | 1.04 | 1.77 | 2.59 | 3.46 | 5.29 | 6.72 | 9.18 | 11.85 | 13.70 |
| Standard deviation                           | 4.73       | 5.97 | 8.17 | 10.00 | 11.82 | 15.43 | 17.11 | 20.51 | 23.18 | 25.04 |

Other points:

- Better make a separate paper for the section on Sri Lanka


- Page 9: For the robustness checks of the role of financial development, Ross Levine’s financial development indicators can be used. (<http://www.econ.brown.edu/fac/Ross_Levine/Publications.htm>)

- Page 10: Alternative broader measures of governance including political risks can be used in addition to ICRG for the robustness checks. Examples are: CPIA, Kaufman index, # of assassinations (Bunside=Dollar, 2000, AER), index of ethnic fractionalization (Bill Easterly HP), Freedom house, Gastil index, etc.