Macroeconomic determinants of remittances and growth in the Dominican Republic

November 23rd, 2004
Columbia University
Economic dynamics of remittances

1. Benefit to households
2. Distributive nature
   1. Rural Sector
   2. Country
3. Macro-economic impact
   1. FC source
   2. Counter-cyclical role
   3. Determined by macro-economic shifts
   4. Multiplying effect
   5. Effect on economic growth
4. Tied to finance: savings, credit, investment
5. Part of a broader process: The 5Ts
Dominican Republic: Economic growth
Dominican Republic: Quarterly GDP and imports, 1997-2003
Average amount sent by a Dominican

[Graph showing the average amount sent by a Dominican from Jan 2002 to Jan 2004, with data values ranging from 170 to 220.]
Dominican Republic: Quarterly Remittances, 1997-2003
Macroeconomic determinants

- *Do remittances respond to economic shifts?*
- *How do remittances respond in the D.R.?*

- **Inflation**: an increase in prices affects a household cost of living and thus prompt immigrants to increase their support to relatives at home;
- **Interest rates** (lending): as lending rates decline, investment increases;
- **Foreign exchange**: an increase in the supply of foreign currency may appreciate local currency.
- **Unemployment**$_{DR}$: downward shifts in employment cause adjustment measures and new forms of income;
- **Unemployment**$_{USA}$: same as above

\[
R_{DR \, t-1} = CPI_{DR} + HispUn_{US} + FX_{DR} + IR_{DR}
\]

(+) (-) (?) (-) [Expected sign in the statistical relationship]

Where,
- $R_{DR \, t-1}$ = Monthly remittance transfers to the D.R. (lagged values)
- $HispUn_{US}$ = Monthly unemployment in the U.S. among Latino immigrants
- $CPI_{DR}$ = Consumer price index in the D.R.
- $FX_{DR}$ = Foreign exchange (nominal) in the D.R.
- $IR_{DR}$ = Interest lending rate in the D.R.
Dominican Republic: Remittances, prices, interest and exchange rates

- **Remittances**
- **Consumer Prices**
- **Interest Lending Rate**
- **Hispanic Unemployment**

- Remittances (left axis)
- Consumer Prices (left axis)
- Interest Lending Rate (right axis)

R2 = 0.54 adjusted R2 = 0.29, statistical significance p < 0.10 *, p < 0.05 **, p < 0.01 ***
Significance: basic support, women, age, income

- Home country variations in exchange rates and unemployment in the U.S. among Latinos does not have an effect on transfers.
- Market of transfers occur independently from exchange rate variations: under the economic crisis affecting devaluation, remittance transfers, and the control of its volume by companies, were not related to exchange rates.
- There is also correspondence between microeconomic and macroeconomic determinants: family commitment will increase with need and number of beneficiaries, and commitment.

<table>
<thead>
<tr>
<th>Administration of remittances</th>
<th>OLS Regression on amount remitted</th>
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<tbody>
<tr>
<td>B</td>
<td>Beta</td>
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<tr>
<td>Having bank account</td>
<td>-22.584</td>
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<tr>
<td>Schooling</td>
<td>-10.038</td>
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<td><strong>Number of beneficiaries</strong></td>
<td>12.994</td>
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<td>Sex</td>
<td>6.745</td>
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<td>Income</td>
<td>25.964</td>
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<td><strong>Length of time receiving remittances</strong></td>
<td>13.042</td>
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<td>House caretaker</td>
<td>-.925</td>
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Source: Orozco, Manuel. Survey conducted by the author.
Economic growth in the age of transnationalism and globalization

- Pablo Rodas (2000) economic integration is reflected in terms of “the commercial flows (manufactures, agricultural products, and tourism) and the flow of factors of production (migration and foreign investment).” (p.17)

- William Robinson (2003) a transnational model in Central America and the D.R. is observed in terms of “production of export-processing factories (of clothes in particular), transnational services (especially tourism), export of non-traditional agricultural products, and remittances sent by Central Americans working in the United States” (p.539).

- \[ \text{GDP}_{dr} = \text{Remit}_{dr} + \text{Tourism}_{dr} + \text{Maquila}_{dr} + \text{Non-traditionals}_{dr} \]
Dominican Republic: Remittances, non-trad exports, tourism, and maquila

<table>
<thead>
<tr>
<th>Year</th>
<th>Remittances</th>
<th>Tourism</th>
<th>Non-trad.</th>
<th>Maquila</th>
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Quarterly flows 93-03

- Remittances: $5,000,000,000
- Tourism: $3,000,000,000
- Non-trad: $2,000,000,000
- Maquila: $1,000,000,000

Beta (Unstandardized):
- Remittances: 0.368
- Tourism: 0.333
- Non-trad: -0.164
- Maquila: 0.01536

Beta (Standardized):
- Remittances: 0.486
- Tourism: 0.368
- Non-trad: 0.286
- Maquila: 0.06

r²: 0.4
adj. r²: 0.27
The national income equation in Latin America: a rent seeking and courtesan state?

\[ \text{GDP: } (X-M) + I + G + C \]

- Maquila, Tourism, Non-traditional exports
  - Transportation, Telecommunication, Nostalgic Trade

- Domestic Savings - Investment
- Foreign Savings - Investment

- FDI: Transnational capital, migrant capital investment
  - Technology Transfer
  - Unilateral Transfers

- ODA - Bilateral & Multilateral
- Private Donations
  - Foundations, PPOs, HTAs
- Worker Remittances
Immigrant economic practices
(annual expenses)

- **Family remittances**
  - Household economy (US$270)

- **Donations**
  - Community (US$10,000 year)

- **Consumption**
  - Trade and services retail (US$3,000)

- **Capital investment**
  - Property and other I (US$5,000)
Policy implications

• Remittances respond to economic indicators, particularly inflation.
• They also conform to micro-determinants to provide basic assistance to as many people as possible;
• These efforts do contribute to economic growth and reflect a counter cyclical behavior
• An economic policy that seeks to increase migrant foreign savings and investment to stimulate the economy can induce a response of remittances to other indicators like interest rates.
• This also calls attention that remittances play an important role in increasing domestic consumption without dramatically affecting an increase in imports;
Remittance recipient households