Student Research Symposium

May 2nd, 1:00 PM - 3:00 PM

Do Remittances Promote or Deter Sound Fiscal Management Among Municipalities in Mexico?

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Do Remittances Promote or Deter Sound Fiscal Management Among Municipalities in Mexico?

Jennifer Martinez
Public Affairs and Policy Doctoral Student
Portland State University Symposium
May 2, 2018
What is a Remittance?
History of Failed Decentralization

Decentralization: the delegation of power from a central authority to regional and local authorities (Merriam-Webster).

- **Fiscal Coordination Law 1978**
  - Strengthened State-Local revenue sharing

- **Constitutional amendment** aimed at local governments (Article 15)
  - Power to administer basic services
  - own-source revenues

Source: Inegi.org.mx
Two Stark Narratives

**Municipal Tax Revenue**

- Municipal revenues only 0.2% of Mexico’s GDP.
- Own-source revenues are only 7 percent of the total municipal revenue portfolio (Smith 2015).
- Property tax lowest in OECD countries (OECD 2015).

**Remittances**

- Remittances make-up 2% of Mexico’s GDP (World Bank 2016).
- In 2000 over a million Mexican households received remittances (INEGI 2000).
Determinants of a Poor Fiscal System

- Political unwillingness
- Weak institutional frameworks
- Poor administrative quality
- Negative citizen perceptions
- High collection costs

Map Source: Inegi.org.mx
Why Does it Matter?

Sound Fiscal Management

- Bonded Debt Capacity: 12.0%
- Democratization: 38.0%
- Fiscal Autonomy: 26.0%
- Public Services: 24.0%
Contestation in Remittance Scholarship

1st

- Spent on “Daily Consumption”
- Damaging economic and social development

(De Hass 2010; Durand, Kandel, and Parrado 1996, 424; Wise and Marquez Covarrubias 2008).

2nd

- Enable “capital” and “professional” investments
- Rudimentary institution for asset building and risk


3rd

- Success of remittances constrained by overall economic context of country.
- Exacerbate impacts of macroeconomic structural policies in North and South

(Canales 2000; Corona 2001; Delgado Wise and Rodrigues 2001).
North and South Differences
Research Questions

1. Is there a relationship between remittance income and municipal tax revenues throughout the 31 states?
2. Does the relationship change when comparing northern-border states to southern states?

Hypotheses:

Ho: No relationship exists between remittance and municipal tax revenue.

Ho: No difference exists between north and south municipal tax revenues.
Methods

- **Time series 2003-2016**
  - Municipal tax-revenue aggregated at state level
  - Remittance data by State
  - Adjusted to per capita terms
  - Dichotomous variable referencing Northern-Border States

- **T-Test and Multiple Regression Test**

- **Data Sources**
  - INEGI
  - Banco de México

\[ Y(\text{Muni Tax Revenue}) = a + b_1 X_1 \text{ (Remittance Income)} + b_2 X_2 \text{ (Northern-Border State)} \]
Existing Research

- Indirect and multiplier effects in local economy and overall fiscal composition of government (Durand, Parrado, Massey 1996).
- State level impacts of VAT and show remittance expand size of state (SInger 2012)
- Three-for-One Program allow municipalities to change spending behavior according to electoral cycle and underutilize debt capacity (Simpser, Duquette-Rury Hernandez, Ibarra (2016).
- Remittances crowd-out municipal federal transfers (Ambrosius 2016)
Chart 1. Scatter Plot

Municipal Revenue Taxes (Y) vs. Remittances (X)
Statistically Significant Difference between N&S

T-Test Results:

Remittances, P value 2.43478E-06

Muni-Tax Revenues, P value 5.3397E-38
Multiple Regression Findings

Regression Statistics

- Multiple R: 0.450351
- R Square: 0.202816
- Adjusted R Square: 0.199117
- Standard Error: 112.3539
- Observations: 434

ANOVA

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<th>SS</th>
<th>MS</th>
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Coefficients

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<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
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<th>Upper 95.0%</th>
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<td>Intercept</td>
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<td>32.61635</td>
<td>1.8E-118</td>
<td>254.0296</td>
<td>286.6088</td>
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<td>Remittances per capita</td>
<td>-0.1159</td>
<td>0.0191298</td>
<td>-6.03889</td>
<td>3.35E-09</td>
<td>-0.15363</td>
<td>-0.07818</td>
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<td>Northern Border Reference</td>
<td>-103.067</td>
<td>13.83843606</td>
<td>-7.44788</td>
<td>5.22E-13</td>
<td>-130.266</td>
<td>-75.8678</td>
<td>-130.266</td>
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Prediction
DV explained by Model

Statistically Significant
Multiple Regression Findings

\[ Y(\text{Muni Tax Revenue}) = 270 + -0.11X_1 \text{ (Remittance Income)} + (-103)X_2 \text{ (N.State)} \]

- **For every MX$1 tax revenue MX-$0.12 in remittance.**
- **For every MX$1 in tax revenues, Northern Border states receives MXN$103 less.**
Final Remarks

Findings

- Remittance may act as a subsidy to municipal tax
- Northern-Border states are not better tax collectors and receive significantly more remittance income

Limitations

- Include Immigration as a control variable
- Leave in the municipal richness

Implications

- Further explore remittances on northern-border
- Explore property tax frameworks