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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

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Portland State University Symposium

May 2, 2018

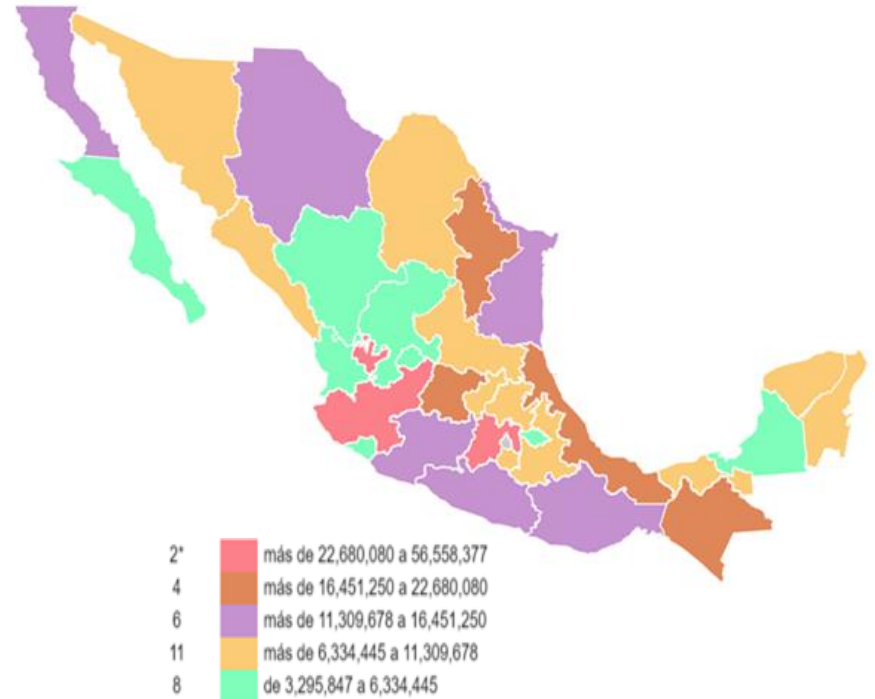
What is a Remittance?



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



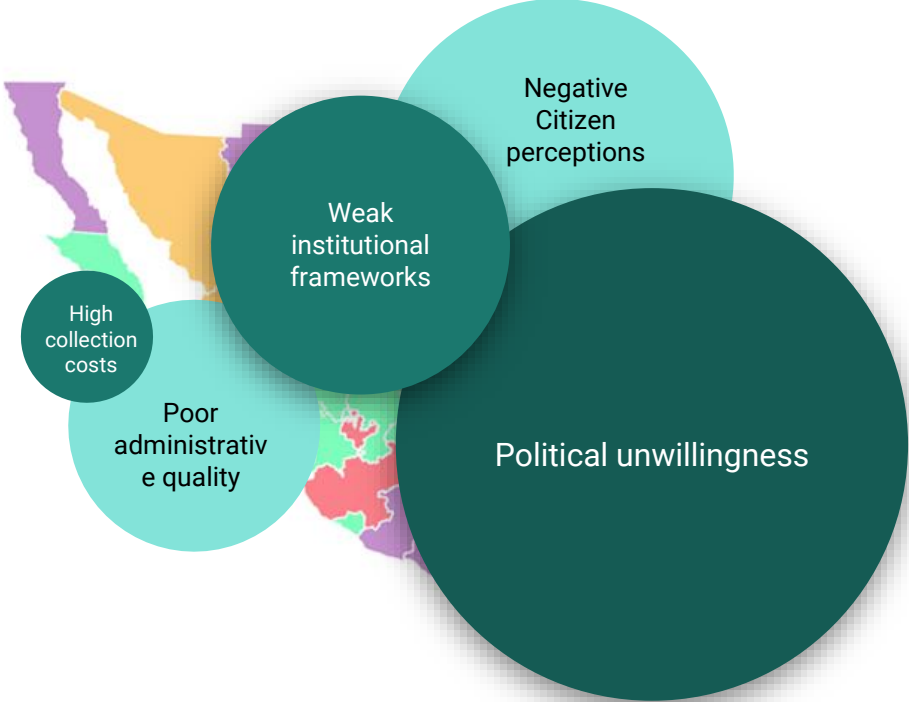
- Municipal revenues only .2% of Mexico's GDP.
- Own-source revenues are only 7 percent of the total municipal revenue portfolio (Smith 2015).
- Property tax lowest in OECD countries (OECD 2015).

Remittances



- Remittances make-up 2% of Mexico's GDP (World Bank 2016).
- In 2016 remittances reached an all-time high of US\$26.97 billion (BBVA Bancomer 2017).
- In 2000 over a million Mexican households received remittances (INEGI 2000).

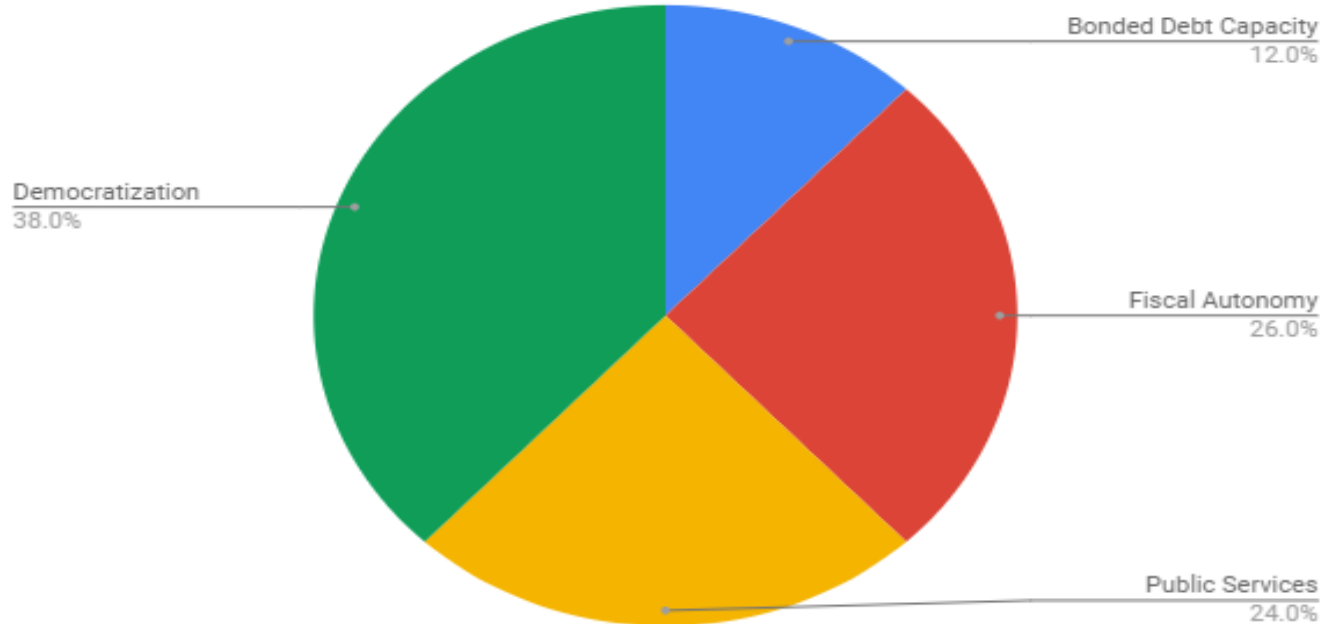
Determinants of a Poor Fiscal System



Map Source: Inegi.org.mx

Why Does it Matter?

Sound Fiscal Management



Contention in Remittance Scholarship

1st

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

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

2nd

(Adams and Cuecha 2010; Hanson and Woodruff 2003; Edwards, and Ureta 2003; Amuedo-Dorantes and Pozo 2009; Valero and Trevino 2010; Woodruff 2007; Ambrius 2012).

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

3rd

(Canales 2000; Corona 2001; Delgado Wise and Rodrigues 2001).

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

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

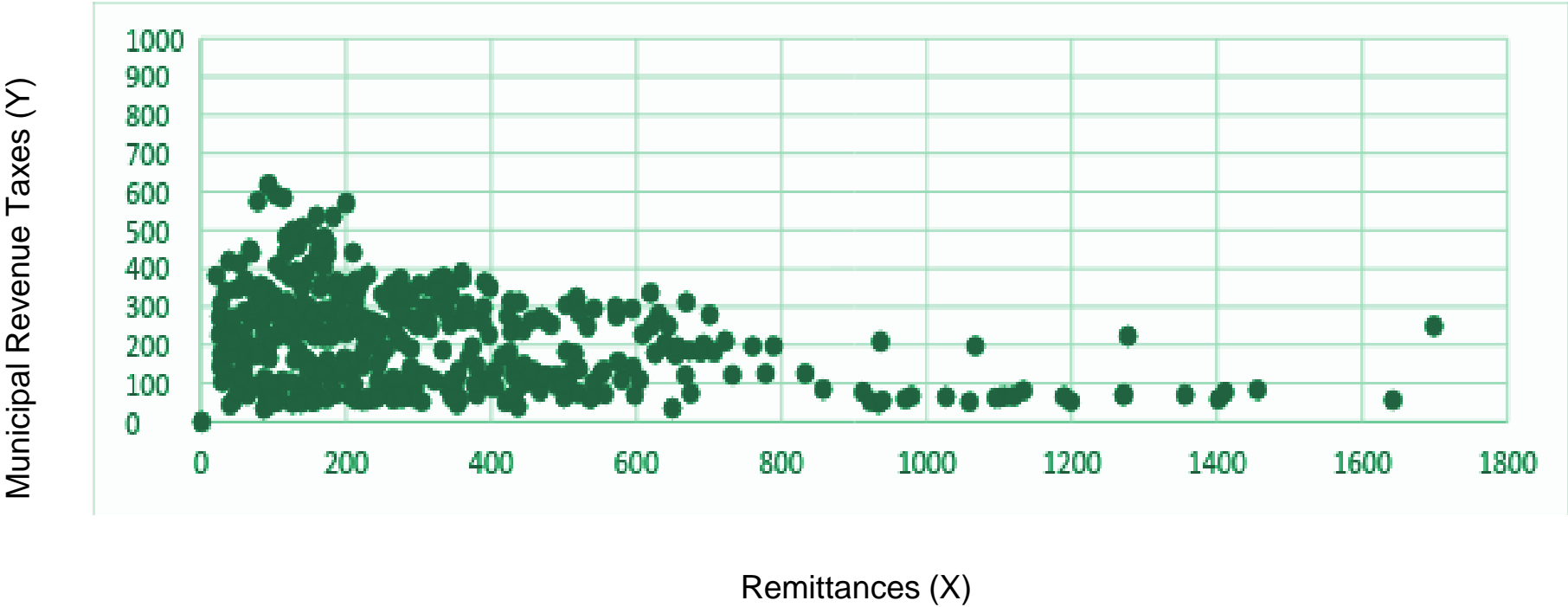
- Time series 2003-2016
 - Municipal tax-revenue aggregated at state level
 - Remittance data by State
 - Adjusted to per capita terms
 - Dichotomous variable referencing Northern-Border States
- T-Test and Multiple Regression Test
- Data Sources
 - INEGI
 - Banco de México

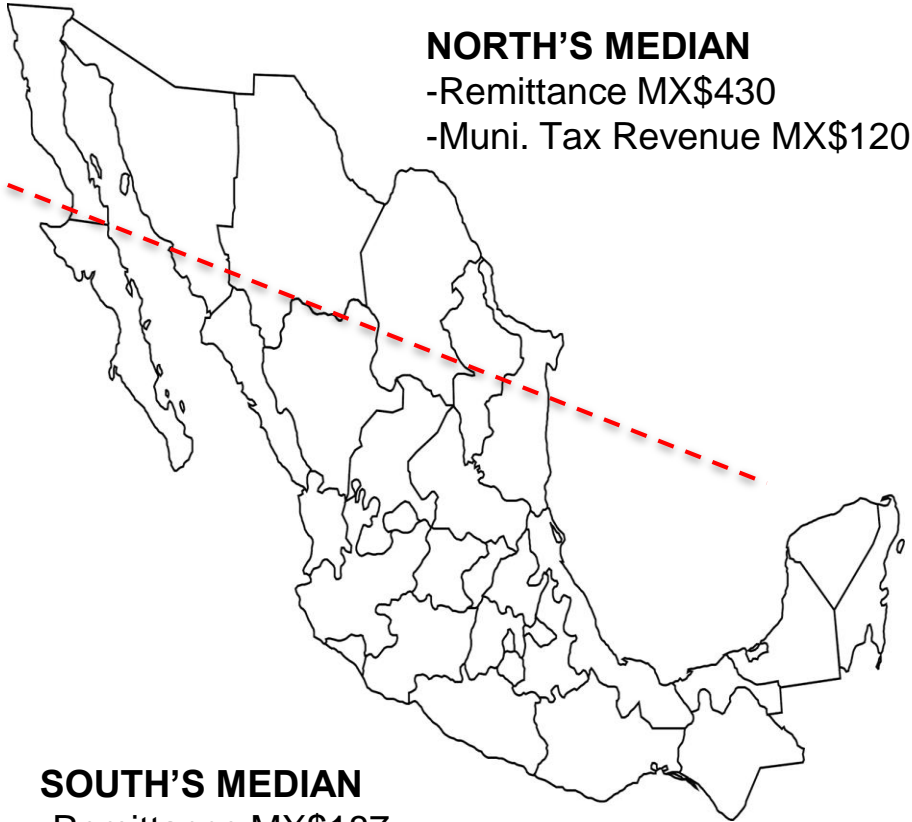
$$Y(\text{Muni Tax Revenue})=a+b_1X_1 (\text{Remittance Income})+b_2X_2 (\text{Northern-Border State})$$

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 (Slinger 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





NORTH'S MEDIAN
-Remittance MX\$430
-Muni. Tax Revenue MX\$120

SOUTH'S MEDIAN
-Remittance MX\$187
-Muni. Tax Revenue MX\$243

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	<u>0.450351</u>
R Square	<u>0.202816</u>
Adjusted R Square	0.199117
Standard Error	112.3539
Observations	434



Prediction



DV explained by Model

ANOVA

	df	SS	MS	F	Significance F
Regression	2	1384196.558	692098.3	54.82662	<u>6.11E-22</u>
Residual	431	5440685.041	12623.4		
Total	433	6824881.599			



Statistically Significant

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	270.3192	8.287843254	32.61635	1.8E-118	254.0296	286.6088	254.0296	286.6088
Remittances per capita	<u>-0.1159</u>	0.01919298	-6.03889	<u>3.35E-09</u>	-0.15363	-0.07818	-0.15363	-0.07818
Northern Border Reference	<u>-103.067</u>	13.83843606	-7.44788	<u>5.22E-13</u>	-130.266	-75.8678	-130.266	-75.8678

Multiple Regression Findings

$$Y(\text{Muni Tax Revenue}) = 270 + -.11X_1 (\text{Remittance Income}) + (-103)X_2 (\text{N.State})$$

- **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