Our Piece of the Pie

The Distribution of State Funds to Municipalities Across New Jersey Regions

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Building Knowledge for Policy and Practice in Southern New Jersey
Motivation

• State funding assistance accounts for almost 25% of all revenue received by all local governments in NJ.

• It serves at least two purposes:
  1. Offsets the cost of providing local governmental services
  2. To lower household property tax bills

• NJ has the highest local property taxes in the entire country.
  • In 2016, the average NJ household paid $8,549 in property taxes.
Motivation

- It is **vital for policymakers and citizens to be aware** of the distribution of state funding assistance.

- State funding assistance is **not necessarily distributed equally** across NJ.

- This is not surprising because not all NJ municipalities are the same:
  - Differences in population
  - Differences in socioeconomic characteristics
  - **Differences in geographic location within state**
Motivation

• Two Quotes on South Jersey vs. North Jersey

“There are two New Jerseys... There are urban hubs, older cities in the north and central jersey with their mix of poverty and prosperity, often sitting side by side with affluent suburbs. And there are the vast rural stretches, including much of the state’s south, with its farming communities and former waterfront factory towns...” – Stainton 2016, NJ Spotlight

“South Jersey is the state’s Rodney Dangerfield. The perception of being slighted is part and parcel of South Jersey’s identity. On the other hand, regional identity doesn’t even seem to be a concern for the rest of the state, which, of course, only further irks South Jerseyans,” – Patrick Murray, director of the Monmouth University Polling Institute.
Beliefs About Fairness by New Jersey Region

Source: Based on data from Monmouth University Poll in 2008
Motivation

- A 2016 Walter Rand Institute study found...
  - **South NJ counties receive significantly less state aid** compared to counties in North and Central NJ

- The current study builds on this previous study by
  - Focusing on NJ municipalities ➔ 563 NJ municipalities
  - Examining longer time period ➔ 9 years between 2008 and 2016
Motivation

- The current study addresses the following research questions:
  
  1. Is there a regional gap in state funding assistance between municipalities in South NJ and non-South NJ?
  
  2. What factors explain why there might be a regional gap?
     - a) Differences in socioeconomic characteristics across NJ regions?
     - b) The source of municipality aid (ETR vs. CMPTRA)?
  
  3. Has the regional gap been increasing or decreasing over the last 9 years?
Motivation

• **Preview of main findings:**

  • On average, a South NJ municipality receives approximately **37% less** state funding assistance compared to non-South NJ.

  • This is mostly explained by differences in population and property wealth between South NJ and non-South NJ.
    ✓ After controlling for these differences, the regional gap disappears for the vast majority of NJ municipalities.

  • However, **the regional gap remains** when examining only the most economically distressed municipalities in NJ.
    ✓ 33% gap in state funding assistance.
Data

• Data comes from **various publicly available data sources**
  • NJ Department of Community Affairs
  • NJ Department of Labor
  • NJ Division of Taxation
  • U.S. Census Bureau and its American Community Survey

• I created a **longitudinal dataset**
  • 5,013 municipality-year observations
    ✓ 563 municipalities
    ✓ 9 years
Data

• **Outcome Variable of Interest → Total State Funding Assistance**

  • NJ Department of Community Affairs (DCA) annually publishes the Certification of State Aid data

    ✓ This data includes all state funding assistance received by each NJ municipality by source

  • **Total Aid is made up of the following sources**

    1. Energy Tax Receipts (ETR) = 76%
    2. Consolidated Municipality Property Tax Relief Act (CMPTRA) = 23%
      ✓ Includes transitional aid
    3. Other sources = 1%
      ✓ E.g. Garden State Trust funds
Data

• Additional details about ETR and CMPTRA
  • **Energy Tax Receipts (ETR)**
    ✓ Taxes on utilities collected by the state on behalf of NJ municipalities
    ✓ Distribution is based on historic values of utility property and equipment in a municipality.
    ✓ ETR must increase with inflation every year

• **Consolidated Municipality Property Tax Relief Act (CMPTRA)**
  • State government is not forced to increase CMPTRA annually
Which NJ counties are in the South?
Research Questions

The current study addresses the following research questions:

1. Is there a regional gap in state funding assistance between municipalities in South NJ and non-South NJ?

2. What factors explain why there might be a regional gap?
   a) Differences in socioeconomic characteristics across NJ regions?
   b) The source of municipality aid (ETR vs. CMPTRA)?

3. Has the regional gap been increasing or decreasing over the last 9 years?
On average, a typical South NJ municipality receives 37% less total state funding assistance compared to a typical non-South NJ municipality.
Question #1 - Regional Gap in State Funding Assistance

• Why is there such a large gap?
  • There might be important factors that affect the level of state funding assistance that I’m not controlling for
    ✓ The size of the municipality (i.e. population)
    ✓ Property tax base
    ✓ Income levels of residents
    ✓ Willingness to tax
    ✓ Demographics
    ✓ Economic distress levels

• It’s possible that NJ regions differ across these factors
Research Questions

The current study addresses the following research questions:

1. Is there a regional gap in state funding assistance between municipalities in South NJ and non-South NJ?

2. What factors explain why there might be a regional gap?
   a) Differences in socioeconomic characteristics across NJ regions?
   b) The source of municipality aid (ETR vs. CMPTRA)?

3. Has the regional gap been increasing or decreasing over the last 9 years?
Question #2a - What Factors Explain this Gap?

Does total state funding assistance depend on population?

- Yes, there is a positive relationship.
- 10% ↑ in population ➔ 7.2% ↑ in total aid

Is there a difference in total population across NJ regions?

- Yes, the average South NJ municipality has 42% less residents compared to the average non-South NJ municipality.
Yes! There is a positive relationship.

10% ↑ in property values → 2.8% ↑ in total aid.

Yes, the average South NJ municipality has 37% lower property values compared to the average non-South NJ municipality, even after controlling for population.

Is there a difference in total property values across NJ regions?
Question #2a - What Factors Explain this Gap?

- What other factors may explain differences in total state funding assistance?
  - Median Household Income ➔ negative relationship
  - Property Tax Rate (high vs. medium vs. low) ➔ positive relationship
  - Demographics (e.g. race)

- What happens to the regional gap after controlling for these factors?
After controlling for differences in Population, Property values, Median Household Income, Property Tax Rates, Race Demographics, Age Demographics, and Population Density, on average, a typical South NJ municipality receives 5% less total state funding assistance compared to a typical non-South NJ municipality.
Question #2a - What Factors Explain this Gap?

- What does this tell us?
  - There is no evidence of a regional gap when comparing the average South and non-South NJ municipality that similar values for

- Population
- Property Values
- Demographics (e.g. Race and Age)
- Median Household Incomes
- Property Tax Rates
Question #2a - What Factors Explain this Gap?

• What about the differences in economic distress across NJ regions?
The Distribution of Economically Distressed Municipalities

**Economic Distress Index** is a composite of

- Unemployment Rate
- % Residents w/ BA Degree or higher
- % Residents w/ less than HS Degree
- Child Poverty Rate
Yes! There is a positive relationship.

1 SD ↑ in economic distress level → 10% ↑ in total state funding assistance.
Question #2a - What Factors Explain this Gap?

After controlling for differences in:
- Population
- Property values
- Median Household Income
- Property Tax Rates
- Race Demographics
- Age Demographics
- Population Density

Economic Distress Levels

On average, a typical South NJ municipality receives 12% less total state funding assistance compared to a typical non-South NJ municipality.
Question #2a – What Factors Explain this Gap?

- **Why does the regional gap reappear after controlling for economic distress levels?**

- I examine this result further by estimating the regional gap in three ways:
  - Including **all** NJ municipalities in the sample
  - Including **only** NJ municipalities below the 90th percentile
  - Including **only** NJ municipalities above the 90th percentile
Top 10% Economically Distressed Municipalities

Economic Distress Index is a composite of

- Unemployment Rate
- % Residents w/ BA Degree or higher
- % Residents w/ less than HS Degree
- Child Poverty Rate
Question #2a - What Factors Explain this Gap?

Regional Gap by Economic Distress level

All NJ Municipalities  |  Below 90th Percentile  |  Above 90th Percentile

The regional gap only exists when comparing the poorest South NJ and non-South NJ municipalities.
Question #2a - What Factors Explain this Gap?

Regional Gap by Economic Distress level
Question #2a – What Factors Explain this Gap?

- **Summary of main findings**

  - On average, a South NJ municipality receives approximately 37% less state funding assistance compared to non-South NJ.

  - This is mostly explained by differences in population and property wealth between South NJ and non-South NJ.
    - After controlling for these differences, the regional gap disappears for the vast majority of NJ municipalities.

  - However, the regional gap remains when examining only the most economically distressed municipalities in NJ.
    - 33% gap in state funding assistance.
Research Questions

The current study addresses the following research questions:

1. Is there a regional gap in state funding assistance between municipalities in South NJ and non-South NJ?

2. What factors explain why there might be a regional gap?
   a) Differences in socioeconomic characteristics across NJ regions?
   b) The source of municipality aid (ETR vs. CMPTRA)?

3. Has the regional gap been increasing or decreasing over the last 9 years?
Question #2b - Regional Gap by Source of State Aid

- Total state funding is made up of two main sources
  - Energy Tax Receipts (ETR) ≈ 76% of all state aid
  - Consolidated Municipality Property Tax Relief Act (CMPTRA) ≈ 23%

- Is the regional gap a result of disparities in both sources, or a disparity in only one particular source?
  - Unlike ETR, CMPTRA does not have to increase with inflation every year
  - This implies that state changes (increases or decreases) to CMPTRA over time are relatively more discretionary than ETR
  - Also, CMPTRA includes transitional aid
The **regional gap is almost entirely the result of regional disparities in CMPTRA.**
Research Questions

The current study addresses the following research questions

1. Is there a regional gap in state funding assistance between municipalities in South NJ and non-South NJ?

2. What factors explain why there might be a regional gap?
   a) Differences in socioeconomic characteristics across NJ regions?
   b) The source of municipality aid (ETR vs. CMPTRA)?

3. Has the regional gap been increasing or decreasing over the last 9 years?
Question #3 - Regional Gap over time - All NJ Municipalities

No evidence of a change in regional gap for any of the years between 2009 and 2016
It appears the regional gap is getting larger following FY 2008.

Lack of statistical power prevents a reliable statistical inference test.
Conclusions

• Summary of Main Findings

  • A regional gap in state funding assistance exists only for the most economically distressed municipalities in NJ
    ✓ Economically distressed in South NJ receive about 33% less compared to non-South NJ
    ✓ No evidence of a regional gap for NJ municipalities with low to medium levels of economic distress

  • This regional gap is the result of disparities in CMPTRA funding
    ✓ No evidence of a disparity in Energy Tax Receipts

  • The regional gap has been increasing since FY 2008
Conclusions

How much would it cost to close this regional gap?

A 3% increase in total state funding assistance and target it to the most economically distressed municipalities in South NJ

How did I calculate this?

1. Total State Aid received by Top 10% poorest South NJ municipalities between 2008 and 2016
   = $1,228,347,000

2. Multiply that by 33%
   = $1,228,347,000 \times 33\% = $372,384,100

3. Total State Aid received by all NJ municipalities between 2008 and 2016
   = $12,352,660,000

4. Divide Answer from Step #2 and Step #3
   = 372,384,100 / 12,352,660,000 = 3.01\%
Top 10% Economically Distressed Municipalities

Economic Distress Index is a composite of:

- Unemployment Rate
- % Residents w/ BA Degree or higher
- % Residents w/ less than HS Degree
- Child Poverty Rate

Legend

Economic Distress Index
- Below the 90th Percentile
- Above the 90th Percentile
Conclusions

• **Limitations**
  
  • Dataset only includes information starting in FY 2008
  
  • No data on historical values of utility equipment and properties
  
  • Study does not control for differences in political influence across NJ regions
  
  • The results can only suggest disparities, not unfairness
Conclusions

• **Policy Implications**

  • **Step #1:** South NJ policymakers should determine whether or not the regional gap is the result of
    1. A set of state-level policies designed to increase economic development in North NJ
    2. An unintended outcome of the current system
    3. Maybe a combination of (1) and (2)?

  • **Step #2:** Propose changes to the current formula
    1. CMPTRA funding is most responsible for the regional gap
    2. The ETR funds are based on historical values of utility equipment and property
    3. Why is there a positive relationship between property values and state aid?
Thank you!

Please visit the Walter Rand Institute website for a copy of the report

rand.camden.rutgers.edu
Bonus Slides

1. Graph #1 - Municipality Aid per Resident
2. Methodology
3. Most Economically Distressed Municipalities in South NJ
4. Most Economically Distressed Municipalities in non-South NJ
5. Main Result Figure
The Distribution of Total Aid per Capita across NJ
Methodology

• Given these significant socioeconomic differences across NJ regions...

• It would be inappropriate to compare South vs. non-South, without controlling for these differences

• Therefore, I use regression analysis
Methodology

I estimate following baseline equation by Ordinary Least Squares (OLS)

\[ Y_{it} = \alpha + \gamma South_i + \beta X_{it} + \theta_t + \varepsilon_{it} \]

- \( i \) and \( t \) index municipality and year
- \( Y \) is the natural log of total aid
- \( X \) is a vector the includes a set of control variables
- \( \theta \) is a year fixed effect (FE)
- \( \varepsilon \) is an idiosyncratic error term
Methodology

• The coefficient of interest is $\gamma$
  • It is the estimate of the percentage difference in total aid between municipalities in South NJ and non-South NJ

• Since the distribution of total aid is highly skewed, it is appropriate to transform the total aid variable by taking the natural log.

• Standard errors are clustered at the municipality-level, which makes inference robust to arbitrary serial correlation within municipalities
Most Economically Distressed - South NJ

1. Camden City
2. Salem City
3. Bridgeton City
4. Woodbine Borough
5. Penns Grove Borough
6. Wildwood City
7. Atlantic City
8. Seaside Heights Borough
9. Pleasantville City
10. Paulsboro Borough
Most Economically Distressed - non-South

1. Paterson City
2. Passaic City
3. Newark City
4. Trenton City
5. Perth Amboy City
6. Asbury Park City
7. Union City
8. New Brunswick City
9. Elizabeth City
10. Plainfield City
Question #2a – Regional Gap in State Funding Assistance

Regional Gap by Economic Distress level

- Log of State Funding Assistance vs. Econ Distress Index
- Gray markers for Non-South NJ
- Red markers for South NJ