State Aid to Municipalities: Measuring Local Non-School Fiscal Distress and Designing an Aid Formula

Bo Zhao and Katharine Bradbury
Federal Reserve Bank of Boston

Financing Municipalities in New England: Revisiting the State-Local Relationship

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The views expressed here are not necessarily those of either the Federal Reserve Bank of Boston or the Federal Reserve System.
Municipal fiscal distress and state aid

- Municipal fiscal distress: not enough local revenue to meet increasing demand for service needs

- A potential revenue solution: increase state aid

- Existing state aid formulas may not address local fiscal distress appropriately.
Developing a new basis for municipal aid

- Achieve fiscal equalization: give more aid to needier communities

- Currently look at municipal (non-school) aid, but it may be applied to education aid.

- Use Massachusetts as study subject, but the research framework, methods, and policy principles are potentially applicable to other states.
How best to distribute local aid?

- **Step 1:** measure local fiscal distress
  - measure local unavoidable costs
  - measure local revenue-raising capacity
  - The gap between costs and capacity indicates severity of distress

- **Step 2:** design an aid formula to address the gaps
  - allocate aid in proportion to the gap
Unavoidable costs

- Unavoidable costs: costs outside the control of local government
  - not actual spending
  - determined by local social and economic characteristics

- Example:
  A community with more jobs per capita needs to spend more on services for commuters, such as traffic lights, plowing, road maintenance, and police and fire protection.
Cost factors

- Use statistical techniques to identify cost factors and quantify their impact

- Higher costs associated with higher
  - population density
  - unemployment rate
  - population size
  - jobs per capita
  - poverty rate
## Cost measure for prototype communities

<table>
<thead>
<tr>
<th>Cost Factors</th>
<th>Average Community</th>
<th>Large City</th>
<th>Rural Town</th>
<th>Job-Center Suburb</th>
<th>Higher-Income Residential Suburb</th>
<th>Resort Town</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population density</td>
<td>1.26</td>
<td>8.00</td>
<td>0.08</td>
<td>1.50</td>
<td>0.90</td>
<td>0.24</td>
</tr>
<tr>
<td>Population size (in logarithm)</td>
<td>9.00</td>
<td>11.50</td>
<td>7.50</td>
<td>10.20</td>
<td>9.00</td>
<td>8.60</td>
</tr>
<tr>
<td>Poverty rate</td>
<td>6.00</td>
<td>18.90</td>
<td>5.00</td>
<td>3.70</td>
<td>2.60</td>
<td>6.50</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>2.61</td>
<td>4.30</td>
<td>2.70</td>
<td>1.80</td>
<td>1.20</td>
<td>2.60</td>
</tr>
<tr>
<td>Jobs by place of work per resident</td>
<td>0.37</td>
<td>0.35</td>
<td>0.20</td>
<td>1.00</td>
<td>0.22</td>
<td>0.53</td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td><strong>$799</strong></td>
<td><strong>$1,224</strong></td>
<td><strong>$682</strong></td>
<td><strong>$918</strong></td>
<td><strong>$657</strong></td>
<td><strong>$813</strong></td>
</tr>
</tbody>
</table>
Local revenue capacity

- Local revenue capacity: ability of local government to raise revenue from local sources

- A measure of revenue capacity should reflect:
  - resources city or town government can tap
  - constraints on tapping resources, such as tax limitations
  - not local government choices or behavior (not actual revenues).
Property tax capacity

- Use statistical techniques to measure property tax capacity

- Residential property tax capacity
  - increases with residential property tax base,
  - and the ability to tap into that tax base under Prop 2½ increases with residents’ income.

- Non-residential property tax capacity
  - increases with non-residential property tax bases.
Other local revenue capacity

- Other capacity: e.g., hotel-motel excise, motor vehicle excise

- Subtract the capacity dedicated to non-municipal purposes
  - Examples: required local funds for public schools and regional transit.

Local non-school revenue capacity = 
property tax capacity + other capacity 
− capacity dedicated to non-municipal purposes
## Capacity measure for prototype communities

<table>
<thead>
<tr>
<th>Property Tax Capacity Factors:</th>
<th>Average Community</th>
<th>Large City</th>
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<tbody>
<tr>
<td>Per capita residential property value</td>
<td>78,786</td>
<td>23,400</td>
<td>50,500</td>
<td>70,500</td>
<td>145,500</td>
<td>250,000</td>
</tr>
<tr>
<td>Per capita income</td>
<td>27,233</td>
<td>17,100</td>
<td>22,900</td>
<td>35,000</td>
<td>54,000</td>
<td>28,300</td>
</tr>
<tr>
<td>Per capita non-residential property value</td>
<td>17,211</td>
<td>6,400</td>
<td>8,100</td>
<td>30,000</td>
<td>6,000</td>
<td>26,500</td>
</tr>
<tr>
<td>Property Tax Capacity</td>
<td>1,212</td>
<td>460</td>
<td>794</td>
<td>1,403</td>
<td>1,915</td>
<td>2,493</td>
</tr>
<tr>
<td>Other Local Revenue Capacity</td>
<td>115</td>
<td>55</td>
<td>96</td>
<td>140</td>
<td>140</td>
<td>225</td>
</tr>
<tr>
<td>Capacity Dedicated to Non-Municipal Purposes</td>
<td>650</td>
<td>250</td>
<td>525</td>
<td>915</td>
<td>1,100</td>
<td>825</td>
</tr>
<tr>
<td>Capacity</td>
<td>677</td>
<td>265</td>
<td>365</td>
<td>628</td>
<td>955</td>
<td>1,893</td>
</tr>
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Gap = costs - capacity

### Gap measure for prototype communities

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<td>955</td>
<td>1,893</td>
</tr>
<tr>
<td><strong>Gap</strong></td>
<td>122</td>
<td>959</td>
<td>317</td>
<td>290</td>
<td>-298</td>
<td>-1,080</td>
</tr>
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- Individual cities and towns across the state show a wide range of fiscal gaps.
Aid formula framework

- Design of an equalizing formula:
  - allocate new aid in proportion to the gap, channeling more funds to communities with more distress
  - provide an aid floor, recognizing that all communities face fiscal challenges
Aid distribution through the formula

The slope reflects the fraction of the relative gap that aid fills.
An example of policy tradeoff

The impact of increasing aid floor on aid distribution

- aid per capita
- gap cutoff
- gap per capita

- higher aid floor
- lower aid floor
General principles for setting policy variables

- Aid floor: set as a constant percentage of statewide per capita new aid pool
- Gap cutoff: consider what share of communities should be eligible for more than aid floor
- Total aid pool: achieve a balance between stability and responsiveness to changes in local needs
Treatment of existing aid while holding harmless

- Holding harmless: existing aid (other general-purpose aid; prior year’s “new” aid) is guaranteed in future years.

- Policymakers may choose to consider combined existing and new aid in filling the gap.

- By doing so, new aid is more targeted to communities having higher gaps but receiving less or no existing aid—achieve more equalization.
Multi-year simulations of combined existing and new aid

![Graph showing multi-year simulations of combined existing and new aid. The graph plots gap per capita on the x-axis and aid per capita on the y-axis. The data points are color-coded by year, with different markers for existing aid, year one, year two, year three, year four, and year five.](image-url)
Another potential revenue solution: local option taxes

States face fiscal challenges too. With competing budget priorities, they may not be able to increase aid very much.

However, when states decide to add more total aid dollars, they may consider adopting a gap-based equalization aid formula to address local fiscal distress.