Indexing Urban Prosperity Risk & Evaluating Multi-Scalar Economic Development: Spatial Patterns of Economic Growth & Social Equity in Eastern U.S. Mid-sized Metropolitan Areas

Presented by

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Overview

• U.S. Regional and Urban Prosperity Risk
• Geographical Selection
• Prosperity Risk and Economic Vulnerability Indexes
• Data Analysis & Multi-Level Modeling
• National & Regional Patterns
• Lowest & Highest Risk Urban Areas by Region
• Scranton, Pennsylvania Case Study
• Future Research Questions & Collaboration
U.S. Regional and Urban Prosperity Risk

Urban areas differ greatly in their exposure to economic change, their trajectory toward recovery and growth, and the extent to which development and equity are paired. Some of this differentiation can be explained by regional dynamics, policies, and migration flows that influence the composition of economic activity, land use, and population characteristics. Simultaneously, the fortunes of center cities are known to often correlate with metropolitan characteristics, yet the interaction of socio-spatial conditions with multi-level governance and development processes, particularly with respect to how prosperity is shared across municipal lines and is distributed among communities, is under-researched.
Geographical Selection

- 117 Metropolitan Areas in Eastern United States
- 4 U.S. Census Regions (Excluding West)
- Mid-Size Populations: 250,000 – 2,500,000

Prior research found the West region had significantly less economic stress in metropolitan areas (St. Clair, Wial, & Wolman, 2012). Further, of the 79 counties that experienced a substantial shift of more than 20% in manufacturing share of employment from 1970 to 2016 (Berube & Murray, 2018), 76 are outside the West region. The goal of the parameters is to be able to compare more and less successful places among and within common economic, cultural, and political contexts.
INDEXES

Prosperity Risk

5 Characteristics
- Municipal Fragmentation
- Geographic Sprawl
- Racial Segregation
- Economic Inequality
- Poverty

4 Spatial Scales
- City
- County
- Urbanized Area
- Core-Based Statistical Area

Economic Vulnerability

Inverted Economic Performance Data from Brookings Institute

County Scale
Population Change
Change in Share of Manufacturing Employment (1970-2016)

https://www.brookings.edu/research/older-industrial-cities/#01073
Data Analysis & Multi-Level Modeling

• City-county-urbanized area-CBSA is a one-to-one join
  ▫ Largest city in each metro area is included
  ▫ e.g. not including Kenosha outside of Milwaukee or Troy outside of Detroit
• 5 characteristics each indexed by sum of z-scores for constituent variables
• Ranks by Census regions and urban areas
• Regression models by region with individual indices against economic performance.
Example: Fragmentation & Economic Vulnerability
National & Regional Patterns

• National Trends
  ▫ **High economic growth linked with high equity/low prosperity risk**
    • Consistent with Benner, 2015, et. al.
  ▫ More segregation and poverty equate with more economic vulnerability

• Regional Patterns
  ▫ **Barriers to prosperity manifest in dissimilar forms**
  ▫ Midwest, Northeast, and South Atlantic fragmentation and sprawl are associated with economic vulnerability
  ▫ South Central region racial segregation is associated with economic vulnerability
## Lowest Risk Urban Areas by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Fragmentation</th>
<th>Sprawl</th>
<th>Segregation</th>
<th>Inequality</th>
<th>Poverty</th>
<th>PRIMED Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>Manchester, NH (21)</td>
<td>Binghamton, NY (16)</td>
<td>Atlantic City, NJ (2)</td>
<td>Norwich, CT (23)</td>
<td>Portland, ME (10)</td>
<td>Portland, ME (10)</td>
</tr>
<tr>
<td>Midwest</td>
<td>Lincoln, NE (8)</td>
<td>Lincoln, NE (5)</td>
<td>Ann Arbor, MI (7)</td>
<td>Toledo, OH (2)</td>
<td>Cedar Rapids, IA (2)</td>
<td>Lincoln, NE (1)</td>
</tr>
<tr>
<td>South Atlantic</td>
<td>Jacksonville, FL (7)</td>
<td>Tallahassee, FL (10)</td>
<td>Naples, FL (1)</td>
<td>Ocala, FL (3)</td>
<td>Naples, FL (1)</td>
<td>Raleigh, NC (5)</td>
</tr>
<tr>
<td>South Central</td>
<td>Laredo, TX (1)</td>
<td>Laredo, TX (1)</td>
<td>College Stn., TX (3)</td>
<td>Chattanooga, TN (1)</td>
<td>Austin, TX (12)</td>
<td>Austin, TX (6)</td>
</tr>
</tbody>
</table>
## Highest Risk Urban Areas by Region

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<th>Region</th>
<th>Fragmentation</th>
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<th>Poverty</th>
<th>PRIMED Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>Scranton, PA (1)</td>
<td>Atlantic City, NJ (1)</td>
<td>Hartford, CT (1)</td>
<td>Hartford, CT (1)</td>
<td>Reading, PA (6)</td>
<td>Reading, PA (1)</td>
</tr>
<tr>
<td>Midwest</td>
<td>Davenport, IA (4)</td>
<td>Duluth, MN (5)</td>
<td>Youngstown, OH (10)</td>
<td>Cleveland, OH (10)</td>
<td>Flint, MI (2)</td>
<td>Flint, MI (3)</td>
</tr>
<tr>
<td>South Atlantic</td>
<td>Salisbury, MD (3)</td>
<td>Cape Coral, FL (2)</td>
<td>Charleston, SC (22)</td>
<td>Columbus, GA (13)</td>
<td>Augusta, GA (10)</td>
<td>Augusta, GA (16)</td>
</tr>
<tr>
<td>South Central</td>
<td>Fayetteville, AR (13)</td>
<td>Fayetteville, AR (20)</td>
<td>Birmingham, AL (16)</td>
<td>McAllen, TX (5)</td>
<td>Brownsville, TX (1)</td>
<td>McAllen, TX (5)</td>
</tr>
</tbody>
</table>
Central City Distress & Regional Inequality

- One disconcerting result of our analysis of 117 mid-sized urban regions is the spatial clustering of areas in the bottom third of both indices.
- These include 29 regions from 20 different states, including numerous older industrial cities in the Midwest and Northeast, such as Buffalo, NY, Flint, MI, Scranton, PA, Trenton, NJ, and Youngstown, OH.
- Part of our larger research agenda is to situate a larger body of work on regional inequality and economic vulnerability in these regions, thus the presence of these cities at the bottom of both indices suggests a framework for additional future work.
Scrapeton, PA

- 175 square miles urbanized
- 335,511 population
- 60% of population in Lackawanna County
- 90% White residents
- 23% in poverty in city
- 64 municipalities in central business statistical area
- Manufacturing employment share lost 30% of total since 1970 (top 20 most nationally)
Scranton, PA Index Rankings

- Ranked 63 out of 117 for most prosperity risk (top half most at risk based on socio-spatial)
- Ranked 109 out of 117 for most economic vulnerability (top 10% most vulnerable)
- Economic performance significantly poorer than prosperity risk index ranking
- Suggests need to examine public policy and institutional features around planning, development, and infrastructure
Future Research Questions & Collaboration

- Regional and local development dynamics
- Identifying policies and practices promoting equitable development
- Contact us about opportunities to utilize the PRIMED data platform

References:

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