Filling in the Gaps

Proprietary Data in Kirwan’s Opportunity Index

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David Norris, Senior Researcher

The Kirwan Institute for the Study of Race and Ethnicity, The Ohio State University
Our time together this morning:

- An overview of Kirwan Institute’s Opportunity Mapping
- Proprietary data in opportunity maps
- Too much of a good thing?
- A few final thoughts
The Kirwan Institute for the Study of Race & Ethnicity
The Ohio State University

The Kirwan Institute works to create a just and inclusive society where all people and communities have opportunity to succeed.
Opportunity Matters: Space, Place, and Life Outcomes

• “Opportunity” is a situation or condition that places individuals in a position to be more likely to succeed or excel.
• Opportunity structures are critical to opening pathways to success:
  - High-quality education
  - Healthy and safe environment
  - Stable housing
  - Sustainable employment
  - Political empowerment
  - Outlets for wealth-building
  - Positive social networks
Systems Thinking: We are all situated within “opportunity structures”

These structures interact in ways that produce racialized outcomes for different groups, but also in ways that influence identity.
Indicators of Opportunity

- Unit of analysis: Census Tract
- Calculate z-score for each indicator group
- Display as quintile map

**Public Education**
- QDI School Proficiency Index
- High School Graduation Rate
- Student/Teacher Ratio
- Student Poverty

**Economics & Mobility**
- Access to Transit
- Access to Automobile
- Job Access
- Average Improvement Value

**Housing**
- Foreclosure Rate
- Vacancy Rate
- Housing Cost Burden
- Housing Insurance Cost

**Socioeconomics**
- Poverty Rate
- Unemployment Rate
- Public Assistance Rate
- Educational Attainment

**Public Health & Security**
- Toxic Release Zones
- Retail Food Environment Index
- Proximity to Parks and Activity Centers
- Fire Hazard Index
- CRS Premium Discount Rate
The Comprehensive Opportunity Map

All measures rolled into a single index value (Opportunity Index)
Diversity Data Kids

- Partnership with Brandeis University
- Mapped 100 largest U.S. metro areas
- Three years in the making
- Child-centric opportunity: includes additional indicators for access to early childhood education

Diversitydatakids.org
## Opportunity Indicators in the Child Opportunity Index

<table>
<thead>
<tr>
<th>Educational Opportunity</th>
</tr>
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<tbody>
<tr>
<td>• Student poverty rates in neighborhood schools (Free/Reduced Price Lunch Eligibility)</td>
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<tr>
<td>• Student math/reading proficiency levels</td>
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<tr>
<td>• Early childhood education (ECE) indicators:</td>
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<tr>
<td>• Proximity to licensed ECE centers and high-quality ECE centers</td>
</tr>
<tr>
<td>• Participation patterns</td>
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<tr>
<td>• High school graduation rates</td>
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<td>• Adult educational attainment</td>
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<th>Health &amp; Environmental Opportunity</th>
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<tbody>
<tr>
<td>• Proximity to health facilities</td>
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<tr>
<td>• Retail healthy food environment index</td>
</tr>
<tr>
<td>• Proximity to toxic waste release sites</td>
</tr>
<tr>
<td>• Volume of nearby toxic release</td>
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<tr>
<td>• Proximity to parks and open spaces</td>
</tr>
<tr>
<td>• Housing vacancy rates</td>
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</tbody>
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<tr>
<td>• Public assistance rates</td>
</tr>
<tr>
<td>• Proximity to employment</td>
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</tbody>
</table>
ESRI Business Analyst Data in the Child Opp Index

Proximity to Health Facilities
- No. of health care facilities in the census tract or within a 2-mile buffer of the tract boundary
- Facilities selected by NAICS code

Retail Healthy Food Environment Index
- mRFEI = 100 x [(No. of healthy food retailers within 1/2-mile buffer from tract boundary) / (Total number of healthy and less healthy food retailers)]
- Retailers selected by NAICS code

Proximity to Parks and Open Spaces
- Distance from tract centroid to nearest park/open space
Issues with BA Business Location Data

Occasional duplicate entries for businesses

Local ground-truthing reveals inaccuracies

- Businesses that have closed
- Businesses that are not included
Issues with BA Business Location Data

So why use it?

• Used to compare one part of region with another
• Assumed that inaccuracies are systematic and so a wash for relative use
• One of 19 indicators in the Index, so individual impact small
• Beyond our capacity to gather these data ourselves
• Verifiable (if someone wants to pay for it)
Too much of a good thing?

A cautionary tale....
Infant Mortality “Hot Spots” in Columbus

Hot Spot Areas (areas with more than 1 infant death per square mile over a five year period)
- A: Hilltop
- B: Franklinton
- C: Morse/161
- D: South Linden
- E: Near East
- F: Near South
- G: Northeast
- H: Southeast

Note: names are for identification purposes only and do not necessarily correspond with exact neighborhood or civic association boundaries
Unique Communities, Tailored Interventions

Low income predominately White communities (urban Appalachian influence) with significant neighborhood distress

- Hilltop
- Franklinton
Unique Communities, Tailored Interventions

Immigrant communities [Hispanic/Latino, African-born Black (Somali)], relatively less neighborhood distress

- Morse Road / 161
- Northeast
- Southeast
Unique Communities, Tailored Interventions

Low income predominately African American communities with significant neighborhood distress

- South Linden
- Near East
- Near South
Infant Mortality “Hot Spots” in Columbus

Questions:
- Where are babies dying?
- What are those neighborhoods like?
- What sorts of outreach and intervention strategies might be effective there?
ODH “Hot Spot” Map Created with Market Analysis Data


- What questions does this map answer?
- What questions CAN this map answer?
Which one is correct?

Much confusion in ODH as policy set for IM/preterm/LBW

Not a DATA failure, per se; rather, a failure to understand the data and what they can, and cannot, say

[Note: Our map shows IM; ODH map shows preterm. Our preterm map (not shown) looks nearly identical to our IM map.]
What is the point?

- Proprietary data used “as is” by naive analysts can create confusion, lead to erroneous results.
- Use this as a “teachable moment”
Final Thoughts on Proprietary Data

• Understand how the data were created
• Get the methodology description if one is available
Final Thoughts on Proprietary Data

- Ground truth the data if possible
  (Do the numbers make sense? Do they fit what I know?)
Final Thoughts on Proprietary Data

- Know and respect the limitations of the data
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