Affordable Housing as a Prerequisite for a Safe, Healthy, Equitable Transportation System: Evidence from a Nationwide Evaluation of Location Efficiency within the Low-Income Housing Tax Credit (LIHTC) Program

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Affordable Housing as a Prerequisite for a Safe, Healthy, Equitable Transportation System: Evidence from a nationwide evaluation of location efficiency within the Low-Income Housing Tax Credit (LIHTC) program

Arlie Adkins, PhD
TREC Transportation Seminar
Portland State University
October 9, 2015
Thank you TREC.
Outcomes: Economic

Low-income households often spend a much higher percentage of income on transportation.
Outcomes: Opportunity

• Spatial mismatch between job centers, affordable housing, and affordable transportation results in more onerous commutes and fewer available jobs.
Outcomes: Health

• Many chronic diseases associated with physical inactivity/activity are more prevalent in low-income individuals

• Low-income people more at risk of health complications from transportation-related air quality problems (asthma)
Outcomes: Health

Prevalence of chronic diseases by annual household income category, males

Outcomes: Health

Prevalence of diabetes, asthma, obesity, and sedentary/inactivity by income

Outcomes: Injury/Death

- Large disparities in fatality rates by race and income

Deaths per 100,000

<table>
<thead>
<tr>
<th>Census Tract Poverty Rate</th>
<th>Deaths per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 5%</td>
<td>3.8</td>
</tr>
<tr>
<td>&gt;5-10%</td>
<td>5.5</td>
</tr>
<tr>
<td>&gt;10-15%</td>
<td>7</td>
</tr>
<tr>
<td>&gt;15-20%</td>
<td>8.3</td>
</tr>
<tr>
<td>&gt;20-25%</td>
<td>9.9</td>
</tr>
<tr>
<td>&gt;25-30%</td>
<td>11.2</td>
</tr>
<tr>
<td>&gt;30%</td>
<td>12.6</td>
</tr>
</tbody>
</table>
Outcomes: Injury/Death

• Large disparities in fatality rates by race and income
• Pedestrian fatality rate for Black and Hispanic men twice than of white men
  – Disparity persists even after controlling for exposure
Outcomes are placed-based. Place is housing-based.

**Built Environment**
- Transit Access
- Infrastructure
- Urban Design
- Destinations
- Density

**Travel Behavior**
- Mode Choice
- Physical Activity
- Safety

**Outcomes**
- Health
- $$$
- Opportunity
- Injury Prevention
Affordable housing is a requirement for an equitable transportation system.
Housing + Transportation

• Increasing acknowledgement that transportation costs need to be considered in calculations of housing costs
• Combined cost of place – “location affordability”
• New tools aimed at helping households make “location affordable” decisions about housing locations
The H+T® Index provides a more complete measure of affordability.

By taking into account the cost of housing as well as the cost of transportation, H+T provides a more comprehensive understanding of the affordability of place.

Dividing these costs by the representative income illustrates the cost burden of housing and transportation expenses placed on a typical household.
But...

Basic rule of urban economics: transportation improvements increase land values.
“An additional one point increase in Walk Score was associated with between a $700 and $3,000 increase in home values.”

“More walkable places perform better economically” in terms of higher office, residential and retail rents; residential sales values; retail revenues.
Increased property values can result in:
– More tax revenue
– Development at higher densities
– Amplification of affordable housing shortage
– Increased vehicle ownership as hh incomes increase
Low-income households priced out

Proportion of respondents who expressed a strong preference for pedestrian accessibility who moved to a “very walkable” neighborhood?

53.4% of higher income respondents

18.4% of low-income respondents
Pedestrian-accessibility by move date

2008 and later moves
- High Income: 0.54
- Low Income: 0.27

Pre-2008 moves
- High Income: 0.35
- Low Income: 0.35
Compared to your previous home, do you expect transportation costs at your new home to increase, decrease, or stay about the same? (N = 344)

- Entire Sample:
  - Decrease: 24.0%
  - Increase: 21.0%

- High Income Group:
  - Decrease: 33.1%
  - Increase: 13.2%

- Low Income Group:
  - Decrease: 13.0%
  - Increase: 26.4%

- Poverty Group:
  - Decrease: 9.1%
  - Increase: 36.4%
Compared to your previous home, do you expect transportation costs at your new home to increase, decrease, or stay about the same? (N = 344)

<table>
<thead>
<tr>
<th>Group</th>
<th>Decrease</th>
<th>Increase</th>
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<td>9.1%</td>
<td>36.4%</td>
</tr>
<tr>
<td><strong>Housing Subsidy Group</strong></td>
<td>23.5%</td>
<td>23.5%</td>
</tr>
</tbody>
</table>
Portland Region Housing Choice Voucher Program Mover Study

• Just completed study with Andree Tremoulet and Ryan Dann

• How do HCV movers in the Portland region fare in terms of LE?
  – In Portland:
    • HCV movers ended up with lower levels of LE than previous home
    • HCV movers had lower LE than non-movers
  – In suburbs:
    • HCV movers LE stayed the same or increased
    • No differences between movers and non-movers
Location Efficiency in the Low-Income Housing Tax Credit (LIHTC) Program

• With Gary Pivo and Andrew Sanderford at Univ. of Arizona

• What proportion of LIHTC units built between 2007 and 2011 are in location efficient places?
  – Do state allocation plans (QAPs) make a difference?
  – Does the share of LIHTC built by non-profits make a difference?
Location Efficiency in the Low-Income Housing Tax Credit (LIHTC) Program

Figure 1: Assisted Housing Units and Households 1940-2012

Source: Citylab.com
Location Efficiency in the Low-Income Housing Tax Credit (LIHTC) Program

- Location efficiency variables from EPA Smart Location Database:
  - Residential Density
  - Street connectivity
  - Transit supportive (5% transit mode share)
  - Near rail transit (1/2 mile)
  - Relative regional accessibility (jobs)

Transportation costs < 20% of income for low-income household (Location Affordability Index)
Analysis

• National and state-level analysis
• Rather than determining whether each state placed LIHTC in a relatively location efficient place for that state, we used national standards
• Also compared LIHTC LE to LE of all housing stock to see which states over-performed against their baseline LE
LE of LIHTC built from 2007-2011

36% of LIHTC was built in CBGs meeting 3 or more LE criteria
State by state LIHTC LE

Avg LIHTC
Avg Differential
Differential: Residential Density
Differential: Connectivity
Relative Regional Accessibility
Differential: Transit Use
Near rail transit
Differential: Transportation costs < 20%
Differential: LIHTC LE (averaged)
Regression Analysis

• Model predicting state LIHTC LE:
  – After controlling for other market characteristics
    • State qualified allocation plans’ LE criteria and share of LIHTC developed by non-profit sector are predictors of LIHTC LE differential
In conclusion

- LIHTC more location efficient than other housing
- Potential to be more LE, especially in some states
- Policy support and non-profit involvement help
- Limited scope of HCV and LIHTC; more needs to be done
- Big limitation: we do not directly address risk of further concentration of poverty; we don’t know what the right % of LE LIHTC is
- Next steps: metro area comparisons, effect of QAP changes
Lessons for transportation planners

Do not:

1) Stop making transportation improvements
Lessons for transportation planners

Do:

1) Include a goal of preserving and creating affordable housing from the beginning of large transportation projects
2) Leverage transportation funding
3) Make affordable affordable housing central to the mission of transportation agencies
4) Capture value from land increases AND put that back into affordable housing
5) Get creative
6) Transportation students: take a housing class
American Institute of Certified Planners Code of Ethics
Selected “Principles to Which We Aspire”

We shall have special concern for the long-range consequences of present actions.
American Institute of Certified Planners Code of Ethics
Selected “Principles to Which We Aspire”

We shall pay special attention to the interrelatedness of decisions.
American Institute of Certified Planners Code of Ethics
Selected “Principles to Which We Aspire”

We shall seek social justice by working to expand choice and opportunity for all persons, recognizing a special responsibility to plan for the needs of the disadvantaged and to promote racial and economic integration. We shall urge the alteration of policies, institutions, and decisions that oppose such needs.
Thank you!
Comments?
Questions?

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