Framework and Methodology to Monitor and Assess likely Gentrification/ Displacement Impact from Transit-Oriented Development (TOD)

John Cho, Matthew Glesne
Frank Wen, Hsi-Hwa Hu, Cheol-Ho Lee, Simon Choi

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Southern California Association of Governments (SCAG)
SCAG Quick Facts

- Nation’s largest Metropolitan Planning Organization (MPO)
- 6 counties, 191 cities and 38,000 square miles.
- 18 million people (5.8% of US population; 48.5% of California population)
- GRP in 2010: $910 Billion, 16th largest economy in the world
Transit-Oriented Communities (TOCs) include:
- better transit services
- mixed use
- walkable environment
- access to activities/services

SCAG and the City of Los Angeles both encourage growth to occur near major transit stations/corridors.
Less driving, more walking/biking/transit =
• Fewer car crashes
• Less air pollution
• More physical activity
• Lower obesity
• Access to healthy food & care
• Better for aging population
• Reduce greenhouse gas emissions
• Reduced financial/mental stress
“The process of transformation of old residential neighbourhoods in which working-class and poor residents are displaced by an influx of gentrifiers, a ‘new class’ consisting of well educated and better-off people” (Ruth Glass, 1964)

“Gentrification is a neighborhood change process characterized by increasing property values and incomes” (Pollack, S. et al, 2010)

“Displacement is a pattern of change in which current residents are involuntarily forced to move out because they cannot afford to stay in the gentrified neighborhood (Freeman, 2005).
Research Questions

1. A difference between TOCs and non-TOC?
2. How does a new train line impact existing residents?
   a. Do people ditch their cars and embrace walk/bike?
   b. Is there a risk of gentrification and displacement with development concentration (TOCs)?
      • Potential to displace transit-dependent core riders away from good transit options
      • New wealthier residents may be more car-dependent
3. Is gentrification/displacement happening at TOC in Los Angeles?
Methodology/Data

Follows 2010 Dukakis Center study (Pollack, Bluestone, Billingham)

• 2000 Census vs. 2005-09 ACS
  – Median household income
  – Hispanic population
  – Car ownership
  – Education level
  – Rent cost
• ANOVA
There are 125 rail stations in SCAG region.

½ mile buffer zone around each station is recommended to represent TOC.

Due to data limitation, Census Block Groups that include the rail stations were selected to represent TOCs.

388 Census Block Groups were selected.
Median Household Income

- Median household income in the TOC areas was much lower than the regional average.
- Income increased in the TOC areas (2%) and fell in the entire SCAG region (-4%).

<table>
<thead>
<tr>
<th>HH. Income</th>
<th>2000</th>
<th>05-09</th>
<th>% Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region</td>
<td>50,855</td>
<td>49,015</td>
<td>-4%</td>
</tr>
<tr>
<td>TOC</td>
<td>32,728</td>
<td>33,262</td>
<td>2%</td>
</tr>
</tbody>
</table>

- However, the difference was not statistically significant.
- Therefore, statistically, there is no difference between the Region and TOC in the growth of median household income.

Median household income was converted to 1999 $s
• Hispanic population grew slowly in TOC areas

<table>
<thead>
<tr>
<th>% of Hispanic population</th>
<th>2000</th>
<th>05-09</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region</td>
<td>40.6%</td>
<td>44.2%</td>
<td>3.6%</td>
</tr>
<tr>
<td>TOC</td>
<td>54.0%</td>
<td>56.6%</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

• However, the difference was not statistically significant.
• Therefore, statistically, there is no difference between the Region and TOC in the growth of Hispanic population.
Car ownership is increasing in TOC

- Although the TOC areas demonstrated higher shares of zero-vehicle households than the SCAG region, the share is declining faster in the TOC areas.

- However, the difference was not statistically significant.
- Therefore, statistically, there is no difference between the Region and TOC in the growth of zero vehicle households.
No statistical differences were found between the Region and TOC

- No variables showed statistical differences between the Region and TOC for the five variables.
  - Median income
  - Hispanic population
  - Car ownership
  - Education level
  - Rent cost
Difference between the Region and Planned TOD

- Planned TOD areas were selected among TOC
- Planned TOD areas are where the developments were financed by Metropolitan Transportation Authority
- 52 Census Black Groups were selected to represent Planned TOD area
- % change of highly educated people and % change of zero vehicle household were statistically significant

<table>
<thead>
<tr>
<th>Variable</th>
<th>Non-TOC</th>
<th>Planned TOD</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent change of College+ People</td>
<td>0.0284</td>
<td>0.052</td>
<td>**</td>
</tr>
<tr>
<td>Percent change of 0 Vehicle Household</td>
<td>-0.025</td>
<td>-0.0926</td>
<td>***</td>
</tr>
</tbody>
</table>

P-value: * p<0.05; ** p<0.01; *** p<0.001
“Gentrification Index”

- Developed by the Neighborhood Change Project - University of Illinois @ Chicago

- A set of (13) Census indicators that can serve as a metric for identifying neighborhood and community change (i.e. gentrification)
Gentrification Index, 2000-2010
City of Los Angeles

13 Factors:
- Income (+)
- Home value (+)
- White (+)
- Professionals and managers (+)
- Adults with college degrees (+)
- Owner-occupied (+)
- Below Poverty (-)
- African American (-)
- Hispanic (-)
- Children (-)
- Seniors (-)
- Female headed households (-)
Population Change, 2000-2010
Change in Persons Per Household, 2000-2010

Persons per Household Change 2000-2010
Conclusions

Is there any evidence of gentrification/displacement in TOC in Los Angeles area?
• Yes and No, it varies and further research is needed to conclude.
• In line with other national/local research
  – *Maintaining Transit Diversity* (Dukakis Center)
  – *What Happened in Hollywood* (Shane Boland)
• It would be important to plan carefully to reduce negative impacts of gentrification when a planned TOD is proposed.
Policy Implications

- Affordable Housing is Precious for TOCs
  - Preserve/Produce all you can
- Need to produce a lot more units to compensate for loss of PPH
- Capture the Value of transit?
- Transit + Affordability = :)

Thank you!

Matt Glesne
City of Los Angeles, Department of City Planning
matthew.glesne@lacity.org

John Cho, Ph.D.
Southern California Association of Governments
choj@scag.ca.gov
1. Will current neighborhood residents, some of whom are low income and/or people of color, benefit from sustainable communities revitalization?

2. Will low-income residents be displaced by more affluent residents because new residential development is less affordable?
Households in the TOC areas demonstrated

- Smaller household size;
- More single-person households and households without kids

<table>
<thead>
<tr>
<th></th>
<th>HHsize</th>
<th>% 1 person</th>
<th>% No Kids</th>
<th>% 1p HH, Retired</th>
<th>% 2p+ HH, Retired</th>
<th>% HH Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>toc025</td>
<td>2.28</td>
<td>44.6</td>
<td>46.4</td>
<td>19.6</td>
<td>7.1</td>
<td>59%</td>
</tr>
<tr>
<td>toc050</td>
<td>2.60</td>
<td>35.6</td>
<td>38.3</td>
<td>16.3</td>
<td>13.6</td>
<td>52%</td>
</tr>
<tr>
<td>toc100</td>
<td>2.80</td>
<td>28.4</td>
<td>34.8</td>
<td>13.4</td>
<td>17.0</td>
<td>49%</td>
</tr>
<tr>
<td>SCAG</td>
<td>2.82</td>
<td>22.3</td>
<td>30.2</td>
<td>12.0</td>
<td>24.4</td>
<td>49%</td>
</tr>
</tbody>
</table>
Transportation – NHTS Data

• There is no direct measure from Census or ACS to analyze transportation-related indicators

• Transportation System Information (TSI) of California Department of Transportation (Caltrans) supports 2009 NHTS California add-on data

• With about 6,700 households and 15,000 individual samples, the 2009 NHTS dataset provides valuable observations to analyzing both demographic and travel characteristics of the SCAG region and the TOC areas.

• We analyze NHTS households with a quarter, a half, and one mile buffer zones from the 125 TOC stations.
Households in the TOC areas show:

- less traveled and less drove

- higher shared non-motorized and transit modes, and lower shared vehicle mode
The share of Hispanic and non-Hispanic households in TOC is about 50-50.

Compared to non-Hispanic, Hispanic households have larger household size, and lower household income.

Compared to the SCAG region, both Hispanic and non-Hispanic population in TOC showed a similar pattern: less total trips and less VMT.

<table>
<thead>
<tr>
<th>Hispanic Status</th>
<th>% Household</th>
<th>Household Size</th>
<th>Household Income</th>
<th>Daily Travel and VMT</th>
<th>Trips</th>
<th>VMT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N-Hisp</td>
<td>Hisp</td>
</tr>
<tr>
<td>toc025</td>
<td>54%</td>
<td>46%</td>
<td>2.75</td>
<td>17,040</td>
<td>5.1</td>
<td>5.8</td>
</tr>
<tr>
<td>toc050</td>
<td>58%</td>
<td>42%</td>
<td>3.07</td>
<td>18,070</td>
<td>6.3</td>
<td>8.0</td>
</tr>
<tr>
<td>toc100</td>
<td>50%</td>
<td>50%</td>
<td>3.42</td>
<td>21,400</td>
<td>6.9</td>
<td>8.8</td>
</tr>
<tr>
<td>All</td>
<td>35%</td>
<td>65%</td>
<td>3.59</td>
<td>28,880</td>
<td>7.9</td>
<td>9.6</td>
</tr>
</tbody>
</table>
Auto Ownership

- Compared to the SCAG Region, the TOC households had smaller number of vehicles.
- About 20% of the TOC households did not own a car; this is a double to that of the SCAG region.
- Vehicles are less available (or less needed?) in TOC households
Commuting Distance by Auto

- Total commuting distance is shorter for TOC workers
- Commuting VMT is much shorter for the TOC workers than for the workers in the SCAG region
- Compared to 86% of the SCAG region, about a half of commuting distance were made by auto to the TOC workers
- Is it self-selected?

<table>
<thead>
<tr>
<th>Home-Work Travel Distance</th>
<th>Vehicles</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>toc025</td>
<td>4.1</td>
<td>13.6</td>
</tr>
<tr>
<td>toc050</td>
<td>9.7</td>
<td>19.2</td>
</tr>
<tr>
<td>toc100</td>
<td>16.5</td>
<td>21.5</td>
</tr>
<tr>
<td>SCAG</td>
<td>19.2</td>
<td>22.4</td>
</tr>
</tbody>
</table>
Commuting Distance and Time

• Living in higher density neighborhoods (TOC) induces a shorter commuting distance, while commuting time is almost same.
• Is it self-selected?