Institute of Urban and Regional Development (IURD)
TRANSIT & CITIES CONFERENCE
UC Berkeley
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Plenary Session 4: The Economics of Sustainable Transit

Measuring Transit-Land Use Synergies Through Housing Price Models: Evidence from San Diego, CA

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Optimal Context for Transit Impacts

- situating transit stations in the right context can:
  - enhance/broaden the ability of transit to lower generalized travel costs
  - appeal to the preferences of the transit user market segment

- what is the right context?
  - 3 studies that indicate that transit has greater impacts for:
    - condos as compared to single family homes
    - for condos in pedestrian friendly neighborhoods
    - single family homes that are zoned for higher densities

Station Area Housing Types

- Single Family Homes
- Condos/Apartments
Rail Proximity Price Premium by Housing Type (cont.)

<table>
<thead>
<tr>
<th></th>
<th>Estimated Prices by Station Distance (2000 $)</th>
<th>Rail Proximity Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1/4 Mile</td>
<td>1 Mile</td>
</tr>
<tr>
<td>Condominium</td>
<td>$158 K</td>
<td>$136 K</td>
</tr>
<tr>
<td>Single Family Home</td>
<td>$217 K</td>
<td>$205 K</td>
</tr>
</tbody>
</table>
Station Area Neighborhood Types

- Good Activity Density AND Good Connectivity
- Poor Activity Density BUT Good Connectivity
- Good Activity Density BUT Poor Connectivity
- Poor Activity Density AND Poor Connectivity

Station Distance Price Gradient by Neighborhood Type

- Low Activity Density & Circuitous Street Network
- High Activity Density & Well Connected Street Network
### Rail Proximity Price Premium by Neighborhood Type

<table>
<thead>
<tr>
<th>Pedestrian Quality</th>
<th>Estimated Condo Prices by Station Distance (2000 $)</th>
<th>Rail Proximity Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>good: 12 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td>average: 5 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td>poor: -7 %</td>
</tr>
</tbody>
</table>

### Station Distance Price Gradient by Allowable Density

- **Low Density Zone (2 allowable units/acre)**
- **High Density Zone (30 allowable units/acre)**
### Rail Proximity Price Premium by Allowable Density

<table>
<thead>
<tr>
<th>Allowable Density</th>
<th>Estimated SF Home Prices by Station Distance (2000 $)</th>
<th>Rail Proximity Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1/4 Mile</td>
<td>1 Mile</td>
</tr>
<tr>
<td>High (30 units/acre)</td>
<td>$119 K</td>
<td>$75 K</td>
</tr>
<tr>
<td>Low (2 units/acre)</td>
<td>$226 K</td>
<td>$230 K</td>
</tr>
</tbody>
</table>

### Conclusions

- There does appear to be a synergy between rail investment and land use planning
  - i.e., higher prices indicate the whole of TOD is greater than the sum of its parts

- These findings provide a stronger impetus for station area planning that can better leverage rail investments

- more importantly, it can be used in choosing proper locations for new stations
  - where the proper context already exists
  - where the proper context can REALISTICALLY be created
Thank you!

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Study Citations


Station Distance Price Gradient by Allowable Density

Estimated Single Family Home Price (in thousands)

Kilometers to the Nearest Trolley Station

- Low Density Zone (5 allowable units/hectare)
- High Density Zone (80 allowable units/hectare)