Assessing the Utility of 2006-2010 CTPP Data

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presented by
Cemal Ayvalik, Cambridge Systematics, Inc.
Penelope Weinberger, AASHTO
Kevin Tierney, Bird’s Hill Research
Objectives

- Develop a list of common and unique applications of CTPP data
- Assess common issues encountered and remedies implemented
- Suggest solutions, including future research and/or resource development
- Inform decision-making for future products
Key Steps

1. Identify Issues
2. CTPP Experience
3. User Survey
4. Peer Exchange
5. Utility Assessment
   - Expert Panel CTPP Oversight Board
   - Access to Data
   - Multiyear Compilation
   - LEHD Comparisons
   - Margins of Error
Step 1
Issue Monitoring

• Focused review of recently published media
• Findings were used to identify focus areas
• Initial findings pointed to
  » Small area workplace allocation problems
  » Workplace geocoding issues
  » Small sample size challenges
  » Disclosure-proofing data perturbation concerns
Step 2
User Survey

- A web survey – September 2014
- 202 respondents
  - Nearly 63 percent – hands-on experience
  - 80 percent – good understanding of the Census ACS data collection processes
  - Users of the CTPP – the program provide value (75 percent)
  - Non-users – indicated circumstantial reasons for not having used the CTPP
Step 2
User Survey (continued)

- 60 percent of users relied on other data sources in addition to the CTPP data for the analysis.
- About 50 percent recently used the dataset for market analysis, another 30 percent for modeling.

The key reasons for concern:
- Questions about data accuracy
- Sample sizes issues for small areas
- Multiyear data accumulation concerns
- Additional cross-tabulations needs
- Software issues

Most Common Uses of the CTPP

<table>
<thead>
<tr>
<th>Most Common Uses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel demand modeling</td>
<td>75%</td>
</tr>
<tr>
<td>Data profiles and summaries</td>
<td>50%</td>
</tr>
<tr>
<td>Transit planning</td>
<td>40%</td>
</tr>
<tr>
<td>Environmental justice analyses</td>
<td>33%</td>
</tr>
<tr>
<td>Bicycle/pedestrian issues</td>
<td>30%</td>
</tr>
<tr>
<td>Race and ethnicity analyses</td>
<td>20%</td>
</tr>
</tbody>
</table>
Step 3

Peer Exchange

• Round table discussion with 16 participants from various sectors

• The key considerations included
  » Data content
  » Geographic delineation
  » Multiyear data accumulation
  » Margins of error
  » Data perturbation
  » Data dissemination and training
  » Future planning of CTPP data products

• In-depth interviews AASHTO CTPP Oversight Board
3.1 – Data Content

- Different delineation of workplace data (multiple job holders, more relevant definition of part and full-time)
- More three-way residence and workplace tabulations
- Added-value tabulations such as commute distances
- Concerns with the data quality and timely release
- Unforeseen consequences since the smaller CTPP will be less flexible than previous iterations
3.2 – Geographic Delineation

- Small area data are essential for travel flow analyses
- Flow data at the most detailed geographic level possible, and demographic/socioeconomic tabulations at a more aggregate geography
- Oversight Board respondents preferred Census tracts over TAZs due to data quality concerns associated with challenges for Census Bureau to process custom geographies.
3.3 – Multiyear Data Accumulation

- A five-year frequency is an improvement over the former decennial based products, and should be continued
- Multiyear accumulation complicates analysis
- Most users treated them as point estimate data
- Problematic for regions that are rapidly changing
- Currency of the data is essential
3.4 – Margins of Error

• 90 percent – understand the concept, but roughly half use the CTPP data without accounting for those

• Experts use of margins of error
  » To evaluate the reasonableness of the estimates qualitatively
  » To decide which geographic level of detail to use

• Analysts could use guidance on the presentation of data with margins of error
3.5 – Data Perturbation

- Some understanding of the general methods of disclosure proofing, but not a strong one
- Most of the respondents prefer CTPP with disclosure proofed tabulations to CTPP data with suppressed values
- Practical analysis of raw and disclosure proofed data
- For the most part, expert users have been using the perturbed “B” tables without hesitation
3.6 – Dissemination and Training

- Only 25 percent are regular users of the CTPP software
- Software offers great value, but needs improvement
  - Automated Programming Interface (API) capability
  - Keyword search capability to allow users to identify table ids
  - Improved map-based capabilities e.g., geographic aggregation
  - Improved flow data visualization
- In-person classes most effective and have a “marketing” value
- Training needed on “uses of” CTPP data
## Recommendations

### Long-Term Census ACS Improvements
- Second Jobs
- Better Information on cellphone availability
- New modes (ridesourcing) and sub travel modes (access/egress to transit)

### More Multiway SE Tables and Flow Tabulations
- Age, gender
- Employment, occupation, earnings
- School enrollment
- Internet access/use

### Value-Added Enhancements to CTPP
- Help users access multiple data sets,
- Supplement with travel distance data
- Facilitate data fusion with other sources (LEHD/LODES and NHTS)
Conclusions

- Awareness of challenges with smaller samples and multiyear accumulation
- The five-year data offer benefits over the decennial data
- Small geography data most preferred
- MOEs rarely incorporated in analysis but used as a quality measure
- Perturbed data generally welcomed – avoid “missing” estimates
- The online software tool is capable and comprehensive with many features – steep learning curve
- Diversity of training opportunities was very appealing
- Research on comparison, integration, and fusion of CTPP with other flow data is needed
Q&A