

Leveraging Federal Data: Focusing on CTPP and NHTS

Clara Reschovsky
Bureau of Transportation Statistics
US Department of Transportation
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Differences between CTPP and NHTS

- ▶ CTPP provides commuting trips only
 - ▶ Available at small geography
 - ▶ Larger sample size
 - ▶ Source data collected continuously
- ▶ NHTS provides all trip types
 - ▶ Smaller sample size
 - ▶ Not available for small geography
 - ▶ Source data collected for each survey effort

Longstanding Data Challenges

- ▶ Timeliness of data
 - ▶ Data is released a minimum of ~2 years after it is collected
 - ▶ Longer for multi-year datasets from ACS
- ▶ Trip details at small geography
 - ▶ Sample sizes preclude small geography or render it unreliable
- ▶ Averaging effect of larger geographic area reporting limits full understanding of travel behavior
- ▶ Privacy concerns for survey respondents put the balance of data collection and data release in conflict

So, now what?

- ▶ There is no additional money available for full, comprehensive data collections particularly at the national level
 - ▶ Budget limitations at all government levels
 - ▶ Hard to plan multi-year projects with budget uncertainties

Opportunities with Alternative Data

- ▶ Cell phone data
 - ▶ INRIX
 - ▶ Cell phone data from cell phone companies
- ▶ App data
 - ▶ Transportation networking companies, e.g. Uber/Lyft
 - ▶ Car/Bike share
- ▶ Social Media
 - ▶ Crowd source data
- ▶ Modeled data instead of observed data
 - ▶ “B” tables in CTPP
 - ▶ LATCH (Local Area Transportation Characteristics for Households)
 - ▶ FAF, modeled data from the Commodity Flow Survey

How can this fit together?

- ▶ Reported travel behavior teaches us what is “normal” travel behavior
 - ▶ Can change over time, but is relatively stable
 - ▶ Useful for habitual travel e.g. JTW
 - ▶ Can help users validate modeled data results
- ▶ What about modal choices as technology changes?
 - ▶ Car/bike sharing
 - ▶ In the future, self-driving cars,
 - ▶ Bicycles with electrical assist (already available for purchase or bike sharing)
 - ▶ Further trip replacement with online communication and shopping
 - ▶ Increases in shipping of goods to personal residences increasing neighborhood level truck congestion
- ▶ Use survey data with alternative data to model additional characteristics
 - ▶ Not a new concept, but more doable with different types of data

Other Travel Behaviors to Consider: We have more to learn

- ▶ Long distance travel
 - ▶ How is it defined?
 - ▶ Minimum distance traveled?
 - ▶ Modal consideration (airplane or inter-city train)?
 - ▶ Trip purpose?
 - ▶ Frequency of behavior (actually infrequent behavior)?
- ▶ Last mile of travel for freight
 - ▶ How does this affect passenger travel behavior in terms of trip replacement and road congestion
- ▶ Connectivity of transportation modes
 - ▶ Linked vs. unlinked trips
 - ▶ Knowledge of intermodal connectivity for use in modeling

Will this mean that CTPP and NHTS are obsolete?

▶ NO!!

- ▶ National data is necessary for understanding non-statistically stratified data sets
- ▶ Geographic bias in non-national data needs to be accounted for in analysis
- ▶ Private sources of data tend not to be open in their methodology, making it difficult to discern the inherent biases in their data

Next Steps in the Data Communities

- ▶ Keep using both NHTS and CTPP data for analysis with citations
- ▶ Participate in conferences and user groups to share information and learn more about data
- ▶ Document usage of national data in development of data collection or post data collection weighting efforts when implementing surveys at the local level

Contact information:

Clara Reschovsky

Bureau of Transportation Statistics

Department of Transportation

clara.reschovsky@dot.gov