Commuting in America

Using the ACS to Develop a National Report on Commuting Patterns and Trends

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What is the CTPP?

• The Census Transportation Planning Products Program
• A Technical Service Program of the American Association of State Highway and Transportation Officials (AASHTO)
• Uses a special or custom tabulation of the ACS – Journey to Work data
• Transportation agencies have purchased JTW Census data since 1970 – National coordinated effort began in 1980
• Current program funded through 2018, anticipates purchase of seventh large scale tabulation based on 2012 – 2016 ACS
Besides Data...

• Training and technical assistance
  – Workshops
  – Classes
  – E-Learning
  – Webinars
  – Short videos

• Research
  – Transportation Research Board
  – Self funded
(historic) Commuting in America
Data Sources for previous CIAs

- Census 2000 Long Form data (and predecessors) and Decennial Census
- Census Transportation Planning Products (CTPP2000)
- National Household Travel Survey/Nationwide Personal Transportation Survey
- American Housing Survey
- Consumer Expenditure Survey
- Transportation Energy Book
Commuting in America

• Research is partly CTPP direct funded ($275,000) and partly NCHRP 8-36 Task 111 ($125,000)

• NCHRP task developed data

• The rest was for analysis, writing, production, etc.
Project Team

• Dr. Steven Polzin, Center for Urban Transportation Research, USF
• Alan Pisarski, Consultant
• Dr. Bruce Spear, Cambridge Systematics
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• Dr. Matthew Hardy, AASHTO
Topics in CIA

• The Role of Commuting in Overall Travel
• Population and Worker Trends
• Population and Worker Dynamics
• The Nature and Pattern of Jobs
• Job Dynamics
• Vehicle and Transit Availability
• Consumer Spending on Transportation

• How Commuting Influences Travel
• Commuting Mode Choice
• Commuting Departure Time and Trip Time
• Auto Commuting
• Transit Commuting
• Bicycling and Walk Commuting
• Commuting Flow Patterns
• The Evolving Role of Commuting

www.traveltrends.transportation.org
Major findings

- Commuting:
  - 16% of person trips
  - 19% of Person Miles and Travel Time
  - 28% of Household Vehicle Miles of Travel
  - Drove Alone increasing
  - Carpool declining
  - 38% of workers leave for work between 7 and 8:30
  - Commute time increases with income
  - Work at home also increases with income
  - Change has been modest
Data Sources

- American Community Survey
- CTPP based on 2006 – 2010 ACS
- National Household Travel Survey
  - Decennial Census
  - American Housing Survey
  - Consumer Expenditure Survey
  - Longitudinal Employment Household Dynamics
  - 2012 National Population Projections
  - Current Population Survey
  - Transportation Energy Data Book
  - National Transit Database
ACS Data

- 2005, 06, 07, 08, 09, 10, 11 DP03 Selected Economic Characteristics
- 2007 – 2011 DP03 Selected Economic Characteristics
- 2010 DP04 Selected Housing Characteristics
- 2010 S0201 Selected Population Profile
- 2011 S2301 Employment Status
- 2011 B23001 Sex by Age by Employment Status
- 2011 B08202 Household Size by Number of Workers
- 2011 S2302 Employment Characteristics of Families
- 2011 S0701 Geographic Mobility
- 2011 S0702 Movers Among Regions
- 2006 – 2010 Commuter Adjusted Daytime Population
- 2011 ACS PUMS – many custom tabulations
And of Course:

- 2010 B08301 Means of Transportation to Work (MOT)
- 2010 B08303 Travel Time to Work
- 2010 B08101 MOT by Age
- 2010 S0801 Commuting Characteristics by Sex
- 2010 B08006 Sex by MOT
- 2010 B08105 MOT (Black, American Indian, Asian, White, non-Hispanic, Hispanic)
- 2010 C08203 Workers by Vehicles Available
- 2010 B08141 MOT by Vehicles Available
- 2010 B08124 MOT by Occupation
- 2010 B08126 MOT by Industry
- 2007 – 2011 GCT0801 Mean Travel Time to Work
- 2010 B08534 - Means of Transportation to Work by Travel Time to Work for Workplace Geography
- 2010 B08007 - Sex of Workers by Place of Work
So Basically

- Age
- Race/Ethnicity
- Sex
- Mobility
- Employment
- Industry
- Occupation
- Income

• Every Means of Transportation table you can think of, Arrival Time, and Auto Ownership
• Custom Public Use Micro Sample tabs
About the data

• Sole nationwide, detailed geographically comprehensive source of data on commuting patterns
• Uniform
• Definitional comparability
• Sample was once 17% of households per decade; is now ~2% annually (large Margins of Error)
Limitations of ACS

• No Multiple Modes (Single mode collected – longest distance portion of trip)
• No second jobs
• No variation in “usual” pattern (occasional or regular but not always telecommute)
• No trip chains
• Lack of “three way” tabulations
• Period estimates conflict with point in time data
Improvements in ACS

• More workplace data than ever before
• More current/Continuous
• More consistent with data sets that come out more regularly such as CEX
• FactFinder strong on MOE awareness
• No more 5 – 6 year wait for data
• No more 10 – 12 year gap for trend analysis
Questions?