Long-Distance Smartphone-Based Travel Surveys in Ohio

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STUDY OBJECTIVES & OVERVIEW

Smartphone-Based Long-Distance Travel Survey Methodology Objectives:
- Facilitate broad data collection (both spatial and temporal coverage) and facilitate detailed data collection (collected route and time data)
- Improve data quality across all 12 months (reduce recall biases)
- Cost effective and efficient (low burden)

2017-2018 Study in Franklin County, Ohio
- Panel of adults recruited after completing a 7-day household survey
- Participants are asked to use long distance app for 6 months
- Long distance app records all trips over 50 miles (straight line)

Overall Study
- 1/10th of the State of Ohio is surveyed each year for 10 years
- Approximately 900 participants per year
- Plan is for provision of an annual, region specific report
- How long distance travel affects economic, social, and environmental conditions
- Capture rare long distance behavior that is typically under-represented in weekday household travel diary studies

OBSERVATIONS & NEXT STEPS

Ongoing Study Considerations:
- Seasonal variations in long distance travel patterns
- Demographic characteristics of frequent and infrequent long distance travelers
- Daily travel patterns compared to long distance travel patterns
- Characteristics of “regular” and “rare” long distance trips

Analysis Questions:
- How travel patterns interact with policies and investments in infrastructure and services
- More detailed long-distance data is desired to better understand:
  - Intensity, interstate, and international travel demand
  - How travel patterns interact with policies and investments in infrastructure and services
- How long distance travel affects economic, social, and environmental conditions

PARTICIPATION PROCESS

Recruitment Rates
- 33% response rate (active participants at the end of month #1)
- Long Distance Study participants are invited if they:
  - Finish the Household Study
  - Are adults (age 18+) with their own smartphones
- Participants who do not respond in month #1 are no longer contacted

Retention Rates
- On average, 87% of study participants are active month-to-month
- Incentives aim to reward retention (bonus for full participation)
  - While encouraging ongoing participation (monthly raffle prize)

PRELIMINARY PANEL CHARACTERISTICS

Comparison of LD Panel vs. the Original Household Study sample:
- Household size (persons) is very similar
- Long Distance panel members are younger
- Long Distance panel members have a higher income

PRELIMINARY TRIP RATES

Long-Distance Trip Rates per Month
- Preliminary results:
  - Average long-distance trip rates increase in the late spring and summer months.
  - Do not yet have data for all 12 months of the year (2017)
  - Plan is for provision of an annual, region-specific dataset, combinable with other years/regions

PRELIMINARY PARTICIPATION RATES

Survey Completion Rates
- On average, study participants answer 95% of their long-distance trip surveys collected by the app
- Survey response rates are consistent across months

PRELIMINARY TRIP RATES