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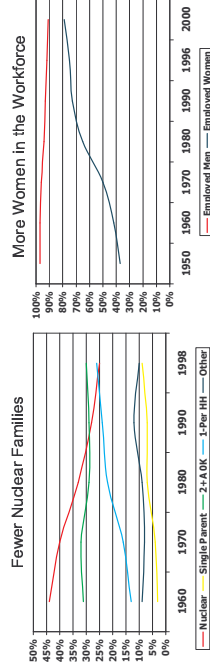
2006 EPA Graduate Fellowship Conference

From Discovery to Solutions: Generation Y Scientists Lead The Way

VMT Reduction Programs: The Next Generation

Overview

Recent trends in travel patterns have been linked to changes in demographics, particularly changes in household composition and the proportion of women in the workforce.



These trends in travel patterns include an increase in reliance on the automobile and growth in vehicles mile traveled (VMT). In addition, there has been a growth in multi-purpose trip-making, also referred to as “**trip chaining**.” From 1995 to 2001, the national travel survey documented a 9% increase in trip chaining, primarily associated with the work trip. The prevailing theory is that this growth in trip chaining is a reflection of how mothers balance work and home.

While traditional employer-based VMT programs have made some progress in achieving VMT reduction goals, demographic and travel behavior trends suggest that choices regarding the commute trip are largely influenced by household, childcare, and work-related constraints. **The theory underlying this research is that these constraints limit the flexibility that commuters have with regard to commute mode.**

Research Questions

The objectives of this research are

- To identify factors (constraints) that influence the structure of the commute trip,
- To estimate the proportion of commuters that have flexibility to use alternative modes,
- To identify the long-term implications for achieving VMT reduction goals if only employer-based programs are pursued,
- To identify how commuters without flexibility in commute mode can contribute to VMT reduction goals through new VMT programs.

Commuters Juggling Responsibilities



Research questions:

1. What are the constraints that impact travel flexibility and how do they vary across family types?
2. What does the mix of commuters, based on their family structure and corresponding constraints, tell us about the potential for saturation using employer-based VMT programs?
3. For those commuters whose constraints prohibit them from participating in an employer-based VMT reduction programs, what other programs can be designed that reflect these constraints but still contribute to VMT reduction goals?

Research Approach

FIRST: National travel survey data will be used to develop a market segmentation scheme of commuters, reflecting varying level of constraints and measuring the impact of those constraints on commute mode choice.

SECOND: Market segmentation results will be used to estimate the proportion of commuters with flexibility to use alternative modes vs. those who do not have that much flexibility.

THIRD: A case study application will focus on the questions of what proportion of commuters has the flexibility to change travel modes? For those who do not, what new programs might help to reduce their VMT?

Anticipated Results

This research will provide insight into the need for and possible structures of alternative, commuter-focused VMT reduction programs. It will explore the factors that influence the structure of the commute trip, with explicit consideration of the role that constraints play in the construction of the commute trip.

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