



Employer Perception of Employer-Based Trip Reduction Benefits and Strategy Implementation (07-0676)

Randall Guensler and Kai Zuehlke (Georgia Institute of Technology)

Introduction

Overview

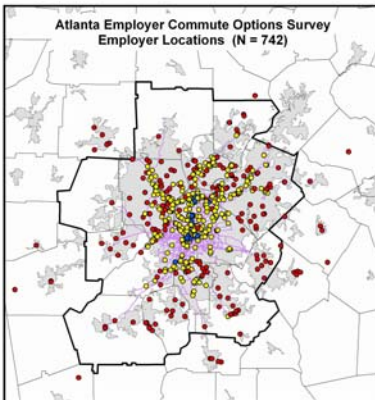
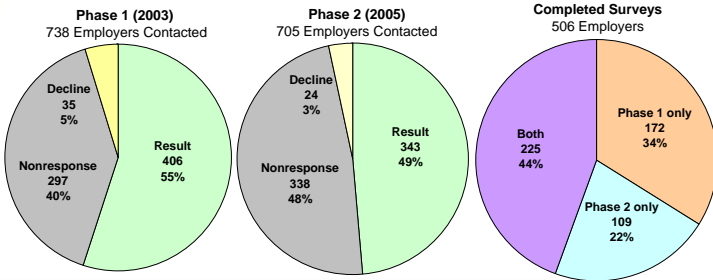
This paper summarizes certain results of the Atlanta Employer Commute Options Survey, an element of the Commute Atlanta Project. These survey results summarize the implementation of various employer-based trip reduction (EBTR) strategies over time, employer perceptions regarding the benefits of EBTR strategies, and barriers identified by employers as impeding EBTR implementation. The researchers also find a positive correlation between employer membership in the Clean Air Campaign (CAC) or local Transportation Management Associations (TMA) and positive employer perception and high degree of EBTR strategy implementation.

Background

The ongoing Commute Atlanta research project uses GPS-instrumented vehicles to study driver behavior and consumer response to mileage-based and real-time congestion pricing. The Commute Options employer survey element was designed to control for changes in employer policies and practices that might impact trip-making behavior during the study period. The survey results provide unique insight into employer participation in EBTR strategies, but the survey was not designed to directly assess the effectiveness of the actual strategies implemented in the 'Atlanta Framework for Cooperation to Reduce Traffic Congestion and Improve Air Quality'.

Data Sample

- Employers of Commute Atlanta households
- A selection of Metro Atlanta Chamber of Commerce members
- A selection of employers of participants in the Strategies for Metropolitan Atlanta's Regional Transportation and Air Quality (SMARTRAQ) regional travel diary study



Employers were classified into geographic regions:

- **Rail Core:** ¼ mile from rail station
- **Transit Zone:** ¼ mile from any transit line
- **Unserviced:** Other urbanized and un-urbanized areas



Analytical Approach

- 200 data elements (binary, categorical, ordinal, and numeric) for employer characteristics, EBTR strategy, metrics, and implementation levels
- Data filtered for each analysis to eliminate non-response for that analysis
- Chi-square test for binary variables using 2x2 contingency tables $\alpha=0.05$ (critical $\chi^2=3.84$)

Longitudinal Frequencies

No statistical difference was detected between Phase 1 (2003) and Phase 2 (2005) in the offering of benefits, CAC/TMA membership, program promotion, or work mode availability

Benefits Offering

- "Gain": did not offer in 2003, offered in 2005
- "Loss": offered in 2003, did not offer in 2005

Survey Question: "Please indicate whether your organization offers the following benefits to employees:"

Parking Benefits

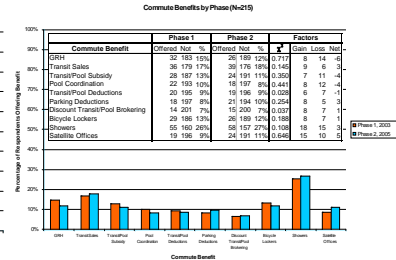
- Free parking*
- Cash or transit passes to employees who give up parking spaces
- Shuttle service to and from offsite parking areas
- Preferential or reserved parking for carpools, vanpools
- Preferential or reserved parking for alternative fuel vehicles

* To maintain EBTR value directionality, the inverse is displayed in the charts: *no free parking,* meaning no parking or pay parking.



Commute Benefits:

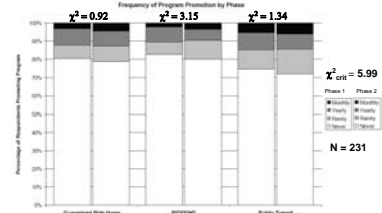
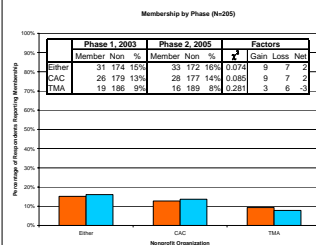
- Participation in Guaranteed Ride Home
- Onsite sales of transit passes or tokens
- Employer-subsidized bus, rail or vanpool passes
- Employer-coordinated carpool or vanpool
- Deductions of carpool, vanpool or transit expenses from employee pre-tax income
- Deductions of parking expenses from employee pre-tax income
- Brokering of discount bus, rail, or vanpool passes
- Bicycle lockers
- Showers for employees biking or walking to work
- Satellite offices from which employees can work



Membership

- **Clean Air Campaign (CAC):** Coordinates, publicizes, and promotes regional TDM strategies
- **Transportation Management Associations (TMA's):** Voluntary associations that implement TDM strategies in specific sub-areas

Survey Question: "Is your organization a member of any non-profit group devoted to promoting employee commute options?"



Survey Question: "How often does your organization promote (by newsletter, flyers, email, meeting announcements, etc.) the following programs to employees?"

Program Promotion

- **Guaranteed Ride Home:** guarantees ridesharing employees a trip home under emergency circumstances
- **1-87-RIDEFIND:** matches potential carpools
- Information about public transit routes and fares

Work Mode Availability

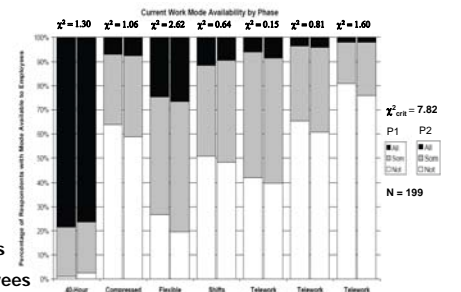
- Traditional work week dominates

Survey Question: "Please indicate the current availability of the following work modes to your organizations employees:"

- Traditional 40-hour work week
- Compressed work week
- Multiple work shifts
- Flexible arrival/departure times
- Working from home occasionally, 1 or 2 days per week, or 3 or more days per week

Response choices:

- Available to all employees
- Available to some employees
- Not available to employees





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Barriers to EBTR Strategy Implementation

- Cross-tabulation of barrier influence with commute benefit offering produced 3 major findings:
 - The most commonly perceived barriers
 - The strength of perceived distance to transit
 - Barriers associated with offering onsite transit sales
- Response choices of "no influence," "some influence," and "strong influence" were collapsed into binary "influence" or "no influence"
- N = 357 (Phase 1) and N = 305 (Phase 2)

Influential Barriers

- Insufficient employee interest (62% Phase 1, 60% Phase 2)
- Minimal perceived benefits to organization (54%, 58%)
- Lack of upper management support (52%, 49%)
- Office's distance to public transit (51%, 43%)

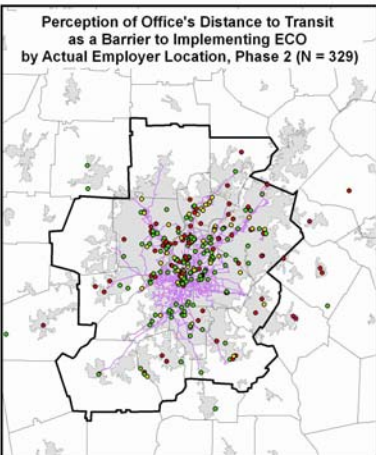
Distance to Transit as a Barrier

Of all barriers, perception of office's distance to transit most strongly related to low level of benefits

- Difference factor, $\delta\%$:** Of employers indicating barrier influence, difference in percent between those not offering and those offering benefit
- Consistency factor, c :** Of employers indicating barrier influence, percent that offer the benefit anyway

Phase 1				Phase 2			
Commute Benefit	χ^2	$\delta\%$	c	Commute Benefit	χ^2	$\delta\%$	c
GRH	6.790	20%	9%	GRH	9.630	27%	6%
Transit Sales	23.258	36%	6%	Transit Sales	15.194	29%	8%
T/P Subsidy	24.752	40%	3%	T/P Subsidy	6.411	24%	5%
T/P Deductions	4.946	22%	5%	T/P Deductions	8.062	29%	3%
Parking Deductions	16.553	41%	2%	Parking Deductions	8.062	29%	3%
Discount T/P Brokering	8.762	33%	2%	Discount T/P Brokering	6.944	29%	2%
Average	14.177	32%	4%	Average	9.051	28%	4%

Mapping employer concern for distance to transit yields inconsistent results



- Many employers with transit access report no influence
- Many reporting influence are within transit zone
- Employers in unserved areas might dismiss transit altogether

Legend

- Transit: 13 County Area
- Urbanized Areas
- Employers: Perception of Office's Distance to Transit as a Barrier
 - No Influence
 - Some Influence
 - Strong Influence

Rail Core: 1/4 mile of rail stations

Transit Zone: 1/4 mile of transit lines

Non-Transit Zone: Other Urbanized and non-urbanized area

Barriers to Onsite Transit Sales

- Employers who offer "onsite sale of transit passes or tokens" report:
 - Potential conflict with organization operations
 - High cost to our organization
 - Equity issues across types of employees
 - Lack of government incentives
- Equity concerns correlate with low levels of "employer-subsidized bus, rail, or vanpool passes"

Survey Question: "How influential have the following factors been in preventing your organization from implementing more employee commute options?"

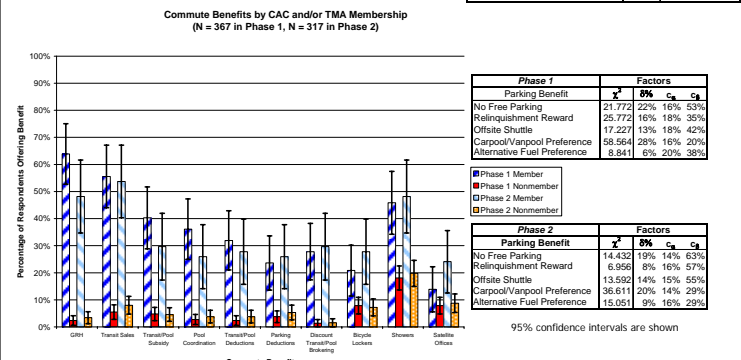
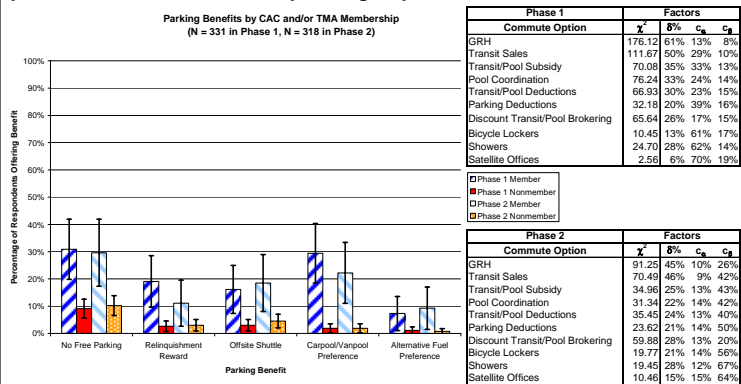
- Insufficient employee interest to organization
- Lack of upper management interest
- Potential regulatory or legal barriers
- Potential conflicts with organization operations
- Potential union opposition or conflicts
- High cost to our organization
- Equity issues across types of employees
- Lack of commute options information
- Our office's distance to public transit
- Lack of government incentives
- Potential paperwork requirements

Barriers to Onsite Transit Sales

Barrier	Phase 1			Phase 2			χ^2	$\delta\%$	c
	Influence	None	%	Influence	None	%			
Operations	100	203	33%	29	25	54%	8.510	-21%	22%
Cost	106	197	35%	32	22	59%	11.390	-24%	23%
Equity	71	232	23%	23	31	43%	8.674	-19%	24%
Incentives	96	207	32%	26	28	48%	5.523	-16%	21%

CAC/TMA Membership

- Members of the CAC or a TMA are more likely to offer virtually all commute benefits than nonmembers
- CAC/TMA members are less likely to provide free parking and more likely to offer parking shuttles and alternative fuel vehicle parking preferences than nonmembers
- CAC/TMA members are more likely offer onsite sales of transit passes than deductions of parking expenses



Conclusions

- Future work for planners and policymakers should focus on:
- Surveying employers about the specific benefits/value derived from programs promoted, commute and parking benefits offered, and even CAC/TMA membership
 - Assessing changes in EBTR implementation and perceptions over time
 - Assessing trends in employer perception of subsidies on potential conflict with organization operations
 - Investigating transit user/non-user perceptions as to acceptance of walking distance to transit and then directing educational initiatives on transit accessibility toward employers within an acceptable distance of transit
 - Evaluating the equity impacts associated with employer commute options strategies
 - Developing strategies to reduce the employer burden associated with offering onsite sales of transit passes
 - Investigating ground-truth as to the effectiveness of various strategies that are offered