

Survey Design and Preliminary Results of the Atlanta Employer Commute Options Survey

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ABSTRACT

This paper documents the survey design methods and preliminary results of the first phase of the Atlanta Employer Commute Options Survey. More than 800 employers in the Atlanta metropolitan area were surveyed to determine the commute options programs (carpool matching, staggered work hours, transit pass subsidies, etc.) that they currently implement. Methodological development of the survey instrument and sampling plan is first provided. Then, survey results for the more than 400 responding companies are presented and discussed, highlighting some lessons learned and the impacts on the final survey. Preliminary results indicate that much more can be done in the Atlanta region by employers to encourage and provide incentives to employees through the implementation of commute options programs. Further analysis will focus on factors potentially driving employer provision of commute options strategies and upon the potential air quality benefits that may arise from further expansion of commute options programs.

KEY WORDS

Employer Commute Options, Transportation Control Measures, Survey Design, Parking Pricing

1. INTRODUCTION

Atlanta residents face one of the toughest commutes in the nation, with long commutes resulting in significant traffic congestion and air quality problems. The Road Information Program¹ indicates that traffic congestion on key streets and highways in the Atlanta area costs commuters as much as \$1,686 annually in wasted time and fuel, depending on which route they use for their daily commute. Furthermore, high levels of traffic congestion significantly contribute to motor vehicle emissions. According to the American Lung Association State of the Air 2004 reportⁱ, metro Atlanta is seventh-worst in the nation for fine particle matter. Metro Atlanta is home to nearly 120,000 businesses and they employ more than 2.2 million people.² A report released by Clean Air Campaignⁱⁱ estimated that more than three-quarters of workers who reside in metro Atlanta drive alone to their jobs, about 14 percent car pool, and 4 percent use transit (the rest work at home, ride a bike or walk). The business community is becoming increasingly concerned that congestion and air quality problems could influence Atlanta's future ability to attract business development and the highest-quality employees to the region. To alleviate congestion and improve air quality, some metropolitan areas have asked employers to implement voluntary commute options strategies, such as carpool matching, vanpools, teleworking, transit pass subsidies, and flexible work schedules. For example, the Clear Air Campaign, which operates on about \$7 million a year, mostly from the federal government, tries to combat air pollution and traffic congestion by encouraging business and their commuters to car pool. The Atlanta Employer Commute Options (ECO) survey is designed to assess the state of implementation of corporate policies that may influence employee travel behavior.

The Atlanta ECO survey is a research component of the Commute Atlanta Program funded by the Federal Highway Administration (FHWA), Georgia Department of Transportation, and Georgia Institute of Technology. The Commute Atlanta Program is an instrumented vehicle research program implemented under the FHWA's Value Pricing Program. The objective of the multi-year program is to assess the effects of converting fixed automotive operating costs into variable driving costs. The main research hypothesis is that per-mile pricing systems that encompass a variety of transportation costs already paid by commuters, such as vehicle registration fees, gasoline taxes, road tolls, and vehicle insurance, will provide incentives for commuters to modify driving patterns, reduce operating costs, and pocket the savings.

The Commute Atlanta research program is a three-phase effort: 1) all trip-making undertaken by the Commute Atlanta pool of household participants is monitored for one year, with no pricing treatments, 2) pricing on a per-mile basis is implemented for one year, and 3) real-time freeway congestion pricing is implemented for six months. In Phase I, researchers installed 487 GT Trip Data Collectors in the vehicles of 263 participating households to collect second-by-second vehicle activity data (vehicle speed, acceleration, location/position, and engine operating parameters). The researchers recently completed the Phase I baseline monitoring and began the cent/mile pricing efforts. More than one million vehicle trips have been collected on a second-by-second basis since the beginning of the research effort. In the current Phase II effort, quarterly incentive accounts are established, based upon the miles driven in the same quarter of the baseline year and a cent/mile rate which increases each quarter. For every mile driven, the incentive account is reduced by the cent/mile rate. At the end of the quarter, the participant will

ⁱ <http://lungaction.org/reports/stateoftheair2004.html>

ⁱⁱ <http://cobbrides.com/Cleaner%20air%20chokes%20car%20po.htm>

receive the amount remaining in the incentive account. If participants continue their pre-existing driving patterns or travel more than they did in the baseline year, they will receive no incentives. But, participants that reduce their household miles of travel will receive a cash payment equal to the amount remaining in their incentive account. The Phase III pricing experiment will test consumer response to a real-time 20 cent/mile congestion fee for operating on the freeways under congested conditions. In Phase III, the household starts with a significantly larger incentive account that is drawn down at a faster rate to examine the effect of pricing on the time of day participants make their trips (to avoid congestion). The research team will monitor the changes in driving patterns and will use statistical analyses of household characteristics, vehicle travel, and relevant employer survey data to examine the relationships between the incentives offered and subsequent travel behavior changes.

The employer surveys control for the potential impact of employer commute options programs external to the mileage-based pricing that are also likely to yield changes in travel patterns. For example, if a participant's employer starts charging for parking in second year of the study, observed changes in travel behavior changes is more likely to be the result of the parking pricing than the mileage-based pricing incentives. The data collected by the research team will also be useful in examining the effect that commute options policies may have on travel behavior. For example, researchers will evaluate the effect of ozone alerts on trip-making by comparing trip-making patterns and mode choice across alert and non-alert days. The impacts of rideshare incentives, parking pricing, and other employer-based strategies will be evaluated through a variety of supplemental survey techniques. During each phase of research, the researchers collect standard household travel diaries, electronically monitor revealed preference travel behavior throughout the year, and perform annual employer commute options surveys to examine the changes in implementation of commute options programs over time.

The commute options survey also seeks to identify factors that may be motivating employers to implement particular commute options strategies. These motivations could include financial benefits, positive press from being a good corporate citizen, or benefits associated with recruiting and retaining productive workers. Identification of motivating factors might allow local and state policy makers to improve commute options incentives and programs. The information could also be used by organizations that assist employers in developing commute options programs, such as the Clean Air Campaign, to identify specific strategies that are likely to work for different types of companies and within different company organizational structures.

The first section of this paper summarizes the research design. The second section discusses the quality of the data obtained. Respondent profiles are discussed in section three. Section four discusses the preliminary survey results. Conclusions comprise the fifth section.

2. RESEARCH DESIGN

Collecting data via surveys, especially by mail, is complex, costly, and time consuming. The main objective of the research design is to maximize response rate and control for variables that might bias survey results. Dillman's (2000) *Tailored Design Method* (TDM), which is based upon a detailed performance review of previous transportation surveys, includes a variety of elements designed to encourage participation in surveys³. Dillman suggests that: 1) the survey questionnaire must be well-designed for content and formatted in accordance with latest advances in cognitive research; 2) multiple personalized contacts should be employed, with each

contact accompanied by a carefully crafted message to encourage the respondent to complete the survey questionnaire; 3) surveys should employ real stamps on return envelopes; and 4) the surveys should include a small financial incentive as a token of appreciation.

Patten⁴ and Dillman^{5,6,7} provide excellent summaries of basic survey design concepts for transportation-related surveys: 1) researcher should design the survey for the respondents, not the researchers; 2) survey instruments should be written in simple language and be easy to understand and complete; 3) researchers should establish trust with the respondents through their correspondence and contacts; 4) respondents should receive a reward for participation; 5) costs to the respondent (respondent burden) should be minimized; and 6) the questionnaire should be user friendly, designed for simplicity of completion, and allow respondents to provide more detailed answers when they desire. The Atlanta ECO survey takes these design factors into account as well as experience of the researchers and an outside panel of survey experts. The next subsections describe how the questionnaire was designed, how the survey samples were selected, and how the survey was implemented.

2.1 Questionnaire Design

This study involves the development and execution of a longitudinal surveys of Atlanta employers. Each firm will be surveyed every year for three years. The researchers developed the survey content in consultation with a five-member informal advisory panel.ⁱⁱⁱ Panel members provided comments on a draft version of the survey content. Researchers revised the survey content based on this feedback. After adding additional questions and rephrasing some questions for clarity, a professional graphic artist designed the physical layout of the questionnaire.

The final questionnaire includes four parts: 1) parking at work locations, 2) current employee commute options support, 3) employer opinions about employee work modes and commute options, and 4) general employer characteristics.

2.2 Pilot Survey

The research plan called for two recruitment phases: the pilot survey, and general recruitment. The pilot survey sought to determine: 1) whether participants understand the study based on the recruitment script; 2) factors that attract them to the study and that negatively affect their participation; 3) weaknesses in the design, content and size of the draft questionnaire; and 4) whether the survey process functioned well. The pilot test was conducted in two ways. First, two volunteers administered the pilot survey in person to the coordinator of employee commute option programs at the engineering consulting firm CH2M Hill, and to the director of employer/employee relations at Georgia Institute of Technology. These volunteers reviewed the alert letter and cover letter with incentive and completed the survey questionnaire while Georgia Tech researchers observed their activities and recorded their questions and comments.

ⁱⁱⁱ Panel members: Jean Borkenhagen, formerly with the Environmental Protection Division of the Georgia Department of Resources; Elizabeth Deakin, Associate Professor at University of California-Berkeley and Director of the University of California Transportation Center; Sarah Siwek of Sarah J. Siwek and Associates; Kevin Shannon, Public Affairs Director of the Southern Coalition for Advanced Technologies; and Martin Wachs, Professor in Civil and Environmental Engineering at University of California-Berkeley and Director of the Institute of Transportation Studies.

The revised mail out, mail back survey was then administered to 30 companies randomly selected from a web-based directory located on the Georgia Tech library website known as CORP (Company Intelligence). Each firm was contacted by telephone to identify their human resource directors and to verify title and mailing address information. Human resource directors were selected as the survey contact because they are presumably best placed within an organization to know what commute options programs are being implemented.

Once contact information for the pilot test sample was finalized, the pilot test process proceeded in four stages. First, an alert letter was mailed to the sample notifying them the forthcoming survey and explaining the survey's purpose and importance of participation. A few days later the sample was mailed a printed survey with cover letter, a postage-paid return envelope, and a small monetary incentive. The cover letter conveyed that recipients could decline participation by returning the blank survey. The monetary incentive was one dollar, with the form of the dollar varying between a gold coin and a one-dollar bill to enable researchers to test the effects of paper versus coinage on response rates. The survey also allowed HR directors to respond to an Internet web-based survey, by giving them a website address and unique identification number to enter the site. A reminder follow-up postcard was mailed a few days after the first survey package. Non-respondents were contacted two weeks later with a cover letter emphasizing the importance of participation, a replacement survey, and a postage-paid return envelope.

The combined four-step process yielded a 57 % ($n=16$) response rate for the pilot test, after 7% ($n=2$) of the survey packages were excluded due to bad addresses resulting in delivery failure. Given the results of the pilot test and the recognition of the burden to the respondents, researchers clarified ambiguous wording and eliminated individual items that have yield non-variant responses. Researchers completed the pilot survey in June 2002 and finalized the survey design and communications tools.

2.3 Survey Methodology

2.3.1 Sampling

The research plan employed the final mail-out/mail-back survey methodology applied to three separate sampling groups. The survey began with a sample target of 800 local businesses of various sizes in Atlanta. The first sample wave included all Metro Atlanta Chamber of Commerce (MACOC) members employing over 5000 employees ($n=38$) and a random sample of MACOC member organizations ($n=262$) employing 250 or more employees. The second sample wave was a random sample of 300 employers drawn from 8000 household participants in the SMARTRAQ regional travel diary study.⁸ The third sample wave consisted of the employers of the 263 participating Commute Atlanta households. The survey was administered to MACOC members from April to June 2003; to SMARTRAQ participant employers from June to September 2003; and from Commute Atlanta participant employers from November 2003 to January 2004. For the first phase, the total sample drawn for the study was 807. Of these, 412 were successfully surveyed. In the second and third phases of the study, employers of Commute Atlanta and 100 of the 600 employers drawn from MACOC and NHTSA study will be surveyed again every year for two additional years.

2.3.2 Incentives

Minor monetary incentives are an effective way to improve response rates³. The incentive is not so much to compensate for the time a respondent spends completing the survey as it is a memory jogger and perhaps a guilt factor if the survey is not completed. In the initial pilot test, no statistically significant difference was noted in the survey response rates for firms that received paper dollars vs. dollar coins. In the final survey effort, one of three monetary incentives was attached to each survey (random assignment of the treatment): Sacagawea golden dollar, Susan B. Anthony silver dollar, or new/crisp dollar bill. Each coin was polished and inserted in a plastic case before attaching the incentive to the letter (additional time, effort, and packaging costs, but no increase in postage costs). The variation in incentive treatment enabled Georgia Tech researchers to test the effects of paper versus coinage on response rates.

2.3.3 Initial Telephone Contact

Because the database lacked specific human resource director contact information, the research team called each employer prior to sending a survey. The initial telephone call served three key purposes. First, it identified human resource directors and verified title and mailing address information. Second, it provided an opportunity to reinforce the importance of the survey and attract participants to the study. Third, it increased the probability that respondents would complete the survey in a timely manner.

2.3.4 Alert Letter

An alert letter was the first written contact with the selected respondents. The alert letter announced the impending delivery of the survey. The content of the letter emphasized the main objective of the survey and the importance of the respondent participation.

2.3.5 First Survey Package

Two days later, the selected respondents would receive the first survey package. The package includes a cover letter, a printed survey, a postage-paid return envelope, and the \$1 monetary incentive. The cover letter conveyed that recipients could decline participation by returning the blank survey. The cover letter also indicated the website address and unique identification number allowing the selected respondents to respond by web survey. The unique identification number was coded and put on the returned address label for each sample. This enables researchers to positively link the survey results with the responding company. The stamps used were basic American Flag stamps to avoid potential response bias that might result from using any other stamp selections (e.g. famous person, love, nature, etc.).

2.3.6 Follow-up Postcard

The selected respondents received the follow-up postcard several days after the survey package. The follow-up postcard notified the selected respondents the survey mailed and the content and reminded them to complete the questionnaire.

2.3.7 Second Survey Package

Two weeks later, a second/replacement survey package was mailed to non-respondents. The second survey package includes a cover letter emphasizing the importance of participation, a replacement survey, and a postage-paid return envelope. Incentives wouldn't be contained this time.

2.3.8 Second Alert Letter

The Metropolitan Atlanta Chamber of Commerce (MACOC) sample received an additional written contact. The additional contact consisted of a replacement survey with postage-paid return envelope, another \$1 incentive, and a cover letter from the president of the MACOC requesting company participation. Rather than targeting human resource directors in this round, the MACOC letter was addressed to upper-lever managers in charge of operations.

3. SURVEY DATA

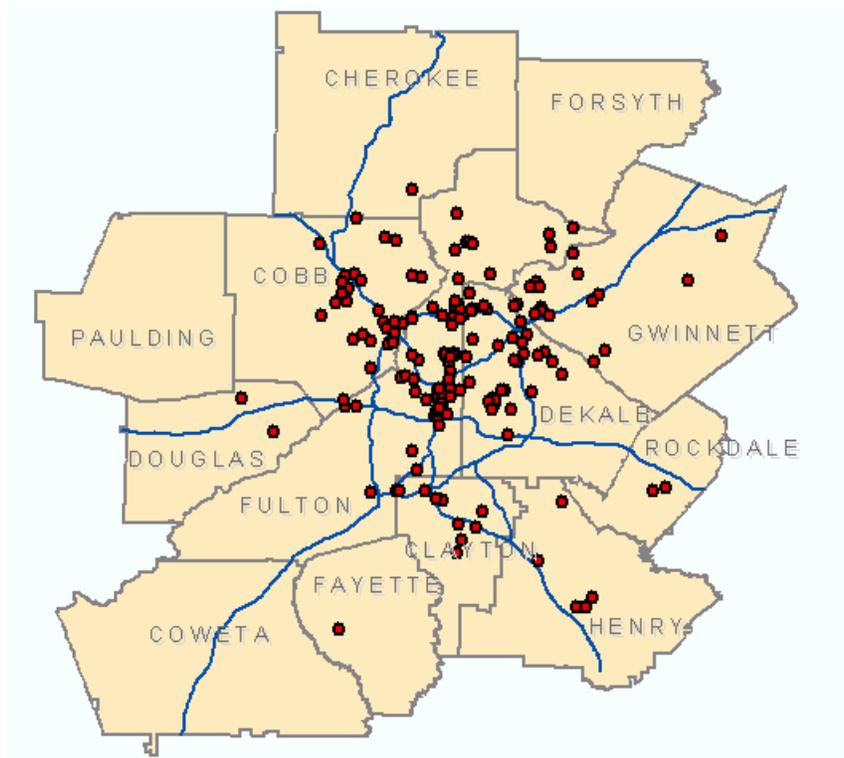
3.1 Response Rates

From the 807 firms surveyed, 412 valid responses were obtained (Table 1). The overall response rate is 51%, comprised of 55% response from the MACOC sample, 47% from the NHSTA sample, and 51% from the Commute Atlanta sample. Statistical t-tests indicate that the MACOC sample response rate was significantly higher than both the NHSTA and Commute Atlanta samples, but that response rates between the latter samples were not significantly different from one another. Figure 1 illustrates the geographic distribution of the employers responding to the survey. The firms that responded by mail to the survey but declined to complete the survey are identified as “Declined” in the data tables. “Non-Response” indicates those who simply did not respond to the survey. In all, the surveyed respondents employ approximately 160,000 employees, which represents around 0.7% of the 2.2 million total employees in the metro Atlanta area.

Table 1. Survey Distribution and Response Rates

	Sample Group			Total
	MACOC	NHTSA	FHWA	
Sample Size	300	300	207	807
Valid Responses	166	141	105	412
First Round	107	135	85	327
Second Round	23	0	17	40
Chamber Letter	21	NA	NA	21
Web	15	6	3	24
Declined	17	9	10	36
Non-Response	117	150	92	359
Response Rate	55.3%	47.0%	50.7%	51.1%

Figure 1. Survey Respondent Business Locations



Survey non-response can introduce significant bias into survey results and resulting models when refusal rates are different across participants that exhibit different behavior⁹. For example, if there are no small employers in the region offering transit pass subsidy programs, and if small employers are also more likely to be non-respondents, conclusions regarding the implementation of transit pass programs based upon surveys received would likely be biased. To examine potential response bias, the response rate was compared across the size of firms that returned and did not return surveys. This exercise was conducted only for the Chamber sample because employer size information for both respondents and non-respondents was available only for this subset. The Table 2 Chi-Square test indicates that firm size in the Chamber sample was independent of the number of responses. Comparative tests of response rates by geographic region and employer classification have not yet been conducted.

The largest response rate came from the Metropolitan Atlanta Chamber of Commerce (MACOC) sample (55.3%). However, this can be readily explained by the use of the additional contact that was made with these companies, which increased the sample response rate from 48% to 55%. The additional contact to upper management from the MACOC president produced 7% of the responses ($n=21$). The follow-up letter from the Chamber is highly recommended.

Table 2. Respondent vs. Non Respondent Firms by Size

Number of Employees	Non Respondents		Respondents		Total
	Sample Size	Percentage	Sample Size	Percentage	
300-499	59	44.03%	81	48.19%	46.67%
500-999	36	26.87%	41	24.70%	25.67%
1000-2499	15	11.19%	14	9.04%	9.67%
2500-4999	7	5.22%	9	5.42%	5.33%
5000-7999	9	6.72%	14	8.43%	7.67%
8000-9999	3	2.24%	3	1.81%	2.00%
10,000+	5	3.73%	4	2.41%	3.00%

Pearson Chi-Square 1.27

Asymp. Significance (2-side) 0.97

The researchers were surprised to find that only 24 surveys (5.8%) were completed via the Internet site. It is possible that some respondents may not be familiar or comfortable with the Internet. However, it seems more likely that because the survey was fairly short and structured, respondents could visually assess the time it was likely to take them to complete the hard copy survey; whereas, the amount of additional time it would take them to go to the website and complete the survey would be an unknown commodity until they invested the time to visit the site. It is also possible that the respondents might be more hesitant to complete the online survey if they perceive that their anonymity will be decreased by doing so.

With regard to the reason for declining to participate, some participants (28%) declined because they felt the questionnaire was not suitable to their situation. For example, one participant said that the business supported only a few employees and that they all lived within walking distance of the company. Since they have no commute problems, they declined to respond. One very large company (a major regional employer) refused to participate because their corporate policy is not to complete any surveys.

Differences in survey response rates across the different forms of monetary incentive (crisp paper dollar, silver dollar coin, gold dollar coin) were not statistically significant. The dollar bill recipients had a greater response rate (53% of dollar bill recipients responded versus 52% and 48% of silver coin and gold coin recipients, respectively). However, a Chi-Square test indicates that the differences were non-significant ($p < 0.72$). Given the higher labor costs associated with using the dollar coins (cleaning and packaging), crisp dollar bill incentives are the preferred alternative.

Table 3. Response Rate by Incentive Type

Incentive	Sample Group			Total
	MACOC	NHTSA	FHWA	
Gold Coin				
Distributed	140	60	75	275
Returned	75	26	32	133
Response Rate	53.57%	43.33%	42.67%	48.36%
Silver Coin				
Distributed	55	144	63	262
Returned	32	70	34	136
Response Rate	58.18%	48.61%	53.97%	51.91%
Dollar Bill				
Distributed	105	96	69	270
Returned	59	45	39	143
Response Rate	56.19%	46.88%	56.52%	52.96%

3.2 Incomplete Forms and Data Cleaning

Due to non-responses on certain questions, the sample size used in the final analyses for each question varies from 264 to 412. The comments submitted by respondents provide some insight into the question non-response. Incomplete responses to questions can arise when: 1) the respondents felt that those questions do not apply to their local business; 2) the respondents found that it was difficult to select or answer to questions related to work modes since a very few individuals can take advantage of the options; and 3) the respondents felt uncomfortable with certain questions, especially to those related to work sites and employees. The highest non-response rate was noted for the question asking the company to provide information on the number of worksites in Georgia.

Response errors were also noted in the survey responses. For example, the respondents were asked to provide the number of worksites their organizations operated in Atlanta and Georgia. One respondent answered that there were 37,812 worksites in Atlanta and 60 worksites in Georgia (alternative sources clearly indicated that the larger number was the number of employees). Researchers did implement a data cleaning process to identify and correct simple obvious errors. Data cleaning is a two-step process including detection and then correction of errors in a data set.

4. THE RESPONDENTS

The most common types of organizations responding to the Atlanta ECO survey (Table 4) are service providers (26%), non-profit organization (11%), corporate offices (10%), and government agencies (9%). At the other end of spectrum, fewer than 3% of responding organizations are categorized as wholesale firms and transportation/utility organizations. A review of the written explanations for the “other” category (selected by 22% of participants) indicates a variety of organization types, including education, healthcare and computer firms.

Table 4. Type of Organizations Responding to the Atlanta ECO Survey

	Frequency	Percent	Valid Percent
Valid			
Retail	15	3.64%	4.13%
Wholesale	7	1.70%	1.93%
Manufacturing	24	5.83%	6.61%
Services(business, personal)	94	22.82%	25.90%
Construction	12	2.91%	3.31%
Transportation/Public Utility	8	1.94%	2.20%
Distribution	17	4.13%	4.68%
Corporate Office	36	8.74%	9.92%
Non-Profit Organization	38	9.22%	10.47%
Government Agency	31	7.52%	8.54%
Other	81	19.66%	22.31%
Total	363	88.11%	100.00%
Multiple answer	42	10.19%	
Blank Answer	7	1.70%	
Total	412	100.00%	

Organizations responding to the survey represent a mixture of small and large organizations concentrated mostly in Atlanta (Table 5). The mean statistic is much higher than the median for all measures of organization size, reflecting a skewed distribution with decreasing numbers of larger firms. The average number of Atlanta work sites is 8; this compares with 12 work sites on average in Georgia.

Table 5. Size Characteristics of Atlanta ECO Survey Respondents

	Work Sites		Employees		
	Atlanta	Georgia	Facility	Georgia	U.S.
Sample size	367	254	369	270	263
Mean	8.12	12.33	429.17	1478.24	17434.14
Median	1	2	100	227.5	730
Min	0	1	2	2	2
Max	200	500	23168	45000	1000000
Std. Dev	23.12	40.50	1488.42	4528.16	83895.13

5. PRELIMINARY RESULTS

The results of the survey paint a somewhat pessimistic picture for employee commute options program implementation within Atlanta metro area organizations. Many respondent organizations do not provide any incentives for employees to use alternative commute methods (Table 6). Between 10% and 20% sell transit tokens or passes onsite, participate in Guaranteed

Ride Home program, subsidize transit passes, or coordinate a carpool or vanpool. Fewer than 10% of respondents offer pre-tax deductions or alternative commute expense reimbursements for carpool/vanpool/transit (8%), or broker discount transit passes (6%). Three of the benefits listed could aid alternative commute options, but are not exclusive to that goal: showers (24%), bicycle lockers (11%), and satellite offices (10%). Fewer than 10% of respondents offer incentive to give up single-occupancy commutes, such as preferential parking for carpools and vanpools (8%), shuttle service to offsite parking (7%), cash or transit passes for giving up parking spaces (6%), or preferential parking for alternative fueled vehicles (2%). In contrast with commute-related benefits, 84% of respondent organizations offer free parking to their employees. From an air quality perspective, it seems clear that additional efforts designed to educate businesses on the air quality and congestion reduction benefits of commute options programs could achieve additional emission reduction benefits.

Table 6. Commute-Related and Parking-Related Benefits Offered to Employees

	Survey Responses	% Offering Benefits	%Not Offering Benefit
Commute-Related Benefits			
Guaranteed Ride Home	407	14%	86%
Onsite sales of transit passes or tokens	408	17%	83%
Employer-subsidized bus, rail, or vanpool passes	408	13%	87%
Employer-coordinated carpool or vanpool	408	10%	90%
Pre-tax deductions of parking expenses	404	8%	92%
Pre-tax deductions of carpool/vanpool/transit expenses	401	8%	92%
Brokering of discount bus/rail/vanpool passes	405	6%	94%
Bicycle lockers	403	11%	89%
Showers for employees biking or walking to work	404	24%	76%
Satellite offices from which employees can work	407	10%	90%
Parking-Related Benefits			
Free parking	410	84%	16%
Cash or transit passes to employees who give up parking spaces	400	6%	94%
Shuttle service to and from offsite parking areas	403	7%	93%
Preferential or reserved parking for carpools/vanpools	405	8%	92%
Preferential of reserved parking for alternative fuel vehicles	403	2%	98%

For over 80% of the sample, employees can immediately find a parking space upon arrival at the work location (Figure 2). Nearly 60% of organizations surveyed own the employee parking lots (Table 7), with less than 25% leasing employee parking spaces from a third party. A small percentage of respondents report that their employees lease their own spaces, lease from a third party, or park in a combination of employer, third-party owned and street spaces.

Figure 2. Distribution of Parking Times

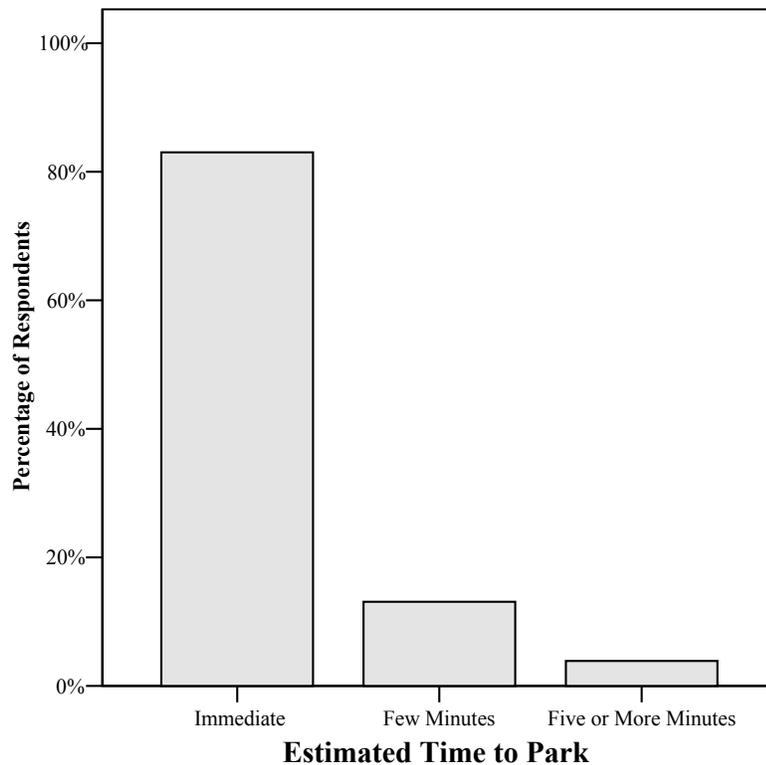


Table 7. Parking Modes of Survey Respondents

	Sample Size	Percent
Parking Mode		
Our organization owns the employee parking space	410	57%
Our organization leases the employee parking space	409	22%
Employees lease individual spaces	404	5%
Employees park in a combination of organization and third-party owned spaces	404	7%
Employees park in a combination of lot, deck and street spaces	404	15%

With regards to organization policies on parking (Table 8), nearly 70% of respondents report that employees incur no parking costs. The overwhelming majority of these cite parking lot ownership as the reason. This implies that companies do not practice full-cost accounting when it comes to the expenses associated with owning parking spaces. Nearly 25% of respondents report that their organizations pay for employee parking; in 15% of these cases, payment is direct versus nearly 10% that reimburse parking costs for some or all employees. Employees pay for their own parking in fewer than 10% of the organizations surveyed.

Table 8. Parking Policies of Survey Respondents

	Frequency	Percent
Our organization incurs no parking costs	273	68.8%
Our organization pays employee parking costs	58	14.6%
Employees pay their own parking costs	33	8.3%
Our organization reimburses some/all employee parking costs	19	4.8%
Our organization pays certain employees parking costs	14	3.5%
Total	397	100.00%

These trends in corporate patronage of parking are reflected in attitudes of survey respondents towards parking as an employment benefit. When asked whether employers should provide parking at no cost to employees, 82% of human resource managers indicate that the company agrees, with 43% of those agreeing strongly (Figure 3). Interestingly, slightly fewer human resource managers (78%) agree that employees believe that free parking is a right of employment, with 33% of those agreeing strongly (Figure 4).

Figure 3. Employer Position on Parking Policies

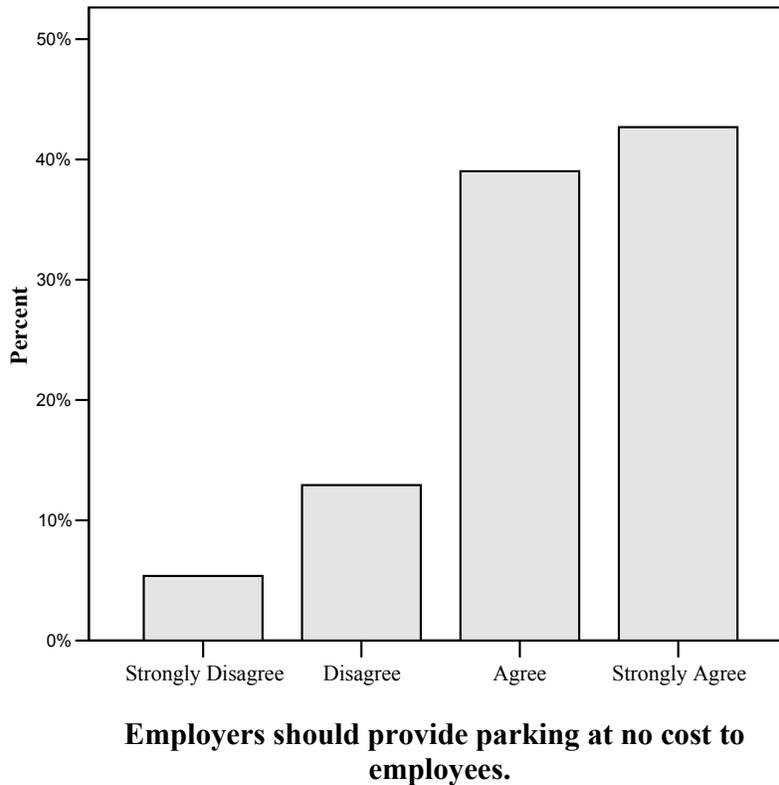


Figure 4. HR Opinion of Employee Position Parking Policies



Surveyed organizations in Atlanta do not appear to implement a significant number of commute options strategies designed to encourage employees to take alternative transportation modes to work. Widespread free parking may be a significant factor affecting the implementation of such strategies. The employers in this sample tend to own their own parking lots and do not consider that ownership incurs cost. Nearly sixty percent of organizations surveyed own the employee parking lots while 82% of the respondents agree that employers should provide parking at no cost to employees. Furthermore, free parking is considered by employers to be a standard employee benefit, offered by the vast majority of organizations in the sample. Although, few companies implement incentives, the largest, central Atlanta companies do appear to offer more incentives than the smaller organizations. Detailed cross-tab analysis of the survey data is currently underway in an effort to identify the strategies most frequently implemented across companies grouped by company size, employment sector, proximity to transit, geographic location, etc. Such analyses should help to identify the strategies that are most widely accepted within employment strata. More detailed analysis can be found in Atlanta ECO survey project report ¹⁰.

6. CONCLUSIONS

The Commute Options survey was designed to assess the current level of implementation of employer commute options strategies within the Atlanta metropolitan area. Before the survey

began, the pilot test investigated the weakness in the design, content and size of the draft questionnaire. Given the results of the pilot test and the recognition of the burden to the respondents, researchers clarified ambiguous wording and eliminated individual items that has yield no variant responses. The survey methodology included telephone notification, alert letter, first survey package, follow-up postcard and second survey package, with one survey sample receiving a supplemental letter from the Metropolitan Atlanta Chamber of Commerce. The survey obtained 412 valid responses, for a response rate of 51%. The response rate significantly improved (7%) when the Metropolitan Chamber of Commerce letter was employed. This letter was sent to survey participant upper-lever managers when human resources managers did not respond to the survey.

The analysis of the survey results shows that the survey met sample design objectives and was generally representative of the employers in Atlanta area. This has been the first phase of Atlanta ECO survey. Two additional surveys will be conducted in 2005 and 2006. Employers of Commute Atlanta Participants (n=263) plus an additional 75 of 600 employers drawn from the SMARTRAQ study will be surveyed again in the second and third phrase. The cost of the employer survey effort for this program will run approximately \$80,000.00.

Based on the survey results, surveyed organizations in the Atlanta metropolitan area do little to encourage employees to take alternative transportation modes and to share rides to work. Few employer commute options programs are implemented across the region. Less than one-quarter of the sample organizations promote alternative commute approaches and only a handful offer incentives for alternative commute patterns, such as pre-tax deductions of alternative commute expenses. Parking characteristics (i.e. abundant free/employer-paid parking) is likely to be one of the major factors correlated with the lack of active program implementation. Further analysis will focus on developing choice models that can help to identify factors that are potentially driving the implementation of commute option programs. In these models, factors such as business classification, employer size, business location, proximal land use, parking availability, location of public transit services, etc. will be examined as potential explanatory variables. The next phase of research will also look more closely at the companies that do currently offer incentive programs in an effort to help voluntary program managers identify the types and locations of companies most likely to be amenable to implementing employer commute options programs. The team will continue to examine the data from this survey in conjunction with travel diary data and monitored vehicle activity data. The goal will be to assess the potential benefits of implementing employer commute option surveys in other urban areas for the purposes of evaluating the potential effectiveness of commute options programs.

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