Champaign/Urbana area Employee e-Survey Report

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Introduction

Two e-surveys were conducted in Champaign/Urbana as part of the miPLAN mobility project. One, the subject of this report, was a survey of the employees of several of the larger employers in Champaign and Urbana, while the other was a study of UIUC students. A separate report has been prepared based on the student survey.

Study objectives

This is a survey primarily about commuting, not about local travel in general. It is a survey of employees of several relatively large employers, not a community-wide survey. Much like a paper-and-pencil mailed survey, it is a sample of convenience dependent on willingness of people to participate. It is not a random sample.

Unlike mailed, telephone, or in-person surveys, and because of the cost structure of e-surveys, it is possible to gather large numbers of responses with very little marginal cost attributed to the larger respondent base. The total sample size in this case is 3,262 persons all of whom are known to commute to work at known employers. Obtaining responses from this many locally employed persons by any other means would have been prohibitively costly.

The objective of the study is to provide a profile of the mobility patterns of a proportion of the body of local commuters. With a large sample it becomes possible to geocode many points of origin and destination, to learn about typical commuting and related mobility patterns, uses of multiple modes, and perceived barriers to walking or riding a bicycle.

Emailed invitations containing a link to an online survey were sent by several large employers to all of their employees encouraging participation in the survey. The employers included the University of Illinois, The Carle Foundation Hospital, The Carle Clinic, Provena Covent Medical Center, The City of Urbana, the Urbana School District, and Devonshire Realty. Thanks are due to each of these organizations and their staffs who coordinated this effort internally.

Participating employers, number of employees, and responses

Employer	# employees*	% of employees in these employers	Survey respondents	% of respondents	Response rate
UIUC	13971	62%	1902	58%	14%
Carle Clinic	2919	13%	598	18%	20%
Carle Foundation Hospital	2750	12%	505	15%	18%
Provena Covent Medical Center	1200	5%	115	4%	10%
Urbana school district	730	3%	47	1%	6%
City of Urbana*	400	2%	29	1%	7%
Devonshire Group***	214	1%	48	1%	22%
Other participating employers***	200	1%	18	1%	9%
Total	22384	100%	3262	100%	15%

* Source: Champaign County website, 2007
** Not including independent brokers
***Estimated

According to local public records, the total number of employees at these organizations was 22,384. The total number of responses was 3,262, for an overall response of 14.5%, which in the inset table is rounded to 15%.

Because the invitations were sent by email and the survey was taken online, only those with email and Internet access could participate. We do not know how many of the estimated 22,384 total employees have such access, but surely not all employees have ready access and some undoubtedly have no access. Thus, within that smaller group of employees, the response rate would actually be somewhat higher than 14.5%, although it would under-represent various types of employees in spite of the higher percent response.

Discussion of the sample

When conducting e-surveys, we are often asked two questions:

(1) What is the statistical margin of error?

(2) Is the response a "good" response?

First, measurement of a range of sample error is a product of the *randomness* of a sample, not the proportion of the population included in a survey. The widely cited statistic of "sample error" is simply a narrow range of percentages (say, for example, plus or minus 5%) within which we can be 95% confident the results will reflect the true characteristics of the population we are surveying. However, sample error is *not* a function of the percent of the population studied, but is a function of the *absolute size* of the sample and the *randomness* of the respondent selection process. The e-sample used in this study cannot be considered a "random sample" because response was voluntary and thus self-selected – i.e. respondents were free to participate or not, though they were encouraged by their employers to do so. Moreover, by definition, an e-survey reaches only those who have email addresses accessible to their employers, generally their work-site email. This obviously limits or omits some types of employment groups who would be unlikely to use computers or the Internet at work.

To obtain a true random sample of employees, would have required identifying a large body of employees choosing a sample (not all) of them in a rigorous randomized manner, then pursuing those selected over time, and probably with financial incentives, until those sampled at random to participate had responded.

It is often assumed that a telephone survey can produce a true random survey sample. In the real world of surveys with budget-limits, this ideal type of random sample is rarely attained. It is less and less frequently attained in an era in which people increasingly refuse to participate, or are inaccessible because they use only cell-phones[1]. It is especially difficult in the workplace where access is highly limited. Thus the ability of the researcher to obtain "true random sample" even by telephone methods is largely theoretical, and we have to rely on other methods. Increasingly that means an e-survey.

[1] Blumberg & Luke, "Wireless Substitution: Early Release of Data from the National Health Interview Survey, July – December 2006, Division of Health Interview Statistics, National Center for Health Statistics.

Methods other than telephone surveys and e-surveys are available, but they involve combinations of personal contact, paper-mail, personal follow up, and financial incentives which are quite labor intensive and far too costly for this project.

Thus, in proposing the e-survey method we felt that a large and diverse sampling of employees of employers who account for a large proportion of local commute-trips, would suffice for our purpose of profiling a large proportion of commuters at a reasonable cost. Moreover, it would have several advantages over a telephone survey. Specifically it would:

- Reach thousands of respondents at a low cost.
- Because it would include a sheer mass of thousands of respondents, the e-survey would offer us the ability to make comparisons among sub-samples of commuters with various perspectives on local mobility options. This is the most important advantage.
- Reach substantial numbers of commuters from outside the immediate Champaign County area, a group that would not be included in significant numbers in a telephone survey for reasons of cost and because we could not know in advance where employees were coming from in order to sample their areas of origin.
- Reach commuters whose workplace destinations are well known in a general sense (e.g. Campus, Carle Clinic, etc.).

Is the sample representative?

The second question about whether 3,262 responses represent a "good response" is more difficult to answer. A "good" response in common-sense terms would be one that met the central objectives of the study. The objectives are to provide a sample large enough to study mobility patterns of a large proportion of the body of local commuters, a proportion that is as representative as possible. The sample is certainly large enough to break down in many ways to compare and contrast groups such as those who use various modes, come from various areas, are interested in alternative modes, and so forth.

Is the sample representative of the local commuting market or at least of the large employers in the local market?

Unfortunately, we have no independent measure of the demographics of the local commuting market and cannot answer that question except indirectly. However, we are able to make several rough comparisons using Census data. To some extent they are "apples to oranges" comparisons, but they do help put the e-sample of commuters in perspective.

The data from the Census of 2000 are approximately seven or eight years old, and cover all area employees, not the employees of larger employment sites only. Therefore, one would not expect that the percentages would match. We offer them only to provide some perspective on how the e-survey data compare to this other major data source.

The inset table on this page shows that the mode-to-work for the total population over the age of 16 in 2000 is roughly comparable – except for the percent walking to work – to the results of the e-survey. The walking discrepancy may have to do with the different methodologies, or with the passage of time and the increased suburbanization of the Champaign/Urbana area, or both.

The most interesting this about the table is not the discrepancy in the percent walking, but the remarkable similarity in mode to work between two very different data collection methods separated by more than seven years.

Mode to work: Compare Census 2000 with e-survey 2007

Travel mode	Census (all workers over 16)	Survey (Workers with email at selected employers)
Drove alone	67%	74%
Walked	12%	3%
Carpooled	11%	11%
Public transportation	7%	8%
Bicycle	3%	4%
Other	0.4%	
	100%	100%

Source: Table II-8, page II - 7, Long Range Transit Plan, Champaign Urbana Urbanized Area Transportation Study, December 2004

Travel time to work: Comparing disparate data sources: Census 2000, ACS, 2005, and e-survey 2007.

	General population studies		Employee study
Travel time	Census, Champaign/Urbana urbanized area, 2000	ACS, Champaign Co., 2005	e-survey, employees from multiple counties, 2007
Less than 10 minutes	25%	21%	12%
10-14	30%	24%	19%
15-19	24%	22%	22%
20-24	9%	16%	19%
25-29	2%	6%	8%
30-34	4%	6%	9%
35-44	1%	1%	5%
45-59	2%	3%	5%
60 or more	2%	2%	1%
Mean	25 minutes	16 minutes	20 minutes

Source: Census 2000 data cited in Table II-10, page II - 7, Long Range Transit Plan, Champaign Urbana Urbanized Area Transportation Study, December 2004. Also American Community Survey (ACS), Champaign County, 2005, US Census Dept.. Also miPLAN employee e-survey, 2007

Another comparison, presented in the table above, is in total time for the commute. Three data sources collected in three different years from two different population bases are used,

Time spent commuting has been increasing in general as sprawl and traffic congestion increase. The change in the percent citing longer commute trips in 2005 compared to

2000 may reflect this change. The 2007 commuter study also seems to reflect the longer trips, though the methodologies differ so much that we cannot be sure. What is interesting is that the general ranges are reasonably similar except for the very brief trips. This is perhaps a result of the fact that the commuter survey of 2007 reached employees from many locations, including those outside of Champaign County, which the Census is focused on that county and on the Champaign/Urbana urbanized area.

Similarities are also interesting. It is interesting, that in all three studies, the vast bulk of the commute trips fall in the same range of ten to twenty-four minutes. Moreover, the longer trip times for the e-survey respondents than for the Champaign County American Community Survey results of 2005 are caused in part by the fact that 10% of the e-survey respondents come from counties other than Champaign and thus have rather lengthy commutes.

Thus, the answer to the question of whether the sample is representative cannot be answered completely. However, it is rather clear that the e-survey sample is generally within the bounds of what is known from the Census about the total community commuter market, and that the deviations observed "make sense" in terms of known social and travel trends, and the differing bases of the data sources.

We are comfortable that the e-survey sample is not dramatically biased by either mode or length of the commute.

Data analysis, presentation and rounding

Data were analyzed using SPSS, and are presented in charts created in Excel and exported to PowerPoint. Consequently, there is a PowerPoint file of all slides contained in this report which can be used for presentation purposes.

In almost all of the charts in the report, percentages are rounded to the nearest whole number. This may cause the sum of any given percentage to total 99% or 101%. This is simply rounding error and should be ignored.

One other source of minor differences among some charts in this report should also be mentioned here. The mode-to-work was asked in two different ways for several reasons including meeting the slightly different needs of both market research and modeling. It was asked as both the mode used most frequently during the past month and as the mode used on the most recent weekday when a person went to work. The two responses are very similar but slightly different. This causes minor differences in percentages one might otherwise have expected to be identical (e.g. the relationship of age of the commuter to the use of MTD).

This causes no difficulty in interpreting the meaning of the data and is mentioned here so that such minor differences will not be disconcerting to those who notice them.

Profile of the commuter sample

Cities of residence from which respondents commute

(Source: MiPLAN e-Survey of Employees - 2007)

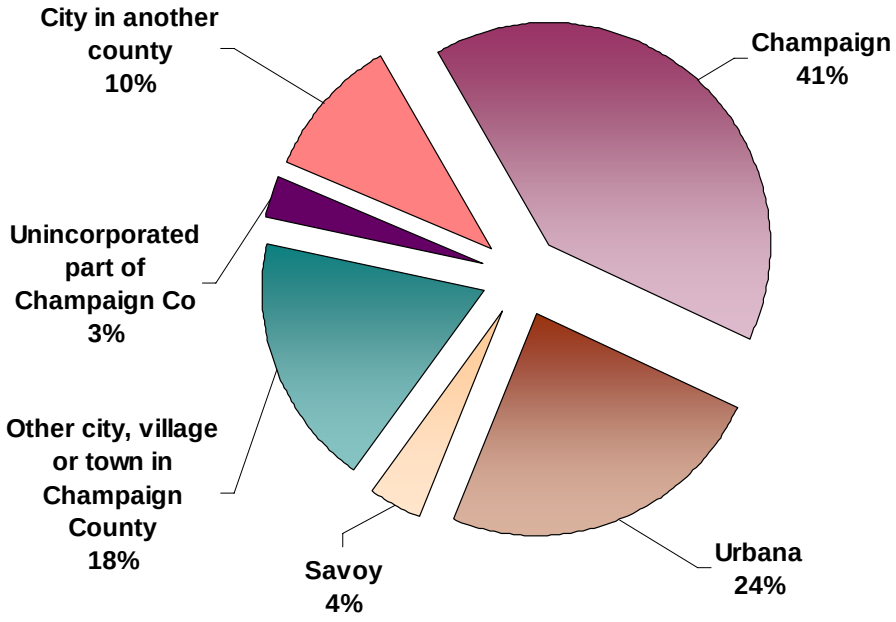


Figure 1 Cities from which respondents commute

Commute-trip origins

Most commuters in the sample live in Champaign (41%) or in Urbana (24%), for a total of almost two-thirds (65%) living in the key cities of the region. Most of the others (25%) live either in Savoy (4%), other towns in Champaign County (18%), or unincorporated parts of the county (3%). The other 10% live in other counties. A handful (two people, both included in the 10% from other counties) commute from Indiana, and one commutes from Chicago[2].

On the following page is a detailed table of the cities, towns and counties of origin.

[2] For computing mean travel times, their travel times were omitted as exceptional, and as factors about which local planners could do nothing by making local mobility improvements.

Origins of commute trips in the sample

City of origin	Number of respondents	Percent	City of origin	Number of respondents	Percent
Champaign	1296	39.73%	Champaign	2	0.06%
Urbana	777	23.82%	McLean	2	0.06%
Mahomet	142	4.35%	Champaign	2	0.06%
Savoy	119	3.65%	Douglas	2	0.06%
Unincorp Champaign Co	98	3.00%	Champaign	2	0.06%
Saint Joseph	95	2.91%	Coles	2	0.06%
Rantoul	66	2.02%	Vermillion	2	0.06%
Tolono	63	1.93%	Champaign	2	0.06%
Philo	43	1.32%	McLean	2	0.06%
Monticello	38	1.16%	Champaign	2	0.06%
Danville	25	0.77%	Vermillion	2	0.06%
Villa Grove	24	0.74%	Ford	2	0.06%
Sidney	23	0.71%	Champaign	2	0.06%
Fisher	22	0.67%	Champaign	1	0.03%
Homer	21	0.64%	Champaign	1	0.03%
Tuscola	16	0.49%	Piatt	1	0.03%
Paxton	13	0.40%	Piatt	1	0.03%
Farmer City	10	0.31%	Douglas	1	0.03%
Mansfield	10	0.31%	Vermillion	1	0.03%
Pesotum	10	0.31%	Champaign	1	0.03%
Sadorus	10	0.31%	No county nam	1	0.03%
Thomasboro	10	0.31%	Ford	1	0.03%
Fithian	9	0.28%	Champaign	1	0.03%
White Heath	9	0.28%	Champaign	1	0.03%
Gibson City	8	0.25%	Champaign	1	0.03%
Gifford	8	0.25%	Champaign	1	0.03%
Bloomington	7	0.21%	Champaign	1	0.03%
Charleston	7	0.21%	Champaign	1	0.03%
Ogden	7	0.21%	Champaign	1	0.03%
Bement	6	0.18%	Champaign	1	0.03%
Oakwood	6	0.18%	Champaign	1	0.03%
Royal	6	0.18%	Champaign	1	0.03%
Broadlands	5	0.15%	Champaign	1	0.03%
Camargo	5	0.15%	Douglas	1	0.03%
Catlin	5	0.15%	Champaign	1	0.03%
Decatur	5	0.15%	Douglas	1	0.03%
Newman	5	0.15%	Douglas	1	0.03%
Seymour	5	0.15%	Vermillion	1	0.03%
Westville	3	0.09%	Piatt	1	0.03%
Armstrong	2	0.06%	Vermillion	1	0.03%
Arthur	2	0.06%	Douglas	1	0.03%
Atwood	2	0.06%	Piatt	1	0.03%
			Bondville	2	0.06%
			Cissna Park	2	0.06%
			Clinton	2	0.06%
			Crawfordsville	2	0.06%
			Deland	2	0.06%
			Dewey	2	0.06%
			Fairmount	2	0.06%
			Georgetown	2	0.06%
			Loda	2	0.06%
			Mattoon	2	0.06%
			Normal	2	0.06%
			Sibley	2	0.06%
			Tilton	2	0.06%
			Arcola	1	0.03%
			Argenta	1	0.03%
			Bellflower	1	0.03%
			Buckley	1	0.03%
			Chatsworth	1	0.03%
			Chicago	1	0.03%
			Chrisman	1	0.03%
			Foosland	1	0.03%
			Forsyth	1	0.03%
			Garrett	1	0.03%
			Hammond	1	0.03%
			Hoopeston	1	0.03%
			Illiopolis	1	0.03%
			Le Roy	1	0.03%
			Lincoln	1	0.03%
			Ludlow	1	0.03%
			Melvin	1	0.03%
			Penfield	1	0.03%
			Potomac	1	0.03%
			Princeton	1	0.03%
			Rankin	1	0.03%
			Ridge Farm	1	0.03%
			Sidell	1	0.03%
			St. Anne	1	0.03%
			Sullivan	1	0.03%
			Towanda	1	0.03%
			Weldon	1	0.03%
			Neither city nor county given	55	1.69%
			County other than Cham-paign, but neither city nor county given	111	3.40%

Figure 2 Detail of city of commute-trip origin

Commuting mode used most often in past month

(Source: MiPLAN e-Survey of Employees - 2007)

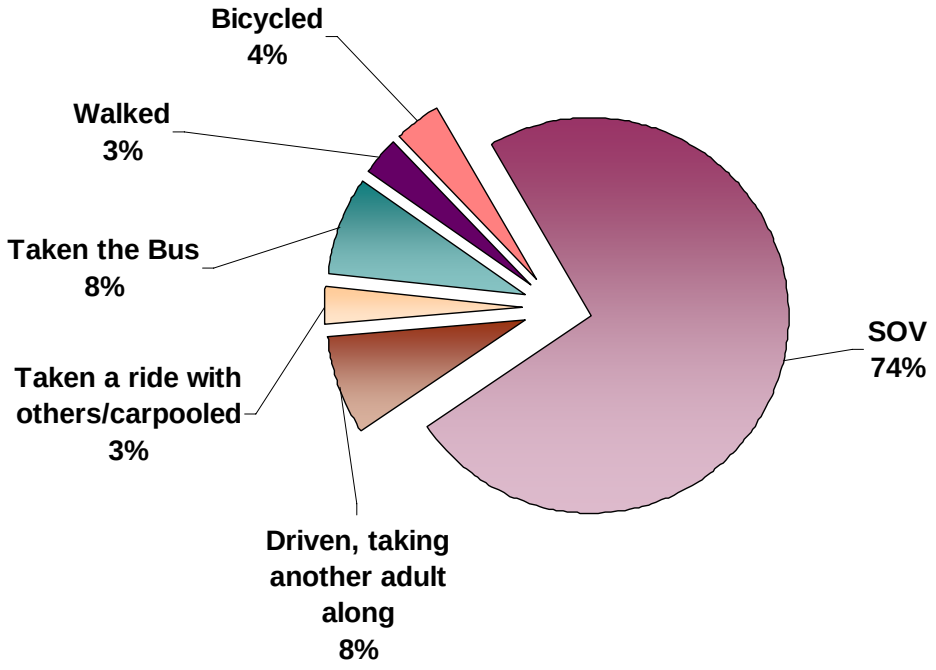


Figure 3 Commuting mode used most often in the past month

Commute-mode

Nationwide, according to the Census, 88% of persons sixteen and older drive to work. Of that total, 77% drive alone, and 11% drive in carpools. Locally, the 2005 American Community Survey for Champaign County shows 72% driving to work alone, and another 11% carpooling. The employees sampled in 2007 follow local tendencies fairly closely, with 74% driving alone, and 11% carpooling[3].

However, slightly more of the e-sample of commuters take public transportation to work (8%) than the 2005 American Community Survey found (5%) for both the United States as a whole and for Champaign County[4].

[3] The American Community Survey is a random sample survey used by the U.S. Census Bureau in many locations as a means of updating the Decennial Census. See the Census website, American fact finder at http://factfinder.census.gov/servlet/ACSSAFFPeople?_submenuId=people_6&_sse=on

[4]

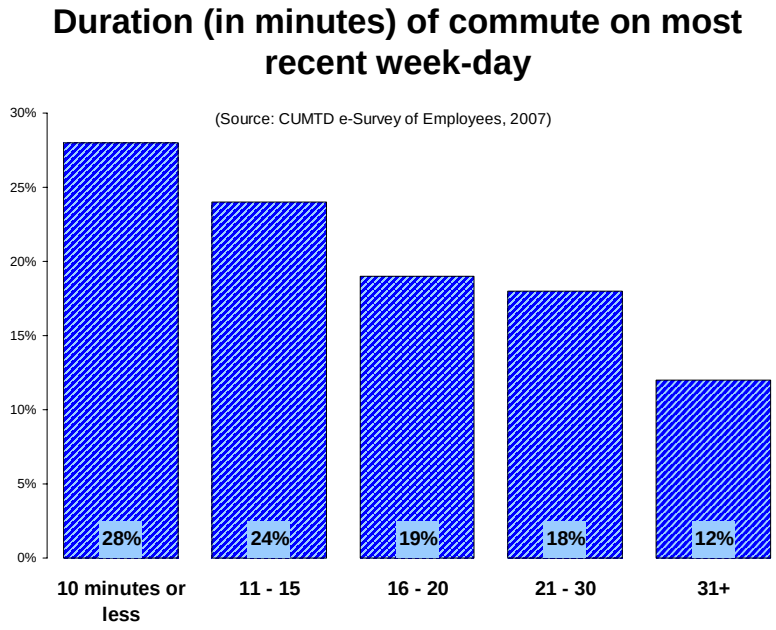


Figure 4 Duration of commute on most recent weekday

Travel mode and time for the commute

In the chart above, the sample is broken into five sets of commuters with commutes of different lengths. More than one fourth (28%) indicated they have commutes of 10 minutes or less while another group of approximately one fourth (24%) indicated a commute between 11 and 15 minutes. Thus, more than half (52%) of all the responding commuters reported commutes of fifteen minutes or less. The inset table below shows (as one would expect) that commuting from towns away from the immediate Champaign Urbana area takes longer than commutes originating in Champaign or Urbana. This is simply due to the fact that all of the employers studied are in Champaign or Urbana.

Minutes to get to work, by origin and mode

City of origin	Mean	Median
Champaign	16	15
Urbana	13	10
Savoy	16	15
Other city, village or town in Champaign County	25	25
Unincorporated part of Champaign Co	23	20
City in another county	40	40

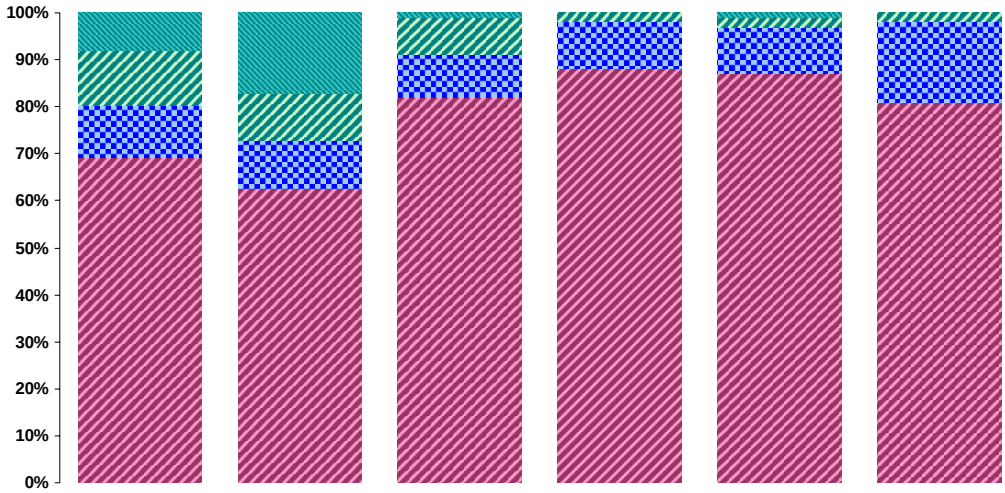
How did you get to work on the most recent week-day you went to work?	Mean	Median
Drove alone	20	15
Drove, taking one or more adults along	22	20
Got a ride with others / car-pooled	19	15
Took the bus	22	20
Walked	17	15
Bicycled	15	15
Entire sample	20	15

The table also indicates that those who pick up others (drive, taking other adults along) have a slightly longer commute (22 minutes) than those who drive alone (20 minutes), but those who said they get a ride with others or carpool have a slightly shorter trip (19 minutes). Those who said they take the bus have a trip equal to those who drive, but pick up others (22 minutes).

Demographics of the commuter, by mode

City of residence, by usual mode to work

(Source: miPLAN e-Survey of Employees, 2007)



	Champaign	Urbana	Savoy	Other city, village or town in	Unincorporated part of Champaign	City in another county
Walk or bike	8%	17%	1%	0%	1%	0%
Bus	12%	10%	8%	2%	2%	2%
Carpool	11%	10%	9%	10%	10%	17%
SOV	70%	62%	82%	88%	87%	81%

Figure 5 City of residence, by usual mode to work

City of residence and usual mode to work

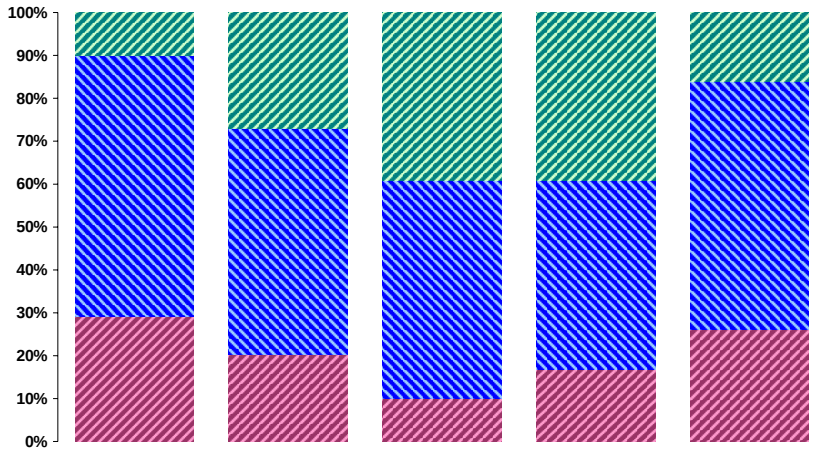
The chart above indicates what is fairly obvious, that those who live in Champaign or Urbana have more mobility options than others. Consequently, people living in other cities or villages or towns in Champaign County or in unincorporated parts of the county or in another county all are more likely to use single occupancy vehicles for their commute.

Those who live in or Urbana are more likely (17%) than others to walk or bicycle to work. Substantial numbers of commuters to the participating employers from Champaign (12%) and Urbana (10%), and even Savoy (8%), indicated that they most often use the bus to get to work. They are also more likely to walk or use a bicycle to commute. Clearly their urban locations make these mobility options available. One consequence is that the rate of commuting by SOV is considerably lower among commuters from these locations than for commuters from other locations.

Not surprisingly, the percent reporting that they carpool, either driving taking others along or getting a ride with others, is highest from cities in other counties (17%).

Vehicles available, by usual mode to work

(Source: miPLAN e-Survey of Employees, 2007)



	SOV	Carpool	Bus	Walk or bike	Entire sample
Less than one vehicle per employed person	10%	27%	39%	39%	16%
One vehicle for each employed person	61%	52%	51%	44%	58%
More than one vehicle per employed person	29%	20%	10%	17%	26%

Figure 6 Vehicles available, by usual mode to work

Vehicles available and the usual mode to work

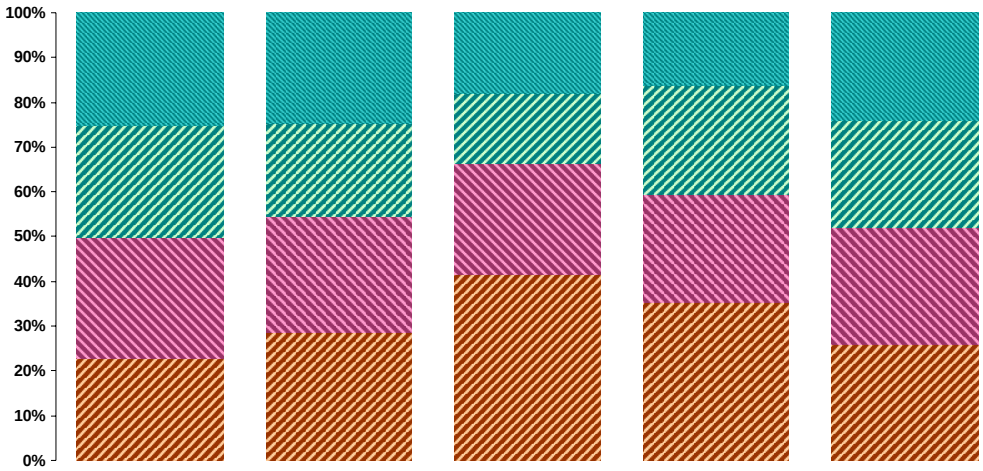
The chart above examines the availability of vehicles for the commute as a ratio of vehicles in the household to employed persons in the household. Of the entire sample, 58% indicated that they have one vehicle per employed person in the household, but an additional 26% have more than one vehicle per employed person. As one would expect, those who use an alternate mode to commute, whether carpooling, taking the bus, walking or biking, all reported a higher incidence of having less than one vehicle per employed person in the household[5]. For example, while 16% of the entire sample indicated having less than one vehicle per employed person, 39% of those who use the bus, walk or bicycle to commute reported that ratio.

On the other hand, more than half of those who report taking the bus to work (51%) said they have one vehicle for each employed person, and another 10% have more than one vehicle per employed person. This indicates that more than half of the 8% who commute by bus do so in spite of the fact that they have a personal vehicle available.

[5] Only 1.6% of the respondents indicated they have no car in their household.

Age, by usual mode to work

(Source: miPLAN e-Survey of Employees, 2007)



	SOV	Carpool	Bus	Walk or bike	Entire sample
54 or older	25%	25%	18%	16%	24%
47 to 53	25%	21%	16%	24%	24%
36 to 46	27%	26%	25%	24%	26%
35 or younger	23%	29%	42%	35%	26%

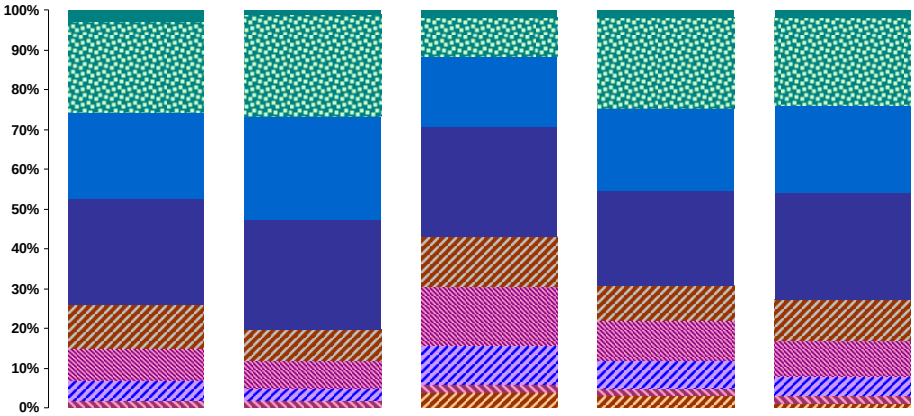
Figure 7 Age, by usual mode to work

Age and the usual mode to work

Using a mode other than a single occupancy vehicle, especially the bus, walking, or bicycling, is frequently associated with younger age groups, and this commuter sample is no exception. Of those who said they commute by bus, 42% are 35 years old or younger, while of those who commute by single occupancy vehicle, only 23% are in that age group. Similarly, 35% of those who walk or bike to work are 35 or younger compared to 23% of those who use a single occupancy vehicle.

Income, by usual mode to work

(Source: miPLAN e-Survey of Employees, 2007)



	SOV	Carpool	Bus	Walk or bike	Entire sample
$200,000 or more	3%	1%	2%	2%	2%
$100,000 to $199,999	23%	26%	10%	23%	22%
$75,000 to $99,999	22%	26%	18%	21%	22%
$50,000 to $74,999	27%	28%	28%	24%	27%
$40,000 to $49,999	11%	8%	13%	9%	10%
$30,000 to $39,999	8%	7%	15%	10%	9%
$20,000 to $29,999	5%	3%	10%	7%	5%
$13,000 to $19,999	2%	2%	2%	2%	2%
Less than $13,000	0%	0%	4%	3%	1%

Figure 8 Income, by usual mode to work

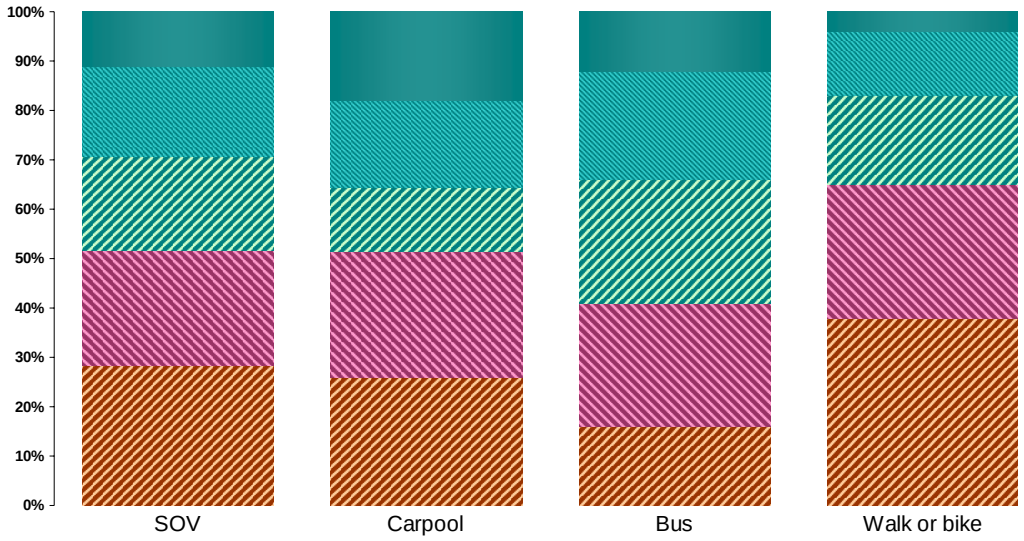
Income, by usual mode to work

The commuter sample encompasses a wide range of household incomes, but they are most concentrated in the range above $50,000, a range which encompasses 71% of the sample.

Another way to think about the income data is this: A total of 83% have household incomes of $40,000 or more. Given that the American Community Survey of 2005 reported a median household income for Champaign County at approximately $39,000, this indicates that the sample is primarily in the upper half of the local income distribution. Given that by definition this sample excludes those who are only students, and those who are retired, unemployed, or unable to work, one would expect that the income distribution would be skewed upward. Therefore, this difference does not necessarily mean that the sample is unrepresentative of the commuters, but probably means that commuters have significantly greater disposable income than others.

Duration of the commute, by usual mode to work

(Source: miPLAN e-Survey of Employees, 2007)



	SOV	Carpool	Bus	Walk or bike
31 or more	11%	18%	12%	4%
21 to 30	18%	18%	22%	13%
16 to 20	19%	13%	25%	18%
11 to 15	23%	26%	25%	27%
Ten or less	28%	26%	16%	38%

Figure 9 Duration of the commute, by usual mode

Duration of the commute by the usual mode of commuting

Those who walk or bicycle to work were most likely to report having commute times of ten minutes or less (38%), presumably because they must live close enough to handle their commute in those ways.

More than one fourth (28%) of the single occupancy vehicle commuters also reported commuting durations of 10 minutes or less, a fact that suggests many of them must live very close by their jobs. Another 23% of the SOV commuters indicated their commute takes 11 to 15 minutes. Thus more than half of the SOV commuters (51%) have commutes of 15 minutes or less.

What commuters say in their own words about their reasons for choosing the modes they use to commute

On the pages which follow, open-end responses are excerpted from random samples of the remarks of fifty respondents from the full set of more than 3,000. Their remarks are fairly representative of the remarks of all respondents[6].

- Those who bicycle to work tend to cite the economies of the bicycle, and the health benefits. Some also mention the environment. Others contrast the bicycle with other alternate modes such as bus and carpool, citing the flexibility of schedule they enjoy with the bicycle.

- Those who drive to work taking along another adult (thus carpooling) tend to cite either their desire to save money (thus the tendency to take someone else along apparently to share costs), companionship, or the convenience of driving itself. Very few site any concern with the environment as a motive. Several indicated that they would use the bus if the schedule or routing were practical for them.

- Those who said they ride with others tend to cite cost savings.

- The bus-commuters tend to cite the economy of using the bus as well as the convenience. They did not cite environmental concerns.

- Those who walk to work tend to cite the health benefits and the economy.

- Those who drive themselves to work alone tend to cite their perceived need for flexibility of schedule, especially for purposes of doing errands, using the car during the workday, or picking up or dropping off children, or getting home if urgently needed by the children. Several people mentioned simply that they live so far away that any mode other than driving is impractical. Some talk about their enjoyment of the time alone driving.

None of these reasons is exceptional or unexpected.

[6] The full text of all responses will be available in an Excel spreadsheet.

Typical reasons given for preferring an alternate commute mode than SOV

Mode to work used most often	What is the main reason that you ride the bus, carpool, vanpool, bike or walk to work?
Bicycled	Before I answer this question, I will say this. The current naming/numbering/coloring/time-of-day/time-of-week scheme for the bus routes is far too complicated, and this, believe it or not, is main the reason why I started cycling instead of taking the bus
	Biking is cheaper, healthier and faster than driving. Taking the bus is cheaper.
	Car: Weather. Bike: Exercise and Flexibility. Bus takes too long: over 40 minutes.
	Economics
	I bike and bus to avoid using my car and to get much-needed exercise. I want to avoid using a car to cut down on my expenses and to reduce pollution. When I bike (or use the bus) I feel more in control of my schedule, than if I were to carpool.
	I bike to conserve energy stop global warming, and for health and savings!
	I bike. It's fun, easy, cheap, parking is free and available. Bicycling is the way to go.
	I generally bike or walk to work, and occasionally ride the bus. I have driven my car to work less than a dozen times over the past 5 years. My primary reason for biking and walking is exercise. However, I also feel very strongly about the environment.
Drive - taking other adult	Convenience
	Convenience - time, comfort, safety
	Convenience, time
	Cost of living (aka gas prices)
	Costs too much to drive
	Fuel price too high
	Gas prices
	High cost of gas
	My wife works in the same building. I drive to be with her and because the bicycle is bad for my knees. Also the car is generally more convenient (sometimes carry things), and riding the bicycle requires an annoying helmet.
	I drive to work with my husband so that we have the convenience and ease of coordinating our work & school schedules together with running errands and getting things done around town.
	I have a decent commute. It saves gas to share the ride.
	I live outside of the City, there is no bus service. I would ride a tram. An electric tram which ran on Green, Springfield, Neil, and Prospect would be heavily used.
	I live too far away and have a young child who i am the sole care provider for and in case of an emergency I need a car at all times
	I ride bus as I can read when on the bus, unlike when driving. Unfortunately, the bus times to/from my work are not good for my travel patterns, and I can't use bus as often as I'd like to.
	It is very difficult to find a parking spot near my place of work on campus (Main Library), as the metered lot is often full early in the day with what primarily appears to be student owned cars.
	My wife and I both work at the University. We have indor parking at KCPA within easy walking distance of our respective offices. We can leave our heated garage, drive 5 minutes to another heated garage, have access to our car during the day for business/pleasure
	One adult from household will ride the bus home if leaving early for the day so that our vehicle remains on campus with the other adult to pick up children from daycare (who need car seats) at the end of day.
	To save money, spend time with my partner, and support the environment
	Two from the same household going to the same place.
	When none of our 4 motor vehicles is capable of making the trip.

Figure 10 In their own words: Reasons to use non-SOV modes

Typical reasons given for preferring an alternate commute mode than SOV (Continued)

Mode to work used most often	What is the main reason that you ride the bus, carpool, vanpool, bike or walk to work?
Taken a ride with others	I use carpooling because it is most valuable to me. The bus system is not run efficiently, although they claim it is. The buses are to big for the few people who need to use it. How about a van instead?
	Irregular hours
	time and money for a second car cost more than going home by bus or bike while coming to work with my spouse.
	biking home has the additional benefit of exercise without losing time.
	Carpooling save me gas money
Taken the Bus	Can't drive due to physical limitation. The bus is a very convenient alternative.
	I don't have a car
	I ride the bus as much as possible to save gas.
	I ride the shuttle from the Assembly Hall parking lot due to high parking costs on campus.
	I walk for exercise. The main reason I ride the bus is to save money on gas and parking. There are many other good reasons for both though.
	It's a way to get exercise, plus it is convenient and free.
	To save money and there is no convenient (free) parking
Walked	I like to walk and live close to work. I don't like to pay for parking.
	I walk because I am only 10 minutes (1/2 a mile) from work.
	I walk to exercise.
	It is good for our health and economical.
	It would take me longer to drive than to walk or ride my bicycle. It is a pleasant walk or bike ride.
	My home is a 10 minute walk to my workplace
	Simplicity, exercise, less CO2, save money
	Usually I have a short period of time to get from one place to another and am not able to wait 15-20 minutes for the next bus to come.
	Walking is easier, more convenient, and infinitely cheaper than parking.

Typical reasons given for commuting via single occupancy vehicle

In your own words, what is the main reason you drive alone to work rather than use another way to commute?

I live 45 minutes away in a different county. If something comes up with my child I would like to be able to pick her up if she needed me.

When possible my spouse and I will commute together but since we work at different health care facilities and different hours this rarely feasible. I am new to this area and have no knowledge of anyone else to commute with.

Although my husband and I both work in Urbana, and have commuted together when essential, neither of us has work hours that are predictable enough to do on a regular basis.

At this time do not have another option or know of anyone else in my area that works close to me.

bus only runs around 8am and 5 pm in my neighborhood. I need mid-day option and later into evening

Changing after school schedule of my kids.

Convenience and need to quickly respond to child's needs and appts.

Convenience, running errands

Easier

Easy to do, no waiting if running late

Have not really thought about my other options.

I can come to work when I want to and not have to wait on someone .. I come to work early , I can run errands or

I commute from a rural area 60 miles north of CU for the midnight shift. I'm not aware of anyone else traveling to

I enjoy the time I get to unwind alone on my ride home

I have complete control of when I travel. 30 minutes is too long between buses. At 15 minute spacing, 24/7, the bus is somewhat attractive. At 10 minute spacing, it's practical. Service from campus to Willard on 10 minute

I have to carry heavy loads of belongings that are needed for work and after work I frequently drive out of town to

I have two children that I drop off at school at a certain time and I would miss any bus and be late to work each day after dropping off my kids. Also I need to run errands at work at times, and my kids often call me sick

I like the freedom of having my own car to run errands during the day. I'm busy on my lunch hours

I live 30 miles away. If one of my children becomes ill, I have to leave and go home. I will not rely on someone else to get me home or them home if their children were sick. I am going to drive myself period

I live 45 miles away from work

I live alone in an outlying town

I live in a rural area 14 miles north of Champaign

I live in an isolated part of rural Champaign County

I live in an outlying town and have children I must be able to reach in an emergency.

can not pick them up in a reasonable amount of time. Taking the bus during the middle of the day to the shuttle lot was too long and stressful

Figure 11 In their own words: Reasons to commute by SOV

Typical reasons given for commuting via single occupancy vehicle (Continued)

In your own words, what is the main reason you drive alone to work rather than use another way to commute?

I live in St. Joseph and there is no other alternative.
I live out of town
I live too far away. Co-workers do not live near me. My hours vary. I run errands while I am in town to save a trip.
I need my car to get to my other school where I work.
I sometimes start my day offsite. Also my son has asthma and I am now a single mom and need to be able to get to him without waiting for transportation and need to take him to and from school since the climate can affect his asthma.
I start to work at 6am I like to have my car available to me at all times
I work erratic hours and am on call and am required to appear at odd hours.
I work off campus and other commuters from Bloomington work on Campus or downtown Champaign. It takes an additional 20 minutes on an already 60 minute commute to get to work from where they work.
If I need to leave work early or want to run errands after work.
It is more convenient. I can leave if I need to during the day, and if someone is sick, I'm not dependent on them or them on me
My starting time at work is consistent but ending time varies. I live too far to walk and there is no reliable bus service between Mahomet and where I work.
Need the flexibility of having my car available during the day.
No other alternative. No buses, no trains, too far to bicycle, no co-workers from my town in the area.
No-one else in my neighborhood who works my hours at my job and whose children go to the same school.
Shop & run errands during my lunch hour and before and after work. must be on call for my mom (who has Alzheimer's) and daughter (both out of C-U).
Taking a bus would involve walking to a bus stop, transferring buses and walking from a bus stop. What is 20 minutes by car would take an hour ormore by foot/bus. I do NOT mind walking (provided the weather isn't severe), but I can't risk being late for work
The bus that comes near my home doesn't go to my work.
The convenience of having my own car
The distance, and independence
There is no other way for me to commute. most people do not like carpooling, even when gas prices are sky high.
Time schedule does not match with anyone.
Too far, don't know if the bus is accessible from where I live.
Uncertainty of work hours and of errands that may need ran during the day
Value of time--I don't have to wait on anyone now to do what I need to do.

MTD market potential among these commuters

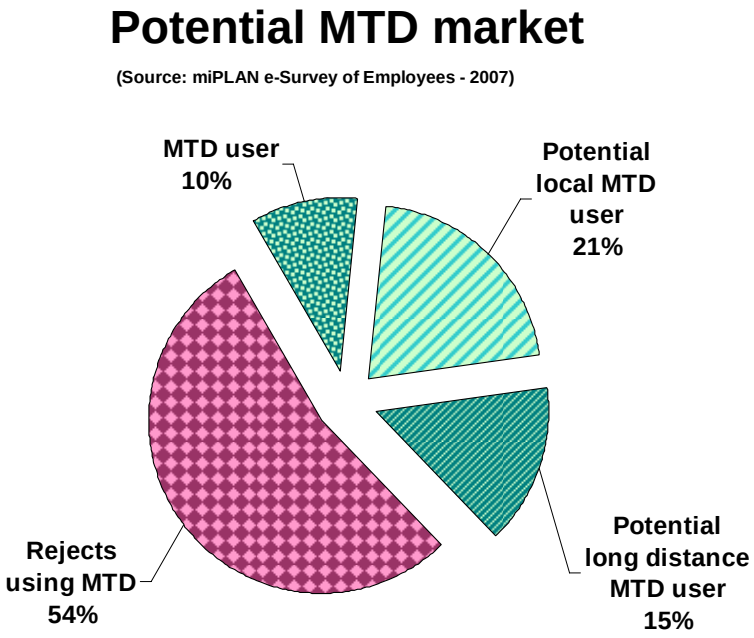


Figure 12 Potential MTD market

The potential market for MTD service

Commuters in the sample were divided into four market segments based upon their attitude toward using bus service in the Champaign/Urbana area. The first thing the reader may notice is that in this case we characterize 10% of the sample as MTD users rather than the 8% who said that MTD was their most frequent mode to work during the past month. The reason for the slight difference in percentage is that there are two criteria in the survey by which to judge whether a person uses MTD[7]. Respondents were asked what their most common mode was during the previous month, and what their mode was on the most recent workday when they went to work.

Our purpose in this segmentation was to find all those who indicated some degree of experience with MTD. This is a somewhat broader definition than was used in previous charts, and thus 10% qualified rather than the 8% discussed earlier when we were discussing the usual mode only. The redefinition is simply a matter of convenience to obtain a slightly larger sample of MTD users.

The other segments include:

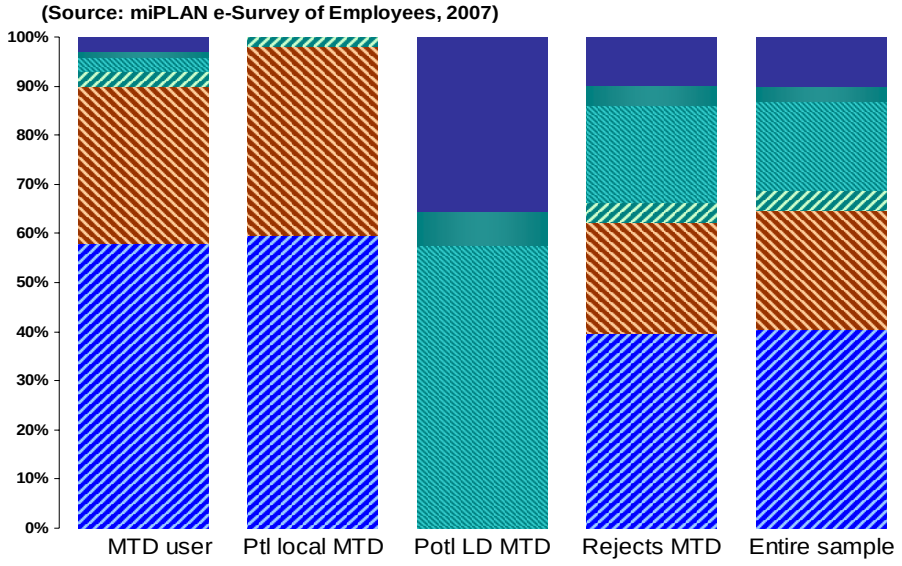
- Those who reject using MTD (54%). This group may or may not have used MTD to a limited extent in recent months, but they tend to reject further use when asked their potential to use it in the future. They reject use of MTD service even if that

[7] See also notes on this subject on page 10.

service were extended to the areas outside of the existing service area where many of the rejectors live. There are very few absolute "rejectors" of all alternate modes in part because the campus of UIUC is inherently multimodal because of the difficulties parking, the availability of frequent and free bus service, and the easy proximity of destinations for walking or bicycling.

- Potential local MTD users live within the existing Champaign/Urbana service area. They include those who do not now use MTD as the most frequent mode nor did they use it on their most recent workday on campus, but they indicated that they may do so in the future.
- Potential long-distance MTD users are the same as potential local MTD users except that they live outside the current service area.

Cities where MTD commuter market segments reside



	MTD user	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
City in another county	3%		36%	10%	10%
Unincorporated part of Champaign Co	1%		7%	4%	3%
Other city, village or town in Champaign County	3%		58%	20%	18%
Savoy	3%	2%		4%	4%
Urbana	32%	38%		23%	24%
Champaign	58%	59%		40%	40%

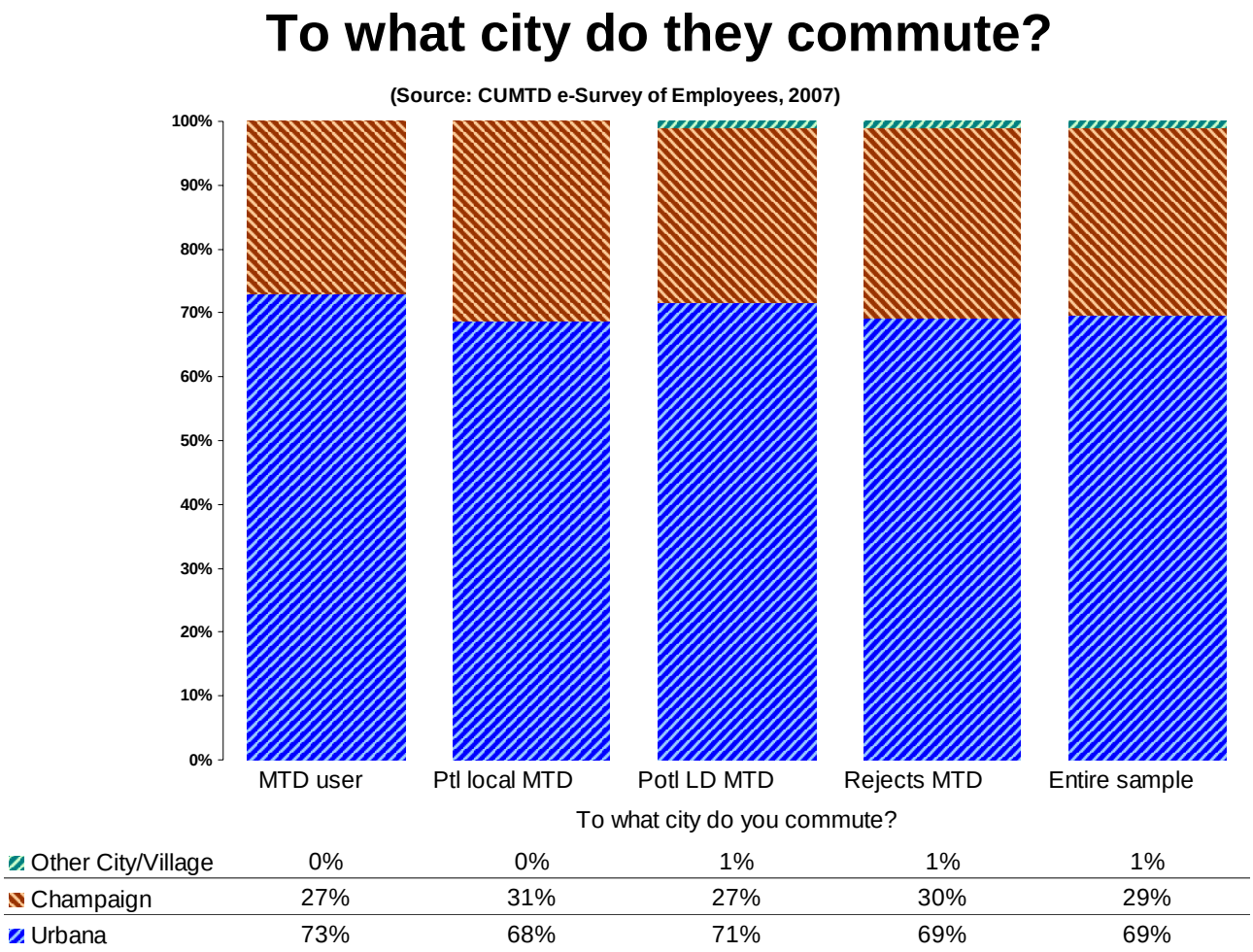
Figure 13 Cities where the MTD market segments respondents reside

Cities where the market segments for MTD service reside

For obvious reasons most current MTD users reside in Champaign or Urbana. A few reside elsewhere, and indicated that they drive to various locations where they can park and then take the bus. A few others ride a bicycle to a place where they can take the bus.

The potential local MTD users ("Ptl Local MTD") live in Champaign or Urbana and a few live in Savoy. The potential long-distance MTD ("Potl LD MTD") users generally live in another city village or town in Champaign County (58%), but a large number (36%) also live in a city in another county.

Those who reject increased use of MTD, include not only people who live at a distance from Champaign and Urbana where they now lack MTD service, but also many who live in either Champaign (40%) or Urbana (23%). In other words the rejectors include both those who have the possibility of using service and do not use it, and others who live outside the service area.



	MTD user	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
Other City/Village	0%	0%	1%	1%	1%
Champaign	27%	31%	27%	30%	29%
Urbana	73%	68%	71%	69%	69%

Figure 14 Commuting destination city

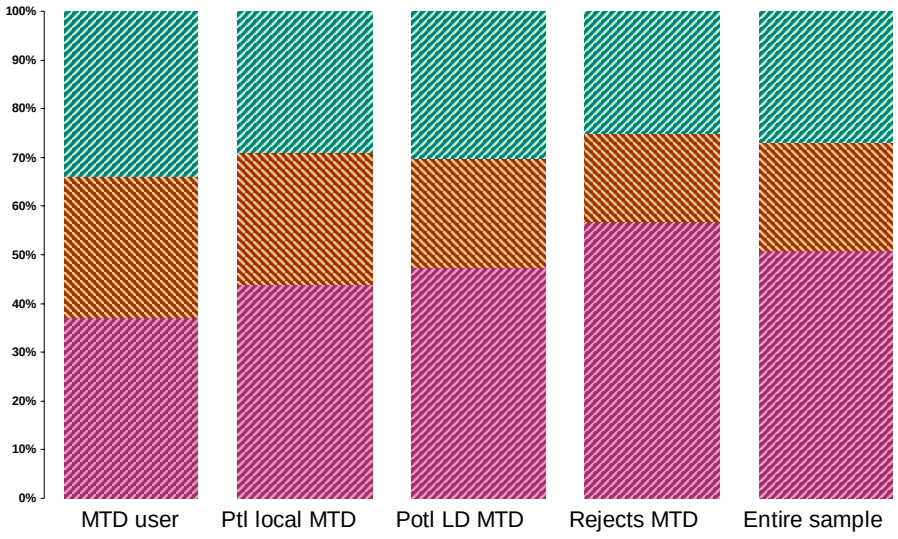
Commuting destination

The chart above indicates the city to which respondents indicated they were commuting to work. Obviously, given the employers who participated, this destination was predetermined to be primarily Champaign or Urbana. At a later phase of this same study the specific locations within Champaign and Urbana will be geocoded so that more detailed information will be available about the destinations.

The destination city did not vary substantially among the four market segments.

Parking costs on most recent week-day at work

(Source: miPLAN e-Survey of Employees, 2007)



	MTD user	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
More than $1.65	34%	29%	30%	25%	27%
Up to $1.65	29%	27%	22%	18%	22%
Free parking	37%	44%	47%	56%	51%

Figure 15 Parking costs

Parking costs

Those who drove to work were asked how much it cost them to park. Because of the fact that parking is often paid weekly monthly or annually and as well as daily, respondents were given options to respond in any of those ways. Unfortunately, while many responded appropriately, many others indicated that they paid weekly monthly or annually, but did not provide an amount. When that occurred, and there was reason to know that they had purchased a parking sticker from the University we knew the rate could complete the answer.

Parking cost on most recent day to work

Transit market segment	Mean	Std. Deviation	N
MTD user	$1.57	$1.98	175
Ptl local MTD	$1.01	$1.20	618
Potl LD MTD	$0.96	$1.30	477
Rejects MTD	$0.81	$1.15	1,706
Entire sample who drove to work	$0.92	$1.26	2,976

In other cases in which the respondents indicated they had paid by day, week, month or annually, we chose to estimate their parking costs by using the mean parking costs of those who had responded within the appropriate category, also using separate means for those who work at the University and those who work elsewhere since the means were quite different. The reason this "mean substitution" technique was used is that without it too many people who obviously paid to

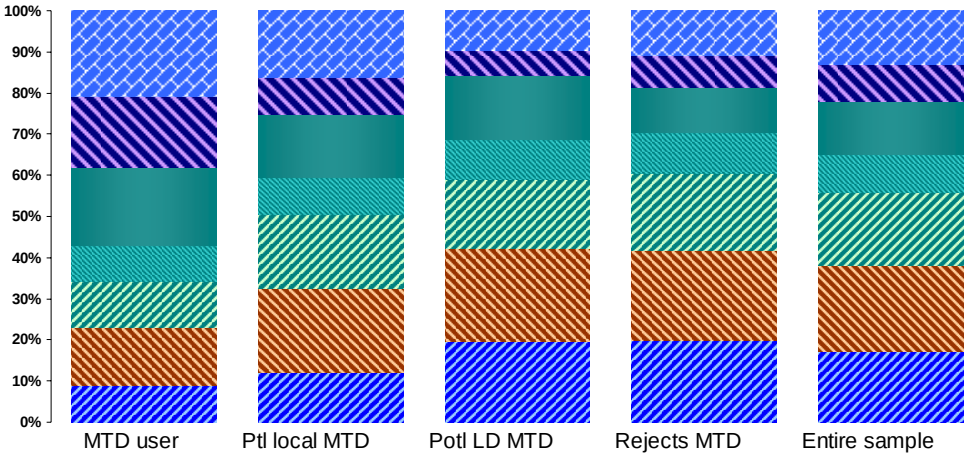
park would be unaccounted for in the total data set. The mean amount computed among those of similar characteristics is a reasonable estimate of what would have been paid.

Parking costs were standardized on a daily basis. This enabled us to compute a mean and standard deviation for the total sample, and to divide the respondents into three groups: those whose parking is free, those who paid $1.65 or less and those who paid more than $1.65 for the day.

There is a clear association between receiving free parking, or low-cost parking, and using, or being interested in using, MTD. For example, 56% of the rejectors said they have free parking, but only 37% of the MTD riders who have driven on their most recent day to work said they have free parking. Similarly, fewer of the potential MTD users said they enjoy free parking (44% and 49% respectively) than the rejectors (56%). In short, free parking is clearly a disincentive to using alternate modes.

Arrival times to work

(Source: miPLAN e-Survey of Employees, 2007)



	MTD user	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
After 10:00 AM	21%	16%	10%	11%	13%
9:31 to 10:00	17%	9%	6%	8%	9%
9:16 to 9:30	19%	15%	16%	11%	13%
9:01 to 9:15	9%	9%	10%	10%	9%
8:46 to 9:00	11%	18%	17%	19%	18%
8:16 to 8:45	14%	20%	23%	22%	21%
Before 8:15	9%	12%	20%	20%	17%

Figure 16 Arrival time at work

Work schedules: Arrival time

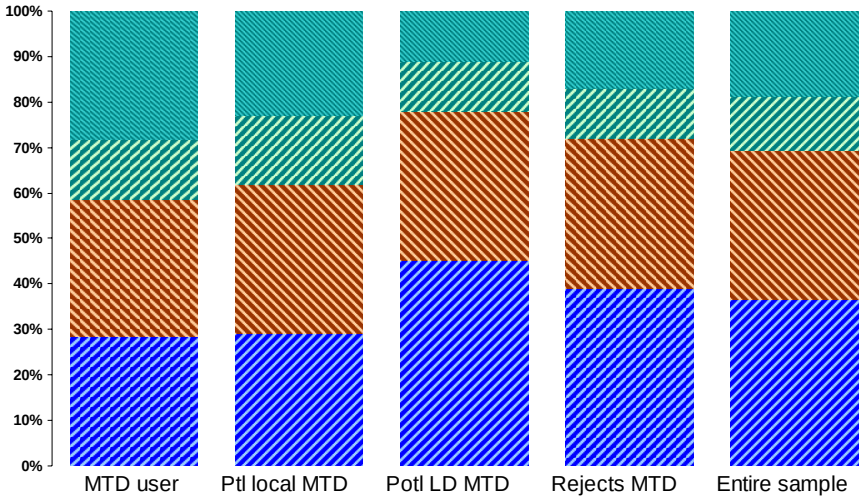
A surprisingly large proportion of all commuters (a total of 44%, including all those arriving at work from 9:01 until after 10:00 am), especially current MTD users (58%), arrive to work *after* 9:00 am. The fact that this is a university town makes a major difference in this respect (see inset table). More of the potential MTD users coming from a long distance (43%%) than those commuting within the existing service area (32%) said they must arrive before 8:45 am. Conversely, fewer of the longer distance commuters (16%) than those commuting within the existing service area (25%), said they could arrive after 9:30.

		Where is respondent employed?	
		Employed by UIUC	Employed by other
		Col %	Col %
Time arrived at work on most recent day at work (Banded)	Before 8:15	9%	29%
	8:16 to 8:45	17%	25%
	8:46 to 9:00	17%	19%
	9:01 to 9:15	12%	5%
	9:16 to 9:30	19%	5%
	9:31 to 10:00	12%	4%
	After 10:00 AM	14%	12%

Why distance would be related to arrival time is not clear. This probably relates to the types of employment (university/non-university) the commuters hold, but that is only a hypothesis and would require further analysis.

Flexibility in arrival time to work

(Source: miPLAN e-Survey of Employees, 2007)



	MTD user	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
Can vary more than 60 minutes	28%	23%	11%	17%	19%
Can vary by 31 to 60 minutes	13%	15%	11%	11%	12%
Can vary by 15 to 30 minutes	30%	33%	33%	33%	33%
Fixed - hours cannot vary	28%	29%	45%	39%	37%

Figure 17 Flexible arrival times at work

Are arrival times at work flexible?

	Where is respondent employed?	
	Employed by UIUC	Employed by other
	Col %	Col %
Fixed - hours normally cannot vary	30%	47%
Can vary by roughly 15 to 30 minutes	33%	32%
Can vary by roughly 31 to 60 minutes	14%	10%
Can vary by more than 60 minutes	23%	12%

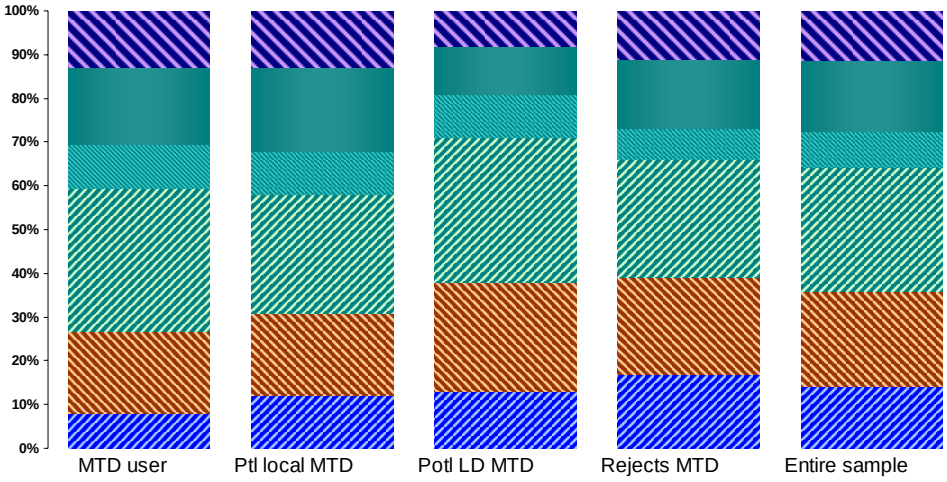
For most of the responding employees, arrival times at work can vary substantially. While 37% said their arrival time is fixed, the balance, 63% said arrival time is flexible. One third (33%) said arrival time could vary by 15 to 30 minutes, another 12% by 31 to 60 minutes, and 19% by more than 60 minutes.

As one would expect, and as the inset table indicates, those employed at the University enjoy considerably more flexibility in their arrival hours than do those of employed elsewhere.

Such flexibility may be important because it suggests freedom to choose various scheduling options for the commute, and this could affect modal choice.

Time employees departed from work on most recent week-day they worked

(Source: miPLAN e-Survey of Employees, 2007)



	MTD user	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
After 6:45	13%	13%	8%	11%	11%
6:16 to 6:45	18%	19%	11%	16%	16%
6:01 to 6:15	10%	10%	10%	7%	8%
5:31 to 6:00	33%	27%	33%	27%	28%
5:00 to 5:30	19%	19%	25%	22%	21%
Before 5:00 pm	8%	12%	13%	17%	14%

Figure 18 Time respondents leave work

Work schedules: Departure time

The largest portion of local commuters (a total of 49%) leave work between the traditional hours of five and six p.m. Within this timeframe more people (28%) leave between five-thirty and six o'clock than in any other time block shown in the chart.

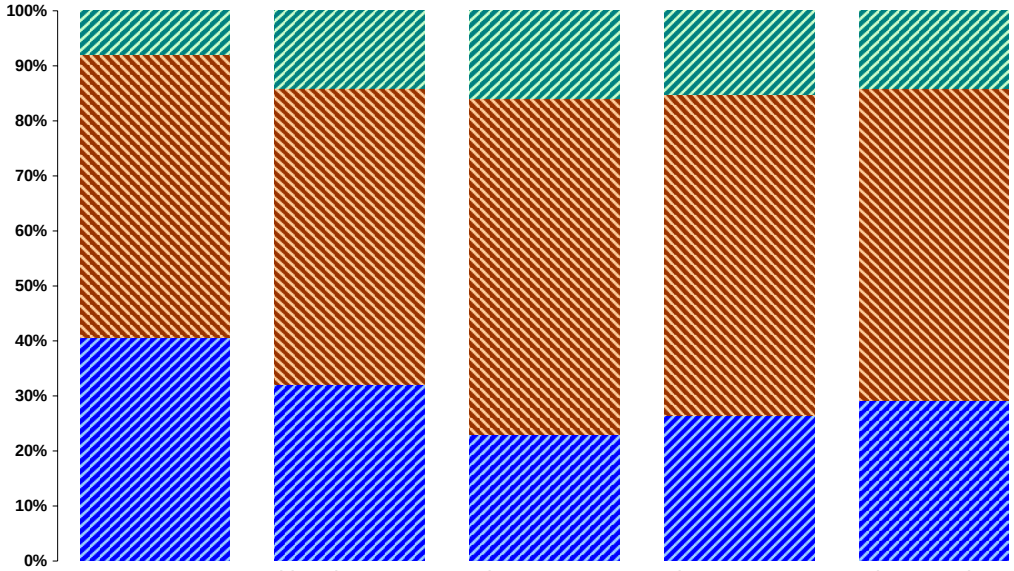
Those who commute from a longer distance, and are potential MTD users, are the most likely to leave by 6 p.m. A total of 71% of this segment leave then compared to 60% of the MTD users.

Although they are in the minority, there is a group of commuters within each market segment who leave later than six o'clock. In the entire sample, this amounts to 35% of all commuters.

Demographic characteristics of the MTD potential market

Number of employed persons 18 and older in the household

(Source: CUMTD e-Survey of Employees, 2007)



	MTD user	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
Three or more	8%	14%	16%	15%	14%
Two	52%	54%	61%	58%	57%
One	41%	32%	23%	26%	29%

Figure 19 Number of employed adults in the household

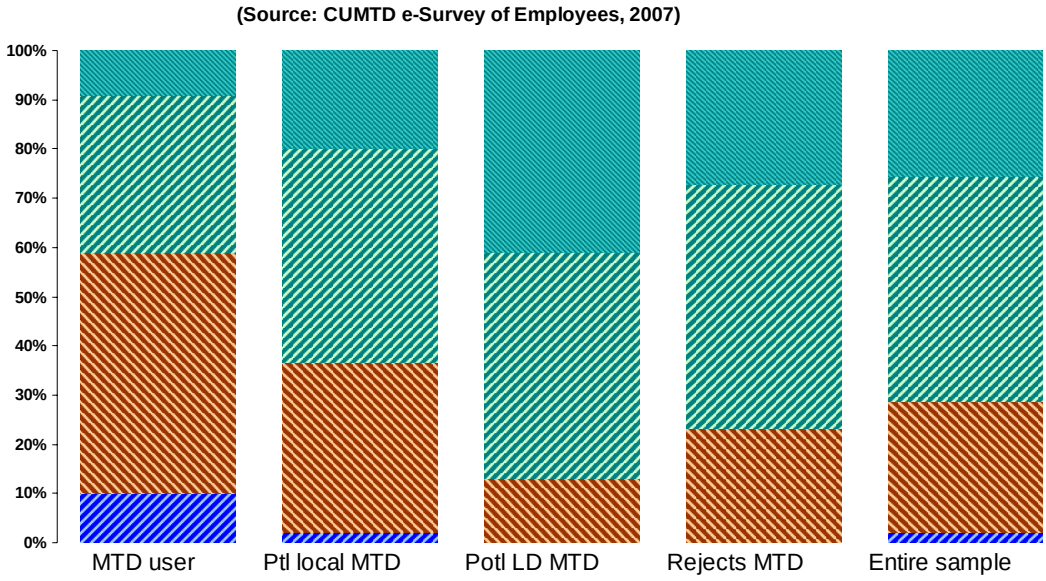
Number of employed adults in the household

More commuting households have two employed persons (57%) than have only one (29%) or more than two (14%). Current MTD users are more likely than others to have only one employed person within the household (41%), while potential local MTD users are next most likely to have only one (32%), and potential long-distance MTD users are least likely at 23%.

The potential long distance MTD users are presumably suburban dwellers, and tend to (61%) have two income families. Also, many of them have a third income earner (16%), quite possibly an older teen or other young adult.

MTD users tend to be younger than other commuters (see Figure 22) and this may account for their greater percentages of single income households.

Number of vehicles available to the household



	MTD user	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
Three or more	9%	20%	41%	27%	26%
Two	32%	44%	46%	49%	46%
One	49%	35%	13%	23%	27%
No cars	10%	2%	0%	0%	2%

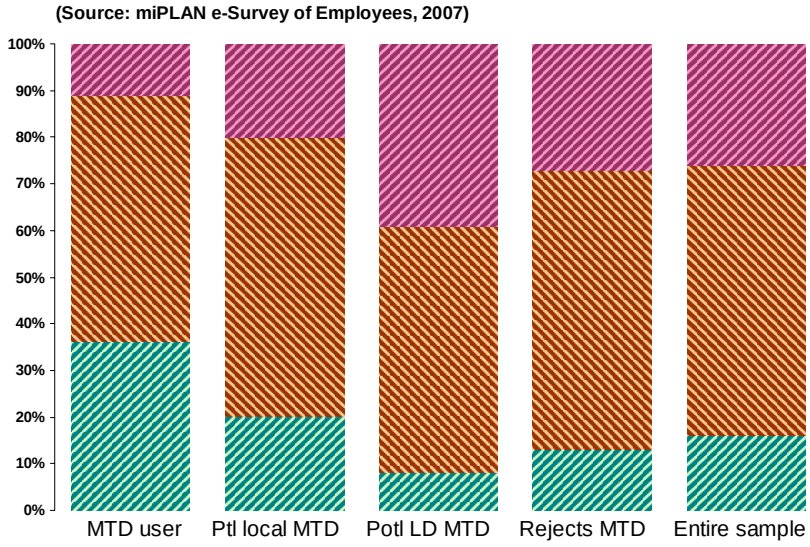
Figure 20 Number of vehicles available to the household

Vehicles available to the household

Very few respondents (2%) said their households lack a vehicle. As one would expect, more MTD users (10%) said they lack a vehicle. Conversely, this means that 90% of these commuters who use MTD do not lack a vehicle and thus have some discretion in modal choice.

There is a stronger tendency for those commuting from a distance to have three or more cars in the household than those commuting from within the MTD service area. This probably relates to lifestyle factors other than distance such as size of household.

Vehicles per employed person



	MTD user	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
More than one vehicle per employed person	11%	20%	39%	27%	26%
One vehicle for each employed person	53%	59%	53%	60%	58%
Less than one vehicle per employed person	36%	20%	8%	13%	16%

Figure 21 Vehicles per employed person

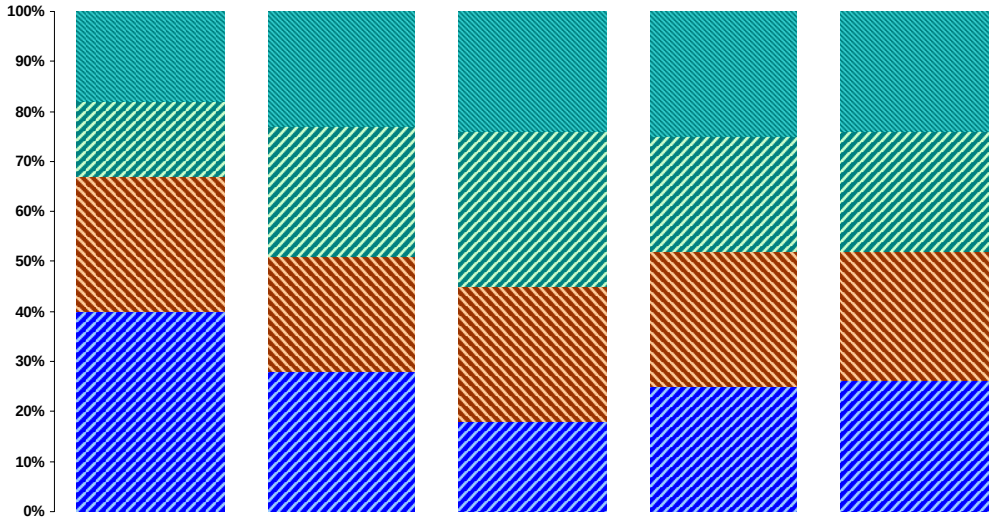
Vehicles per employed person

More germane to modal choice than simply the number of vehicles available to the household is the ratio of vehicles to employed persons within the household. Most commuters in the entire sample reported that their households have a one-to-one ratio of vehicles to employed persons (58%). Of current MTD users, however, 36% reported having fewer than one vehicle per employed person, compared to 16% for the entire sample. This suggests that they are taking advantage of the economies of using MTD rather than owning multiple vehicles.

We have already seen that the potential long-distance MTD users are more likely than the other potential or current user segments to have multiple wage earners in their households. In addition, they are also much more likely (39%) than the other segments to have more than one vehicle per employed person. This compares to only 20% of the potential local MTD users, and only 11% of current MTD users who have more than one vehicle per employed person.

Age

(Source: miPLAN e-Survey of Employees, 2007)



54 or older	18%	23%	24%	25%	24%
47 to 53	15%	26%	31%	23%	24%
36 to 46	27%	23%	27%	27%	26%
35 or younger	40%	28%	18%	25%	26%

Figure 22 Age (in quartiles)

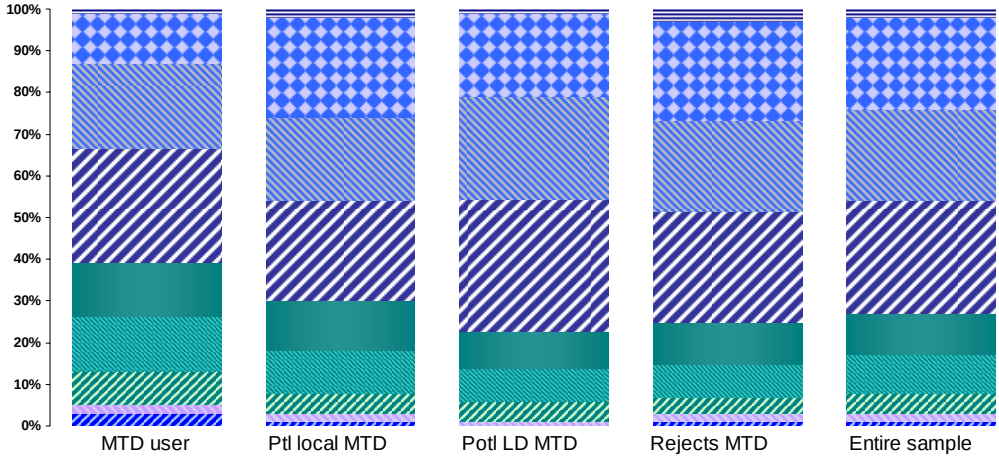
The age of MTD market segments

We have already seen in an earlier figure that current MTD are relatively youthful compared to the other commuters (see Figure 7)[8]. Current MTD users are, in fact, considerably younger than the potential markets, either local or long-distance. While 40% of the MTD user market segment is 35 or younger, only 28% of the local MTD potential market and only 18% of the long-distance potential market is within that age group.

[8] Please recall that the difference in the definitions of "*Bus as the most usual mode*," and the current MTD user market segment differ slightly. Thus the percent who use the bus most often and are 35 and younger in that figure was 42%. The percent 35 or younger within the *MTD user market segment*, defined more broadly as explained on page 28 is 40%. The slight difference in definitions accounts for the 2% difference in the percent of the MTD current user market segment who are 35 or younger. What is important here is not this minor difference in definitions, but the clear difference in the relative sizes of the several age groups within the market segments in Figure 22.

Income

(Source: miPLAN e-Survey of Employees, 2007)



Approximately what was the total annual income of your entire household last year?

	MTD user	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
$200,000 or more	1%	2%	1%	3%	2%
$100,000 to $199,999	12%	24%	20%	24%	22%
$75,000 to $99,999	20%	20%	25%	22%	22%
$50,000 to $74,999	27%	24%	32%	27%	27%
$40,000 to $49,999	13%	12%	9%	10%	10%
$30,000 to $39,999	13%	10%	8%	8%	9%
$20,000 to $29,999	8%	5%	5%	4%	5%
$13,000 to $19,999	2%	2%	1%	2%	2%
Less than $13,000	3%	1%	0%	1%	1%

Figure 23 Income

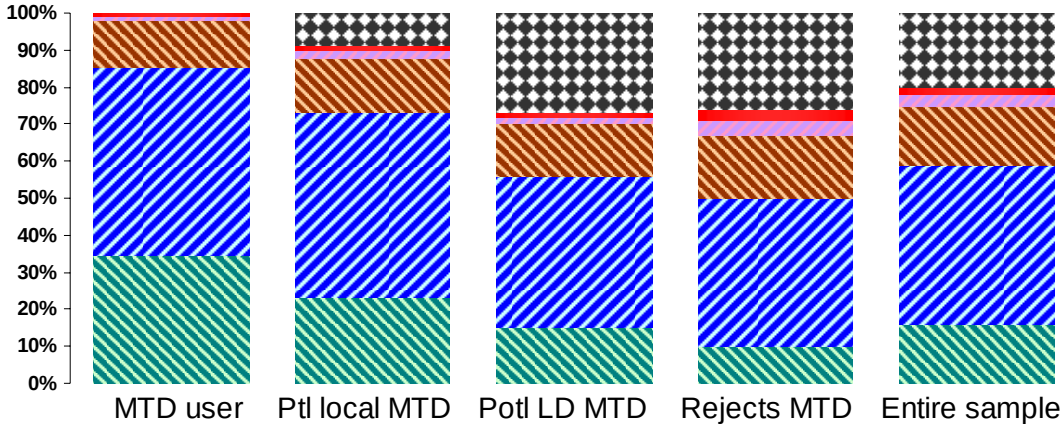
The household income of MTD market segments

The incomes of all the market segments are quite high because this is a commuting population and is, by definition, employed. Moreover, they are employed in positions most of which provide e-mail access, thus requiring some computer skills. We therefore would *not* expect, as is often seen in studies of transit users, for the MTD market segment to be of very low income. It does, however, have somewhat lower income than the potential user market segments. For example, 26% of the current MTD commuters have incomes at or below the local Champaign County median income for households (approximately $39,000). However, only 18% of the local potential market segment, and 14% of the long-distance potential market fall below the Champaign County median household income level.

Perceptions of MTD service and interest in additional service

Rating MTD service

(Source: miPLAN e-Survey of Employees, 2007)



Based on your experience with MTD, or what you hear, how would you rate the overall quality of MTD service?

	MTD user	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
No opinion	0%	9%	27%	26%	20%
Very Poor	1%	1%	1%	3%	2%
Poor	1%	2%	2%	4%	3%
Fair	13%	15%	14%	17%	16%
Good	51%	50%	41%	40%	43%
Excellent	35%	23%	15%	10%	16%

Figure 24 Rating MTD service

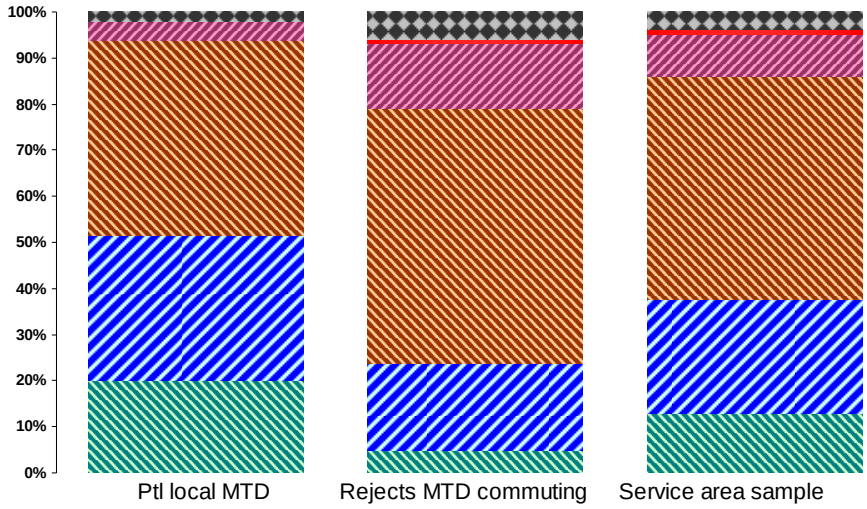
How do commuters rate the overall quality of MTD service?

Within the entire sample of commuters, a total of 59% rate MTD service as either excellent (16%) or good (43%). The current MTD user market segment is especially likely to rate service as excellent (35%) or good (51%) for a total of 86%.

The largest difference among the market segments is that among the potential long-distance MTD users and the rejectors, more than one fourth (27% and 26% respectively) indicate they have no opinion of MTD service. Thus, their tendency not to rate service as excellent is not a result of their rating it negatively, but rather a result of their not knowing how to rate it at all.

Interest in using an MTD neighborhood circulator

(Source: miPLAN e-Survey of Employees, 2007)



*For getting around within a mile or two of your home use neghborhood circulator?

	Ptl local MTD	Rejects MTD commuting	Service area sample
Not sure	2%	6%	4%
Couldn't - problem would prevent it	0%	1%	1%
Definitely would not	4%	14%	9%
Not very likely	42%	56%	49%
Somewhat likely	31%	19%	25%
Very likely	20%	5%	13%

* Complete wording was: For getting around within a mile or two of your home, suppose that MTD ran small buses through your neighborhood every 30 inutes in a circular route stopping at various local destinations and nearby shopping areas. Thinking realistically, how likely would you be to use that service for trips in the neighborhood and local shopping trips?

Figure 25 Interest in using an MTD neighborhood circulator

Focus groups and other interviews conducted prior to the surveys revealed interest in certain types of new services by MTD. These included local neighborhood circulators and service running back and forth along major thoroughfares within Champaign/Urbana.

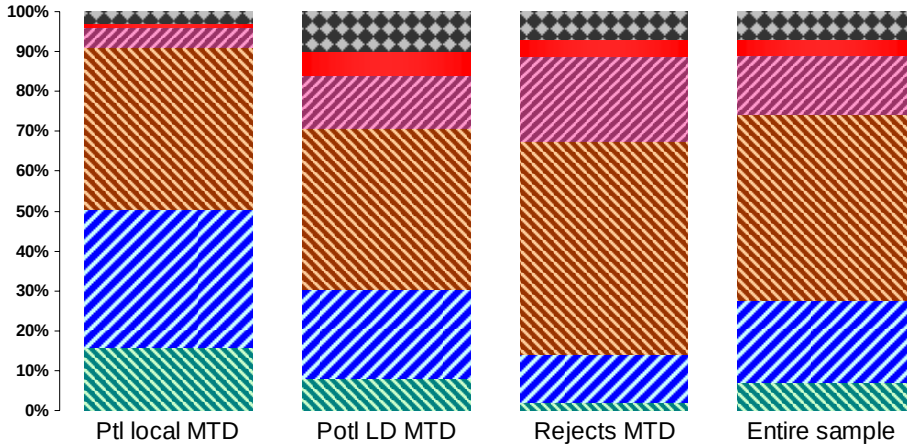
Interest in an MTD neighborhood circulator

Those who live within the existing MTD service area were asked their level of interest in using a neighborhood circulator route running every 30 minutes and using small buses to access various local destinations, including local shopping centers. Among the potential local MTD market segment, 20% indicated that they would be very likely to use such a service, and another 31% that they would be somewhat likely to do so.

The reader should understand that these are not predicted outcomes if such service were in place. A specific service may or may not meet the particular needs of those who initially expressed an interest. Therefore the 20% who indicated they would be very likely to use such a service represents a ceiling of interest, not a predicted level of use.

Interest in routes on major avenues

(Source: miPLAN e-Survey of Employees, 2007)



	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
Not sure	3%	10%	7%	7%
Couldn't -- a problem would prevent it	1%	6%	4%	4%
Definitely would not	5%	13%	21%	15%
Not very likely	41%	40%	53%	47%
Somewhat likely	35%	22%	12%	21%
Very likely	16%	8%	2%	7%

For getting around when you are in the cities of Champaign and Urbana, suppose that MTD ran buses every 15 minutes directly back and forth staying only on the major streets such as University, Lincoln, Neil, Prospect and others. Thinking realistically, how likely would you be to use that type of bus service to get between main points of the cities rather than driving and parking?

Figure 26 Interest in MTD routes on major avenues

Interest in new routes on major avenues

All respondents who are not now using MTD were asked their level of interest in having new routes on major avenues. This type of service was suggested by potential riders in a focus group as providing a convenient way to have mobility along major corridors. It might potentially be useful to any employee who needed to move around the Champaign and urban areas during the workday.

Of the potential local market, 16% indicated that they would be very likely to use such a service, while another 35% indicated they would be somewhat likely. Only 8% of the potential long-distance MTD market indicated they would be likely to use such service.

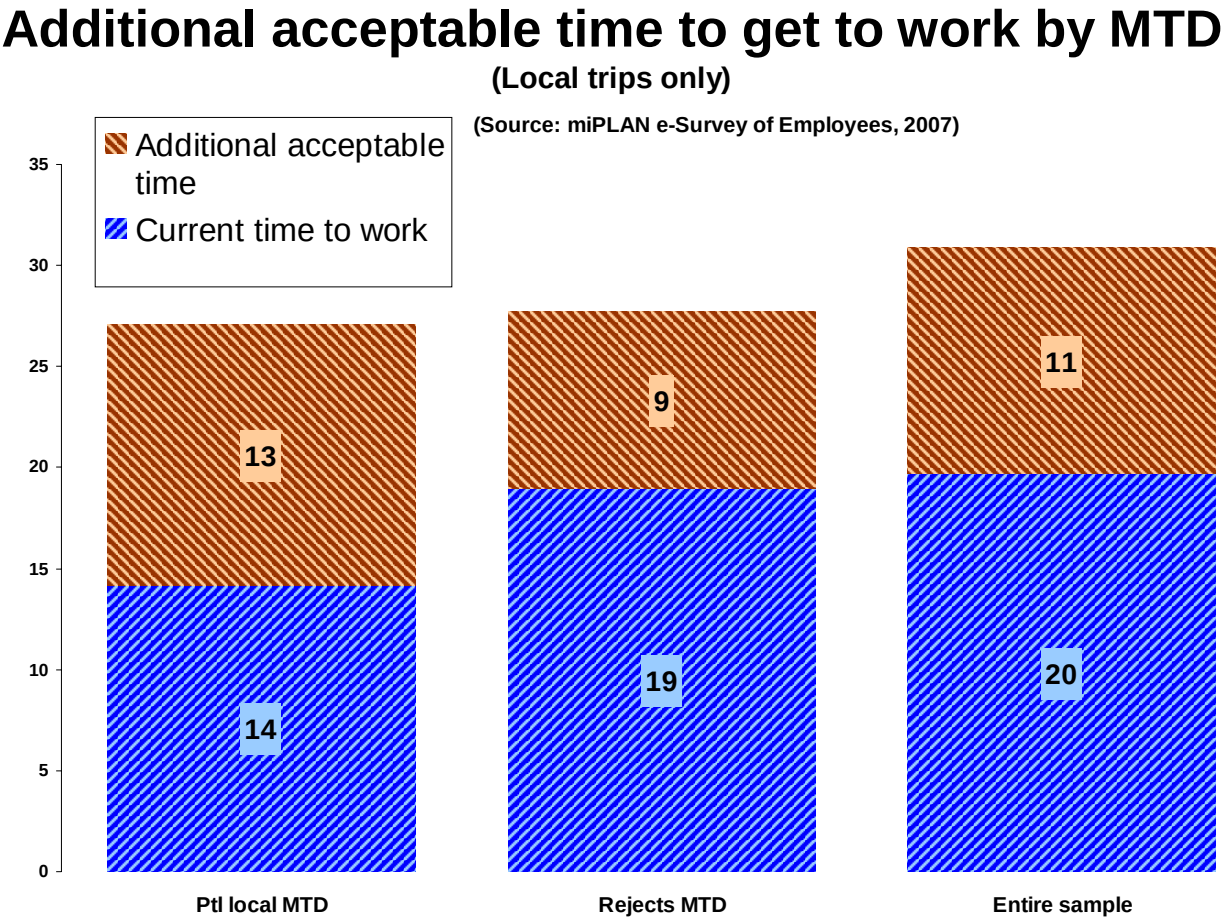


Figure 27 Acceptable additional time to get to work by MTD

Additional time required to use MTD

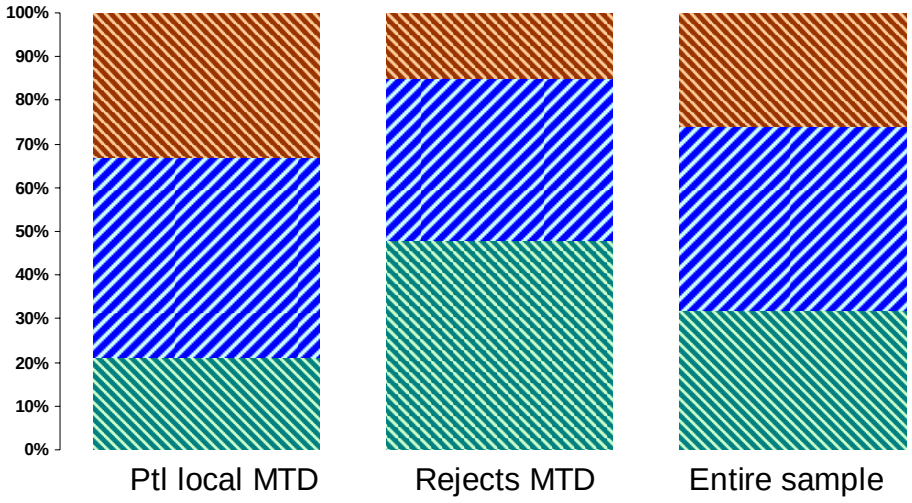
People generally perceive that bus trips take longer than alternatives. Respondents were asked how long their current commute trip takes and how many additional minutes would make it a worthwhile trade-off to take the bus to work. The chart above shows both figures for those who live in the service area but do not now use MTD.

Notice also that while the local potential market says it would accept a trip almost (but not quite) twice as long (an additional thirteen minutes over their current commute of fourteen minutes), the rejectors would accept a much briefer increment of nine minutes on their present commute of nineteen minutes.

Note that this chart does not show the long distance potential users because they were asked the time-increment question only in the context of a long distance express service, and those data will be shown in a later chart.

Additional acceptable time to use MTD

(Source: miPLAN e-Survey of Employees, 2007)



Additional commute time respondent is willing to accept for good local bus service

	Ptl local MTD	Rejects MTD	Entire sample
More than twice as long	33%	15%	26%
More than 1.5 times and up to twice as long	46%	37%	42%
Less than 1.5 times as long as current commute	21%	48%	32%

Figure 28 Additional time acceptable if using MTD for local commuting (ratio)

Additional time required to use MTD as a ratio

It is important to know not only the number of additional minutes people will; accept as a trade off for the other efficiencies of public transit, but also the ratio of the new total time to the current trip time. Rather than asking directly what ratio people would accept, we asked how many additional minutes they would accept for a trip by bus and computed the ratio.

We find in general that interest in using public transit increases if the ratio of total time by bus, to total time by personal vehicle, is thought to be less than 1 1/2 times. This effect can be seen in the fact that even among those who nominally reject the idea of using MTD service, almost half, 48%, indicate that they would accept a trip by bus if it were less than one and one half times as long as their current commute. In other words, they understand that there are some advantages in using public transportation, but they reject those advantages unless the additional cost in time is perceived as reasonable.

On the other hand, those who have indicated interest in using MTD service for purposes of economy or convenience, and were therefore classified as potential local MTD users, are more tolerant of the cost in additional time. Among them 33% said they would accept service that was more than twice as long as their current commute.

Those commuting from a longer distance were not asked this question, but were asked to separate question on express service from park and ride lots located at the periphery of the service area.

Information factors influencing potential use of MTD

On the following page is a chart that details four of information and perception factors that can influence whether a commuter will be willing and able to use public transit. They are:

- Knowing the location of the bus stop closest to work.
- Knowing the location of the bus stop closest to home.
- Knowing which bus routes connect home and worksite.
- Perceiving the walk to the nearest bus stop as reasonable.

For the entire sample, 83% said they know where the bus stop closest to work is located. Even among rejectors, 79% said they knew this elemental piece of information. More importantly, 88% of the local potential market segment said they knew where the workplace stop was located.

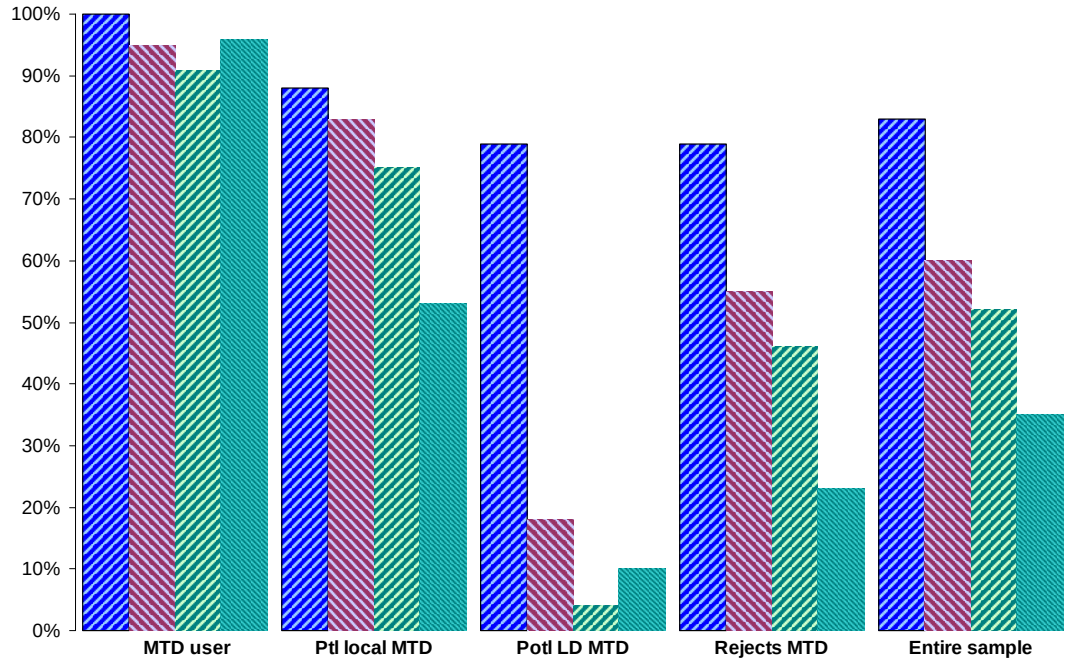
Similarly high percentages of the current MTD users and potential local MTD users (but not potential long distance MTD users) said they know where the stop nearest their *home* is located. It at first may seem odd that 95% and not 100% of the MTD user segment said they know where the stop nearest their home is located. But some of this segment use the buses only locally when at work, and have no occasion to board a bus near home.

Slightly more than half of the potential local users said they know which bus route connects their home and worksite (53%). While this is a positive base to build upon, obviously attracting potential riders would involve dissemination of that kind of information.

Factors affecting use of MTD

(Table cells indicate the percent responding "True")

(Source: miPLAN e-Survey of Employees, 2007)



	MTD user	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
I know where the bus stop closest to my workplace is located	100%	88%	79%	79%	83%
I know where the bus stop closest to my home is located	95%	83%	18%	55%	60%
Reasonable walk to the nearest bus stop	91%	75%	4%	46%	52%
I know which bus routes connect my home and worksite	96%	53%	10%	23%	35%

Figure 29 Information factors affecting use of MTD

Needs and practices affecting use of MTD

One of the primary obstacles to commuters using public transit is their perception that they must use their own vehicle during the workday. (See Figure 30 on the following page.)

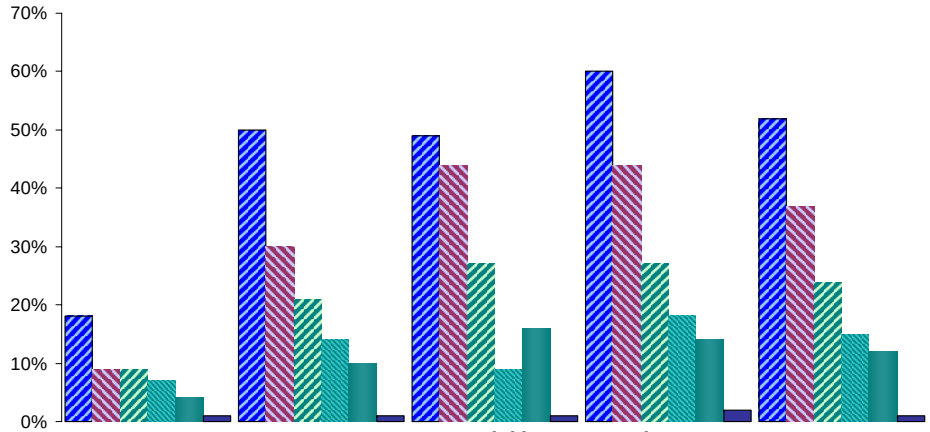
Fifty-two percent (52%) of the entire sample said that they must use their cars during the workday. Many of these, 37%, indicated that they must use the car for work purposes and not just for personal errands. However, 24% said they needed a car for errands. Some of those errands presumably included shopping, cited by 12%, and entertainment, cited by 1%. However, in addition to these needs, 15% of employees said that they had to drop-off or pick up children from child care. Of course, many employees expressed more than one of these needs.

Notice that 50% of the potential local MTD user market, and 49% of the potential long-distance MTD user market indicated that they have to use their car during the workday. Many of them (30% and 44% respectively) said that they must use their cars for purposes of work. Coupled with the need that some people among these market segments expressed to drop off children at childcare, these perceived needs certainly would substantially restrict the ability of MTD to penetrate these markets.

Notice also that somewhat paradoxically, 18% of current MTD users indicate that they must use their cars during the workday. Bear in mind, however, that some MTD users, especially at the University, use MTD several days a week but not every day, or they drive to campus but then use MTD.

Barriers to using alternative modes to commute

(Source: miPLAN e-Survey of Employees, 2007)



	Current MTD user	Potential local MTD user	Potential long distance MTD user	Rejects or cannot use MTD	Entire sample
Have to use car during the workday	18%	50%	49%	60%	52%
I must use my car for work purposes (not just for personal errands) during the workday	9%	30%	44%	44%	37%
Need car for errands	9%	21%	27%	27%	24%
Had to drop children at child care	7%	14%	9%	18%	15%
Stopped for shopping	4%	10%	16%	14%	12%
Stopped for entertainment	1%	1%	1%	2%	1%

Figure 30 Barriers to using alternative modes to commute

What changes would make it more feasible for non-MTD users to begin using public transit for their commute?

On the following pages is a table of open-end responses to the question, "…And what (if anything) would it take to make it possible for you to consider using public transit to commute?" The table contains a random sample of 50 responses which are quite representative of the total body of responses.

A perusal of the list of the answers to this question provides a flavor of public perception. Notice the themes. Frequently people called for more direct service such as, "MTD to my exercise facility where I work out before work. Then an MTD from my exercise facility to where I work. This would all have to be available at the right time and get me to work pretty much as fast as my current timeframe." Obviously this would be highly idealized service (to say the least), a service for which the respondent is entirely unwilling to accept any trade off. Others are less specific, but discuss routes coming closer to their home and running directly to the workplace.

Most people indicated more realistic possibilities. For example one said "If I knew I could get free parking on the outskirts of Champaign such as at the mall or on Prospect, I would consider using MTD on the days I knew I would be in the office all day."

Several people indicated that they would like to have a vehicle available to them during the day if they commuted by bus. A good many indicated that they would not consider using public transit. A few others issued the often-heard lament about wanting MTD to use “smaller buses” and decrying “empty buses.” On the other hand at least two people mentioned that the buses seem very full and implied or stated that perhaps larger buses were needed.

The final respondent in this series of comments exemplifies the multimodal characteristics of some commuters in the Champaign/Urbana area. This person said that he or she had "... checked the box saying that I have mostly driven to work this past month, but over the year I typically walk into work three or four days a week and take the bus home (like today). I very much appreciate being able to ride the MTD after showing my staff ID."

What would make it more possible for SOV users to use MTD?

(Random sample of 50 responses from 1,937 provided.

- **And what (if anything) would it take to make it possible for you to consider using public transit to commute?**
- A car available at work. MTD to my exercise facility where I work out before work
- Then an MTD from my exercise facility to where I work. This would all have to be available at the right time and get me to work pretty much as fast as my current time frame
- A direct bus line to and from home. Currently, I'd have to switch buses at the Illini Union which makes the commute too long.
- A park and ride system
- At this time with my children's schedule I do not think it is feasible for me to take public transportation. I did however take it when it was just two of us.
- Availability, convenience
- Better shuttles and an emergency pick-up drop-off service.
- Bus route closer to my house.
- Bus went 2 blocks to my house and fairly directly to my workplace...no transferring
- Cost-free transportation. No parking costs.
- Extra time to use public transport be included as part of work time.
- I live out of town.
- I might take a bus if one ran from St. Joe to Urbana. I would actually be more likely to take the bus than ride with someone (carpool).
- I would never use public transportation
- I would not use public transit because it would take over an hour to get on from home, get off at daycare, get on from daycare and then proceed to work.
- If an express bus came near to my home, 20 miles away from work, I would consider that option.
- If I knew I could get free parking on the outskirts of Champaign such as at the mall or on Prospect I would consider using MTD on the days I knew I would be in the office all day
- If it were the absolute only option
- if my employer would pay for my bus fare
- If there was less transferring to get across town.
- It would have to be easy I would need to know where and at what times exactly the bus picked up.
- Kids would have to go to a closer school, they hate riding the MTD (am and pm), they say that the bus is loud and full.
- Less crowding. Some of the longer routes fill up the bus very quickly, and some could use the larger buses.
- More convenient schedules
- More flexibility .....the MTD is new to my area and hardly seen. Have no idea where a bus stop exists, but it appear it's not convenient.
- Not available in rural area
- Not have to transfer or it take much longer
- not sure
- I would not consider it
- Nothing. I think it's sad that so much money is spent driving empty buses around CU
- Nothing
- Nothing
- Nothing
- Nothing
- Nothing
- Nothing
- Only if a company vehicle was available at all times.
- Public transportation does not exist where I live
- Shorter times between buses
- Smaller, more local buses
- The bus would have to come closer to my house -- especially in poor weather. It's just too far to walk and the bus doesn't come to my area (Savannah Green) frequently enough.
- the closest bus stop is at least 10 miles away from my house & there is no park & ride option. i have to take a bus & then transfer at another location. it's not worth the time & there is no significant cost savings to me
- The MTD is okay around here. For me, I wish one could set one's watch to it (particularly the Brown line), which is not the case presently. I don't like using things that aren't punctual/reliable.
- time and accessibility
- Timely, close proximity of bus. an express bus would be nice
- We don't even have a stoplight where I live. Why would we get public transit?
- We would need to have a university vehicle available to our unit 24/7, we must use our personal vehicles at this time for some essential but infrequent off campus trips. These trips are infrequent but are often with little of no advance notice.
- When I retire, I plan to use the MTD more.
- While I checked the box saying that I've mostly driven to work. this past month, over the year I typically walk into work 3-4 days a week and take the bus home. (Like today). I VERY much appreciate being able to ride the MTD after showing my staff ID

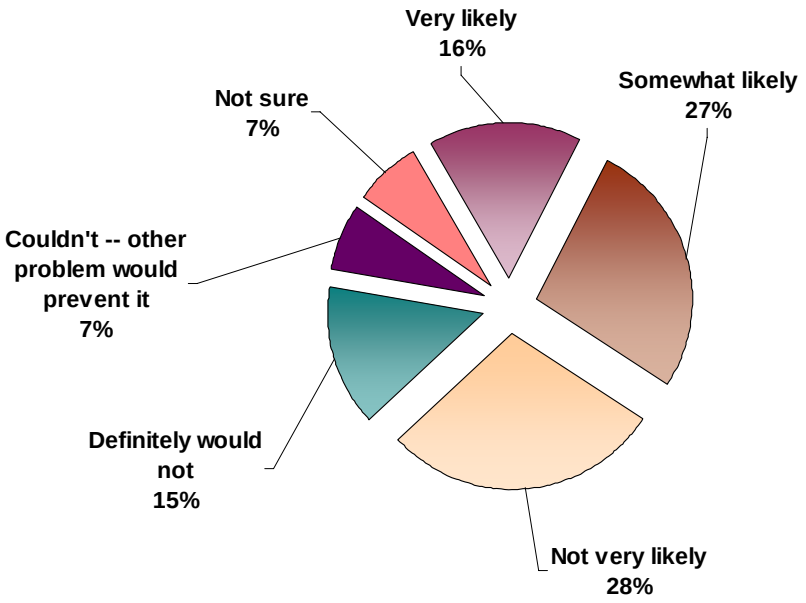
Figure 31 In their own words: Factors that would make it feasible for SOV commuters to use MTD

Interest in MTD service to Champaign/Urbana from outside the present service area

Interest in new MTD express service from areas outside the current service area

(Asked of only those residing outside of the current service area. N=1,188.)

(Source: miPLAN e-Survey of Employees - 2007)



If MTD offered an express bus service that ran from a Park & Ride lot in your community directly to downtown Champaign, downtown Urbana and/or the UIUC Campus, how likely would you be to use such a service?

Figure 32 Interest in MTD service from areas outside of current service area

Interest in MTD service from areas outside of the current service area

Respondents who live outside the current Champaign/Urbana service area of MTD were asked whether, if MTD offered an express bus service that ran from a park and ride lot in their community directly to downtown Champaign, downtown Urbana, and/or the UIUC Campus, how likely they would be to use it. Of the entire sample living outside the service area (35% of the total sample), 16% said they would be very likely to use it, while 27% indicated they would be somewhat likely to do so.

Distribution of primary areas of interest in using express MTD service from out of current service area

(Table cells represent percent of respondents who indicated they were very or somewhat likely to try an express bus from a park and ride in their community)

483 respondents, or 15% of the total sample, both live outside of the MTD service area and indicated some interest in express bus service. The table at the right shows their distribution among area locations.

If MTD offered an express bus service that ran from a Park & Ride lot in your community directly to downtown Champaign, Urbana and/or the UIUC Campus, how likely would you be to use it?

City/town where respondent lives	Very likely	Somewhat likely	Total very + somewhat
Mahomet	3.9%	9.5%	13.5%
Other county than Champaign	4.1%	5.6%	9.7%
Rantoul	4.1%	3.7%	7.9%
Saint Joseph	2.5%	5.4%	7.9%
Unincorporated part of Champaign Co	1.0%	5.0%	6.0%
Savoy	1.9%	3.3%	5.2%
Tolono	1.2%	3.7%	5.0%
City not given	1.4%	2.7%	4.1%
Monticello	.8%	2.3%	3.1%
Philo	1.4%	1.7%	3.1%
Villa Grove	.8%	1.9%	2.7%
Danville	1.0%	1.4%	2.5%
Champaign	1.0%	1.0%	2.1%
Locations with fewer than 10 respondents	11.4%	15.9%	27.3%

Figure 33 Interest in MTD service from outside current service area, by city of origin

[Please note that percentages in the table above are to be read horizontally across each row designating a city or town.]

Interest in using such a long distance service to commute varies by community as the table above indicates. The cities and towns are arranged in descending order of the percent who said they were be very likely or somewhat likely to use such a service. Residents of Mahomet were the most likely (13.5%) to indicate some interest in such a service.

The next most likely were the various counties outside of Champaign County from which employees commute (9.7%). After that came Rantoul and St. Joseph, each with 7.9% expressing interest.

Acceptable additional time for commute via express from outside current MTD service area

(Source: miPLAN e-Survey of Employees, 2007)

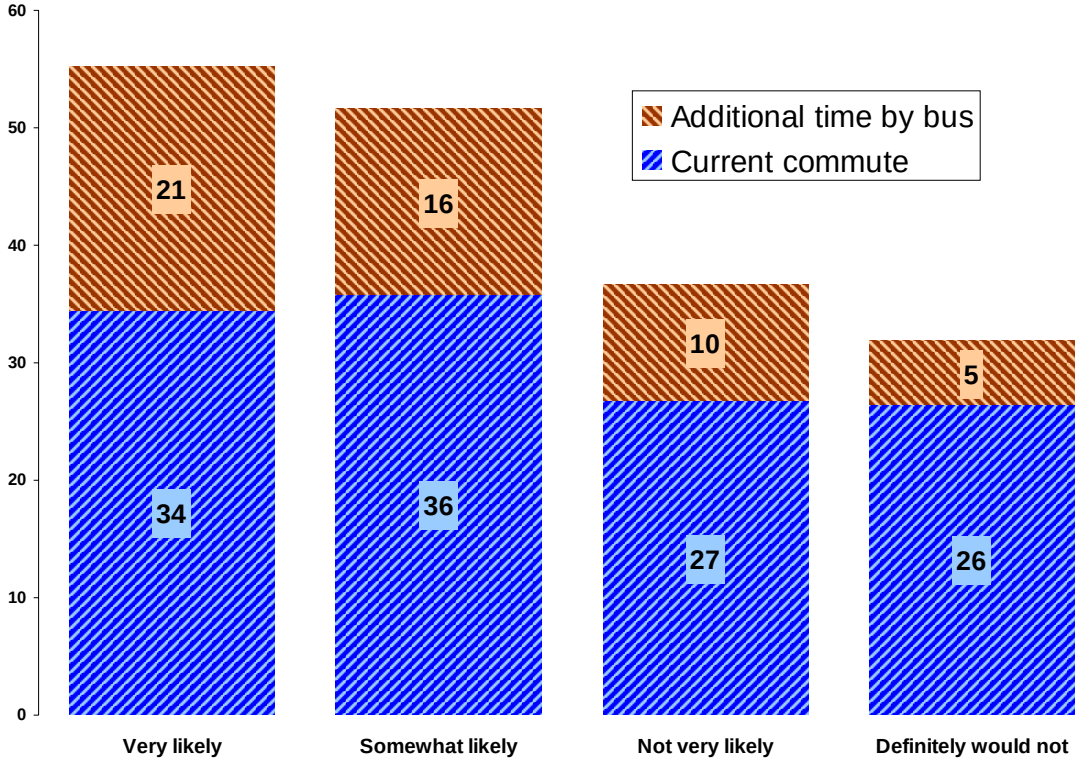


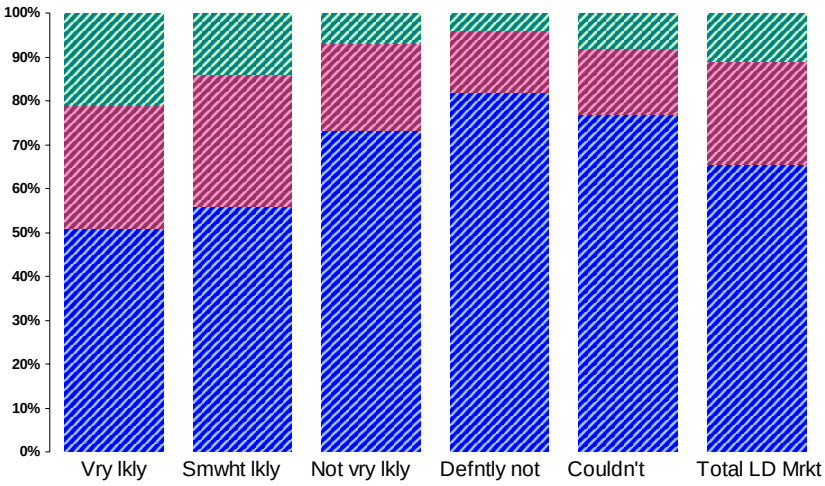
Figure 34 Current and acceptable additional time for commute by MTD from outlying areas (in minutes)

Additional acceptable time for long distance express service

If these long-distance commuters were to use an MTD express bus, how many more minutes would they be willing to spend to commute? Those who said they would be very likely to use such a service indicated that their current commute takes an average of 34 minutes, and that they would be willing to spend an additional 21 minutes for such a service. Those who said they were somewhat likely to use such a service were somewhat less tolerant of additional time, accepting an additional 16 minutes above their existing commute of 36 minutes.

Acceptable additional time for commute

(Source: miPLAN e-Survey of Employees, 2007)



	Vry lkly	Smwht lkly	Not vry lkly	Defntly not	Couldn't	Total LD Mrkt
More than twice as long	21%	14%	7%	4%	8%	11%
More than 1.5 times and up to twice as long	28%	30%	20%	14%	15%	23%
Less than 1.5 times as long as current commute	51%	56%	74%	82%	77%	65%

Figure 35 Acceptable additional time for commute by MTD from outlying areas (as a ratio)

When we consider the additional time that would be acceptable to commuters using an MTD express bus from remote areas, we find that most want a service that would be less than 1 1/2 times their existing commute. As we have seen in the previous chart, those who said they would be very likely to use such a service are the most tolerant of a longer commute.

Of that group, 21% said that a trip twice as long would be acceptable, while only 11% of the entire sample would accept such a time-increment. This suggests that the importance of non-time factors, such as cost, are an important motivator for this market segment.

Interest in carpooling

Carpool market

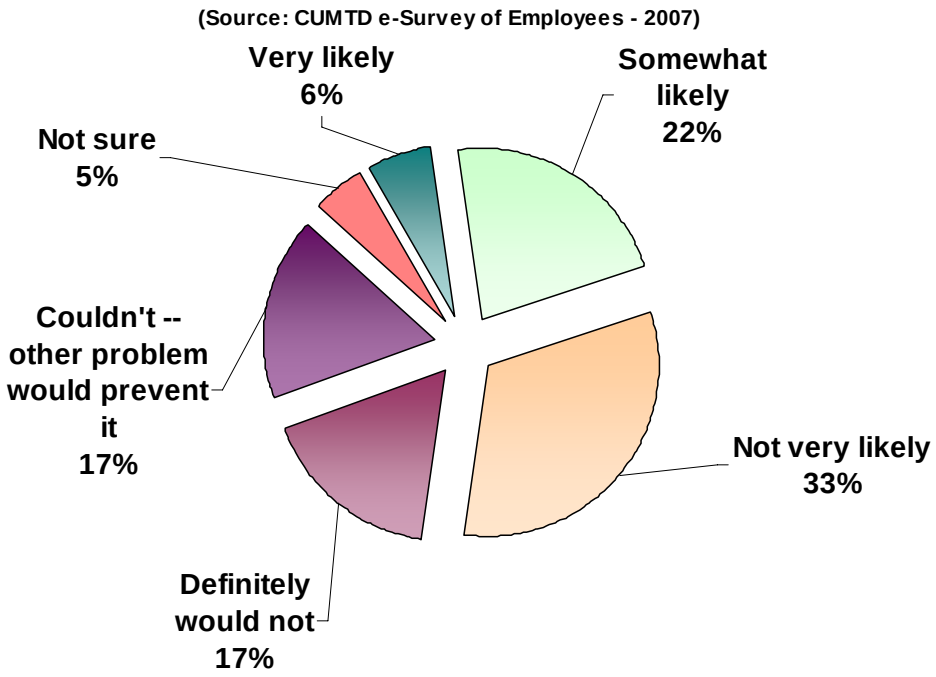


Figure 36 Interest in carpooling

Interest in carpooling

Respondents who were not already carpooling walking, or riding a bicycle to work, and who do not have to stop on their way to work, were asked whether they would be interested in carpooling. Only 6% said they would be very likely to commute via carpool, and another 22% said they would be somewhat likely to do so.

Current commute time and acceptable additional time if commuting by car pool

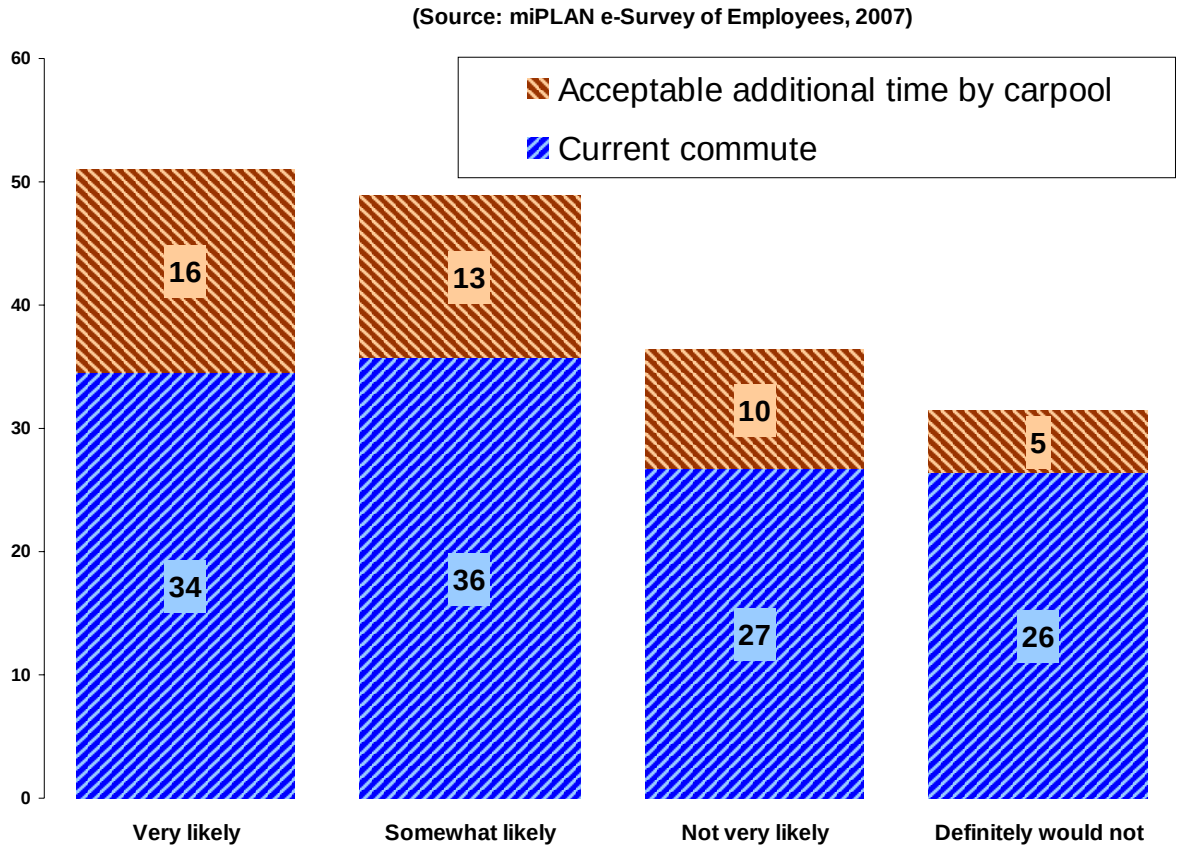


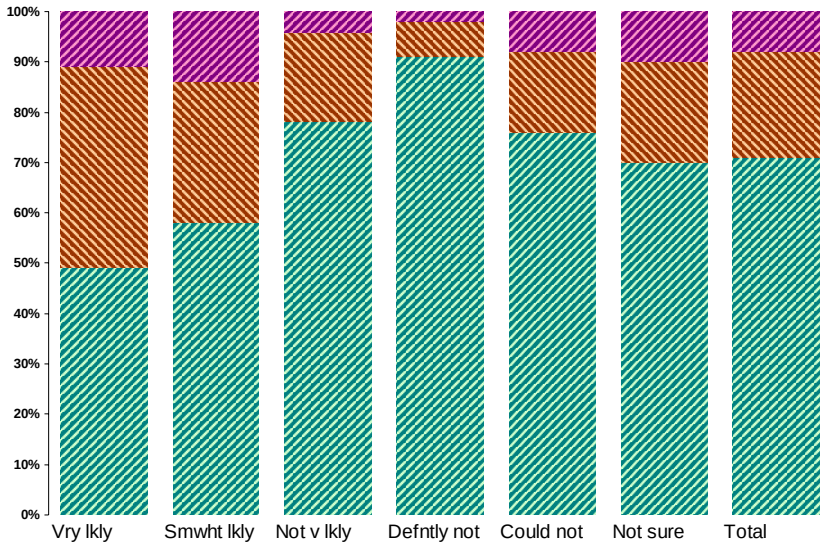
Figure 37 Current and acceptable additional commute time by car pool (in minutes)

Additional acceptable time if using a carpool

Those who are predisposed to using a carpool are also those willing to accept a greater time-increment for the commute. Those who said they were very likely to join a carpool said that their average commute today is thirty-four minutes, and they would accept an additional sixteen minutes for the benefits of carpooling, just under one and one half times as long in total. Those who were only somewhat likely to try carpooling would accept only a briefer increment of thirteen minutes above their current commute of thirty-six minutes.

Acceptable additional time if using a car pool

(Source: miPLAN e-Survey of Employees, 2007)



	Vry lkly	Smwht lkly	Not v lkly	Defntly not	Could not	Not sure	Total
More than twice as long	11%	14%	4%	2%	8%	10%	8%
More than 1.5 times and up to twice as long	40%	28%	18%	7%	16%	20%	21%
Less than 1.5 times as long as current commute	49%	58%	78%	91%	76%	70%	71%

Figure 38 Acceptable additional time if using car pool (as a ratio)

When additional time is expressed as a ratio, we again find that those who believe they are very likely to join a carpool are more tolerant of additional time. For example, 40% of that group said they would accept a total commute trip more than one half times as long and up to twice as long, and an additional 11% said they would accept a total trip more than twice as long to obtain the benefits of carpooling. On the other hand those who felt they would not use a carpool said that only if the trip were no longer than one and one half times the length of their current commute would they consider carpooling. Moreover, many of these indicated that in any event they would not travel with others because of their personal need to have a vehicle at their free disposal.

Interest in using bicycles

Current use of bicycle for commuting or errands

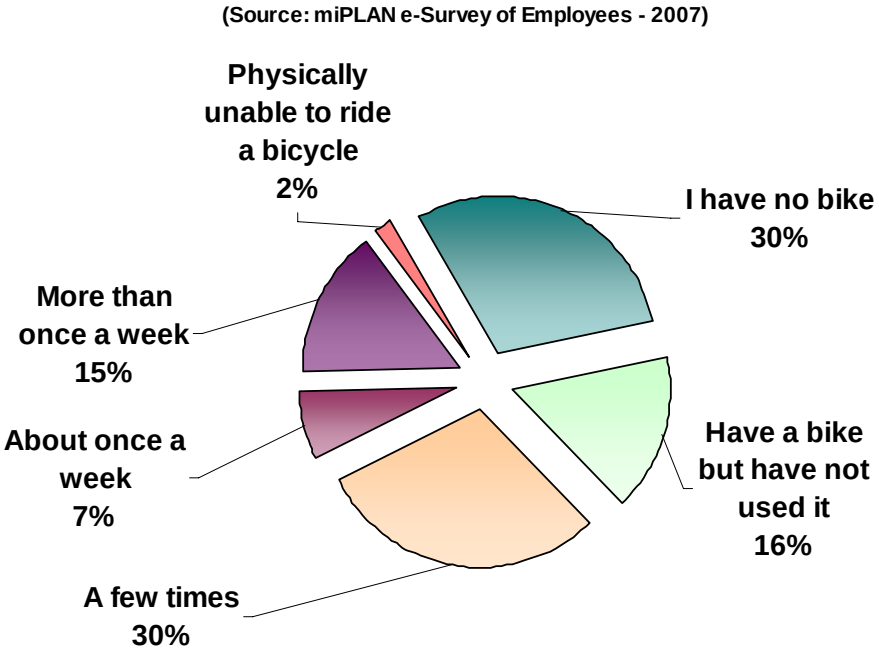


Figure 39 Use of bicycles for any purpose in the past year

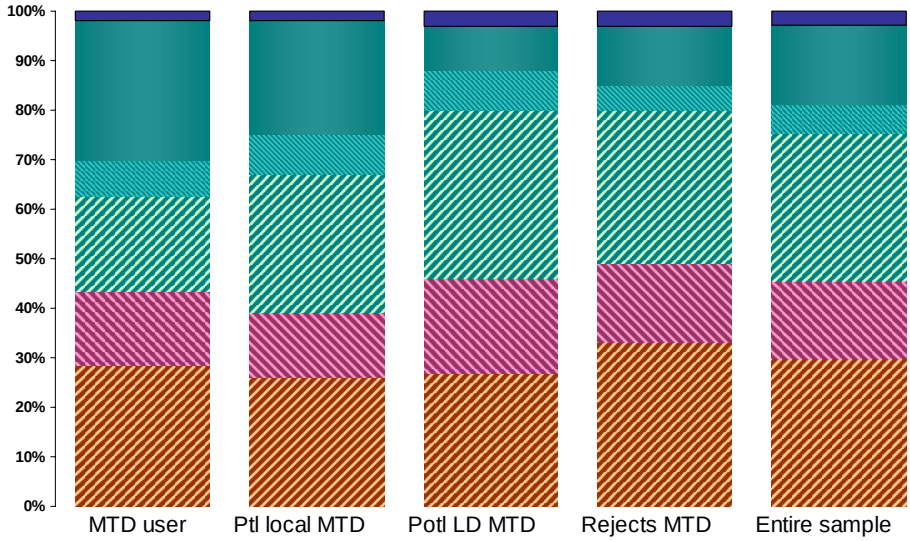
Current use of a bicycle

Many local commuters already use a bicycle, although they may not use it for commuting. We saw earlier that 4% indicated that they had most often commuted by bicycle during the past month. However, 15% said in the past year they had ridden a bicycle for some purpose more than once a week, and another 7% said they had ridden about once a week. In addition, 30% said they had ridden a few times. Only 2% said that they were physically unable to ride a bicycle, and 30% said they had no bicycle. Some, 16% indicated they have a bicycle but have not used in the past year.

Given the extensive ownership and use of bicycles, it would appear that there may be some opportunity to expand the use of bicycles under certain circumstances.

Frequency of using a bicycle, by MTD market segment

(Source: miPLAN e-Survey of Employees, 2007)



How often, if ever, in the past year have you ridden a bicycle for any purpose, including recreation, running errands, commuting?

	MTD user	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
Physically unable	2%	2%	3%	3%	3%
More than once a week	28%	23%	9%	12%	16%
About once a week	7%	8%	8%	5%	6%
A few times	19%	28%	34%	31%	30%
Have a bike but have not used it	15%	13%	19%	16%	16%
I have no bike	28%	26%	27%	33%	30%

Figure 40 Frequency of using a bicycle in the past year

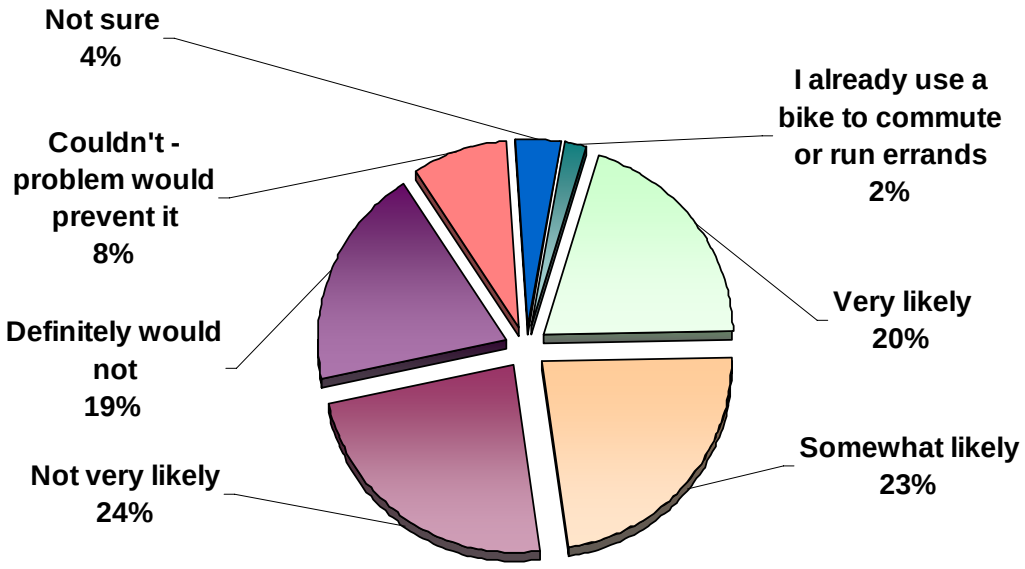
MTD market segments and the use of bicycles

There is a clear relationship between using a bicycle and either using or potentially using MTD. For example, 28% of current MTD users, and 23% of potential local MTD users indicated that they have used a bicycle more than once a week during the past year. This does not mean that they have necessarily combined use of the bicycle with their use of MTD, but it does indicate that this is a population among whom many use multiple modes regularly.

The frequency of their use of bicycles contrasts starkly with the only 9% of the potential long-distance MTD users and 12% of the rejectors who said that they use bicycles more than once a week. Given the relationship between urban living where MTD operates and the greater practicality there of using a bicycle to run errands or commute, this relationship is not surprising.

Interest in use/additional use of a bicycle

(Source: miPLAN e-Survey of Employees - 2007)



If there were a network of bike paths and bike lanes throughout Champaign and Urbana, how likely would you be to use a bike (or use a bike more often) to commute or run errands?

Figure 41 Interest in additional use of a bicycle

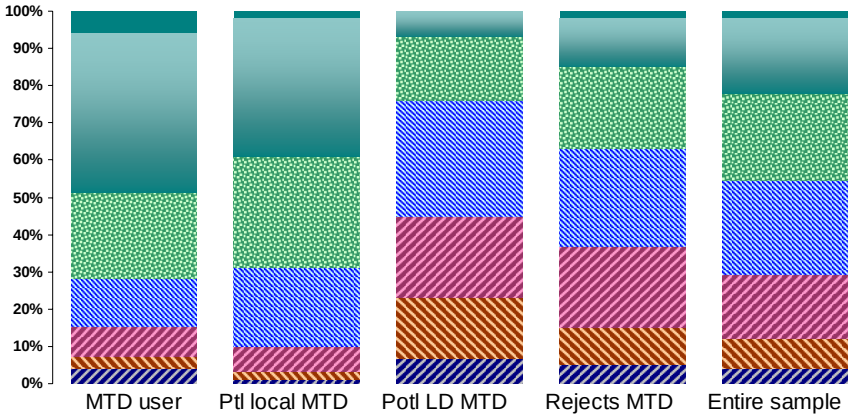
Interest in use or additional use of a bicycle

Those who do not use a bicycle were asked whether they would be interested in beginning to use one, and those who already use a bicycle were asked if they would be interested in using it more often under certain circumstances. Of all respondents, 20% said that if there were a network of bike paths and lanes, they would be very likely to use a bicycle (or use it more than they already do), and 2% said they already use a bike to their maximum capacity. Another 23% said they would be somewhat likely to use a bicycle.

The balance of the respondents indicated that they either would or could not use a bicycle or at least would not be very likely to do so.

Interest in use/additional use of a bicycle, by MTD market segment

(Source: miPLAN e-Survey of Employees, 2007)



If there were a network of bike paths and bike lanes throughout Champaign and Urbana, how likely would you be to use a bike to commute or run errands?

	MTD user	Ptl local MTD	Potl LD MTD	Rejects MTD	Entire sample
I already use a bike to commute or run errands	6%	2%	0%	2%	2%
Very likely	42%	37%	7%	13%	20%
Somewhat likely	23%	30%	17%	22%	23%
Not very likely	13%	21%	31%	27%	25%
Definitely would not	8%	7%	22%	22%	17%
Couldn't - problem prevents	3%	2%	16%	10%	8%
Not sure	4%	1%	7%	5%	4%

Figure 42 Interest in additional use of a bicycle if there were a network of bike paths, by MTD market segment

A network of bike paths and interest in using a bicycle

Another example of the relationship between the use and potential use of MTD and interest in using a bicycle appears in the chart above. Respondents were asked whether, if there were a network of bike paths and bike lanes throughout Champaign and Urbana, how likely they would be to use a bicycle to commute or run errands. The greatest interest was, as one may expect, among those who are either MTD users or potential local MTD users. In part, this response is due to the fact that those two populations are located in Champaign and Urbana, and the posited bike path network would be located there.

In the entire sample, 22% said that either they would be very likely to use a bicycle to commute, or run errands if there were such a bike path network, or that they already use a bicycle for those purposes. However, among MTD users, the total is more than twice that number, 48%, and among potential local MTD users the comparable percent is 39%.

In short, there appears to be an opportunity to expand the use of bicycles in the local market, especially among those also interested in greater use of MTD

Interest in use (or greater use) of a bicycle for commuting or errands

		Bike user	High interest	Moderate interest	Low or no interest	Entire sample
Age quartiles	35 or younger	32%	30%	27%	24%	26%
	36 to 46	31%	28%	27%	26%	26%
	47 to 53	28%	23%	23%	25%	24%
	54 or older	9%	20%	23%	25%	24%
Where is respondent employed?	Employed by UIUC	86%	72%	57%	49%	58%
	Employed by other	14%	28%	43%	51%	42%

Figure 43 Demographics of the potential market for mobility by bicycle

Demographics of the potential market for mobility by bicycle

For purposes of further studying interest in using a bicycle, those who said they would be very likely to use a bicycle if a network of bike paths were established were labeled, "high interest," those who said they would be somewhat likely were labeled "moderate interest." Those who said they already use a bicycle to commute or run errands were labeled simply "bike user," and everyone else was labeled "low or no interest."

There is a slight tendency for those most interested in using a bicycle to be somewhat younger than those with only moderate or low interest. For example, 32% of those who currently use a bicycle to commute or run errands are 35 years old or younger, compared to only 24% of those with little or no interest. Conversely, only 9% of current bike users are 54 years old or older, while of those with little or no interest, 25% are in that age group. Those with high interest in using a bicycle, or using a bicycle more often, follow this same age pattern, although the relationship is less pronounced.

Current bike users and those with high interest in using a bicycle are more likely than those with less interest in a bicycle to be employed by UIUC. This certainly makes sense because of the more bicycle-friendly physical layout of a campus compared to typical city streets.

Perceived barriers to using a bicycle or using a bicycle more often

Although there is considerable interest in using a bicycle, people do perceive barriers. This first became clear in a focus group held prior to the surveys in which people complained about having to ride bicycles in traffic, having to share a bicycle paths on campus with pedestrians, and having very few secure places in which to leave bicycles. Of course for those who live at a considerable distance from their commute location or from shopping areas, the distance would simply be too great for routine use of a bicycle.

On the following page is a chart which indicates the perceptions of these kinds of barriers among the entire sample. For example, 56% strongly agreed with the statement that it is dangerous to use a bicycle because of traffic on current bicycle routes, and another 33% agreed somewhat with that statement. Clearly, the perception of traffic danger is a very substantial deterrent to increasing the use of bicycles for local mobility.

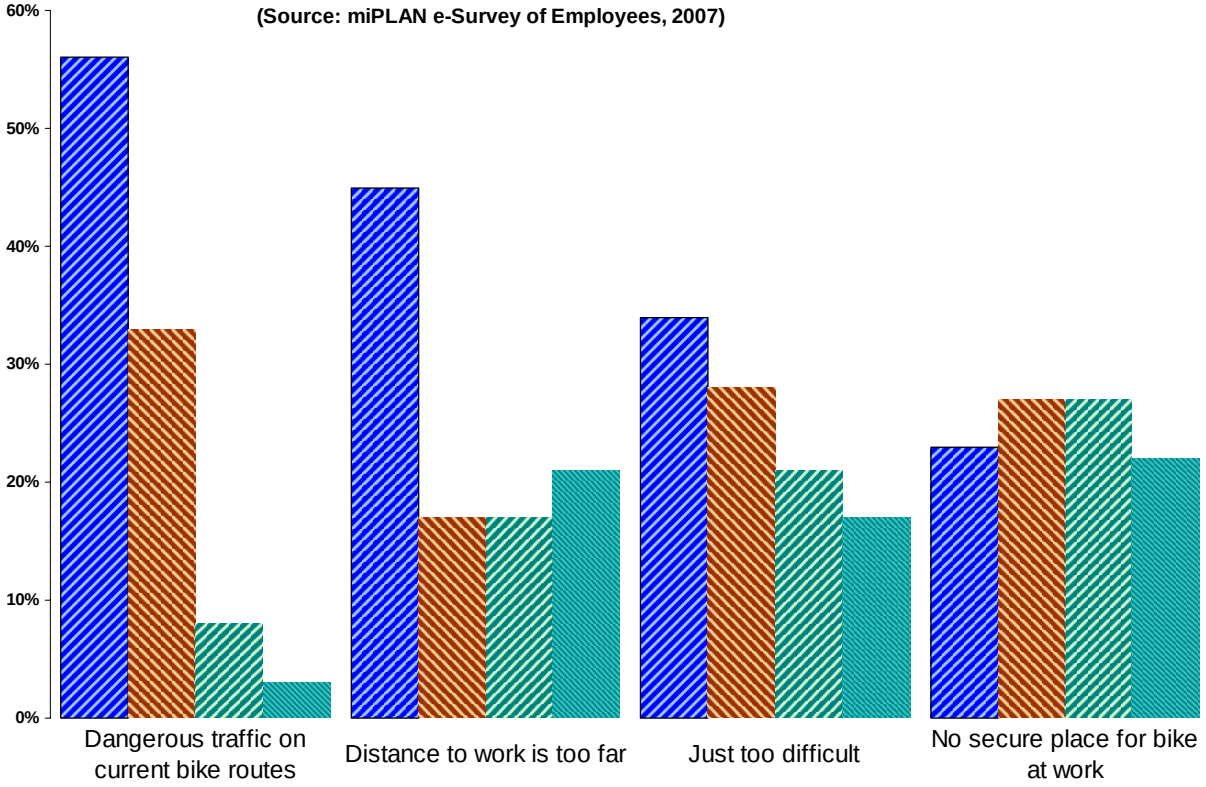
Asked to agree or disagree whether the distance to work is too far to make use of a bicycle possible, 45% agreed strongly. However, 21% disagreed strongly, suggesting that a very substantial number of people consider the distance not to be an obstacle although at the current time far fewer than that actually use a bicycle to get to work. Many people, 34% indicated using a bicycle to get to work is just too difficult.

A third significant obstacle is the widespread perception that there is no secure place to leave a bicycle when at work. Response to that statement divides almost into quartiles, with 23% agreeing strongly that there is no secure place to live a bicycle while at work, and 22% disagreeing strongly with the same statement.

It is clear that several barriers are perceived that impede regular use of a bicycle. However, it is also clear that there is already a substantial segment of the population that is not only interested in using a bicycle but also considers that the obstacles are not too great to do so. For example significant numbers of respondents consider that the distance to work is not too far and that there are secure places to leave bicycles when at work.

However, the fact that there are substantial numbers who see no major obstacles does not mean that there are no obstacles to work on for increased mobility by bicycle. For example, 22% said that they agree that there are no secure places to leave a bicycle. This does not mean that that factor should not be improved. A good example was a young woman in a focus group who indicated that she would like to ride her bike to the bus, and then ride the bus to her job at Sonic in Savoy (a fast food restaurant). This would be convenient because the bus does not stop near her home, nor near her job in Savoy where she has to walk approximately a mile from the stop to get to work. If there were a secure place for her to leave her bicycle and shelter, she said that she would very much like to do that because it would save her great deal of time not only by saving the walk to and from the bus stops, but because since she could catch a later MTD bus.

Perception of challenges to using a bike



	Dangerous traffic on current bike routes	Distance to work is too far	Just too difficult	No secure place for bike at work
Strongly agree	56%	45%	34%	23%
Agree somewhat	33%	17%	28%	27%
Disagree somewhat	8%	17%	21%	27%
Disagree strongly	3%	21%	17%	22%

Figure 44 Perception of challenges in using a bicycle locally

What respondents said in their own words would make it more feasible to use a bicycle

On the following two pages, is a list of responses people gave when asked what would make it realistic for them to use a bicycle or to use a bicycle more often. Again, we have taken a random sample of 50 respondents from the total data set. Their answers appear as they typed them in. The list shows not only their responses but also how often they have used a bicycle in the past year.

The first person listed, says that he or she uses a bicycle more than once a week, but would like, "a shower at work." This is a common comment, and one also made with regard to walking to work. The next respondent asked for "contiguous bike paths," while the next talks about expansion and painting of bike lanes, and the next, about good bike lanes as part of the roadway, not on the sidewalk.

The bike paths network is one of the most promising areas of alternative mobility expansion in the data.

On the other hand, some people indicated that it would not be practical for them to use a bicycle, saying that they have obligations to their children for transportation or that they feel they are too old, or that they live too far away.

What changes, if any would make bicycling more feasible for you? (Page 1 of 2)

How often, if ever, in the past year have you ridden a bicycle for any purpose, including recreation, running errands, or commuting	Are there other changes that would make it feasible for you to bicycle more?
More than once a week	A shower at work.
More than once a week	Contiguous Bike Paths
More than once a week	expansion and painting of bike lanes would be very important.
More than once a week	Good bike lanes as part of the roadway (not on the sidewalk - these are more dangerous than riding on the road).
More than once a week	I would like to take my bike on the bus, but I'm not strong enough to put it on the bus rack, or get it off of the rack
More than once a week	it's not about other changes, it's about a complete change of dealing with traffic. with a very few exceptions on the campus itself there is no infrastructure for bikes at all (or does anybody think the bike lanes like the one on green street close to ne
More than once a week	more bus routes to SW Champaign. I currently bike-bus via routes 9, 10, 4, 5, or 5X. In the case of 9, 10, 4, and 5, the timetables coincide in their arrival to SW Champaign....if you staggered these more it would make this more convenient to me.
More than once a week	More dedicated bike lanes would be my foremost priority, especially in this car-centric area: it would enable people to generally feel safer on a bike, and, especially in the university area, force the fools who ride on the sidewalks too fast off on to the bike paths.
More than once a week	when biking to places other than to work, it truly is too dangerous. even when there are bike paths, or large shoulders on roads, there is so much debris on the shoulder that it is too dangerous to even ride there. i would ride my bike to grocery stores.
More than once a week	When my kids are grown up.
A few times	20 years younger and no kids!
A few times	ban motor vehicles on campus - allow trams/mtd only - impose stiff fines for anyone not yielding to cyclist/peds - vastly improved trails throughout ch/urb so children can safely ride to/from school
A few times	Bike paths need to be better connected without curbs in the way.
A few times	Bike Paths would be great. Better street repair would help too. There are enormous potholes in the roads.
A few times	distance and weather make it unfeasible
A few times	i would have to move closer or in town
A few times	if i didn't live 30 miles away
A few times	my kids need to get older so they can ride bikes/walk to school rather than be driven to day care.
A few times	No practical changes.
A few times	no, i live to far to bike.
A few times	No, I work out of town quite often.
A few times	No, I work until 11 PM at night and will not ride at night like that.

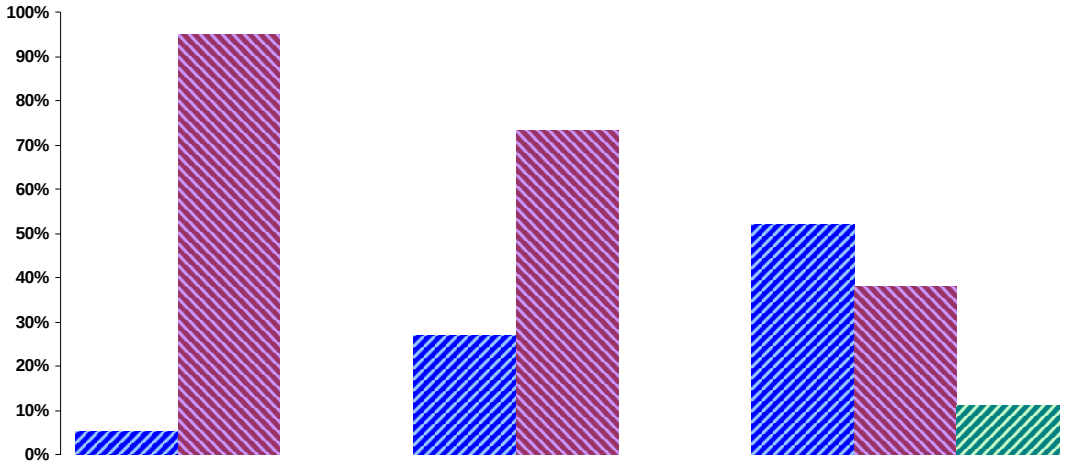
Figure 45 In their own words: Changes that would make using a bicycle more feasible

How often, if ever, in the past year have you ridden a bicycle for any purpose, including recreation, running errands, or commuting	Are there other changes that would make it feasible for you to bicycle more?
A few times	Place to shower/change at work Safety! as I would need to bike with my child and leave him off at school
A few times	TAKE CARS OFF THE ROADWAYS; FINE BICYCLISTS FOR NOT OBEYING TRAFFIC LAWS.
A few times	the buses need to be more careful and courteous!
A few times	The main obstacle is the traffic patterns with no designated bicycle route through town. If there was a designated bicycle route, I would definitely ride to work atleast 3 times per week.
About once a week	Even when riding in bike lanes on roads like Windsor, it requires crossing busy intersections (e.g., Windsor & Mattis) where cars are NOT looking for bikes and/or drive aggressively (e.g., turning right in front of bike proceeding straight with green ligh
About once a week	Fewer night hours--i work late 3-4 nights a week
About once a week	I have to dress up and that means heels, skirts, dress slacks. If I were to ride my bike, which I would like to do I would have to have a wardrobe change carried with me and that would be a real pain.
About once a week	if there were a bus in from mahomet with bike rack, that would be great
About once a week	More bike paths/lanes separate from traffic and walking paths!!
Have a bike but have not used it	bicycle lanes and driver awareness
Have a bike but have not used it	I live too far away from work
Have a bike but have not used it	I live too far away to use a bicycle.
Have a bike but have not used it	If I didn't have to dress up it would be easier :)
Have a bike but have not used it	If i don't have to take my daughter to daycare.
I have no bike	Adding bike lanes on existing roadways.
I have no bike	Being able to purchase and learning to operate speed bike
I have no bike	Better lighting in neighborhood/Crystal Lake Area
I have no bike	bike paths running from North to South Urbana
I have no bike	I have no opinions about the bicycle issue- it is not applicable for me and I know nothing about it
I have no bike	If I did not need my car at work I could bicycle. Also, owning a bike would help.
I have no bike	If the bike paths were good and in my neighborhood, I would use it for recreation or physical exercise only.
I have no bike	Live too far away.
I have no bike	Showering and/or changing facilities would have to exist at work in order to ride a bike and arrive to work in a presentable state.
I have no bike	These changes concernig a bus route would be fantastic in the Waters Edge Area (stonecreek blvd/Route 130(highcross rd) as the area is building up with baby boomers.....
I have no bike	Yes if I had somewhere to keep it at home. I live in an apt
More than once a week	Yes. Efficient bike paths that go to other places than the university. I have commuted in good weather, but you have to be creative to get a good route.
I have no bike	Can't because of the clothes I need to wear and the inconvenience of changing.
I have no bike	I live out of town and am not willing to be stranded all day relying on other methods to come and go as I please or need.
More than once a week	If I could clean up when I got to work, I would love to ride my bike to work. Getting to work a sweaty mess makes for a miserable day.

Walking

Feasibility of walking

(Source: miPLAN e-Survey of Employees, 2007)



	From where you now live, is it a reasonable walk to work?	From where you live, is it a reasonable walk to stores ?	From where you live, is it a reasonable walk to the nearest bus stop?
Yes	5%	27%	52%
No	95%	73%	38%
Not sure			11%

Figure 46 How feasible is walking to selected destinations?

The feasibility of walking to certain locations

Obviously, the possibility of using walking for local mobility is limited by distance. For this reason, questions about walking to the destinations shown in the chart above (work, stores, and the bus stop near home) were asked only of those who said they live in Champaign or Urbana. Respondents from those cities were asked whether it was a reasonable walk to get to work, to get the stores, and to get to the nearest bus stop.

Only 5% of the total sample said that it was reasonable to walk to work. Since 3% indicated that they had most often walked to work in the past month, it does not appear as if there is a great deal of potential to expand walking to work under present living and working locations. However, 27% said that it would be a reasonable walk to get to stores, and 52% indicated that it would be a reasonable walk to get to the nearest bus stop.

Obstacles to walking to work

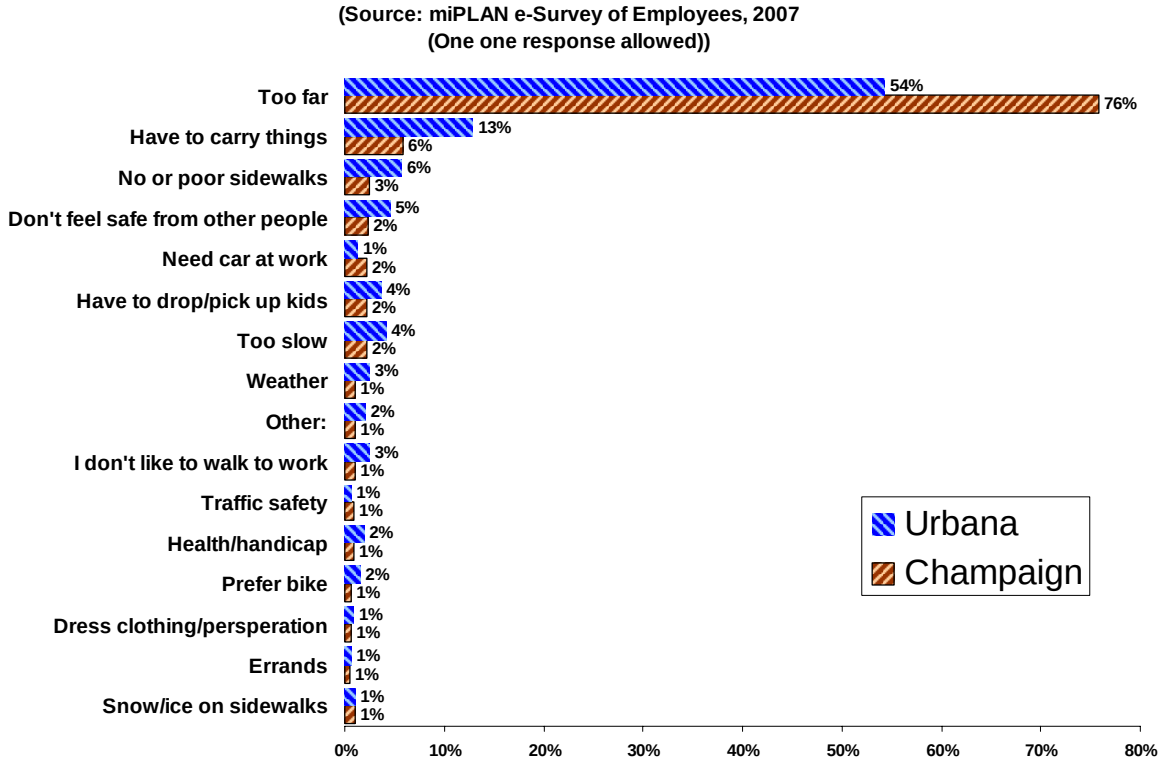


Figure 47 Perceived obstacles to walking to work

Perceived obstacles to walking to work

Respondents were asked what they perceived as obstacles to walking to work. Since 95% had already said that it would be too far to walk to work, it is not surprising that this was the most frequently cited obstacle.

As the chart above shows, distance is a greater obstacle for those living in Champaign than it is for those who live in Urbana. This probably has to do with the location of most campus facilities in Urbana. This was not the only obstacle however. Having to carry things, a lack of sidewalks, feeling safe from other people, and other obstacles were also seen as problems by some respondents.

Services to encourage use (or more frequent use) of alternative mobility modes

Programs to encourage use of alternative mobility modes

Current SOV commuters were asked:

- *Like most commuters, you most often drove alone to work in the past month. If the services shown below were offered, how important would each one be in getting you to try commuting by means other than driving alone?*
  - Response choices: *Definitely would try an alternative if this were available, Much more likely to leave my car at home and try an alternative to driving alone, Somewhat more likely to leave my care at home and try an alternative to driving alone, Would make no difference to me.*

Current alternate mode users were asked:

- *Unlike most commuters, you do not always drive alone to work. If the following services were offered, how valuable would each one be to you as an aid to help you continue or increase your commuting by carpooling, walking, biking or taking the bus?*
  - Response choices: *This would be extremely valuable to me, Very valuable, Somewhat valuable, Of no value to me*

Figure 48 How questions were asked of SOV and alternate mode users

Nationally, various supplemental services are frequently offered in an attempt to persuade single occupancy vehicle commuters to use alternate modes or to encourage those already using alternate modes to use them more frequently. These two markets had to be asked questions in slightly different ways which are described in the chart above. Essentially, those who now commute in SOV's were asked whether any of the programs would encourage them to try commuting in a different manner. Those who already use alternate modes were asked how valuable each of these would be these would be in helping them continue to use the alternate mode or to increase their use. The reason to ask them about *continued use* is that users of public transit tend to have a very high rate of turnover. Reducing that rate would have the effect of increasing ridership.

Commuter responses to programs intended to encourage additional use of alternative mobility modes

Figure 49 on page 85 displays the percent of respondents who said that each program listed in the chart would "definitely" cause them to use an alternate mode or to use it more often than they now do if it were available. The two figures which follow Figure 49 break these responses down in greater detail.

The usual caution about the stated intentions of consumers applies again here. While many people believe they would use an alternate mode under certain circumstances, many will ultimately have real or imagined reasons for which they cannot do so if such services are provided. Therefore *the most positive response percentage should be taken as a ceiling and not as a prediction.* It indicates the total market that will listen favorably to a message about such programs, but favorable response will not always translate into action.

The strongest positive response was for a transportation subsidy. Twenty-four percent (24%) of respondents said that if their employer paid part or all of their costs to commute by bus or carpool, they would definitely use one of those modes. To put this in perspective however, UIUC employees already have a paid transit option, and yet of all commuters, only 8% said that MTD is their usual form of transportation. What respondents were saying, then, in their endorsement of the concept of employer subsidy, was that this would be one factor that would carry considerable weight for them along with other factors in helping move them toward using an alternate mode.

The next most positive response (21%) was for a guaranteed ride home program. Many people had told us in the open-ended responses that they would be reluctant to use a bus or bicycle because they might need to get home quickly if their children had a problem. Guaranteed ride home programs are often instituted by transit systems or county authorities to meet this concern. Although ultimately they are not widely used, and in an of themselves they do not appear to greatly expand the transit or carpool markets, they constitute a useful form of reassurance which, along with other inducements, may push a potential rider who knows about these kinds of programs, past the tipping point.

The third most positive response has been found to be powerful as a marketing tool in various markets -- having real-time information about the arrival time of the next bus. The uncertainty of the wait at a bus stop has long been a major deterrent to broader use of bus transportation. We suspect also that the presence of such signs implies to people that a destination will be given, and that too adds greater certainty because many novice riders have very little idea where a given bus will take them.

It is interesting that while 20% reacted very favorably to this concept, fewer (15%) responded positively to the other high-tech option of having online trip planning. In other words it is not so much the whiz-bang of high tech services that attracts interest, but the

practical daily application to resolving a regular uncertainty that the time-to-arrival sign provides.

Other items attracted less positive attention. The least positive was the possibility of renting small cars by the hour near the workplace to run errands, a service that attracted only 7% very positive attention. The fact that this was the lowest item on the list does not necessarily mean that this would not be a viable business opportunity. There are many variables involving overhead and costs of operation and marketing skill that would enter into that determination. It is possible that a small market of determined users could be identified that would make it a viable business. However, to the extent that work sites are scattered, the option of using a small car during limited workday hours (i.e. lunch hour or break times) seems to require that the rental the car be extremely close at hand. The fact that major employers in the study are physically moderately close to one another might make it conceivable that a small market within that 7% could make this a business opportunity worth pursuing, but anyone interested in offering a service should take that low percentage as a cautionary note.

In terms of overall priorities for such programs, it is fairly clear that publicizing the availability of transit subsidy, if employers besides UIUC choose to make it available, would be the most powerful tool, and that that should be supported by a guaranteed ride home program and an aggressive program to expand the “Stop Watch” program to as many bus stops as possible.

Percent responding most positively to each of these programs

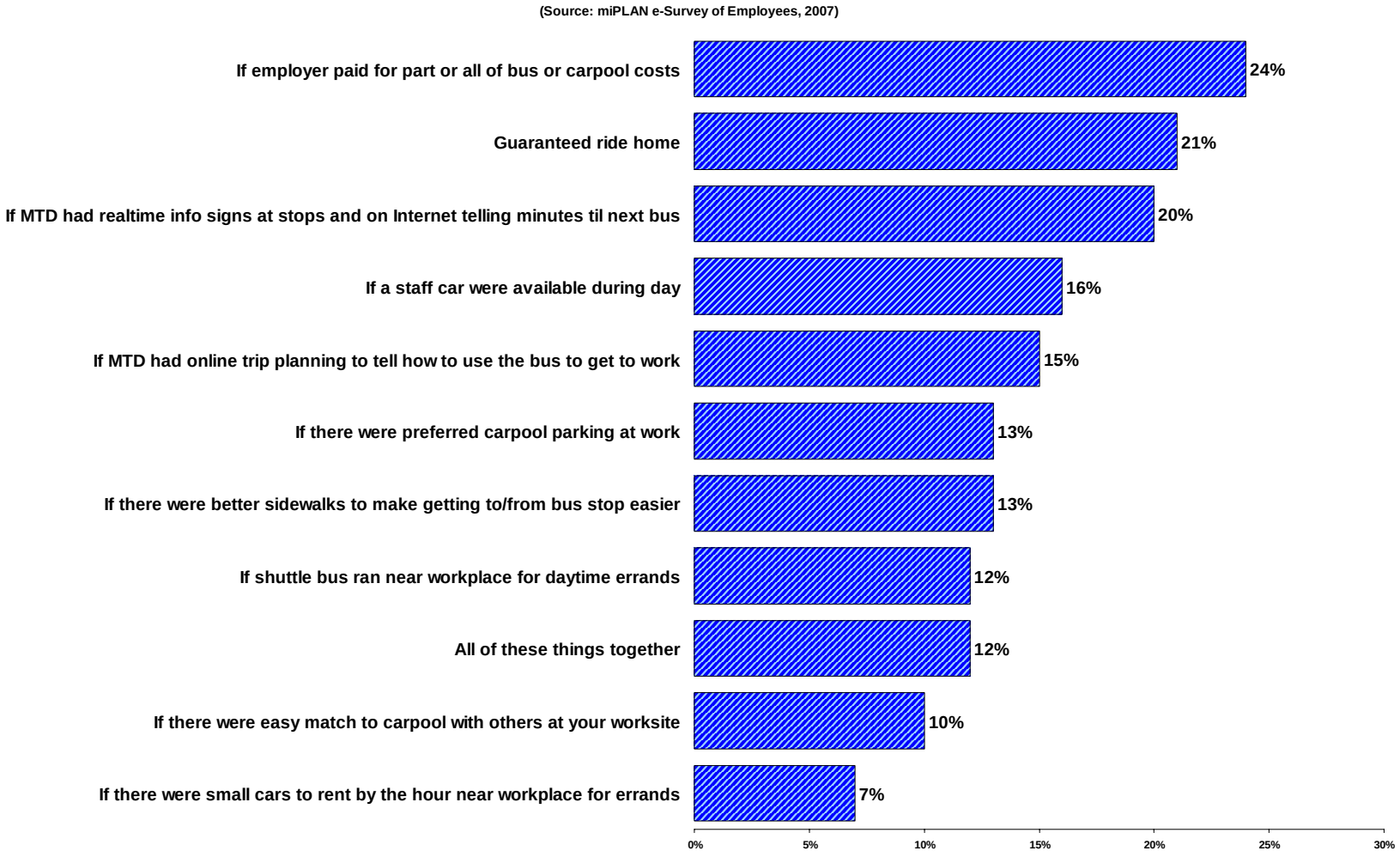


Figure 49 "Top box" response to programs encouraging use of alternate commuting modes

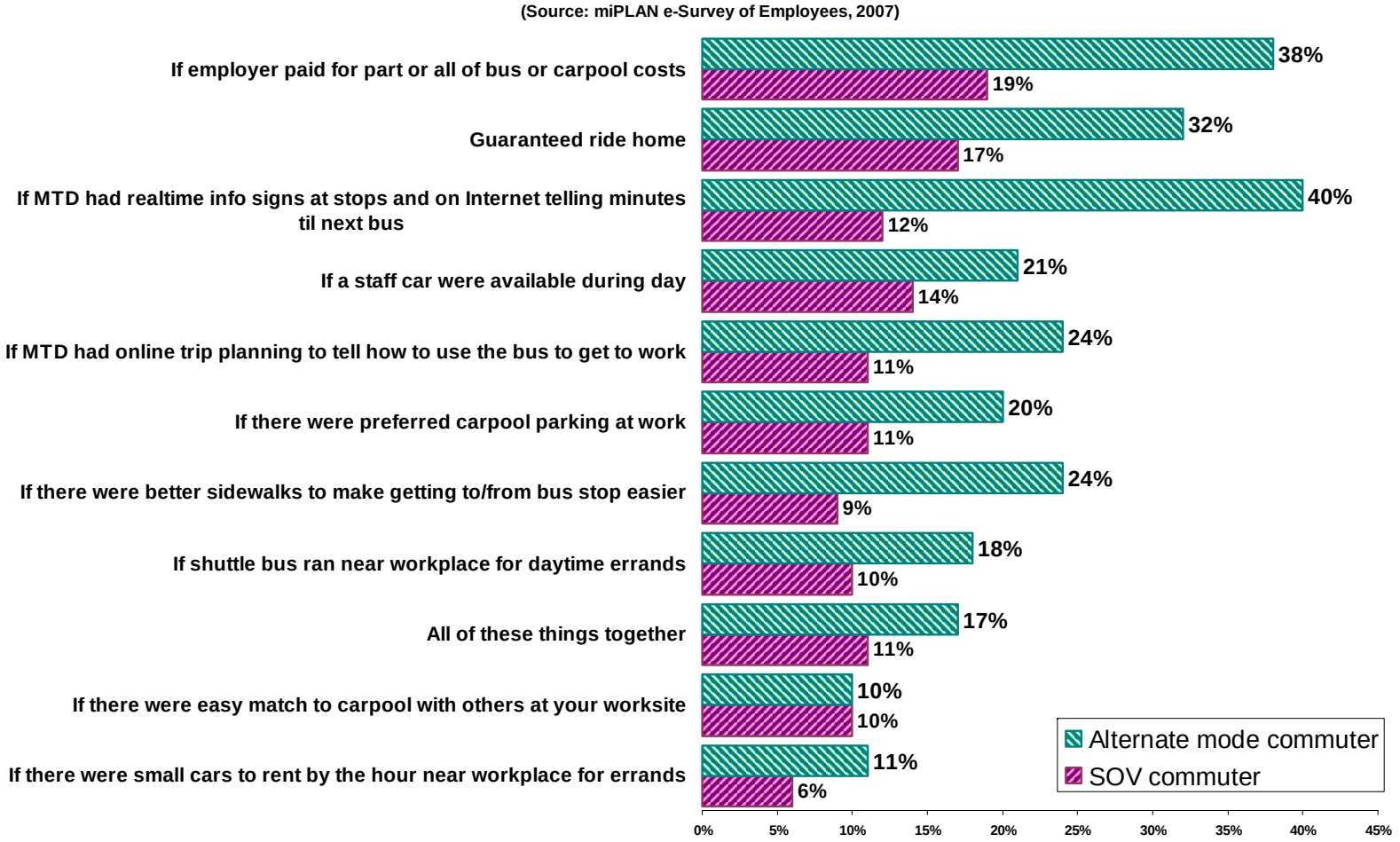
How current SOV commuters and alternate mode commuters respond to programs that would support the use of alternate modes

Figure 50 on the following page details the response to these programs by those who commute in single occupancy vehicles and those who currently use an alternate mode, whether it is the bus, carpool, bicycle, or walking. Clearly the primary message in this chart is that the positive response of those who are already using an alternate mode is much stronger than the response of those who are not. This makes sense in that those already using an alternate mode would feel rewarded and would find some of the barriers that they have to overcome to use alternate modes would have been removed.

The greatest difference between the two groups is for having real-time information signs at bus stops and on the Internet telling the minutes until the next bus. On that item, 40% of those already using an alternate mode react very positively compared to only 12% of those who drive alone. This is clearly a very powerful motivator, and is important because of the tendency of transit users and perhaps other alternate mode users to default to driving alone after a period of time.

The differences between the two groups suggest that the more powerful effect of these programs might be retention of those who already use alternate modes rather than the attraction of those who do not.

Response of current alternate mode and SOV commuters to programs



Note: "Alternate mode commuters" include all respondents (n=998) who walk, bicycle, carpool, or take MTD to work as their most frequent mode or as the mode they used on their most recent workday trip to work.

Figure 50 "Top box" responses of SOV users and current alternate mode users to programs

Detail of response to these alternate mode reinforcement programs

The tables on the following two pages present detail on the response to the various alternate mode support programs, showing not only the most positive response but also the other responses.

The first of the two tables breaks the data down by SOV commuters versus alternate mode commuters. It also shows the entire sample.

The essential finding in that table is that the tendency (see Figure 50) for current alternate mode commuters to respond more favorably to support services is consistent throughout the range of service options with the exception of the item on an easy match to carpool. On the carpool match option, alternate mode commuters were no more positive than SOV commuters.

The tendencies of current SOV commuters were to indicate that these programs would make little or no difference to them. In other words, rather than simply responding slightly less favorably than current alternate mode commuters, they responded more often by saying that such programs would make no difference to them.

The second of the two tables breaks the data down by employment at UIUC or employment at all of the other employers aggregated. The reason to break this down in this manner is that campus environments tend to be unique transportation markets. It might be hypothesized that university employees would respond differently than others to these kinds of support programs. However, although commuters employed by the University tend as a group to respond slightly more favorably to the services, the differences are not great. It appears that most of these programs would not have much greater appeal among campus employees than among others in the Champaign/Urbana area. The one exception to this tendency is real-time information signs, a program to which considerably more UIUC employees responded favorably than those employed by others. This may be a result of the fact that there are such signs already on campus and people may have greater experience with their value.

Features intended to encourage use of non SOV modes for commuting

		SOV commuter	Alternate mode commuter	Entire sample
If employer paid for part or all of bus or carpool costs	Definitely would use alt mode (more)	19%	38%	24%
	Much more likely to use alt mode (more)	19%	23%	20%
	Somewhat more likely to use alt mode (more)	22%	16%	20%
	Would make no difference to me	40%	22%	35%
Guaranteed ride home				
	Definitely would use alt mode (more)	17%	32%	21%
	Much more likely to use alt mode (more)	19%	24%	21%
	Somewhat more likely to use alt mode (more)	22%	25%	23%
	Would make no difference to me	42%	18%	35%
If MTD had realtime info signs at stops and on Internet telling minutes til next bus	Definitely would use alt mode (more)	12%	40%	20%
	Much more likely to use alt mode (more)	19%	26%	21%
	Somewhat more likely to use alt mode (more)	22%	19%	21%
	Would make no difference to me	47%	15%	39%
If a staff car were available during day	Definitely would use alt mode (more)	14%	21%	16%
	Much more likely to use alt mode (more)	16%	16%	16%
	Somewhat more likely to use alt mode (more)	18%	22%	19%
	Would make no difference to me	52%	41%	49%
If MTD had online trip planning to tell how to use the bus to get to work	Definitely would use alt mode (more)	11%	24%	15%
	Much more likely to use alt mode (more)	16%	23%	18%
	Somewhat more likely to use alt mode (more)	21%	22%	22%
	Would make no difference to me	51%	30%	45%
If there were preferred carpool parking at work	Definitely would use alt mode (more)	11%	20%	13%
	Much more likely to use alt mode (more)	14%	17%	15%
	Somewhat more likely to use alt mode (more)	16%	20%	17%
	Would make no difference to me	59%	43%	55%
If there were better sidewalks to make getting to/from bus stop easier	Definitely would use alt mode (more)	9%	24%	13%
	Much more likely to use alt mode (more)	11%	18%	13%
	Somewhat more likely to use alt mode (more)	16%	28%	19%
	Would make no difference to me	64%	30%	55%
If shuttle bus ran near workplace for daytime errands	Definitely would use alt mode (more)	10%	18%	12%
	Much more likely to use alt mode (more)	14%	20%	16%
	Somewhat more likely to use alt mode (more)	23%	29%	25%
	Would make no difference to me	53%	32%	48%
If there were easy match to carpool with others at your worksite	Definitely would use alt mode (more)	10%	10%	10%
	Much more likely to use alt mode (more)	15%	15%	15%
	Somewhat more likely to use alt mode (more)	24%	28%	25%
	Would make no difference to me	51%	47%	50%
All of these things together				
	Definitely would use alt mode (more)	11%	17%	12%
	Much more likely to use alt mode (more)	19%	35%	23%
	Somewhat more likely to use alt mode (more)	31%	35%	32%
	Would make no difference to me	39%	13%	32%
If there were small cars to rent by the hour near workplace for errands	Definitely would use alt mode (more)	6%	11%	7%
	Much more likely to use alt mode (more)	7%	10%	8%
	Somewhat more likely to use alt mode (more)	13%	23%	16%
	Would make no difference to me	75%	56%	70%

Response to support programs for alternate mode use, by current mode used

Figure 51 Details of the responses to programs encouraging alternate mode commuting, by current mode

Features intended to encourage use of non SOV modes for commuting

		Employed by UIUC	Employed by other
Guaranteed ride home	Definitely would use alt mode (more)	23%	17%
	Much more likely to use alt mode (more)	22%	19%
	Somewhat more likely to use alt mode (more)	25%	20%
	Would make no difference to me	30%	43%
If employer paid for part or all of bus or carpool costs	Definitely would use alt mode (more)	25%	22%
	Much more likely to use alt mode (more)	21%	19%
	Somewhat more likely to use alt mode (more)	21%	20%
	Would make no difference to me	33%	39%
If there were easy match to carpool with others at your worksite	Definitely would use alt mode (more)	8%	11%
	Much more likely to use alt mode (more)	14%	17%
	Somewhat more likely to use alt mode (more)	25%	25%
	Would make no difference to me	53%	46%
If there were preferred carpool parking at work	Definitely would use alt mode (more)	15%	11%
	Much more likely to use alt mode (more)	16%	14%
	Somewhat more likely to use alt mode (more)	19%	14%
	Would make no difference to me	50%	61%
If a staff car were available during day	Definitely would use alt mode (more)	18%	14%
	Much more likely to use alt mode (more)	16%	16%
	Somewhat more likely to use alt mode (more)	21%	16%
	Would make no difference to me	45%	54%
If there were small cars to rent by the hour near workplace for errands	Definitely would use alt mode (more)	9%	5%
	Much more likely to use alt mode (more)	9%	6%
	Somewhat more likely to use alt mode (more)	19%	11%
	Would make no difference to me	63%	78%
If shuttle bus ran near workplace for daytime errands	Definitely would use alt mode (more)	14%	10%
	Much more likely to use alt mode (more)	18%	12%
	Somewhat more likely to use alt mode (more)	27%	21%
	Would make no difference to me	41%	57%
If MTD had online trip planning to tell how to use the bus to get to work	Definitely would use alt mode (more)	17%	13%
	Much more likely to use alt mode (more)	19%	17%
	Somewhat more likely to use alt mode (more)	24%	19%
	Would make no difference to me	41%	51%
If MTD had realtime info signs at stops and on Internet telling minutes til next bus	Definitely would use alt mode (more)	24%	14%
	Much more likely to use alt mode (more)	22%	18%
	Somewhat more likely to use alt mode (more)	23%	18%
	Would make no difference to me	30%	50%
If there were better sidewalks to make getting to/from bus stop easier	Definitely would use alt mode (more)	15%	11%
	Much more likely to use alt mode (more)	13%	13%
	Somewhat more likely to use alt mode (more)	23%	15%
	Would make no difference to me	50%	61%
All of these things together	Definitely would use alt mode (more)	13%	11%
	Much more likely to use alt mode (more)	26%	20%
	Somewhat more likely to use alt mode (more)	36%	27%
	Would make no difference to me	25%	42%

Response to support programs for alternate mode use, by employer

Figure 52 Details of the responses to programs encouraging alternate mode commuting, by employer

Appendix: Questionnaire