Transportation Users' Views Of Quality

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Source and Accuracy of Sample Data

The data for this report came from the 1995 Nationwide Personal Transportation Survey (NPTS) pretest. This was a national telephone survey that used random digit dialing sampling methodology to obtain a stratified random sample of U.S. households. Interviews were attempted with all adult household members. A final household interview rate of 78.7 percent was achieved. General questions about this analysis should be directed to the Federal Highway Administration. Questions about statistical procedures used in this analysis should be directed to the Bureau of Transportation Statistics.

Sampling Variability—Sampling variability is variation that occurred by chance because a sample was surveyed rather than the entire household population.

We used a technique called "Jackknife repeated replication" to estimate the sampling error in this analysis. We could not use regular textbook formulas to estimate the sampling error because the sample was more complex than a simple random sample. The Jackknife technique takes the complexities of the sample design into account to produce more accurate estimates of the sampling error. Using the sample estimate and its sampling error (or standard error), confidence intervals were constructed around each estimate and estimates of the statistically significant differences between estimates in the tables. The "90 percent confidence interval" means that if the NPTS pretest were repeated for all possible samples conducted under the same conditions, 90 percent of the estimates obtained would be within the interval of 1.645 standard errors below and above the estimate. Sampling errors shown in this report are primarily measures of sampling variability, although they may include some nonsampling error.

Nonsampling Variability—Nonsampling errors can be attributed to several sources including the following:

- The inability to obtain information about all cases in the sample (unit and item nonresponse)
- The inability to obtain correct information from respondents
- Errors made in data collection such as recording and coding errors
- Errors made in data processing
- Failure to represent all units with the sample (noncoverage)

Since the sample excluded households without telephones, care should be taken in interpreting results of characteristics that are known to be related to telephone ownership, such as family income and age. For example, estimates of survey data grouped by family income could underestimate the impact of low-income households and, therefore, not represent the population as a whole.

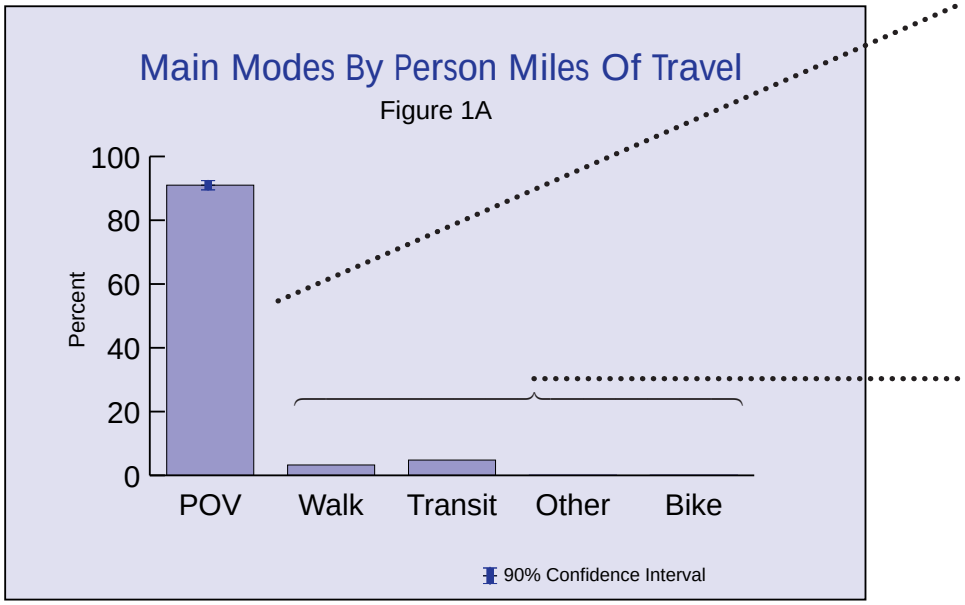
Please Note: Information on the analysis of this data set is available from the Federal Highway Administration.

In some tables, due to rounding, values will not total exactly 100 percent.

Transportation Users' Views Of Quality

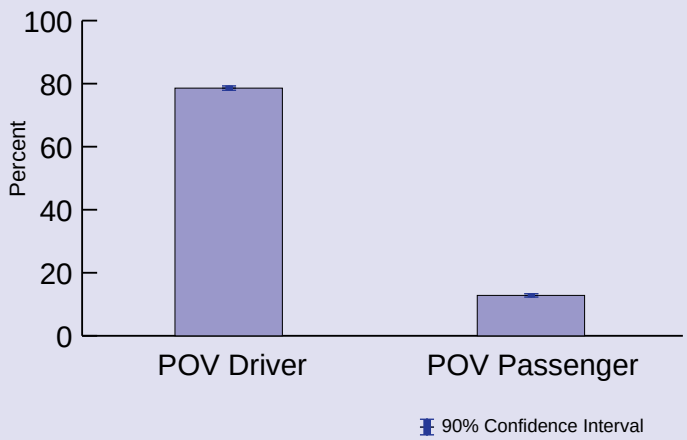
Overall Transportation Evaluations

In order to begin to understand the public's views regarding the transportation services it receives, as part of the pre-test of the 1995 Nationwide Personal Transportation Survey, a national sample of over 4,000 adults were asked a series of questions about their reactions to many aspects of travel, with emphasis on elements of the road system, where most of their travel occurs. The survey was conducted by telephone and, therefore, did not include adults without telephones where they live. The reader should keep this in mind when interpreting survey results that may be related to telephone ownership, such as income and age.



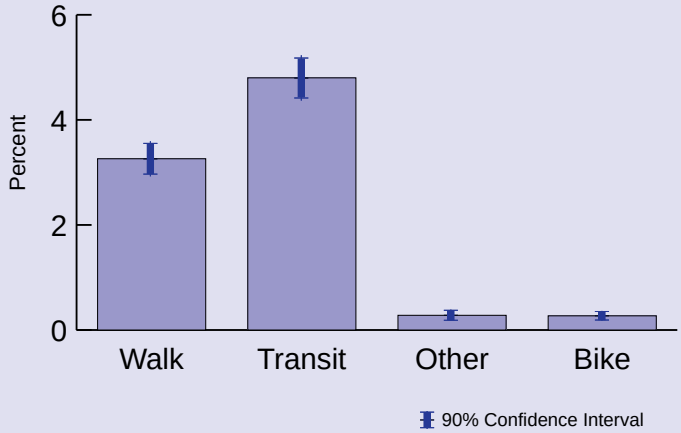
Detail Of POV As Driver Or Passenger

Figure 1B



Detail Of Non-POV Modes Of Travel

Figure 1C



A background question established that approximately 91 percent (±3%)[1] of adults identify driving a car, or traveling as a passenger in a car, as their main mode of travel; 3 percent (±0.6%) indicated walking; and 5 percent (±0.8%) indicated transit use. Figure 1A shows the share of responses by main mode used. Figure 1B provides a comparison of persons who use privately owned vehicles (POVs) as a driver or as a passenger. Figure 1C shows non-POV modes in greater detail than Figure 1A.

Respondents rated thirteen travel elements of the transportation system on a four-point scale. Overall, almost all elements were rated positively, typically with above 60 percent giving each of the elements a combined rating of excellent or good. *Passenger Air Travel* received the highest ratings with 74 percent (±2.7%) rating it excellent or good; it also had one of the lowest poor ratings at only 7 percent (±2%). The element with the lowest proportion indicating a good or excellent rating was *Bicycle Lanes And Routes* at 48 percent (±4%). Two other elements with a relatively low proportion of respondents rating them as good or excellent were *Local Street Pavement Quality* at 51 percent (±3%) and *Intercity Rail Service* at 52 percent (±5%). *Intercity Rail Service* also had one of the largest poor ratings with 27 percent (±4%) rating it poor. The 13 elements and the estimated proportions of adults in each rating category are shown in Table 1 and in Figure 2. Note that differences between elements (within rating categories) of less than 4 percent are not statistically significant.

[1] A 90% confidence interval is provided after sample estimates in parentheses in this report. The interval means that 90% of possible samples, conducted under identical conditions, would produce an estimate within the range shown.

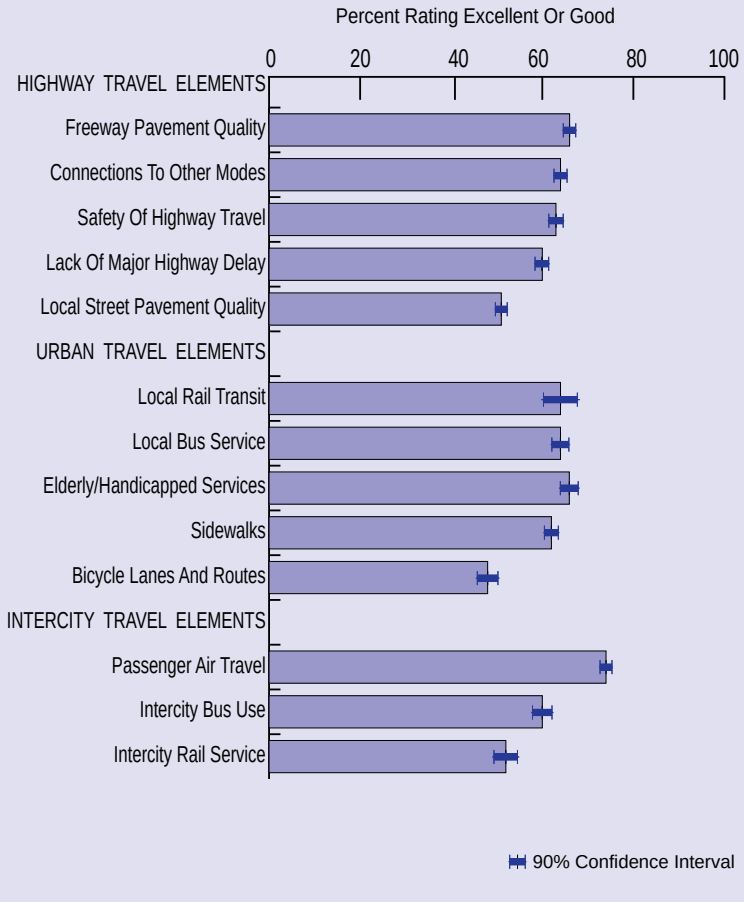
TABLE 1
Would you evaluate this as excellent, good, fair, or poor in your area?

Elements	Excellent	Good	Fair	Poor	Total	Obs.[2]	%Pos
Highway Travel Elements							
Freeway Pavement Quality	12%	54%	26%	8%	100%	1,144	66%
Connections To Other Modes	13	51	23	13	100	966	64
Safety Of Highway Travel	9	54	29	8	100	1,111	63
Lack Of Major Highway Delay	15	45	28	12	100	1,154	60
Local Street Pavement Quality	7	44	30	19	100	1,151	51
Urban Travel Elements							
Local Rail Transit	24	40	20	17	100	212	64
Local Bus Service	13	51	23	13	100	476	64
Elderly/Handicapped Services	14	52	23	11	100	608	66
Sidewalks	13	49	25	13	100	900	62
Bicycle Lanes And Routes	13	35	28	24	100	601	48
Intercity Travel Elements							
Passenger Air Travel	18	56	20	7	100	827	74
Intercity Bus Use	8	52	23	17	100	453	60
Intercity Rail Service	9	43	21	27	100	442	52

[2] Total respondent observations—respondents were randomly divided into three groups of about 1,350 for these questions. Respondents who did not provide an opinion were either unfamiliar with the category or otherwise chose not to respond.

Highway Travel Elements

Figure 2



Views Of Highway Related Travel

There are five highway-related elements in Table 1. This includes *Connections To Other Modes*, because it is most often the highway that provides the interconnections to the other modes of transport. Most elements were rated excellent or good by a majority of adults, with *Local Street Pavement Quality* having the most negative ratings.

Pavement Related—*Freeway Pavement Quality* ratings are almost uniformly superior to *Local Street Pavement Quality* ratings across all age categories, while older adults tend to be more positive in their ratings than younger adults. *Freeway Pavement Quality* ratings did not vary significantly by metro class (see Table 2 for metro class descriptions). All show about 12 percent (±1.5%) of adults with excellent ratings. *Local Street Pavement Quality* was rated excellent or good by a higher proportion in the two largest metro classes (urbanized areas of over one million population with or without rail or subway service). Also, a greater proportion of those with higher than the median family income[3] rated *Local Street Pavement Quality* as good or excellent. This suggests, not surprisingly, that streets in higher income areas may be better maintained than in poorer areas.

[3] The U.S. Census Bureau reported the 1995 median family income for the United States as $49,687. The income answer category used in the NPTS allowed households to be divided into two groups; those making $50,000 or less and those making more than $50,000.

Other Highway Related—It is surprising how well views regarding *Lack Of Major Highway Delay* and *Connection To Other Modes* fare given the sense of public concern about congestion. Along with safety on highways, the ratings are uniformly positive. (The related issue of violence against motorists as a concern of drivers and passengers is treated later.)

Intuitively, the most significant factor in any ratings of highway delay would be strongly associated with the size of the metropolitan area, and the data bear this out. Table 2 shows the ratings for *Major Highway Delay* by metro class. The data show that 60 percent (±3%) of adults rate the system as excellent or good regarding (lack of) delay. Almost 80 percent (±5%) of rural areas give positive ratings, but only 43 percent (±7%) of respondents in rail oriented large metro areas do so. Note that differences between metro classes (within rating categories) of less than 6 percent are not statistically significant.

TABLE 2
Ratings of Major Highway Delay Characteristics by Metro Size Class

Metro Class By Urbanized Area Population	Excellent	Good	Fair	Poor	Total	Obs.	%Pos
1 Million Or More With Rail Or Subway Service	6%	37%	39%	18%	100%	178	43%
1 Million Or More Without Rail Or Subway Service	11	41	34	14	100	363	52
Less Than 1 Million	19	47	24	10	100	402	66
Not In Urbanized Area	25	54	16	5	100	211	79
Total	15	45	28	12	100	1,154	60

Ratings for safety on highways show a similar pattern with the major distinction that ratings improve with decreasing area size, but show a very marked negative shift in nonmetro areas, as seen in Table 3. Note that differences of less than 7.5 percent are not statistically significant.

TABLE 3
Ratings of Safety Concerns While Traveling on Highways

Metro Class	Excellent	Good	Fair	Poor	Total	Obs.	%Pos
1 Million Or More With Rail Or Subway Service	5%	48%	38%	8%	100%	177	53%
1 Million Or More Without Rail Or Subway Service	6	57	28	9	100	312	63
Less Than 1 Million	12	58	23	8	100	407	70
Not In Urbanized Area	10	50	32	8	100	215	60
Total	9	54	29	8	100	1,111	63

Table 4 documents that drivers were the most positive regarding concerns about delay—about twice as positive as transit users. Differences within rating categories of less than 14 percent are not statistically significant.

TABLE 4
Ratings of Major Highway Delay Characteristics by User Groups

Category	Excellent	Good	Fair	Poor	Total	Obs.	%Pos
Drivers	17%	47%	27%	10%	100%	952	64%
Auto Passengers	6	43	32	20	100	137	49
Transit Users	6	25	46	23	100	25	31
Walkers	29	22	36	13	100	33	51
Total	15	45	28	12	100	1,147	60

Overall, the views toward the five highway travel-related elements are positive. Younger adults are less positive about local pavement quality. Those in larger metro areas are less positive about safety and delay issues and more positive about local pavement quality.

Views Of Other Major Transport Elements

The eight nonhighway travel elements that respondents were asked to make judgments about can be further subdivided into a group of five Urban and three Intercity travel elements. Their ratings were given in Table 1.

Urban Group—In general all elements of the urban group have a majority of respondents rating them as excellent or good, with the exception of *Bicycle Lanes And Routes* which has the lowest rating.

As expected, the size of the metro area in which people live has an appreciable effect on their ratings. These effects vary from element to element:

In Areas With Rail Transit, rail transit's rating is 71 percent (±9%) which is about the same as the ratings for buses.

Sidewalks have the largest areas exhibiting the best ratings, with a significantly smaller proportion in nonmetro areas than metro areas rating them as excellent or good.

Bicycle Lanes are uniformly viewed in all areas centering on a 48 percent (±6.7%) positive rating.

Elderly And Handicapped Services ratings were uniformly good across areas at about 66 percent (±6.6%). There is some evidence that women rate transportation services for the elderly and handicapped higher than men.

Intercity Group—Ratings of air and rail are significantly higher in larger metro areas. There is some evidence that a smaller proportion of those in households with incomes above the median household income rate *Intercity Bus* as excellent or good compared to those in households at or below median income.

Highway Use Values

Concerns of motorists were addressed by asking private vehicle users about their agreement or disagreement with a set of three positively worded statements and three negatively worded statements about roadway use. The motorists were asked to grade their agreement on a five-point scale from strongly agree to strongly disagree. The statements were as follows:

A. Traveling by private vehicle gives me the freedom to go **where** I need to go.
B. Traveling by private vehicle gives me the freedom to go and return from activities **when** I want to.
C. I **like** to travel by private vehicle.
D. **Highway congestion** is a major problem for me.
E. I spend **too much time** in a vehicle every day.
F. Traveling by private vehicle **is very stressful** to me.

Respondents were very positive in their regard for private vehicle use. They strongly agreed with the positively worded statements, and almost as strongly disagreed with the negative statements. An amazing 88 percent strongly agreed with both the statement regarding freedom to go "where I need to go," and, freedom to go "when I need to go." The statement regarding "liking to travel by private vehicle" was also positively supported with 85 percent (±2.1%) strongly agreeing with the statement. It is most surprising that only 3 percent (±1%) disagreed or strongly disagreed with the statements in each case.

The overall statistics are as follows. Differences between statements (within rating categories) of less than 2 percent are not statistically significant.

TABLE 5

Percent Agreement with Positive Highway Statements

Category	Strongly Agree	Agree	Unknown	Disagree	Strongly Disagree	Total	Obs.
Go Where I Need To Go	88%	7%	2%	1%	2%	100%	1,523
Go When I Need To Go	88	7	2	1	2	100	1,524
Like To Travel In Vehicles	85	7	5	1	2	100	1,654

The Positive Statements

Among the pertinent variations among different groups regarding the positive statements were the following:

- In general, the statements regarding freedom to go when and where desired received greater support than the statement related to liking to travel by private vehicle.

- The greatest degree of agreement came from those in their most active travel years, both men and women in the age groups 35-54 and 55-64 in which levels of strong agreement reached 95%. In no age group did disagreement ever rise above 11 percent (±2.5%).

- The most negative groups were the age groups of 16-19, reflecting perhaps restraints on young people's use of vehicles.

- Not surprisingly, significantly fewer of those in households without vehicles agreed that traveling by private vehicle gives them the freedom to go where and when they need to go.

The Negative Statements

Response to the negatively worded statements was not so completely emphatic, although quite strong. About 69 percent (±4%) disagreed or strongly disagreed with the statement that travel by vehicle was very stressful; 56 percent (±4%) disagreed or strongly disagreed with the statement that they spend too much time in their car. Figure 3 shows how reaction to spending too much time varies by miles driven.

The key difference was in respect to congestion where 43 percent (±4%) disagreed or strongly disagreed with the statement that highway congestion is a major problem. It also was the largest group (31±2%) stating that they had an unknown view on the subject. As with the preceding question about time, Figure 4 shows that concern over congestion seems to increase with miles driven.

The overall statistics for the group of negative statements are as follows. Note that, like Table 5, differences of less than 2 percent are not statistically significant.

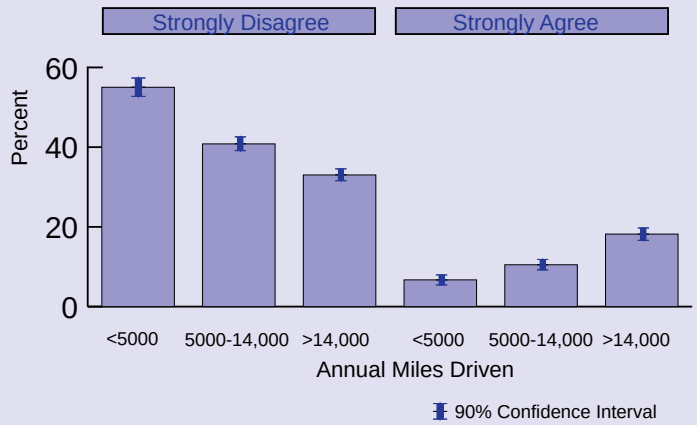
TABLE 6

Percent Agreement with Negative Highway Statements

Category	Strongly Agree	Agree	Unknown	Disagree	Strongly Disagree	Total	Obs.
Congestion A Major Problem	15%	12%	31%	17%	26%	100%	1,511
Spend Too Much Time In Vehicle	14	8	22	16	40	100	1,656
Travel By Vehicle Is Very Stressful	9	7	15	17	52	100	1,652

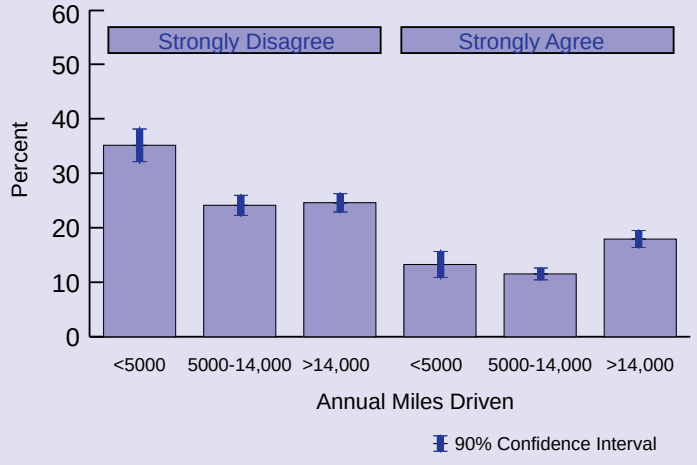
Spend Too Much Time In A Vehicle Each Day?

Figure 3



Congestion A Major Problem?

Figure 4



Some of the key findings in regard to the negative statements are:

- There is clearly a great deal of variety in opinion in regard to the three negative statements. While the stronger emphasis is on disagreement with the statements, there is certainly enough agreement or strong agreement with the negatives to warrant further concern and analysis.

- The degree of ambivalence is also great with unknown/uncertain scores ranging from 15 percent (±2%) to 31 percent (±2%), unlike the positive questions where only 2 to 5 percent (±1%) indicated an unknown or uncertain middle reaction.

- Congestion indicated the strongest uncertainty with only 26 percent (±2.4%) strongly disagreeing that it is a problem, half the level of the statement regarding vehicle travel being stressful. The question of spending too much time in vehicles falls somewhere in between.

- Women have a more positive attitude toward spending time in a vehicle, with 45 percent (±2.8%) of women saying that they strongly disagree that they spend too much time in vehicles versus only 34 percent (±3.2%) of men. A smaller proportion of women aged 16-19 and 65+ strongly agree that they spend too much time in vehicles than women aged 20-64.

• Finding driving stressful is the least supported of the three negative statements with only 16 percent (±2.7%) registering any agreement at all, roughly evenly divided between men and women. As one might expect, there is more strong agreement with stress concerns by those aged 20+ than those aged 16-19.

• Mileage traveled does have some impact on reactions to the three statements. Strong disagreement with concerns about congestion declines significantly with increased driving, from 35 percent (±5.9%) in strong disagreement below 5,000 miles per year to 25 percent (±3.4%) for those traveling over 5,000 miles per year.

• As miles driven increases strong disagreement declines, and strong agreement increases with the proposition regarding spending too much time in vehicles. Strong disagreement drops from 55 percent (±4.7%) to 35 percent (±3%) in the highest driving range and strong agreement more than doubles from 7 percent (±2.4%) to 18 percent (±2.9%).

• There does not seem to be a significant positive effect on stress reactions as a product of miles driven; strong disagreement remains around 52 percent (±2.3%) throughout.

• In general, nonmetro residents are the least supportive of the negative statements about private vehicle travel.

• About 20 percent (±4.6%) of those in areas over one million are in strong agreement regarding congestion problems compared to 8 percent (±2.4%) for nonmetro areas. Similarly strong disagreement is lower in metro areas than nonmetro areas.

• There is more disagreement with congestion problems in areas with rail than without.

• There is greater strong disagreement with spending too much time in vehicles in nonmetro areas.

• Stress levels seem lower in nonmetro areas with 65 percent (±4.2%) strong disagreement.

Highway Travel Problems

In order to better appreciate the problems that people may have in dealing with private vehicles, a list of difficulties that people might have, nine in all, were submitted to those respondents who used private vehicles as either drivers or passengers. They were asked: "Is this a large problem, small problem, or no problem at all for you?"

The different groups were asked about:

- Worrying about **crime against motorists**
- **Air pollution** caused by cars, trucks and buses
- Worrying about **being stranded** or in danger and not knowing how to get help quickly
- Not knowing about **traffic tie-ups** or road construction
- Worrying about **traffic crashes**
- Being **dependent on a car** for every trip I make
- Traveling in local areas or neighborhoods I am **not familiar** with
- Having others **depend on me** to take them places
- **Having a car available** to me when I need it

The actual proportions in each category are given in the table below using shorthand wording of the problems. Figure 5 depicts how perception of an issue being a large problem varies by gender. Note that differences between questions (within rating categories) of less than 3.5 percent are not statistically significant.

Perception Of Issues As Large Problem By Gender

Figure 5

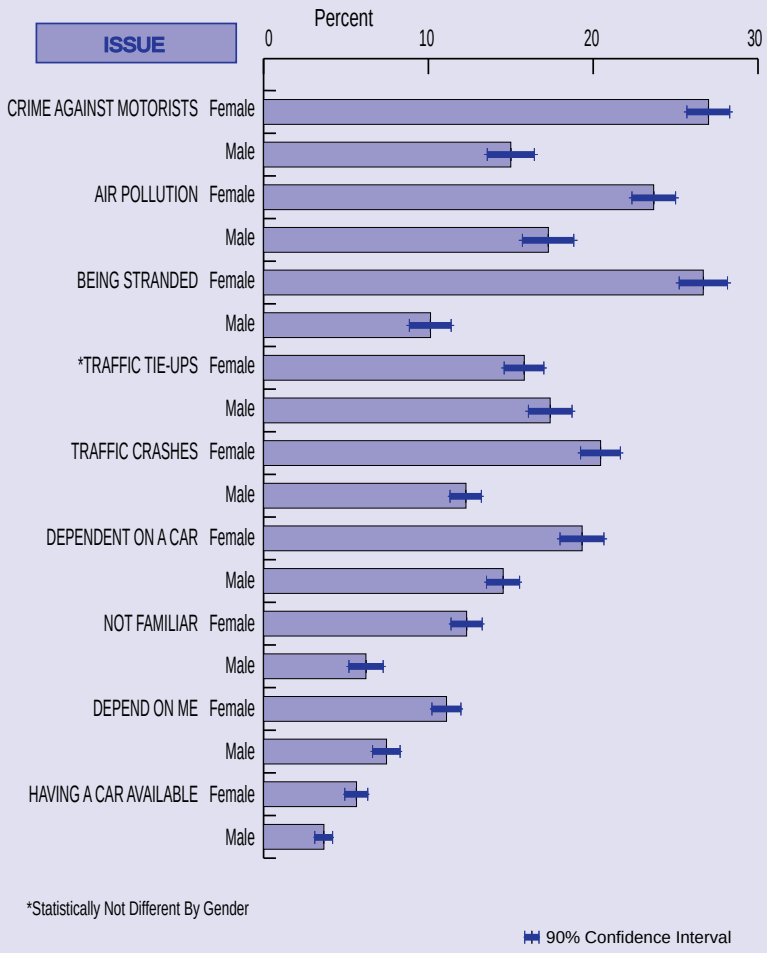


TABLE 7
Are the following a large problem, small problem, or no problem for you?

Question	Large	Small	No	Total	Obs.
Crime Against Motorists	22%	37%	41%	100%	1,662
Air Pollution	21	34	45	100	1,521
Being Stranded	19	28	54	100	1,526
Traffic Tie-Ups	17	34	50	100	1,654
Traffic Crashes	17	34	49	100	1,666
Dependent On A Car	17	23	60	100	1,659
Not Familiar	9	33	58	100	1,531
Depend On Me	9	27	64	100	1,529
Having A Car Available	5	9	86	100	1,663

The primary observation is that large problems are not very large. The biggest problem has only a 22 percent (±2.2%) share indicating that it was a large problem. Overall, five of the nine problems had a majority indicating that it was no problem. The four categories with the lowest proportions indicating no problem were *Crime Against Motorists*, *Air Pollution*, *Traffic Crashes*, and *Traffic Tie-Ups*.

There are substantial differences in the rankings of these problems between men and women. In every case but one, women viewed each item as a bigger problem than did men, in many cases by large degrees. Both men and women rated *Traffic Tie-Ups* about the same. The average percentage seeing a large problem in any item among women was 18 percent, whereas the average for men was less than 12 percent.

One conclusion that can be drawn is that, other than concerns about knowing about traffic, women are more concerned about all these issues than are men. In some instances there are differences among younger or older women. A higher proportion of older women rated *Being Stranded*, *Crime Against Motorists*, *Air Pollution*, *Traffic Tie-Ups* and *Having People Depend On Them* as no problem.

A number of concerns are greatest among older motorists, most particularly regarding *Crime Against Motorists*. This is heavily affected by women's concerns. Forty-two percent (±10.2%) of women in the age group from 55 to 64 years of age and 32 percent (±5.8%) of women over 65 rated crime as a big problem.

The kind and size of metropolitan area that one lives in affects the response to these questions. Many problems are "big city" problems that decline as area size declines or shifts from metropolitan to rural areas. The average percentage with a big problem for the nine topics is between 17 percent and 18 percent (±1%) for the metros over a million, dropping to an average percentage of 14 percent (±1%) for metropolitan areas under a million and about 11 percent (±1.4%) for nonmetro areas. This emphasizes the finding that there are not very strong differences between metropolitan areas over a million with and without a rail transit system. Concerns about *Crime Against Motorists* and *Air Pollution* are clearly big city issues with fewer ranking these issues as big problems in places outside metropolitan areas over one million.

Levels Of Transit Use

It is useful to pin down the levels of use that people make of transit to better understand their interests, needs and problems. The earlier discussion of respondent characteristics indicated that about 5 percent (±4.8%) said that public transportation was the way they usually get around. This limits the group to those who use transit exclusively or almost exclusively. In order to get a better sense of transit users, another question was asked to determine the frequency of use of both those who said that they used transit to get around and those who selected other alternatives as their Usual Mode. Table 8 gives the overall findings. Differences of less than 18 percent between the *Other* mode and the rest of the Usual Modes (within time categories) are not statistically significant. Differences between all the modes except the *Other* mode of less than 8 percent are not significant.

TABLE 8
Frequency of Use of Transit by "Usual" Mode Used

Usual Mode	2+ Days A Week	About Once A Week	Once or Twice A Month	Less Than Once A Month	Never	Total	Obs.[4]
Driver	2%	1%	6%	5%	86%	100%	1,585
Passenger	11	7	8	4	70	100	270
Walker	19	17	15	8	41	100	75
Transit User	90	4	5	1	0	100	136
Other	7	22	10	13	48	100	24
All	10	3	7	5	76	100	2,090

[4] This excludes approximately 2,000 respondents who indicated that there was no transit available where they lived.

This table is very revealing of who uses transit. As background about half the population does not have transit available to them where they live, and therefore do not use transit. In areas where transit is available about 76 percent (±2%) of travelers say they never use it. But the key points concern the composition of users. A significant number of those who say they use other modes to get around indicate that they use transit two or more days per week or less frequently, particularly walkers and auto passengers.

This leads to the second point which is that those who consider themselves transit users constitute only about two-thirds of the group that say that they use transit two days a week or more. The others are those who say they usually drive (16±3.2%) or are a passenger (15±4.9%). When all time categories are summed, those who say that they use transit to get around constitute about 27 percent (±5.5%) of transit riders, with usual auto users who use transit only on an incidental basis constituting about 62 percent (±14%); walkers account for about 9 percent (±6%).

Transit Issues

In order to get a better understanding of transit users, a set of questions was put to them about why they use transit and about some of the positives and negatives of transit use. Unfortunately, because of the limited numbers of transit users in the pretest survey, the number of observations made it infeasible to disaggregate these data in detailed ways by income group, age, sex or other categories. But the overall reporting provides useful insights nonetheless.

A question was asked in the form: “I use Public Transit because:” followed by nine statements with which the respondent could agree or disagree on a five-point scale. The nine statements are listed in Table 9 along with the proportion in each answer category. Differences of less than 18 percent between statements (within answer categories) are not statistically significant.

TABLE 9
I use public transit because…

Statement	Strongly Disagree	Disagree	Unknown	Agree	Strongly Agree	Total	Obs.
I Can Do Something Else	39%	12%	13%	8%	27%	100%	67
It Is Faster Than A Private Vehicle	31	20	10	8	30	100	68
I Don't Drive Or Don't Like To Drive	32	4	9	12	43	100	68
Avoids Buying A Car	22	11	7	16	44	100	65
It Is Better For The Environment	22	2	13	14	49	100	32
Costs Less Than Driving	14	6	10	20	50	100	65
It Avoids Stress Of Driving In Congested Roads	15	11	1	14	59	100	34
Do Not Have Access To A Car	21	3	6	6	64	100	33
It Is The Most Convenient Way For Me	10	6	9	10	65	100	34

It is clear that the strong agreement and strong disagreement elements are dominant. This may in part be a product of the fact that some of the questions have close to a yes/no nature.

Summary

The American public is pleased with its transportation system. While it certainly is not without problems, the amount of strong support for the services received is very high.

There is strong appreciation for the mobility and flexibility afforded by the private vehicle, with agreement above 90 percent on such characteristics as freedom to go when and where needed, and simply liking to travel in a vehicle. Concerns about supposed negatives (such as spending too much time in cars, the stress of driving, or congestion) are quite limited, with congestion the biggest concern.

In many cases users seem to be happy with their actual or likely mode of choice. There seems to be a substantial degree of self-selection going on in which users have selected what they construe to be the best options for their circumstances, rather than feeling that they are being forced to accept an inferior alternative.

Many problems are linked to large metropolitan areas where difficulties are only rarely perceived as less serious than elsewhere and usually perceived of as worse. This is most strongly associated with congestion and delay problems, transit service and fear of crime.

There are significant differences between men's and women's perceptions. In general, women have a more positive view of most modes of transport than men. However, when problems regarding private vehicle travel were addressed, women uniformly saw problems as greater

than men. This was particularly acute in regard to concerns about crime against motorists, being stranded or lost in a vehicle. Age factors also figured in many concerns, especially those associated with access to vehicles among the young, and concerns about being lost or stranded among older travelers.

There is substantial support for transit among users; among many the main reasons for use are convenience and reduced costs and stress from driving. Perceived negatives are not strongly held. The strongest negatives were concerns about cleanliness and waiting. Cost does not seem to be a major concern.

More data collection and research in these areas can provide a stronger sense of the needs and concerns of the traveling public. These data can be an effective element in guiding transportation investment and policy.