

OREGON DEPARTMENT OF TRANSPORTATION CUSTOMER-BASED PERFORMANCE MEASURES SURVEY

Summary of Survey Methodology and Results

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Introduction

The Oregon Department of Transportation (ODOT) continuously gathers information and conducts evaluation research in order to better serve the needs of Oregonians. As one part of that larger effort, ODOT contracted with the Oregon Survey Research Laboratory (OSRL) to conduct research on Oregonians' assessment of the quality of statewide transportation services and functions. Working closely with representatives of ODOT, OSRL planned, pretested and implemented a telephone survey of 831 Oregon adults, divided roughly equally between the tri-county Portland metropolitan area and the rest of the state in December 1996. This report summarizes the survey methodology and results.

Survey Methodology

Survey Instrument

The broad goals of the survey were to obtain valid and reliable information from Oregon adults on the quality of statewide transportation, knowledge of ODOT functions, the value and importance of those functions, satisfaction with the quality and value of ODOT's services, and travel behaviors. More specifically, the survey targeted:

1. **Global assessments of how good a job Oregon is doing in several dimensions of transportation**, including: maintaining existent highways, roads and bridges; constructing new highways, roads, and bridges; planning to meet the state's future transportation needs; developing mass transit; and providing easy access to work, shopping, and recreation;

2. **Importance of ODOT's safety functions**, including improvement of signs, stripes, reflectors, signals, night time visibility, law enforcement, snow and ice removal, traffic flow in road work zones, safety in road work zones, and the way the state decides whether or not someone is qualified to drive;
3. **Importance of ODOT's construction and maintenance functions**, including maintenance and repair of existing highways, roads and bridges; building more highways; widening roads; reducing the number of cars on the road; reducing the number of heavy trucks on the road; and speeding up road construction projects;
4. **Importance of ODOT's environmental protection functions**, including reducing air pollution from cars and trucks; encouraging people to carpool, to use bicycles as a means of transportation, to use public buses and light rail within cities, and to use trains, vans, and buses to travel between cities; to construct roads and highways in such a way to minimize noise and damage to the environment; and to ensure litter pick-up;
5. **Importance of ODOT's transportation service functions**, including improving services to senior citizens, handicapped and disabled people; increasing mass transit within cities; increasing bus, van and train services between cities and in rural areas; reducing gasoline prices; reducing prices of public transportation on buses, light rail and trains; providing more traveler information on road conditions, weather, and congestion; and providing safe and clean rest areas along Oregon's highways;
6. **Prioritization of the importance of ODOT functions** in each area above (safety, construction and maintenance, environmental protection, transportation services) and overall;
7. **Overall assessments of how good a job ODOT is doing**, including general positive, negative and neutral feelings; Department of Motor Vehicles (DMV) services; reducing traffic accidents, injuries and deaths; and adapting to inadequate funds; trust;
8. **Knowledge questions**, including ODOT funding sources; responsibility for highway rest areas, policing roads and highways, licensing and regulating airplane pilots, truck drivers and car drivers; construction and maintenance of light rail trains in Portland; weighing trucks along highways; building and maintaining airports; maintaining Oregon State Parks and campgrounds; helping to manage the way land is used in Oregon; helping to manage the cities' growth; and knowing who is responsible for maintaining the road in front of the grocery store where respondents usually shop;
9. **Satisfaction with ODOT**, including planning to meet Oregonians' future transportation needs; ; maintaining the state's highways, bridges and roadside rest areas; ; constructing highways and bridges to meet the needs of state residents; and licensing and servicing through the DMV;
10. **Demographic, residence and travel characteristics**, including valid driver's license, zip code, rural residence, distance to nearest mass transit stop; traffic congestion in local community, travel behaviors (number of trips, transportation modes, number of persons in vehicle), number of persons and

children in household; age, sex, education, disability, voting behavior, and income.

In designing the survey instrument, OSRL used a multi-path approach which included: drawing from OSRL's survey archives and professional networks for questions related to ODOT's needs; creating original survey questions; and extensively pretesting individual questions and the entire survey instrument with members of the survey population, professionals, survey experts, and potential users of the data from ODOT. Most of the survey questions are OSRL originals, but some are direct parallels to those from previous ODOT surveys.

The survey instrument was programmed into OSRL's computer-aided telephone interviewing (CATI) system and further pretested. A facsimile of the survey instrument is provided in Section 2 of this documentation. All interviews were completely confidential, and human subjects approval was obtained.

Sample and Data Collection

Interviewer training was conducted on November 25, 1996; see Section 3 for interviewer instructions. Interviewing was conducted all times of the day and all days of the week (except Sunday mornings) until the target sample sizes of 400 in the Portland tri-county area (Multnomah, Washington, Clackamas) and 400 in the rest of the state were achieved. Altogether, OSRL interviewers made 10,578 random-digit-dialed telephone calls to complete 831 interviews with adults age 18 and over December 3 - 20, 1996. Up to 10 calls were made to each valid telephone number. All households in the two geographic areas had an equal chance of being selected, excluding those without telephones (approximately 4.5% in the state). The net response rate was 54% and the refusal rate was 8.7%; see Section 5 for the sample and response rate report. The average length of the interviews was 19 minutes.

Survey sampling errors are calculated to assist data users in assessing how much confidence to place in a particular survey result. Large random samples, as in this study, reduce sampling error. Results for survey questions in which there is low variability also have less sampling error; for example, a variable with a 50/50 proportional split has wider confidence intervals than a variable with a 5/95 proportional split. For this study of 831, the sampling error is ± 3.5 percentage points on a variable with a 50/50 proportional split (at the 95% confidence level). For a variable with a 5/95 proportional split, the sampling error is ± 1.6 percentage points.

For researchers interested in studying the two geographic areas separately, the sampling error is ± 5.0 percentage points on a variable with a 50/50 proportional split (at the 95% confidence level). For a variable with a 5/95 proportional split, the sampling error is ± 2.2 percentage points.

Survey Results

The presentation of the survey results is organized around the subject areas identified on pages 1 - 3. Readers of this report may refer to the 81 banner-style tables in Section 4 for more detail.¹ In the banner tables, all questions asked in the survey were cross-tabulated with 9 key variables: where do you think ODOT gets its funds, trust in ODOT, possession of a drivers license, rural or non-rural residence, importance attached to traffic congestion, knowledge of who maintains the road in front of their house, age, sex, and voting frequency. The banner data include counts and percentages for each question overall, and counts and percentages for each row and column of the cross-tabulation.

Narrative responses to open-ended questions are provided in Section 6. Codes developed for those responses are provided in Section 7. The coded narratives are also included in tabular form at the end of the banners, Table 81.

Profile of Survey Respondents

Before turning to the results of the survey, we provide a profile of respondents in the survey's sample, which will serve to contextualize their answers to the survey questions.

Sixty one percent of respondents in the sample are female (Table 77). The mean age is 48, with an age distribution of 10% less than age 25, 16% age 26-35, 24% age 36-45, 19% age 56-70, and 10% age 71 or greater (see Table 76 for a cross-tabulation based on age classification).

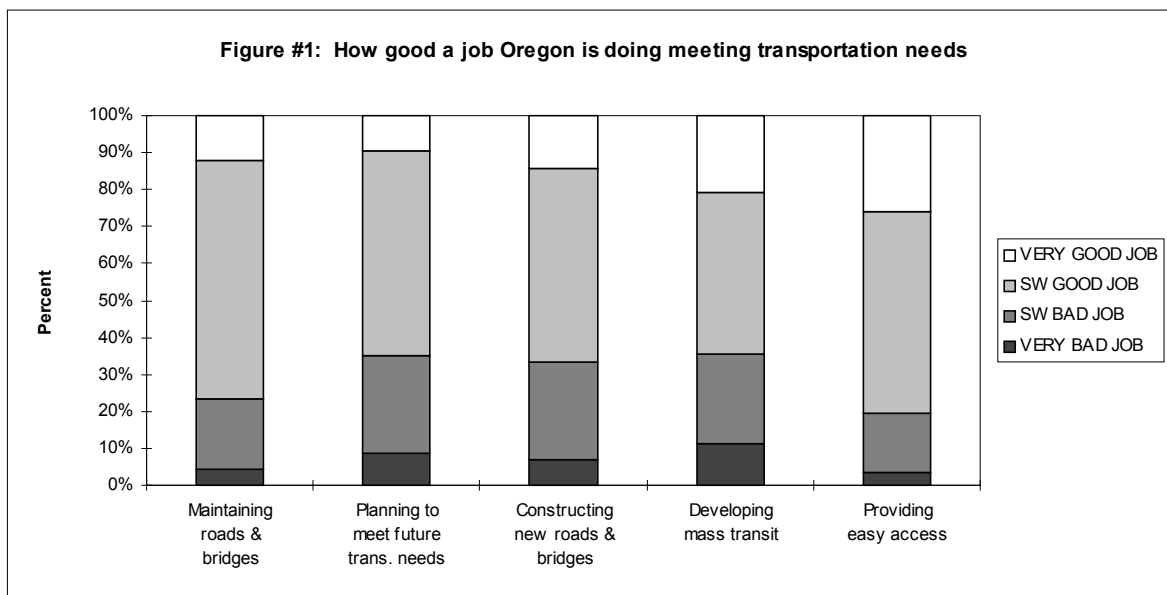
Respondents were asked about their labor force status, education and income. Fifty seven percent work for pay, 8% are homemakers, and 3% or fewer are looking for work, retired, disabled, or taking classes (Table 75). Twenty nine percent of the sample graduated from college (7% have advanced degrees), 36% have some college or an associates degree, 28 % graduated from high school or have a GED; and 7% did not graduate from high school (Table 74). When questioned about their 1996 household income, 20% reported \$20,000 or less, 30% reported \$20,000-40,000, 27% reported \$40,000 to 70,000, and 14% reported more than \$70,000 (Table 80).

Finally, respondents were asked about voting behavior and whether or not they live in a rural area. Sixty six percent of respondents always vote, 17% often vote, 9% vote sometimes or rarely, and 8% never vote. On the question of residence, 45% live in a rural area and 54% live in either a suburban or a metropolitan area.

¹ At ODOT's request, the banner tables also may be placed at OSRL's World Wide Web site for greater public usage: <http://darkwing.uoregon.edu/~osrl>.

Global Assessments of How Good a Job Oregon is Doing in Transportation

The survey opened with five questions designed to tap the un-aided, “top of the head” feelings that Oregonians have about the quality of the job the Oregon is doing on a broad set of highway transportation issues. In each of these questions respondents were instructed to give their impression of how good of a job Oregon is doing using the response categories “very good job”, “somewhat good job”, “somewhat bad job”, and “very bad job” (see Figure 1).



Respondents were first asked how good of a job they thought Oregon was doing “maintaining existing highways, roads and bridges”. Twelve percent of respondents indicated that Oregon was doing a “very good job”, an additional 64% though Oregon was doing a “somewhat good job”, while 19 % though Oregon was doing a “somewhat poor job”, and only 4% thought Oregon was doing a “very bad job.”

Similar response patterns occurred for the other 4 questions about the quality of the job Oregon is doing. The majority of Oregonians (and usually a large majority) thought that Oregon was doing either a “very good job” or a “somewhat good job” in “planning to meet the state’s future transportation needs”, “constructing new highways, roads, and bridges”, “developing mass transit”, and “providing easy access to work, shopping, and recreation.” Only a small percentage of responds though Oregon was doing either a “somewhat bad job”, or a “very bad job.” The issue for which the largest percentage of responds thought Oregon was doing a bad job was the development of mass transit, where 22% though Oregon was doing a “somewhat bad job”, and another 10% thought Oregon was doing a “very bad job.”

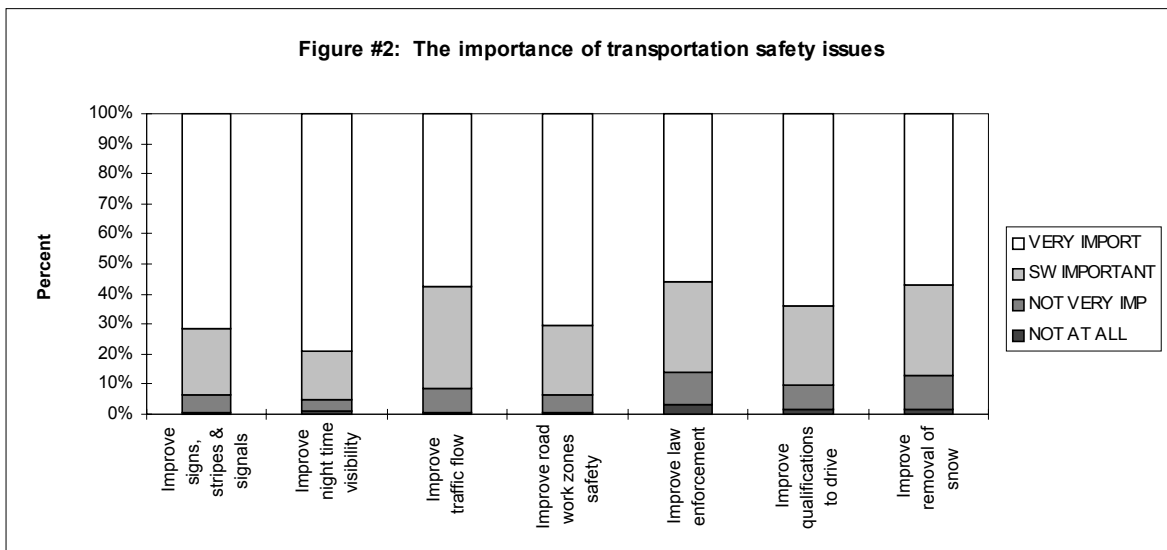
In addition to the five questions discussed above, respondents were asked their impression of the condition of the state highways today as compared to 10 years ago, and how they would compare Oregon’s highways to the highways of other states. Oregonians were fairly evenly split on the question of the current condition of the highways and bridges Twenty six percent of respondents

thought the highways and bridges were in “better” shape than 10 years ago, 31% thought the condition was “about the same” as 10 years ago, and 29% thought the conditions “worse” than 10 years ago. When asked to rate Oregon highways against other states 46% thought Oregon’s highways were either “much better” or “somewhat better” than the highways of other states, while 16% thought Oregon’s highways were either “somewhat worse” or “much worse” than other states. An additional 32% thought Oregon’s highways were about the same as the highways of other states.

Importance of ODOT’s Safety Functions

Following the job quality and comparison questions respondents were asked a set of seven questions having to do with highway safety. Respondents were asked about the importance of: “signs, stripes, reflectors and signals”; “improving night time visibility”; “improving traffic flow in road work zones”; “improving safety in road work zones”; “improving law enforcement on Oregon highways”; “improving the way the state decides (who) is qualified to drive”; and “improving the removal of snow and ice.” For each question respondents were asked whether they thought the safety issue at hand was “very important”, “somewhat important”, “not very important”, or “not at all important.”

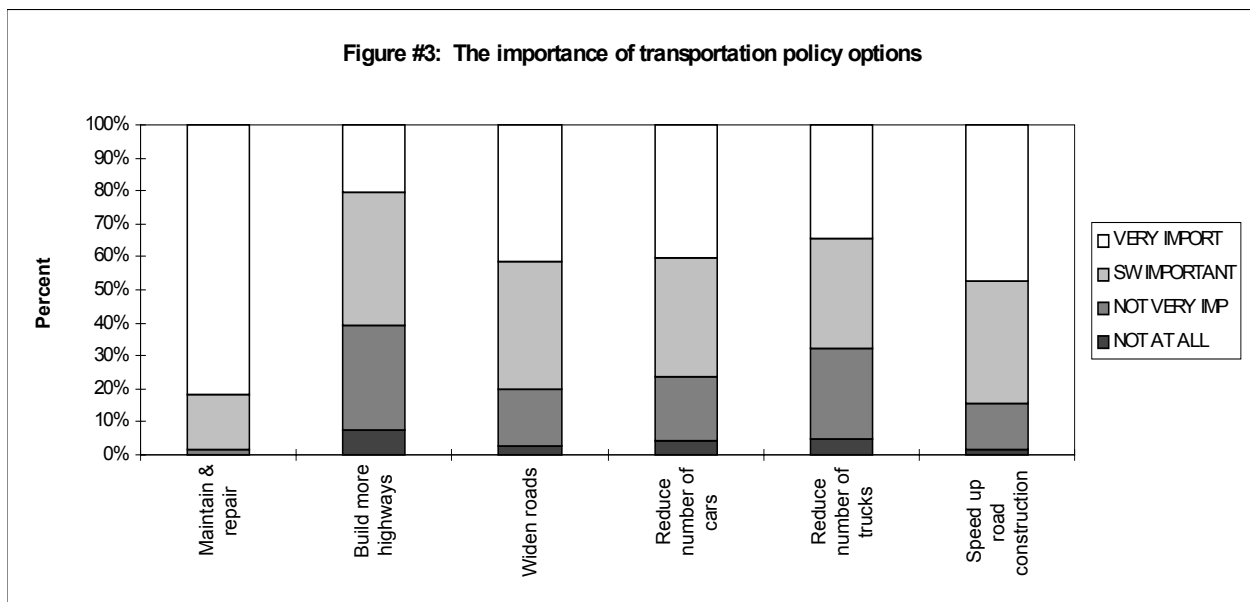
Oregonians take highway safety very seriously. For every one of the seven safety issues, over 55% of respondents thought that the issue was “very important.” In the most extreme case, 79% of respondents thought it was “very important” to improve night time visibility. When the categories “very important” and “somewhat important” are combined the vast majority of respondents fell into one of these two response categories. The percentages of respondents who picked one of these two categories (very important and somewhat important) ranged from a high of 95 % for “improving night time visibility on Oregon highways”, to a ‘low’ of 85% for “improving law enforcement on Oregon highways” (see Figure 2).



Almost no one interviewed thought any of these safety issues were “not at all important” The percentage of respondents who saw any safety issue to be of no importance was 1% or less, with the exception of the question about improving law enforcement, which 3% of respondents thought was “not at all important.”

Importance of Transportation Policy Options

Respondents were next asked another set of importance questions, only this time instead of safety issues they were asked six questions about potential transportation policies. These policies included: “maintaining and repairing existing highways roads and bridges”; “building more highways”; “widening roads”; “reducing the number of cars on the road”; “reducing the number of heavy trucks on the road”, and “speeding up road construction projects.” By far the most important thing to respondents was the maintenance of existing highways, roads and bridges, where 82% of respondents thought this was “very important”, and another 16% thought it was “somewhat important” (see figure 3).

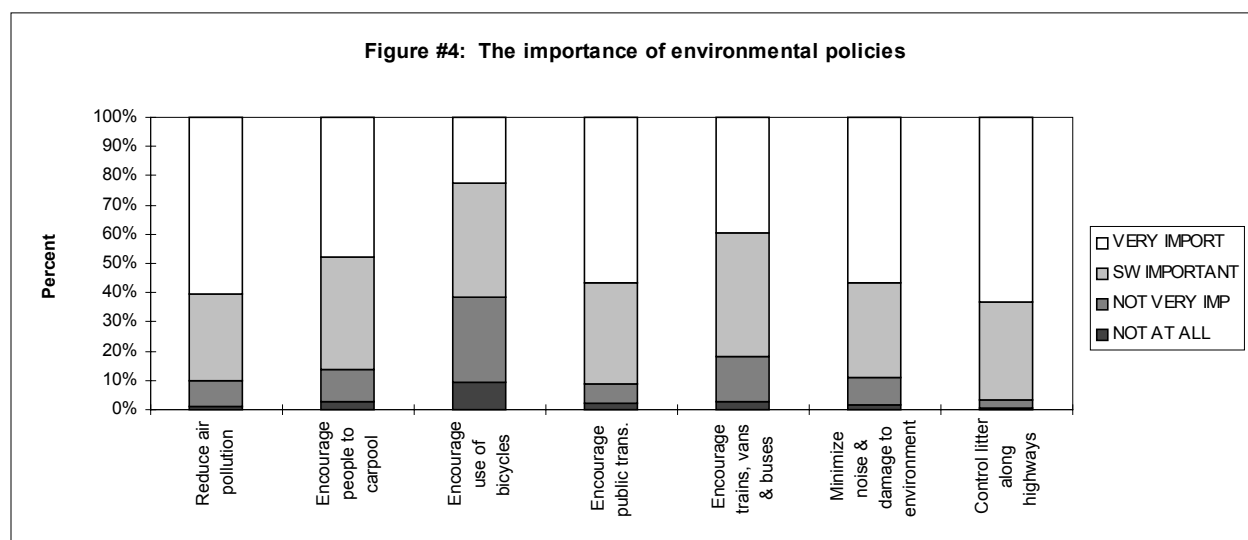


All of the other policy issues were thought of as either “very important” or “somewhat important” by over 50% of respondents. However, there were interesting and significant differences in the importance levels attached to these remaining 5 questions. In particular the question of building more highways can be compared with the questions about reducing the numbers of cars or heavy trucks on the roads. When such a comparison is made you find that twice as many respondents, 40% vs. 20%, see the idea of reducing cars on the road as “very important”, than see building more highways as “very important.” In addition, a substantial number of respondents, 34%, see the reduction of heavy trucks as “very important.”

In general there is very strong support for maintaining highways, widening highways, speeding up construction projects, and reducing cars and trucks from the highways, and a much smaller amount of support for building new highways.

Importance of ODOT’s Environmental Protection Functions

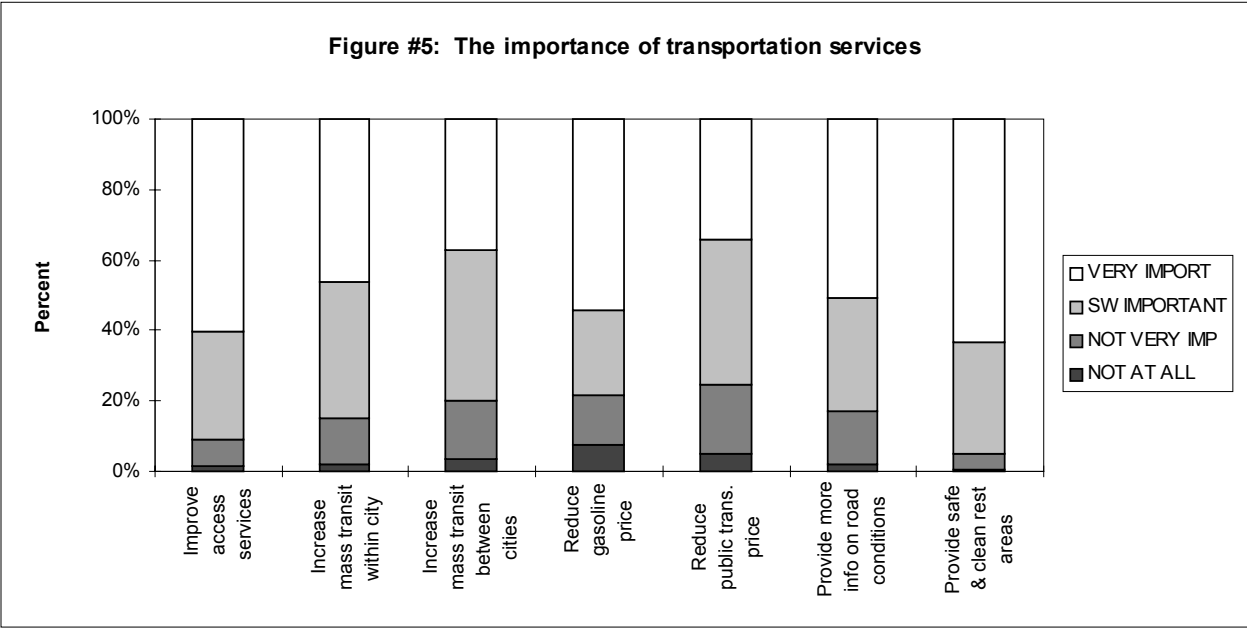
Respondents were next asked another set of seven policy questions. This time the policies had implications for environmental protection, either directly through issues such as reduction of air pollution from cars and trucks, or indirectly through issues such as carpooling and the use of the bicycle. Respondents were once again asked to judge the importance of these items. Here, much as on the previous issues of safety, over 60% of respondents thought that all of the environmental policy questions were either “very important”, or “somewhat important” (see Figure 4).



“Controlling litter was seen as “very important” by the highest percentage of respondents (63%), followed closely by reducing pollution from cars and trucks (60%). Other issues seen as “very important” by a large number of respondents included minimizing noise and environmental damage during highway construction, and encouraging the use of mass transit within cities. Both of these issues were seen as “very important” by 56% of respondents. Interestingly, the encouragement of mass transit between cities was seen as “very important” by a much smaller number of respondents (39%), and the encouragement of bicycling was seen as “very important” by the least number of respondents for any environmental issue, only 29%.

Importance of Transportation Service Functions

Respondents were asked a final set of importance rating questions about service functions related to transportation. These seven questions asked respondents to rate the importance of increases in services, such as mass transit within cities, or more travelers information, as well as issues that would make transportation cheaper, such as reducing the price of gasoline or the cost of public transportation. Again, a large majority of respondents thought that all of these services were either “very important” or “somewhat important” (see Figure 5).



The services rated as “very important” by the largest number of respondents were “providing safe and clean rest areas” (63%), and the improvement of “transportation services to specific groups of people, such as senior citizens and people who are handicapped or disabled” (60%). Mass transit related issues, while still seen as important, were not seen as “very important” by nearly as large a percentage of respondents. As an example, the mass transit issue seen as “very important” by the largest percentage of respondents, was to “increase mass transit within cities” (45%), while the same question asked about mass transit between cities was seen as “very important” by a smaller 37% of respondents. Similarly, reducing the price of gasoline was also seen as “very important” by a large number of respondents (54%), while reducing the cost of mass transit was seen as “very important” by only 33% of respondents.

Prioritization of the Importance of ODOT Functions

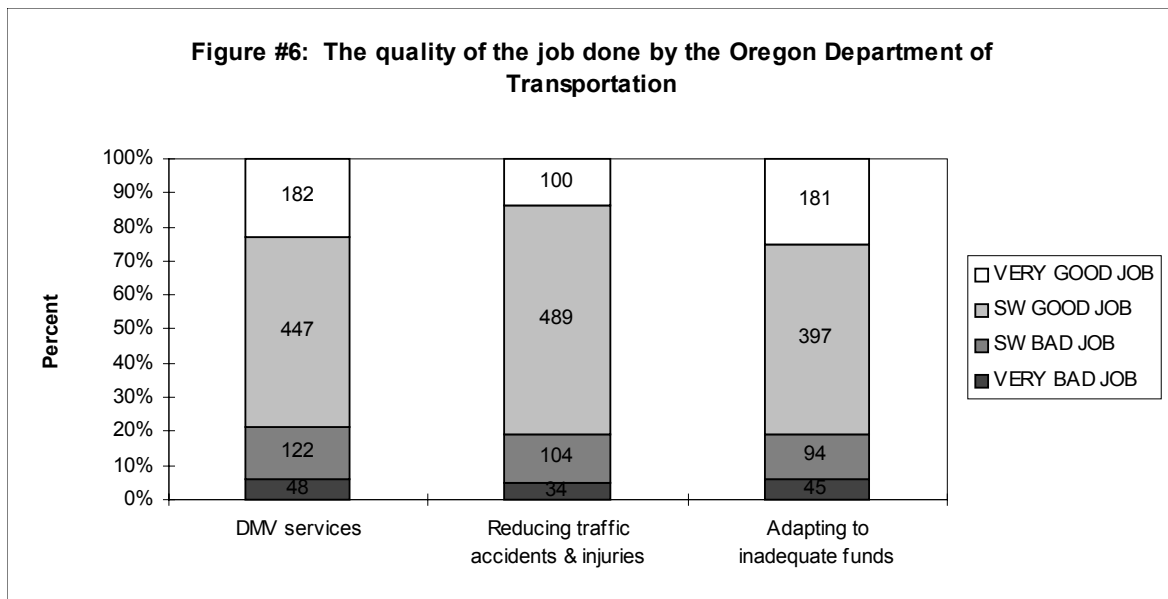
In addition to asking respondents their judgment about the importance of the four transportation areas discussed above (safety, policy, environmental, and service), respondents were also asked after each of the four areas to rank which of the issues in that area they thought was most important. This task is quite different from the previous judgment tasks. In the case of ranking items, respondents must make a single choice with all of the different issues laid out in front of them. Consequently, the ranking given in each of these four areas are different than a similar ranking that could be created by looking at the percentage of respondents who rated each issue as “very important.” For example, in the last area discussed (service functions), clean rest areas received the highest percentage of “very important” ratings from respondents (63%), yet when ranked against all of the other service areas, clean rest areas was ranked only fourth. The highest ranking was given to improving services to seniors and the disabled, followed by improving mass transit within cities. Clearly, it is one thing for respondents to judge each item’s

importance to themselves as they are asked about it, and quite another thing for them to rank it when arrayed against items of broad social value, such as senior services and mass transit. Put another way, the ranking score measures the importance attached to the item when placed in a context, of similar and sometimes competing items, while the judgment score measures each individual items importance to that individual respondent. The ranking score thus requires the respondent to step slightly outside their own interests, while the judgment score does not.

Consumers of the data in this study are well advised to look at both the judgment and the ranking scores and, realize that both scores are malleable depending on the way in which the issue is framed. For more on the ranking scores see Tables 16, 23, 31, and 39.

Overall Assessments of How Good a Job ODOT is Doing

By this point in the survey respondents had received considerable information about the functions of the Oregon Department of Transportation and had been sensitized to a wide variety of transportation issues. The survey then asked respondents for overall or global assessments of how good a job ODOT is doing on three issues. First, respondents were asked to judge the quality of the job ODOT is doing providing Department of Motor Vehicles (DMV) services. Seventy seven percent of respondents thought the DMV was doing either a “very good job”, or a “somewhat good job” (see Figure 6).



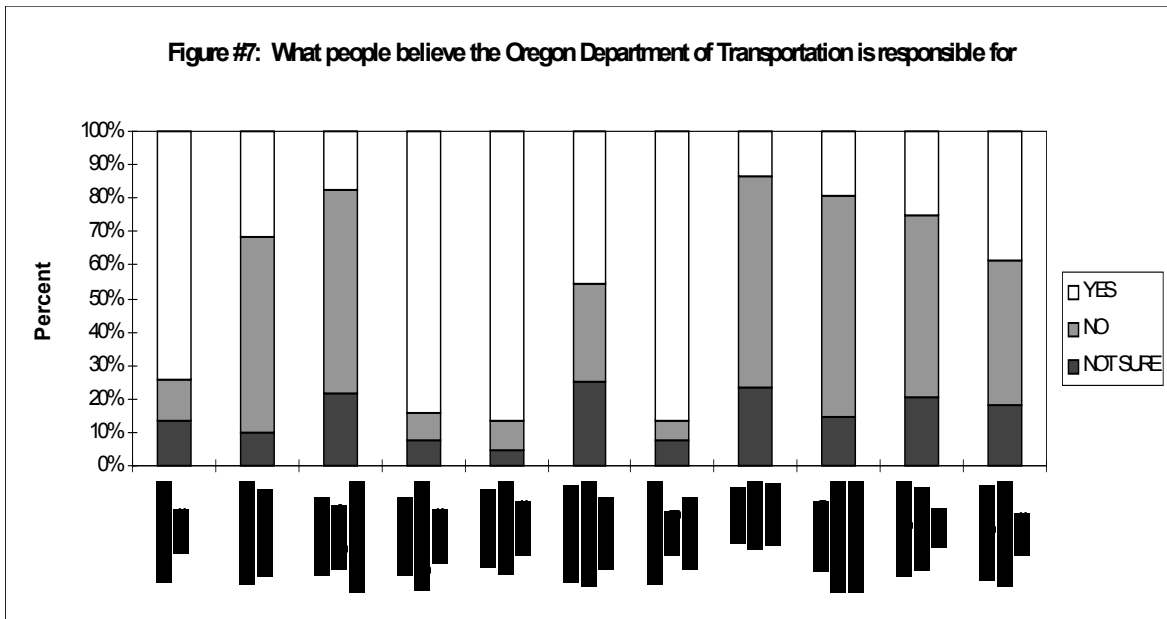
Second, respondents were asked how good of a job ODOT was doing “reducing traffic accidents, injuries and deaths.” Although fewer respondents thought ODOT was doing a “very good job” here then with DMV services (12% vs. 22%), the total percentage of respondents who thought ODOT was doing either a “very good job”, or a “somewhat good job” remained high, with a total of 72% of respondents picking one of these two response categories.

Finally, respondents were asked how good of a job they thought ODOT was doing “adapting to inadequate funds.” Again, ODOT was perceived by the public as doing a good job, with 71% of respondents choosing either the response a “very good job” or a “somewhat good job.”

Knowledge Questions

At this point in the survey respondents were asked a series of knowledge questions about the Oregon Department of Transportation. These questions were placed close to the end of the survey to prevent respondents from feeling that they were taking a test and that all questions had a right or wrong answer. Respondents were first asked where they think ODOT gets most of its funding. Thirty five percent thought most of the funding came from truck user fees, and 18% thought that most of the funding came from licensing fees (see table 45).

Respondents were then asked 11 yes or no questions about whether they thought ODOT was responsible for specific issues related to highways, transportation and travel. These items included things ODOT is responsible for, such as “licensing and regulating car drivers”, and things ODOT is not responsible for, such as: “policing roads and highways”(see figure 7).



For each of the 11 items there were some respondents who thought that ODOT was responsible for that item. Eighty six percent of respondents thought that ODOT was responsible for “licensing and regulating car drivers”, and for “weighing trucks along highways”, while 84% thought ODOT was responsible for “licensing and regulating truck drivers.” At the other end of the spectrum, 14% of respondents thought ODOT was responsible for “building and maintaining airports”, and 18% thought ODOT was responsible for “licensing and regulating airplane pilots.”

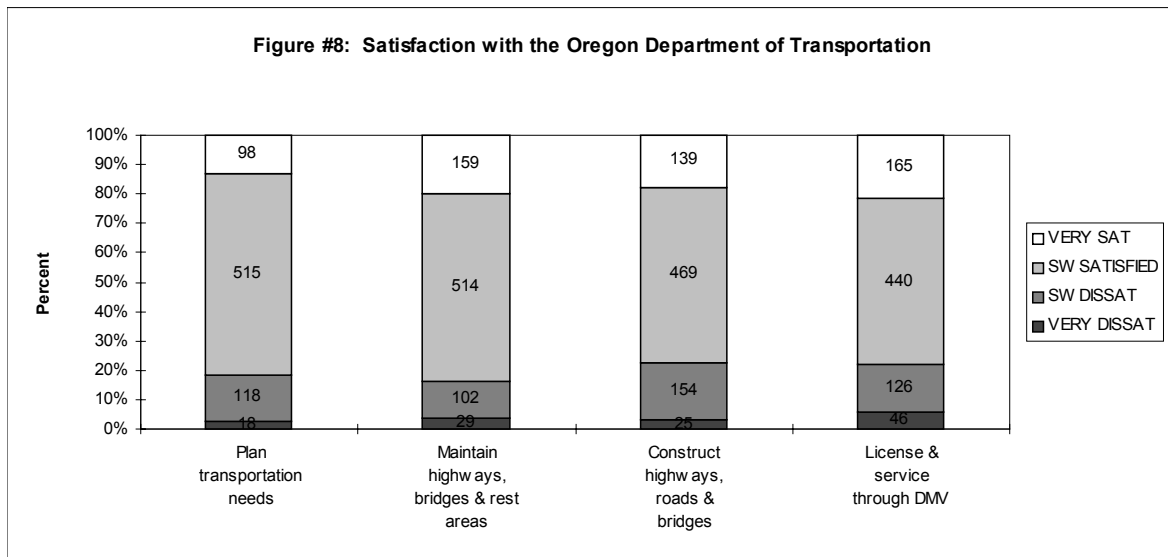
In general respondents were more likely to correctly answer the knowledge questions for the functions that ODOT is well known for, such as licensing cars, and were less likely to think that ODOT was responsible for a function that is not well known or generally not thought of as a transportation function, such as land use planning. Respondents were also fairly correct about those issues that are not ODOT functions, such as maintaining the state parks, although 31% of

respondents incorrectly thought ODOT was responsible for policing the highways.

Satisfaction with ODOT

The final content questions of the survey replicated four questions used previously by the Oregon Department of Transportation in a survey conducted by the Gallup organization. These questions were replicated to provide some method of comparing results from this survey with the previous Gallup survey.

The questions asked respondents to give their level of satisfaction with how well ODOT is performing on four specific tasks: “planning for future transportation needs”; “maintaining highways, bridges, and rest areas”; “constructing highways, roads, and bridges”; and providing “licensing and services through DMV” (see Figure 8). For all four of these questions a large majority of respondents were either “very satisfied”, or “somewhat satisfied” with the performance of ODOT. This combined satisfaction level was highest (83%) for the question about maintaining the states highways, bridges and rest areas, and only fell as low as a still very high 74% for the question about the provision of DMV services.



These questions are similar to some questions asked earlier in the sections on “Global Assessments of How Good a Job Oregon is doing in Transportation”, and “Overall Assessments of How Good A Job ODOT is Doing.” However, there are two differences to keep in mind before comparing responses to these final questions about satisfaction with the previous questions. First, the response scale (satisfaction) is different than the job quality scale used in the other two sections. Second, the placing of these satisfaction questions at the end of the survey, after respondents have been asked similar questions as well as knowledge questions, means that responses will change because of increased awareness of transportation and maturation of the respondents thinking during the survey process. Consequently, these questions are best taken on their own face value, as a measure of how satisfied respondents are with the services asked about, and may be used to measure changes between the current survey and the

previous Gallup survey. It is not appropriate to use them as substitutes for previous and similar questions in this survey.

Conclusions

The purpose of this survey was to assess public perceptions about transportation issues in Oregon. The issues addressed in the survey covered items that the Oregon Department of Transportation felt could be used as measures of how well ODOT was performing its transportation functions and duties. The survey also measured the public's knowledge of ODOT's responsibilities and the importance to the public of specific transportation policies and goals

The results show that the public generally thinks that the Oregon Department of Transportation does a good job in performing almost all of its functions, and that the public is relatively satisfied with ODOT. In addition, the public generally understands the extent and limitations of ODOT's responsibilities, although there were some respondents who felt that ODOT's responsibilities were broader than they really are. The worst case of this was the 31% of the public who thought ODOT was responsibility for policing the state highways - a function delegated to the Oregon State Police and not ODOT.

The results also showed that the public has strong support for environmentally sensitive transportation issues and wants progress on such things as inter-city mass transit and programs to reduce the number of vehicles on the highways. The public also highly values policies that would increase transportation safety. In fact, safety related policies enjoyed stronger support than any other transportation issues respondents were asked about.

This report has just scratched the surface of an exceptionally rich source of current information on the perceptions and beliefs the Oregon public holds on issues of transportation. The results reported here raise as many questions as they answer and await more detailed, multivariate analysis. These data also can serve as a baseline against which ODOT can measure the effects of policy or funding changes over the next several years.