

Travel Characteristics for Puget Sound Residents

People in the Puget Sound region are leaving home to engage in various activities as often in 2006 as they were in 1999, and the number of places people stop at during each of these “tours” also remains about the same. However, the reasons they are making these tours and the amount of time needed to complete them have changed since 1999. There are some indications that a difficult economy is causing some shifts in travel. These are findings from two household surveys conducted in 1999 and 2006.

The Surveys

The first survey was conducted between July and November 1999 and consisted of 6,000 households. The latter survey of 4,700 households was conducted in spring 2006. Because summer travel is different from travel the rest of the year (children out of school, vacations, etc.), the 1999 households surveyed in July and August were taken out of the analysis to allow for a more direct comparison with 2006. That left 3,749 usable households.

Each survey was based on a two-day travel diary filled out by each person in the household, recording all trips made on those two days by all means of transportation. From that information, home-to-home tours were identified. Each tour was then assigned a primary purpose and destination, the amount of time spent on the tour (both traveling and time spent in various locations), and the maximum distance from home in a straight-line calculation.

Trip Chaining

Overall, more tours are being made in the Puget Sound region in 2006 compared to 1999, increasing 11 percent from a daily average of 3.55 million tours to 3.96 million (see Table 1). This is a direct reflection of population growth (11 percent) in the intervening seven years rather than a real increase in trip-making. Looking at the primary purpose for making a tour, travel devoted to eating out, social/civic activities, and the catch-all category of personal business saw the largest increases in 2006. Some of the change in the frequency of social tours is attributable to how trips were coded in the two surveys. In the 2006 survey, “visiting friends” was usually coded as a social activity, while the same activity in 1999 was often coded as a recreation trip. On a percentage basis, work, school and shopping tours declined in this timeframe, likely due to the more difficult economy. Another significant difference is in the number of people who took no trips at all in the two-day travel period. Compared to 1999, 21 percent fewer persons (from 116,615 to 91,604) stayed at home during the travel period in 2006. This is likely due to increases in telecommuting among full-time workers and decreases in trip-making among non-workers (see next page).

What is a Tour?

A home-based travel tour is defined as a chain of trips that both begins and ends at home. For example, leaving home at 7 a.m., going to work, and returning home at 6 p.m. is one complete tour. Leaving home again at 8 p.m. to go to the gas station and coming back home 10 minutes later is a second tour. Often a tour will involve many separate activities, such as various stops one makes on the way back home from work.

Table 1. Number of Tours

Tour Purpose	1999	2006	Change
Work	1,290,809	1,389,928	7.7%
School	573,634	580,984	1.3%
Escorted	313,539	368,102	17.4%
Personal Business	290,762	400,661	37.8%
Shopping	353,117	346,188	-2.0%
Eating Out	108,326	169,183	56.2%
Social/Civic	140,666	263,729	87.5%
Recreation	484,106	445,737	-7.9%
Total Tours	3,554,959	3,964,511	11.5%
No Travel (persons)	116,615	91,604	-21.4%

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On average, people took more tours in 2006, increasing 3.5 percent from 1.26 to 1.30 daily tours per person (see Figure 1), but made the same number of stops per tour. Those with the largest increases in the number of tours made on an average day are part-time workers and 16- and 17-year-olds. The only category of person who saw a decrease in tour-making activity in 2006 was the other non-worker (those who are not working but also not retired.)

The number of stops made in a tour saw little change between 1999 and 2006, at 2.7 stops per tour in each survey (see Figure 2). There were fewer stops on work and school tours in 2006 than in 1999, indicating less trip chaining. This may be a result of fewer discretionary stops due to a difficult economy. There were also fewer stops to eat out, which declined 4 percent, possibly indicating fewer spontaneous stops to eat out (but more eating out tours, indicating more conscious travel to eat out).

Figure 1. Average Tours per Person

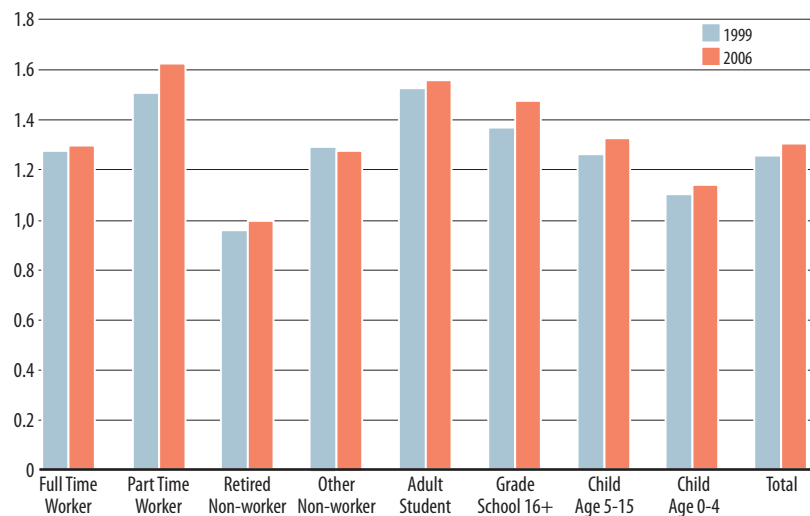


Figure 2. Number of Stops



Activity and Travel Time

The amount of time traveling has remained unchanged in 2006, a bit less than 1 hour spent on the road per person on an average day (see Table 2). Work tours require the most travel at 1.3 hours per person, unchanged since 1999. Escort tours, on the other hand, included only a bit over 30 minutes of travel, but have increased 6 percent in travel time since 1999. All tours except work tours needed considerably less than an hour of travel time to complete. When looking at tours other than work and school, the average travel time was 40 minutes.

Table 2. Average Activity Time of Tour (in hours)

Tour Purpose	1999 Activity	2006 Activity	Change
Work	8.18	8.17	0.0%
School	7.17	7.03	-2.0%
Escorted	0.49	0.62	26.7%
Personal Business	1.83	1.69	-7.6%
Shopping	1.01	1.01	0.1%
Eating Out	1.49	1.48	-0.9%
Social/Civic	2.56	2.89	12.8%
Recreation	2.69	1.90	-29.4%
Average (non-work, non-school)	1.58	1.49	-5.8%
Average All Purposes	4.78	4.58	-4.2%

Source: PSRC 2006 Household Activity Survey Analysis Report.

The time spent performing activities while on tours has gone down 4 percent since 1999, from 4¾ hours to a little over 4½ hours on an average tour. Most of the time is devoted to work and school, with average tours of 8 and 7 hours respectively. When these two activities are taken out of the mix, the average tour takes about 90 minutes, 6 percent shorter than in 1999.

The biggest changes between 1999 and 2006 are in escort tours (see sidebar for a discussion on escort tours), which increased by a quarter the time spent on them, and recreation tours, which dropped from 2 hours, 40 minutes, to less than 2 hours. Even given that some of the change can be attributed to coding issues, as described above, this is a significant reduction in the amount of time spent on tours devoted to recreation, likely due to the economic downturn.

Distance

There are two ways of looking at distance: the actual number of miles traveled between leaving and arriving back home and the furthest distance reached from home at any point in the tour. The former is mainly a factor of the number of stops, or different places, a person goes to during the tour. The latter is affected more by how far away from home a person is willing to travel in order to perform certain activities.

The longest distances are associated with work (see Figure 3). In 2006, an average commuter went a maximum of 11.5 miles from home during the work tour (typically the distance to work), while traveling 28 miles overall for the tour. This latter number is nearly 5 miles more than would be a direct round trip, with the extra miles accounted for by any other activities accomplished during the tour. For other tours, the “extra” miles traveled range from 2.9 to 3.9 in 2006. This is similar to 1999 for all non-work tours except for personal business and recreation.

For the average non-work tour a person rarely traveled beyond 5 to 6 miles from home, which is down nearly 10 percent from the 5.6 miles in 1999. On the other hand, people traveled an average of 13½ miles to complete all the activities on the tour, about 2 percent less than in 1999.

The total distance traveled during a tour has changed little since 1999 (see Table 3). In both years the average for all tours was around 18 miles. Taking away work tours (the longest tour type), the average for both years is just under 13 miles. The greatest changes between 1999 and 2006 are for social and recreation tours. The distance traveled for recreation tours went down 20 percent while that for social tours went up 10 percent in 2006.

Summary

More tours are being taken for reasons other than traveling to and from work, especially tours driven by personal business, social/civic, and eating out activities. Tours to and from work, however, are still the most frequent, comprising one-third of all tours taken. They are the longest tours, averaging over twice the total miles traveled as the composite of non-work tours. They also include a lot of trip-chaining on the way from work to home, which adds considerably to the total time and distance traveled during the tour.

Figure 3. Maximum Distance From Home (in miles)

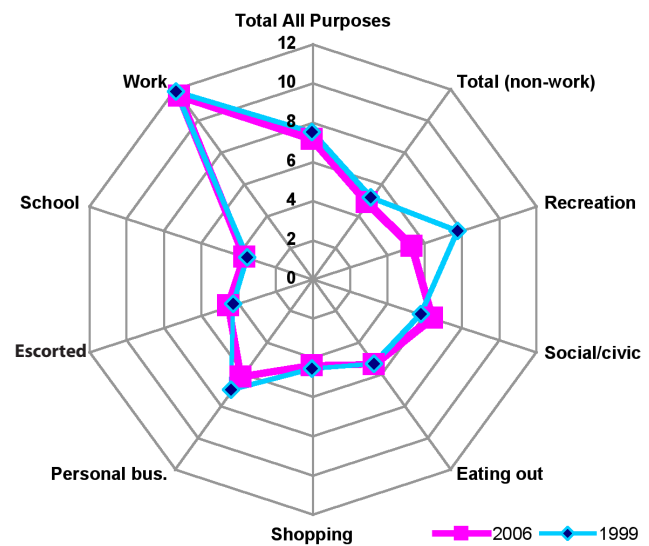


Table 3. Total Distance Traveled in Tour (in miles)

Tour Purpose	1999	2006	Change
Work	28.07	27.90	-0.6%
School	10.05	10.28	2.3%
Escorted	11.92	12.43	4.2%
Personal Business	16.66	16.12	-3.3%
Shopping	12.35	12.30	-0.4%
Eating Out	14.22	13.67	-3.8%
Social/Civic	15.29	16.86	10.3%
Recreation	17.00	13.62	-19.9%
Total (non-work)	12.84	12.78	-0.5%
Total All Purposes	18.16	17.93	-1.3%

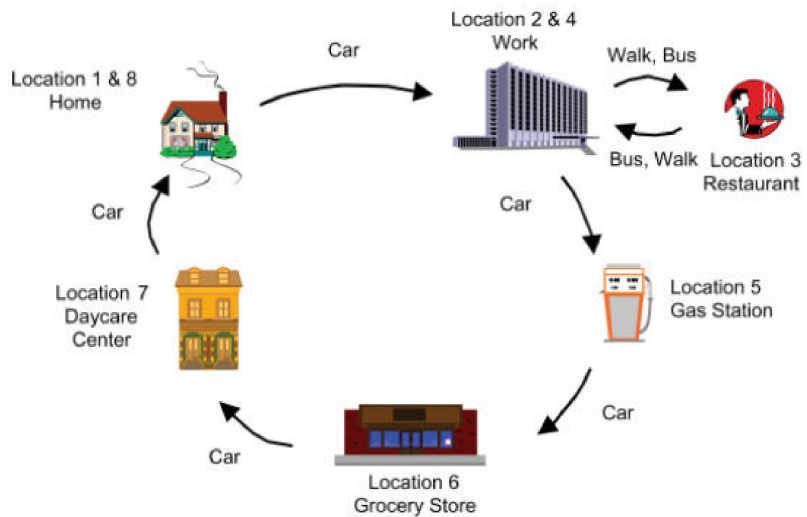
The creation and analysis of tours from the 1999 and 2006 household survey data is giving us insight into the decisions people make every time they leave home: what kinds of activities people combine into a single journey, the route taken, how far they are willing to go to accomplish various tasks.

For more information about this *Trend* and household survey data, please contact Neil Kilgren at 206-971-3602 or nkilgren@psrc.org.

Trend Note:

Subtours, or “tours within tours,” can also be used in tour analysis. These can be defined as a chain of trips that both begin and end at some location other than home, usually the workplace.

For purposes of this analysis, activities are classified into nine separate categories: work, school (including attending college), escort, personal business, shopping, meal (or eating out), social, or recreation. “Escort” is defined as a driver servicing a passenger by picking up, dropping off, or taking the passenger to an activity that the passenger



engages in. Often this involves parents and their children, but can also include, for instance, taking another person, whether a household member or not, to a doctor’s appointment. Another instance of an escort tour is a child who is merely “along for the ride” with a parent or other adult and has no other purpose for making that tour (such as going to a school or play activity). Such tours are removed from most of the tour analyses because they are not the reason that the tour is taken in the first place.

The travel period for both the 1999 and 2006 surveys is a 48-hour interval from 3 a.m. on day 1 to 3 a.m. on day 3. Some people will not be at home at either the start or end of the travel period. Often this is because a person works a graveyard shift and will be at work at 3 a.m. In other cases, a person will be at a friend’s house or out of town for any reason. In these cases, the first or last tour is considered an “open-ended” tour (it does not begin or end at home) and is not included in the analyses involving stops per tour, distance, and activity time.