

## ANALYSIS BRIEF

# USUAL VERSUS ACTUAL MEANS OF COMMUTING



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The National Household Travel Survey asks workers about their 'usual' means of commuting last week and also obtains the commute characteristics on one randomly assigned travel day. This allows analysts to look at the mode loyalty for different means of travel—that is how often the usual means of travel to work matches the commute reported on the actual travel day. Understanding the variation in day-to-day commuting is important for policy and performance measurement, and for regional travel demand modeling which often builds on the Census journey-to-work data.

The NHTS data shows that workers who identify 'drive alone' as the usual means of commuting 'last week' are the most likely to drive alone for their commutes on the travel day. On the other hand, workers who report usual commutes by transit, walk, or bicycle are less likely to report using these means of commuting on the actual travel day (see Figure 1).

Figure 1 – Percent of Workers and Their Usual and Actual Means of Commuting

Workers Reported 'Usual' Means of Commute:	Percent of the Same Workers Who Commuted on Travel Day by:						
	Drive Alone	Carpool	Transit	Walk	Bike	Other	Total (Usual Means)
<b>Drove Alone</b>	<b>93.5</b>	5.6	0.1	0.5	0.1	0.4	72.9
<b>Carpool</b>	42.9	<b>54.8</b>	0.6	1.0	0.0	0.7	16.5
<b>Transit</b>	13.0	9.2	<b>69.3</b>	6.6	0.8	1.2	5.5
<b>Walk</b>	6.1	9.3	3.7	<b>80.2</b>	0.2	0.5	2.8
<b>Bike</b>	13.8	3.3	6.0	2.6	<b>73.0</b>	1.4	0.8
<b>Other</b>	66.5	19.3	3.8	4.0	0.3	<b>6.2</b>	1.6
<b>Total (Actual Means)</b>	77.2	14.4	3.9	3.0	0.7	0.8	100.0

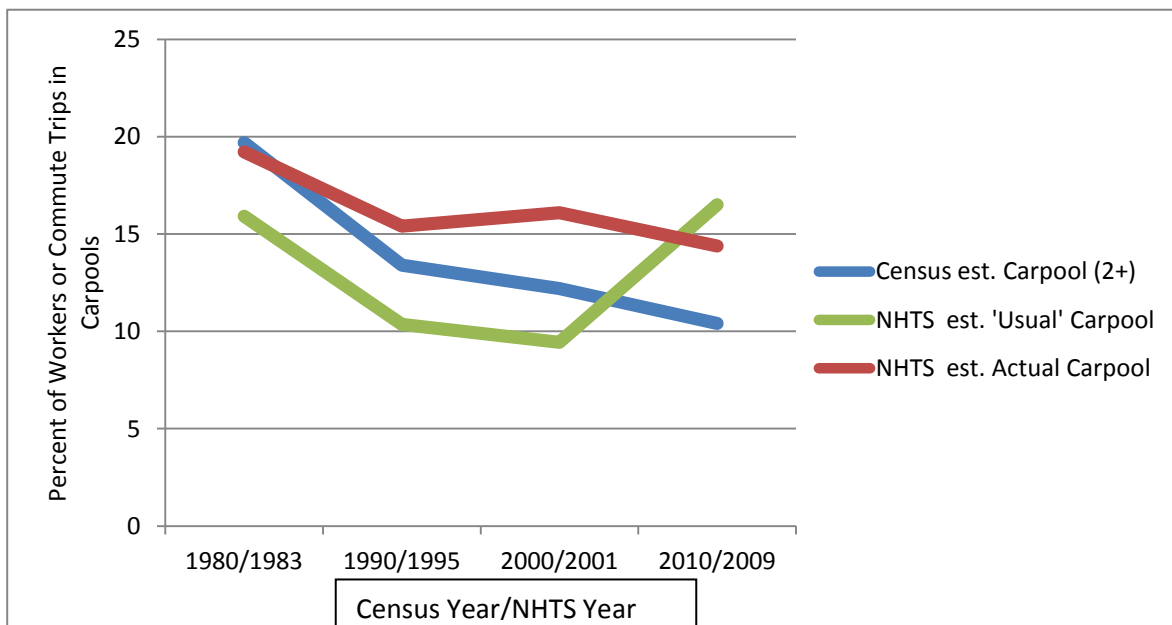
As shown in Figure 1, 93.5 percent of workers who said they 'usually' commuted by driving alone reported driving alone to work on the assigned travel day, and another 5.6 percent drove with someone else (carpool) when they commuted on the assigned travel day--a remarkable mode loyalty of 99.1 percent for those who usually drive a private vehicle. On the other hand, nationally the lowest mode loyalty is for transit users: 69.3 percent of workers who said they 'usually' used transit to commute actually reported using transit on the assigned travel day, 13 percent drove alone, 9.2 percent rode with somebody in a vehicle (carpool), and 6.6 percent walked.

Small shifts from dominant to less dominant modes can have a big effect. For example, say that 100 million workers usually drive alone and 7 million usually take transit (a mode share of 73 percent and 5 percent out of 130 million workers). If on any given day 1 percent of the workers who drive alone shift to transit for commuting (ten times the 0.1 percent shown in Figure 1) the result is nearly 15 percent more transit users—added primarily in the peak period. Shifts like these were experienced during the gas price spike in the summer of 2008 which resulted in new riders overwhelming some smaller transit systems.

The high percent of private vehicle use and the strong mode loyalty for workers who commute by private vehicle is well known. The percent of workers who commute in a private vehicle has remained near 90 percent since 1969 (see “Summary of Travel Trends”, Table 25). What is interesting in the most recent data is the shift between drive alone and ride with others (carpool).

Figure 2 shows the percent of workers who usually commuted by carpool and compares the Census journey to work data and the NHTS for a series of paired years (the 1990 NPTS did not include complete information on the usual means of commuting). The NHTS estimates of actual means of travel represents the percent of commute trips by private vehicle with more than one person in the car.

Figure 2 –Trends in Carpool as a Usual and Actual Means of Commuting

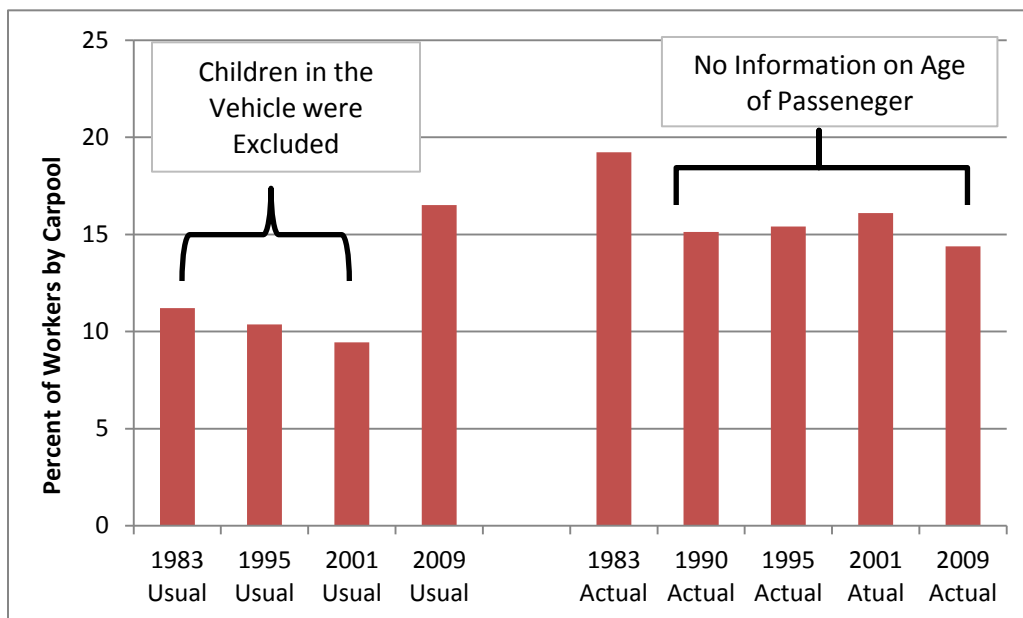


While the actual use of shared ride is historically greater than the usual use of carpool, the 2009 data stands out with a high value for the usual carpool percent.

Further investigation found a slight change in the wording in the 2009 data collection instrument. Each of the years from 1983 to 2001 had various methods of obtaining the means of travel to work, but importantly they all explicitly excluded children in the estimation of carpool. The 2009 data collection instrument does not have any wording identifying who is countable as part of the carpool, the question simply asks: “How many people including yourself, usually rode in the vehicle last week?”

Figure 3 shows the trends from the usual commute means and the actual commute means for just the NHTS data series.

Figure 3 - Trends in the Usual and Actual Use of Carpool –NHTS data series



The high estimate for the percent of workers who usually travel in carpools in the 2009 NHTS may include workers reporting children in the vehicle during their commute. In the 2009 NHTS ‘actual’ travel day reports, about 70 percent of vehicle commutes that have 2 or more occupants are ‘fam-pools’ made up exclusively of people from the same household, the remaining 30 percent include at least one non-household member. Further study would be required to identify whether workers were reporting children that they dropped off at school, and then continued the commute alone, or whether the children were vehicle occupants for the full commute trip.

Carpooling is the subject of important policy initiatives and many areas are developing major investments related to HOV/HOT lanes to ease congestion. Congestion pricing, gas price spikes, economic pressures, and environmental awareness may all contribute to more ridesharing. Mobile apps have been developed to allow for casual carpools. On the other hand, many workers are able to adjust their own work schedules and/or work from home, and more service and production jobs run on a 24/7 schedule.

Ride-sharing—whether formal carpools or family carpools—is second only to drive alone as a means of commuting. The commute is complex and detailed information on how respondents answer questions about the usual means of travel is lacking. More research is needed to really understand how people apply carpooling in their everyday commutes, and how respondents identify ‘carpool’ as the usual means of travel to work.

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