

# Like commuting? Workers' perceptions of their daily commute

by Martin Turcotte

For many people who work in a large urban area and have to cope with traffic congestion on a daily basis, commuting between home and work is far from a pleasant experience. It is no more appealing for those who have to stand crammed onto crowded buses for long journeys. In fact, it is generally assumed that for most workers, commuting is at best a necessary evil, at worst, a daily nightmare. But is that really the case?

The question bears asking since these assumptions are often based on anecdotes, sensational stories of "extreme commuters" or just our general impressions. This is understandable given that very few data were collected in the past to measure how much workers like (or dislike) commuting to work. The present study is intended to fill that information gap.

Specifically, it attempts to determine, using the latest data from the 2005 General Social Survey on time use, whether commuting is in fact an unpleasant experience for most workers. The main factors associated with a more or less pleasant commute are identified, focusing in particular on the mode of transportation used.

This article presents only information for "commuting workers", that is, people who made a round trip between their home and their place of work the day before the General

Social Survey telephone interview. For convenience, they will simply be referred to as "workers".

## A thousand good reasons to dislike commuting

According to the latest time use data, Canadian workers are spending more time travelling to and from work: 63 minutes in 2005 (or almost 12 full days for someone who works full time), compared with 54 minutes in 1992.<sup>1</sup> Increases in commuting times were observed for both drivers and public transportation users in almost every part of Canada. In the larger cities, particularly those experiencing rapid population growth such as Calgary, the increases were even larger. The overall conclusion from this study is that more and more workers are spending more and more time travelling to and from work.

It might be expected that dissatisfaction levels would be quite high and that most workers would regard commuting to work as a very unpleasant activity. And yet ...

## Better to commute than to clean

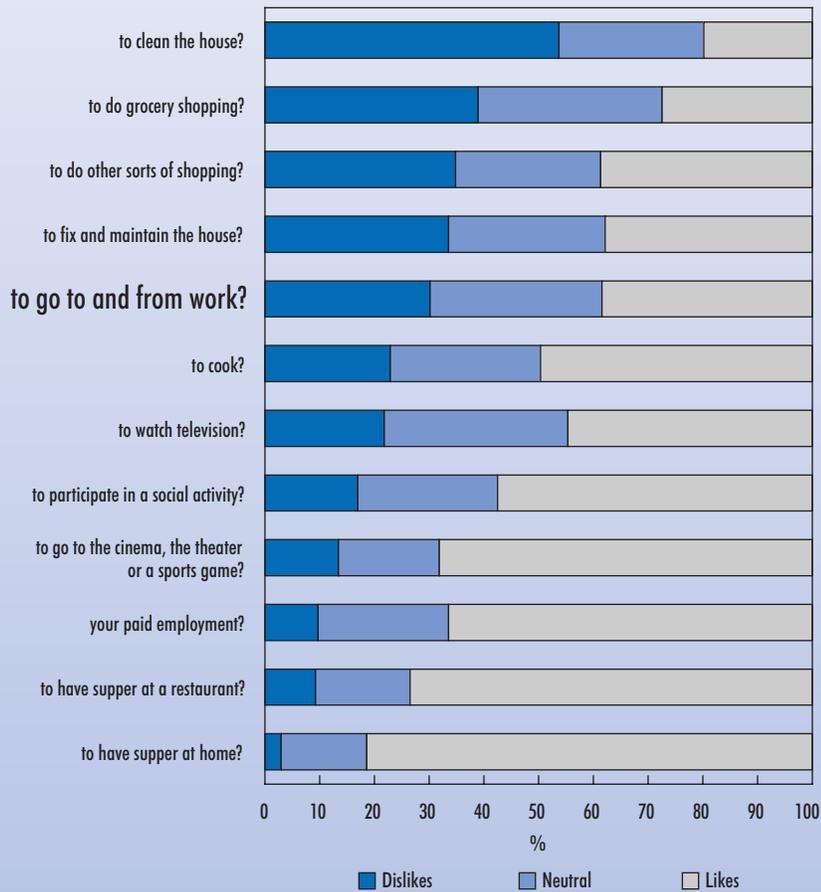
Respondents to the 2005 General Social Survey (GSS) were asked to rate a set of activities (including "commuting to and from work") using a scale from "1" to "5" where "1" meant they disliked the activity a great deal and "5" meant they enjoyed it a great deal.

In total, 12% of all workers who had travelled between home and work the previous day rated commuting as a "1", indicating that they disliked it a great deal, while another 18% gave it a "2", indicating that they disliked the activity but not a great deal. Despite all this, the percentage of workers who were negative about commuting to and from work (30%) was lower than the proportion of workers who said they liked it (38%). One out of six workers (16%) even said that they liked commuting *a great deal*.

These findings raise the question of whether commuting workers are people who are "positive" by nature and enjoy a wide variety of activities, including commuting to work. The 2005 Time Use Survey also collected information about respondents' views on a number of daily activities. That information indicates that for the majority of workers, commuting is not the most unpleasant activity in their lives. The proportion of workers who did not like cleaning the house, grocery shopping or other kinds of shopping was higher than the proportion of workers who did not like commuting to and from work.

A recent study in the United States also found that the proportion of workers who liked commuting was relatively high, or at least higher than the researchers had expected.<sup>2</sup> In that survey, 40% of workers reported that commuting between home and work was a transition that they

**How do you like...**



Source: Statistics Canada, General Social Survey, 2005.

on mass transit said they liked commuting, compared with 39% of drivers.

However, younger workers, those who live in large cities and those who spend more time travelling to and from work are less likely to enjoy commuting, all of which are characteristics typical of public transit riders. Public transport users are generally younger and much more likely to live in larger cities, spending a significantly longer time on commuting.<sup>3</sup>

This complex situation, in which a number of factors appear to interact with one another, raises the question of whether mass transit users are less likely to enjoy commuting because they also have other characteristics associated with a negative opinion; or because taking public transport is, regardless of these other factors, associated with a lower probability of liking the daily commute. To answer this question, a statistical analysis that takes all these characteristics into account simultaneously is needed. (See "What you should know about this study".)

The results for Model 1 show that the predicted probability that public transit users will like commuting is lower than the probability for drivers, even when the other factors are kept constant. Specifically, the predicted probability that a public transport user will like commuting is 28%, compared with 38% for a car driver.

However, Model 1 does not include the *duration* of the commute. A recent American study<sup>4</sup> indicates that trip duration is the factor that most influences the stress of commuters using a suburban train (the longer the commute, the greater the stress). What happens if time is kept constant, that is, if drivers and public transit riders with the same commute times are compared?

As was found in the American study of travel time and stress, adding the time factor in Model 2 (commute duration) eliminates the difference between drivers and public transportation users in their

found "useful". According to the authors, this somewhat unexpected result is attributable in part to the fact that for many workers, the time they spend commuting is one of the only times in the day they have to themselves. During their commute, workers have the opportunity to think about personal matters, listen to their favourite music, read a book if they take public transportation, talk on the phone, and so on.

Nevertheless, it is probably best not to exaggerate the significance of these findings; a larger proportion of workers like any number of activities (such as paid work and cooking) more than commuting.

**Workers who use public transit like commuting less than those who drive their cars**

While the data show that workers on the whole have a relatively positive attitude toward commuting, they conceal some important differences based on the mode of transportation, age group, place of residence, and so on. The various characteristics associated with a more positive or less positive opinion of commuting are presented in Table A.1.

This table shows that users of public transport are less likely to enjoy commuting than drivers. In 2005, only 23% of people who travelled between home and work

	Model 1		Model 2		Model 1		Model 2		
	Dislikes or greatly dislikes	Likes or greatly likes	Dislikes or greatly dislikes	Likes or greatly likes	Dislikes or greatly dislikes	Likes or greatly likes	Dislikes or greatly dislikes	Likes or greatly likes	
<b>Predicted probability (%)</b>					<b>Predicted probability (%)</b>				
<b>Mode of transportation used to get to work<sup>1</sup></b>					<b>Season in which the GSS survey took place</b>				
<i>Automobile (no public transportation)</i>	25	38	25	37	Spring	26	37	n. s.	n. s.
Public transportation (no automobile)	34	28	n.s.	n.s.	Summer	23	40	23	39
Bimodal (public transport and automobile)	40	23	33	28	Fall	n. s.	n. s.	n. s.	n. s.
Walking	18	47	19	46	Winter	29	33	28	33
Cycling	13	57	12	59	<b>Area of residence</b>				
Other	n. s.	n. s.	n. s.	n. s.	Toronto	27	35	26	36
<b>Commuting duration</b>					Montréal	31	31	30	32
1-29 minutes	...	...	19	46	Vancouver	32	30	31	30
30-59 minutes	...	...	22	41	Ottawa–Gatineau	31	31	31	31
60-89 minutes	...	...	26	36	Calgary	34	28	34	28
90-119 minutes	...	...	31	30	Edmonton	30	32	29	32
120 minutes and over	...	...	39	23	CMA of 250,000 to 750,000 residents	27	36	26	35
<b>Distance from workplace</b>					CMA/CA of 100,000 to 249,999 residents	21	42	22	41
1-4 kilometers	14	55	16	57	CA of 50,000 to 99,999 residents	n. s.	n. s.	n. s.	n. s.
5-9 kilometers	19	45	21	42	Urban region of 49,999 residents or less	n. s.	n. s.	n. s.	n. s.
10-14 kilometers	24	38	25	37	Strong MIZ	n. s.	n. s.	n. s.	n. s.
15-19 kilometers	30	31	31	31	<i>Rural area (moderate, weak or no influence MIZ)</i>	18	48	19	46
20-24 kilometers	32	30	31	31					
25-29 kilometers	32	30	29	32					
30-34 kilometers	40	23	36	26					
35-39 kilometers	41	23	35	27					
40 kilometers or over	49	17	40	23					

... not applicable

1. The mode of transportation used to make the greatest part of the journey (based on time).

All predicted probabilities presented in this table were calculated from coefficients statistically significant at  $p < 0,05$ .

Municipalities (small towns, villages, etc.) not located within a CMA or a CA are classified based on the percentage of the population making the commute to a CMA or CA to go to work.

A municipality is categorized as a strong MIZ if 30% or more of its population commutes to a CMA/CA; moderate MIZ if the percentage is between 5% and 29%; weak MIZ if the percentage is between 0% and 5%; and no influence MIZ if no-one commutes to a CMA/CA.

CA : census agglomeration.

CMA : census metropolitan area.

MIZ : census metropolitan area and census agglomeration influenced zone.

n. s. : not statistically different from the reference category in italics.

Source: Statistics Canada, General Social Survey, 2005.

attitudes toward commuting. When commute duration and all the other factors included in the analysis are kept constant, there is no statistically significant difference in liking and disliking the daily commute between users of public transport and drivers.

Hence, the results of the present study suggest that if the average travel time of public transport users was equal to that of car drivers (which it is not), their attitudes toward commuting could be similar (in contrast to the results shown in Table A.1 when the various factors

that differentiate drivers from public transit users are not taken into account).

For workers who used both the automobile and public transportation to commute, the inclusion of travel time did not, however, eliminate the significant statistical correlation

observed. It would seem that, of all commuters, they are the ones for whom commuting is most unpleasant. The fact that the majority of them have to transfer, and therefore endure additional waits or the frustration of having missed a connection, may account for this persistent difference.

### **Cyclists are more likely to enjoy commuting**

Very few workers travel to work by bicycle. According to 2001 Census data, about 1% of commuters rode a bicycle to work (the largest proportion was 4.9% in Victoria, British Columbia). Cyclists differ from other workers not only because of their small numbers, but also because they are much more likely to enjoy commuting to work. The predicted probability that a worker commuting to work by bicycle would like the activity was 59%, compared with only 37% for people who used their cars to get to work (Model 2). Workers who walked to work were also more likely to enjoy commuting, with a predicted probability of 46%.

### **Farther, longer ... and less enjoyable**

Not surprisingly, duration is one of the factors that has the greatest impact on the probability of liking or disliking the commute to work. For commuters who spent two hours or more a day travelling between home and work, the predicted probability that they would like doing so was just 23%. In contrast, it was 46% for those whose commute time was less than 30 minutes.

Commute duration does not explain everything, though. Even when the effect of travel time is kept constant, the farther a worker lives from his place of work, the lower the probability that he will like commuting. Although some people are obliged to travel long distances to get to work, many others have chosen to live a considerable distance from work in order to have, for example, more space at a better price.<sup>5</sup> Although the location of their home stems from a deliberate choice, it does not alter the fact that those who take longer and travel greater distances to get to work are those who like commuting the least.

### **The inconveniences of urban life: living in a large city is associated with liking commuting less**

In general, the residents of larger cities have to allow more time for commuting than do people who live in smaller centres. However, even when commute time is kept constant (along with the other factors included in the analysis), workers who live in larger cities remain less likely to enjoy commuting than workers who reside in smaller centres. For example, the predicted probability that residents of the census metropolitan area (CMA) of Calgary would not like commuting was 34%, compared with just 19% for workers living outside the urban area.

Some studies have shown that travel time has an even more negative effect for individuals when they have to commute on heavily congested roads.<sup>6</sup> In other words, 30 minutes of driving on a relatively uncongested road would cause significantly less dissatisfaction than 30 minutes in bumper-to-bumper traffic. The effects are even more negative when gridlock is unexpected.

In general, the larger a city is, the heavier the traffic.<sup>7</sup> As a result, workers in larger cities have a greater chance than others of commuting under more stressful conditions. This makes it easier to understand why workers who live in larger urban areas are less likely than other workers, given equal commuting distance and duration, to enjoy commuting.

### **Liking the job and being eager to get there**

One correlation that catches attention exists between liking one's job and the probability of liking commuting. According to the statistical model, the predicted probability that a worker who likes his paid work a great deal would also like travelling to work was 64%, compared with only 10% for a worker who disliked her paid work a great deal. To our knowledge, this correlation, which is one of the strongest presented in this study,

## **GST What you should know about this study**

The people selected for inclusion in this study were all those who travelled between home and work the day before the telephone interview for the 2005 General Social Survey (or two days before in some cases). For more details on the survey methodology, please see *The Time it Takes to Get to Work and Back*, Statistics Canada Catalogue no. 89-622-XWE.

### **Analytic techniques and statistical models**

The figures shown in the tables are predicted probabilities based on an ordered logit model. They represent the estimated probability that a "commuting worker" with a particular characteristic (e.g., driving his/her car to work) will like or dislike commuting, after all the other factors in the regression model have been taken into account, i.e., kept constant. The predicted probabilities were calculated by keeping all variables, except the variable of interest (e.g., driving), constant at their average value for the sample in question. To take into account the General Social Survey's complex sampling methods, bootstrap weights were used to estimate the standard errors of the regression models' beta coefficients.

has not been seen in any previous studies. This finding indicates that when a worker likes her job, she will more likely be anxious to get to work and may also be more likely to put up with some of the unpleasant aspects of commuting, such as road congestion.

Among the other characteristics associated with attitude to commuting are age and level of education (but not gender). On average, younger workers tend to like commuting less. This correlation between age and attitude to commuting may be due to generational differences between baby-boomers and their children. Another possibility is that younger workers tend to like commuting less because it takes up too much of the time they might otherwise spend with their family and friends.<sup>8</sup>

## GST People who love commuting

In the Time Use Survey, respondents were asked to identify, among all the activities in which they participated during the day, the one they liked best. As surprising as it may seem, some people (about 3% of all workers) said that the time they spent commuting between home and work was their favourite activity of the day. Who are these "eccentric" people?

Further analysis revealed that one of the only characteristics separating those who loved commuting from other workers (apart from travel time) was bicycling to work. That is, 19% of workers who rode their bicycles to work reported that their commute was the most pleasant activity of their day; in contrast, this was true of just 2% of workers who drove to work.

## GST Commuters who like their jobs are more likely to enjoy commuting

	Model 1 <sup>1</sup>		Model 2		Model 1		Model 2	
	Dislikes or greatly dislikes	Likes or greatly likes	Dislikes or greatly dislikes	Likes or greatly likes	Dislikes or greatly dislikes	Likes or greatly likes	Dislikes or greatly dislikes	Likes or greatly likes
<b>Predicted probability (%)</b>								
<b>Assessment of paid job</b>								
<i>Greatly dislikes</i>	64	10	64	10				
Dislikes	48	18	48	17				
Neutral	39	24	38	24				
Likes	25	37	25	37				
Greatly likes	10	64	10	64				
<b>Sex</b>								
<i>Woman</i>	25	37	25	37				
Man	n. s.	n. s.	n. s.	n. s.				
<b>Age group</b>								
<i>15 to 24 years</i>	34	28	34	28				
25 to 34 years	26	36	26	36				
35 to 44 years	26	37	25	37				
45 to 54 years	22	42	21	42				
55 years and over	21	43	21	43				
<b>Predicted probability (%)</b>								
<b>Language</b>								
<i>English</i>	26	37	26	36				
French	n. s.	n. s.	n. s.	n. s.				
<b>Highest level of schooling attained</b>								
<i>Less than secondary</i>	22	42	22	41				
Secondary diploma	n. s.	n. s.	n. s.	n. s.				
College or trade/technical diploma	26	36	26	36				
University degree	28	34	27	35				
<b>Immigrant status</b>								
Born in Canada	26	36	26	36				
Arrived before 1980	27	36	26	36				
<i>Arrived between 1980 and 2005</i>	21	43	20	43				
<b>Main activity in previous 12 months</b>								
<i>Paid employment</i>	25	38	25	38				
Self employment	29	33	28	33				
Other	n. s.	n. s.	n. s.	n. s.				

1. Model 1 does not account for duration of commute.

n. s. : not statistically different from the reference category in italics.

Source: Statistics Canada, General Social Survey, 2005.

## GST Other findings

Some additional statistical analyses performed are not presented in this article. One of them showed that public transit users were neither more nor less satisfied with their commutes, no matter which census metropolitan area (CMA) they lived in. In other words, public transport users in the CMA of Montréal (for example) were no more unhappy or less unhappy with their commutes than public transport users in Toronto, Vancouver or Ottawa (and vice versa).

Another analysis showed that bus riders (i.e., people who spent most of their commute on the bus) were no more likely to enjoy commuting than those who took the metro and/or the train to work. Unfortunately, it was not possible to separate suburban train passengers from metro riders.

In a third analysis, drivers who commuted alone were compared with people who car-pooled. The results showed that those who drove alone were neither more nor less likely to enjoy commuting than car-poolers.

There is also a slight difference based on workers' level of education. Workers who have a higher level of education are a little less likely to enjoy commuting than workers with less education. However, it is difficult to explain why this is so.

### Conclusion

One of the important goals of urban transportation policies, common to the majority of developed countries, is to encourage greater use of public or "sustainable" modes of transportation and reduce dependence on the automobile, especially for solo commuting.<sup>9</sup> In this context, it makes sense to compare the public transit users' attitudes to commuting with car drivers' attitudes.

The results of this study show that in general, car drivers are more likely than mass transit riders to like travelling to and from work. However, the attitude difference between the two groups disappears when the fact that public transportation users have to spend more time commuting between home and work is taken into account; in other words, for equal commute times, drivers and public transport users are equally likely to enjoy commuting.

These results suggest that should commuting times of public transit riders be similar to those of drivers (i.e. shorter), drivers could be more attracted to public transportation. However, other factors affect the choice between public transport and the automobile. Among others, the comfort associated with each mode; access to subsidized parking at the workplace; cost differences; and easy access to public transit near one's residence.

In conclusion, the workers who are most likely to enjoy commuting are those who bicycle to work. There are only a few brave ones in the winter, but in the summer, they are probably the ones who best live up to the old saying about combining business with pleasure.



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1. Turcotte, Martin. 2006. *The Time it Takes to Get to Work and Back*. Statistics Canada Catalogue no. 89-622-IXE.
2. Ory, D.T., P.L. Mokhtarian, L. Redmond, I. Salomon, G.O. Collantes and S.Choo. 2004. "When is commuting desirable to the individual?" *Growth and Change* 5 (3): 334-359.
3. Turcotte, 2006; Statistics Canada. 2003. *Where Canadians work and how they get there – 2001 Census: Analysis Series*, Statistics Canada Catalogue no. 96F0030XIE2001010.
4. Evans, G.W. and R.E. Wener. 2006. "Rail commuting duration and passenger stress" *Health Psychology* 25 (3): 408-412; Wener, R.E., G.W. Evans, D. Phillips and N. Nadler. 2003. "Running for the 7:45: The effects of public transit improvements on commuter stress" *Transportation* 30:203-22.
5. Downs, Anthony. 2005. *Still stuck in traffic – Coping with peak-hour traffic congestion*, Washington, Brookings Institution Press.
6. Small, K., R. Noland, X. Chu and David Lewis. 1999. *Valuation of travel time savings and predictability in congested conditions for highway user-cost estimation*. National Cooperative Highway Research Program report 431 Washington, D.C.: Transportation Research Board; Cambridge Systematics Inc, 2002. *The Benefits of reducing congestion – NCHRP Project 8-36, Task 22 Demonstrating positive benefits of transportation investment*.
7. Downs. 2005.
8. Ory et al. 2004.
9. Stopher, P.R. 2004. "Reducing road congestion: a reality check: *Transportation Policy* 11: 117-131; Stradling, S.G., M.L Meadows and S. Beatty. 2000. "Helping drivers out of their car: integrating transport policy and social psychology for sustainable change." *Transportation Policy* 7 (3) 207-215.

**Table A.1 Characteristics associated with liking the commute to get to work**

	Dislikes or greatly dislikes	Neutral	Likes or greatly likes	Total
	%			
<b>Mode of transportation used to get to work<sup>1</sup></b>				
Automobile (no public transportation)	29	33	39	100
Public transportation (no automobile)	47	30	23	100
Bimodal (public transportation and automobile)	58	22 <sup>E</sup>	20 <sup>E</sup>	100
Walking	19	20	61	100
Cycling	F	34	58	100
Other	37 <sup>E</sup>	28 <sup>E</sup>	35 <sup>E</sup>	100
<b>Area of residence</b>				
Toronto	36	30	35	100
Montréal	35	28	37	100
Vancouver	34	37	29	100
Ottawa–Gatineau	36	31	33	100
Calgary	38	36	26	100
Edmonton	39	30	31	100
CMA of 250,000 to 750,000 residents	33	33	34	100
CMA/CA of 100,000 to 249,999 residents	25	33	42	100
CA of 50,000 to 99,999 residents	20	32	48	100
Urban region of 49,999 residents or less	20	30	49	100
Strong MIZ	24	32	44	100
Rural area (moderate, weak or no influence MIZ)	21	29	50	100
<b>Commuting duration</b>				
1-29 minutes	16	28	56	100
30-59 minutes	24	34	42	100
60-89 minutes	33	35	32	100
90-119 minutes	40	31	28	100
120 minutes and over	55	26	19	100
<b>Distance from workplace</b>				
1-4 kilometers	16	25	59	100
5-9 kilometers	22	33	45	100
10-14 kilometers	27	35	38	100
15-19 kilometers	32	38	29	100
20-24 kilometers	37	34	29	100
25-29 kilometers	35	40	25	100
30-34 kilometers	43	33	24	100
35-39 kilometers	51	26	23	100
40 kilometers or over	50	28	22	100
<b>Season in which the GSS survey took place</b>				
Spring	31	29	40	100
Summer	27	32	40	100
Fall	28	31	40	100
Winter	34	33	32	100
<b>Sex</b>				
Woman	29	32	39	100
Man	31	31	38	100
<b>Age group</b>				
15 to 24 years	36	31	33	100
25 to 34 years	33	33	35	100
35 to 44 years	30	32	38	100
45 to 54 years	26	32	43	100
55 years and over	27	28	45	100
<b>Language</b>				
English	31	32	37	100
French	28	28	44	100
<b>Highest level of schooling attained</b>				
Less than secondary	23	28	49	100
Secondary diploma	29	30	41	100
College or trade/technical diploma	30	32	38	100
University degree	34	34	32	100
<b>Immigrant status</b>				
Born in Canada	30	31	39	100
Arrived before 1980	33	31	37	100
Arrived between 1980 and 2005	27	36	37	100
<b>Main activity in previous 12 months</b>				
Paid employment	30	31	38	100
Self employment	28	32	40	100
Other	F	F	F	100
<b>Assessment of paid job</b>				
Greatly dislikes	62	19 <sup>E</sup>	19 <sup>E</sup>	100
Dislikes	56	26	18	100
Neutral	38	42	20	100
Likes	28	32	40	100
Greatly likes	16	22	62	100

<sup>E</sup> use with caution

<sup>F</sup> too unreliable to be published

1. The mode of transportation used to make the greatest part of the journey (based on time).

Source: Statistics Canada, General Social Survey, 2005.