

2011 Metro Vancouver Regional Trip Diary Survey

Briefing Paper #1

An Overview of Regional Demand and Mode Share

Introduction

The 2011 Metro Vancouver Regional Trip Diary Survey is the latest survey conducted as part of an on-going data collection program undertaken by TransLink. It provides a snapshot of passenger travel patterns and tracks the weekday trip-making behaviour of a random sample of local residents on a 24-hour basis. It is the most comprehensive source of information on overall travel patterns in the region. The data provides an important foundation for a variety of research and analytics such as transportation performance benchmarking, monitoring of long term transportation trends, policy and project planning, updating of the regional transportation demand model, etc. All of these will help inform regional dialogues on transportation issues and facilitates an evidence-based decision-making approach for the transportation system.

In addition to the more detailed analytical reports which are typically produced to document results from the survey, a series of briefing papers will be prepared to provide high level discussions of key study findings. This briefing paper #1 focuses on providing a synopsis of key travel characteristics at the regional level, focusing on the size of demand and mode share.

Key Findings

Demand for transportation continues to grow - there are more trips per day

As the Metro Vancouver region continues to grow and develop, so does the demand for transportation as people need to travel for work, education, social, recreational and other purposes. A total of 6.1 million trips were made by Metro Vancouver residents (five years of age and older) on a typical fall weekday in 2011. This represents the overall regional passenger travel market and includes trips by all modes for all purposes over a 24 hour period. This is a 5.9% increase over the number of trips made in 2008, when the previous regional trip diary survey was conducted. This represents a marginally higher growth rate compared to the population growth in the region over the same time period of 5.8%.

Individual people are making slightly more trips

Because population grew at a slightly slower pace than the total number of trips, the number of trips per person per day, or daily trip rate, increased slightly from 2.70 to 2.77 between 2008 and 2011 respectively. This indicates that the residents of Metro Vancouver are travelling more on a daily basis.

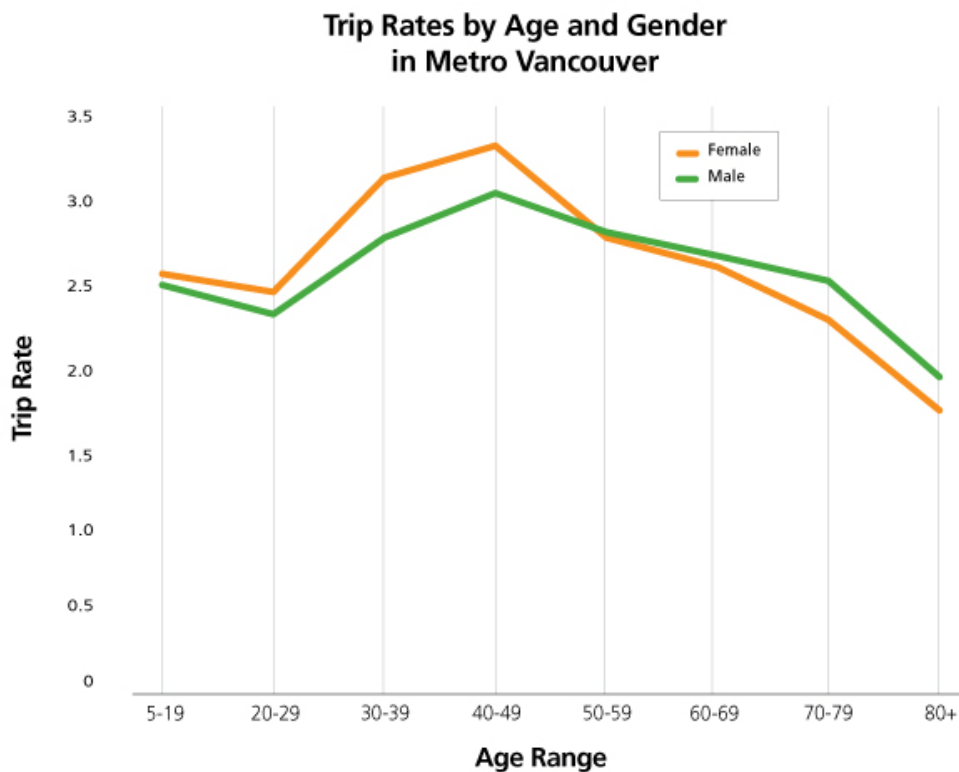
Trip rates also tend to differ by the various age groups and by gender. Therefore, it is useful to analyze travel behaviour accordingly. This is especially important since the Lower Mainland will experience changing demographic patterns over the next thirty years as baby boomers retire and progress from being active young seniors to older age.

People in their 40's make the most trips

Analysis of trip rates by age shows that the people in their 40's make the most trips. This is partly because this is a time when many people have families with grade school children, requiring more trips for picking up and dropping off children for their activities.

Gender also affects trip making. Middle aged (30 to 50) females make more trips than middle aged males, likely due to child care and shopping responsibilities. On the other hand, females over the age of 70 tend to have lower trip rates than males. The relationship between age, gender and trip rates for Lower Mainland residents is illustrated in **Figure 1** below.

Figure 1



Data: 2012 Metro Vancouver Regional Trip Diary Survey conducted by TransLink

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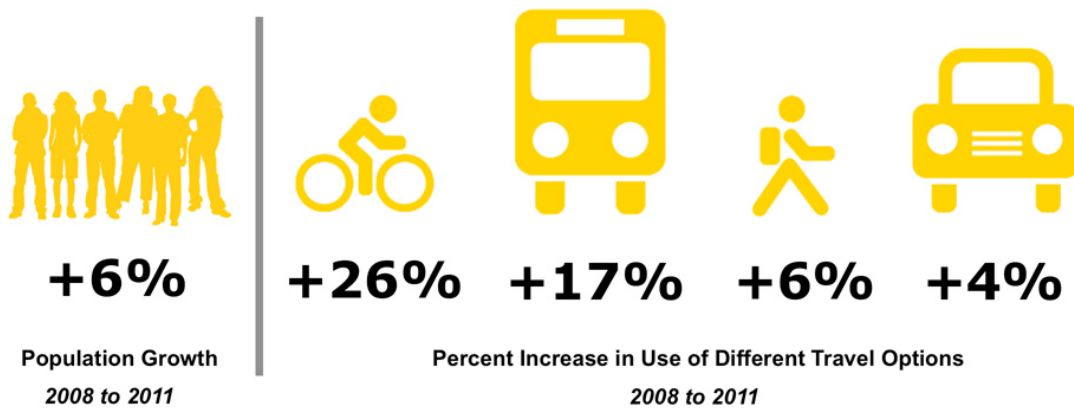
It is interesting to note that since the largest cohort of the region's population is currently the 40-49 age group which is the group with the highest trip rates; average trip rates could potentially fall over the next twenty to thirty years as this generation ages and enters age groups with lower trip rates.

More Demand for Every Mode but Growth Rate Highest for Cycling and Transit

There are significant differences with respect to the rate of growth in trip-making by mode. There are several factors that account for different levels of growth for each mode of travel. Some of the more obvious factors include fuel prices, income levels, supply and cost of transit services, and provision of safe and convenient cycling and walking networks to name a few. The following graphic (**Figure 2**) summarizes the rates of growth in travel by the various modes between 2008 and 2011.

Figure 2

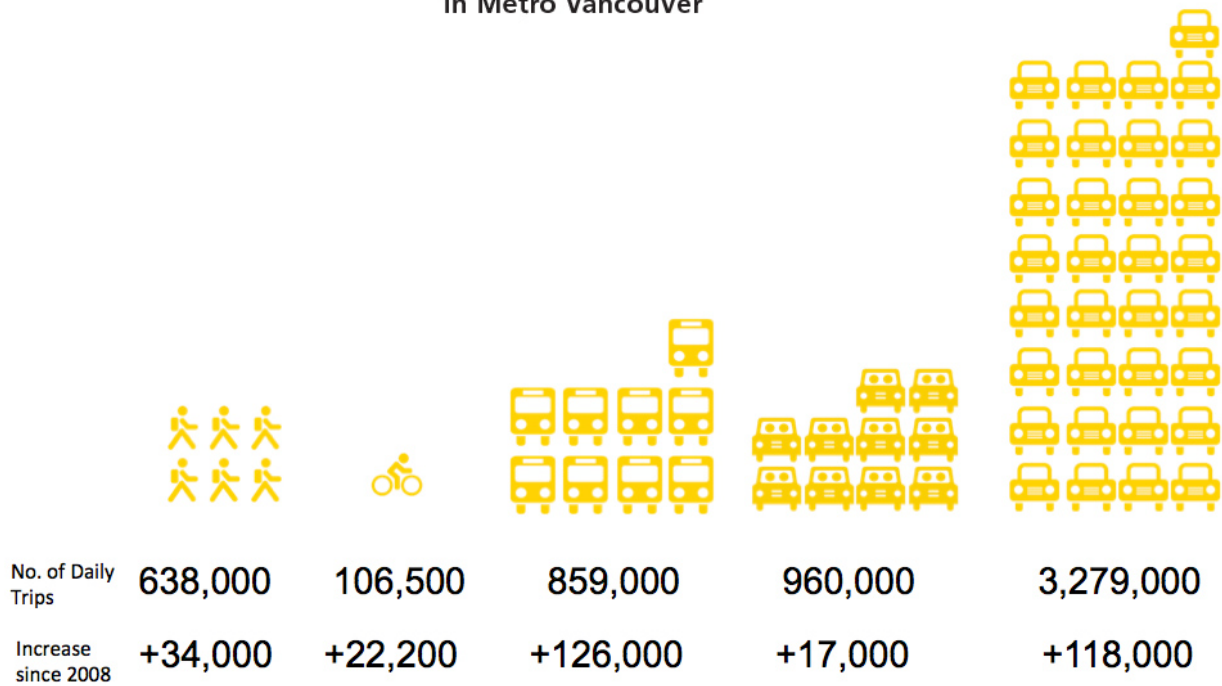
Percentage Growth in Travel by Mode for Metro Vancouver



Data: 2011 Metro Vancouver Regional Trip Diary Survey conducted by TransLink
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Auto trips (driver and passenger) grew slower than population growth, whereas transit and cycling trips grew substantially faster. Walk trips generally kept pace with population growth. In terms of absolute numbers (see **Figure 3**), transit experienced the highest growth at 126,000 additional daily trips with auto drivers at a close second at 118,000 additional daily trips. Growth in walking, cycling and auto passengers is on a smaller scale with absolute growth of 34,000, 22,200 and 17,000 respectively.

Figure 3
Trips and Absolute Growth in Travel by Mode
in Metro Vancouver



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Metro Vancouver residents are choosing sustainable modes more often

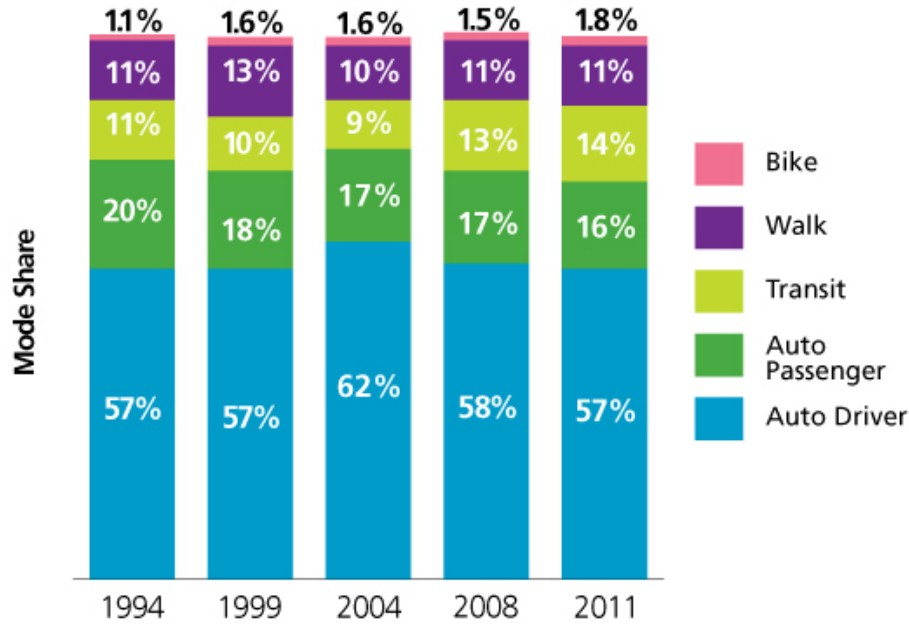
There are significant differences with respect to the level of growth in trip making by mode, with more trips being made by sustainable modes. Before looking at the absolute growth in travel by mode, however, it is useful to review trends in the proportion of travel by mode. **Figure 4** provides historical analysis of the mode share in Metro Vancouver (note: the 2004 survey was conducted in the spring and not fall).

Overall, the automobile (including auto driver and passenger) is the dominant mode of travel, accounting for 73% of trips in 2011. At the same time, the domination of the automobile has been declining from 77% in 1994. This reduction of auto mode share is a result of a continuous decline in car passenger mode share combined with stable auto driver mode share.

Transit is the next dominant mode at 14% of trip making which has generally been trending upward in the last decade. The walk mode represents 11% of total trips which has remained relatively stable over the span of travel surveys dating back to 1994. Finally, the bicycle mode accounts for just under 2% of total travel. While cycling have the lowest mode share of the five main modes, its growth from 1.5% to 1.8% represents the largest growth, percentage wise, between the last two Trip Diary surveys. Together, the walk, bike and transit mode shares add up to 26.8%.

Figure 4

Trends in Share of Travel by Mode in Metro Vancouver



Data: 2012 Metro Vancouver Regional Trip Diary Survey conducted by TransLink

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Summary

Demand for transportation continues to grow in the region and travel behavior is trending towards more sustainable patterns. Slower growth in auto use and gains in walk, bike and transit trips are very encouraging changes and likely resulted from a combination of factors including socio-demographic and economic shifts as well as regional efforts to move towards a more transit-oriented region and make significant investments in the transportation system. However, a lot more progress still has to be made if the region wants to achieve its goal of having majority of the trips by walking, cycling and transit.