

## Mover groups in Finnish cities

Regular customers of public transport, people who mix all modes and other mover groups in Finnish cities have different travel habits and also perceive the quality aspects differently. Most of them are not committed to a single travel mode, however.

How diversely do individuals use the various travel modes and how committed are they to a specific travel mode? The question involves the numbers of persons with certain habits concerning travel mode. In conceptual terms, the issue is wholly different from the traditional modal split, which describes the number of trips taken with travel mode. People can and have been profiled in a multitude of ways. This article presents a grouping based on travel habits reported by the respondents, who were profiled into five mover groups: heavy car users, car users, people who mix all modes, regular customers of public transport and people who prefer walking or cycling. The results of the public transport research programme show that the inhabitants of Finland's six largest cities have diverse travel mode repertoires and are not committed to any single travel mode.

The study population consisted of inhabitants aged 18–64 of the Helsinki Metropolitan Area (HMA) and the cities of Tampere, Turku and Oulu. The HMA consists of the cities of Helsinki, Espoo and Vantaa, which have a combined population of approximately one million. Tampere has a population of approximately 200,000, Turku 175,000 and Oulu 130,000.

Travel habits were studied through a mail-back questionnaire distributed to 12,000 randomly selected recipients. The response rate was 35 percent and the number of acceptable responses 4,209. Similar data was also compiled from the towns surrounding Turku, but this article focuses on urban areas only.

The key element of the survey questionnaire was a table asking how often the respondent used each travel mode for different types of trips. This allowed the accumulation of data on the respondents' modal choices on a more general level instead of merely for individual trips. Abandoning the traditional travel diary provided a great deal of new opportunities but also made for challenges in the analysis of data and interpretation of results. All distributions presented in this article describe proportions of persons, not of trips.

The survey concerned modal choices in five trip types which together cover 80–90 percent of all trips. The trip types were:

- daily trips to work
- shopping trips for groceries
- other trips for shopping or errands
- free-time trips made regularly
- other free-time trips

The survey dealt with four travel modes: passenger car, public transport, cycling and walking. Respondents were asked about the prevalence of each travel mode in each trip type on a four-level scale: almost always, quite often, occasionally and hardly ever. At its most detailed, the data can be used to define 256 different modal combinations for trips in each category. The respondents had very varied travel habits. Practically all possible combinations appeared in the research data.

## Travel modes of Helsinki metropolitan area residents on trips to and from work

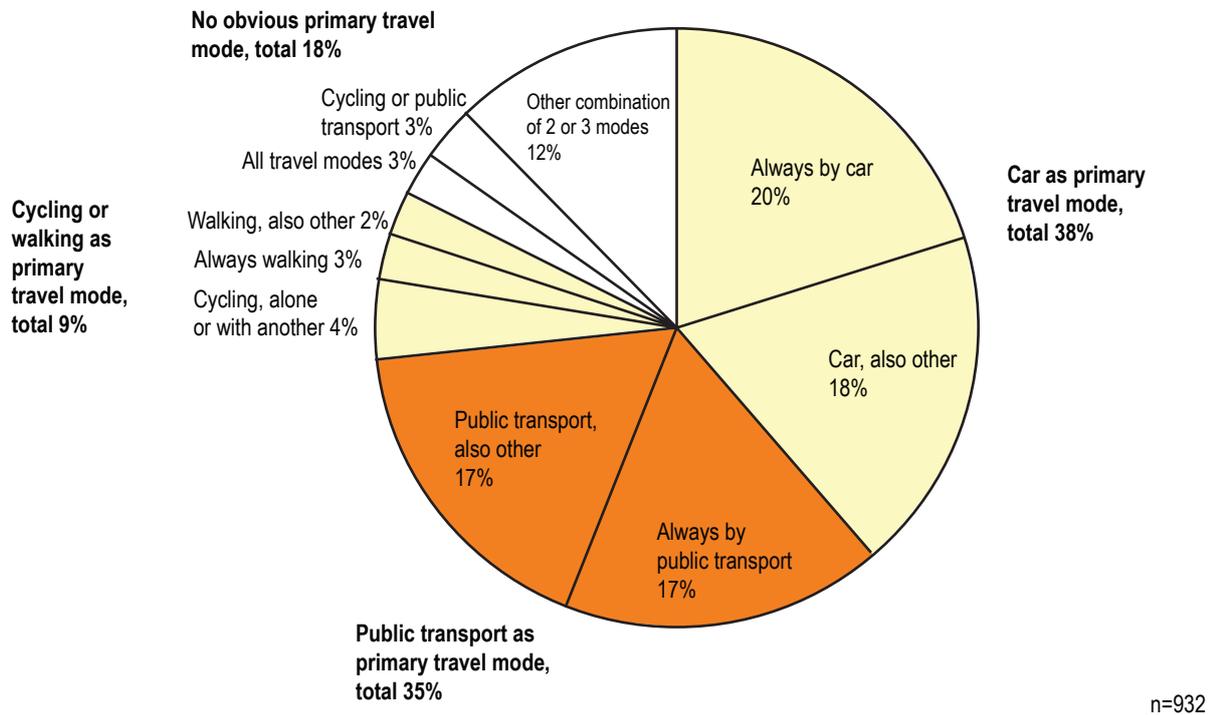


Figure 4–1. Modal combinations on trips to and from work in the Helsinki Metropolitan Area.

Five mover groups were compiled in the work on the basis of travel mode choices on various kinds of trips:

1. Heavy car users
2. Car users
3. People who mix all modes
4. Regular customers of public transport
5. People who prefer walking or cycling

Determination of mover group was based solely on the travel habits reported by the respondents. Although the names assigned to the groups may hint at bias, no comment was made on reasons for modal choices in determining group. Heavy car users, for example, are only heavy in the sense that they hardly ever use any other travel mode.

### The use of several travel modes is common

The use of more than one travel mode was common in all cities and trip types. Upon examination of similar trips, i.e. one trip type at a time, at most nearly 70% of respondents used at least two different travel modes. When all travel categories are studied, an obvious “primary travel mode” used in most travel categories

more often than others could only be determined for fewer than one third of respondents. Although those committed to a single primary travel mode are usually committed specifically to car use, more than one travel mode is also used by car users.

Public transport and cycling were popular for travel to and from work, in which passenger car use was less prevalent as the primary travel mode than in other travel categories. Many people in all cities took their grocery-shopping trips on foot, with hardly any use of public transport. In simplified terms, the survey can be interpreted to show that there is no need to take public transport to visit the local grocery store while supermarkets are not accessible by public transport. Travel modes on trips for other shopping and errands clearly differed from those on shopping trips for groceries. It is rather questionable for these two trip types to be combined, as they usually are.

Figure 1 shows the modal combinations of HMA residents on trips to and from work. Respondents using only one travel mode have been separated from those who also use other travel modes besides their primary one. Nearly one fifth of respondents use two or more travel modes equally often. The proportion is surprisingly high, considering that trips to and from work seldom differ from one day to the next.

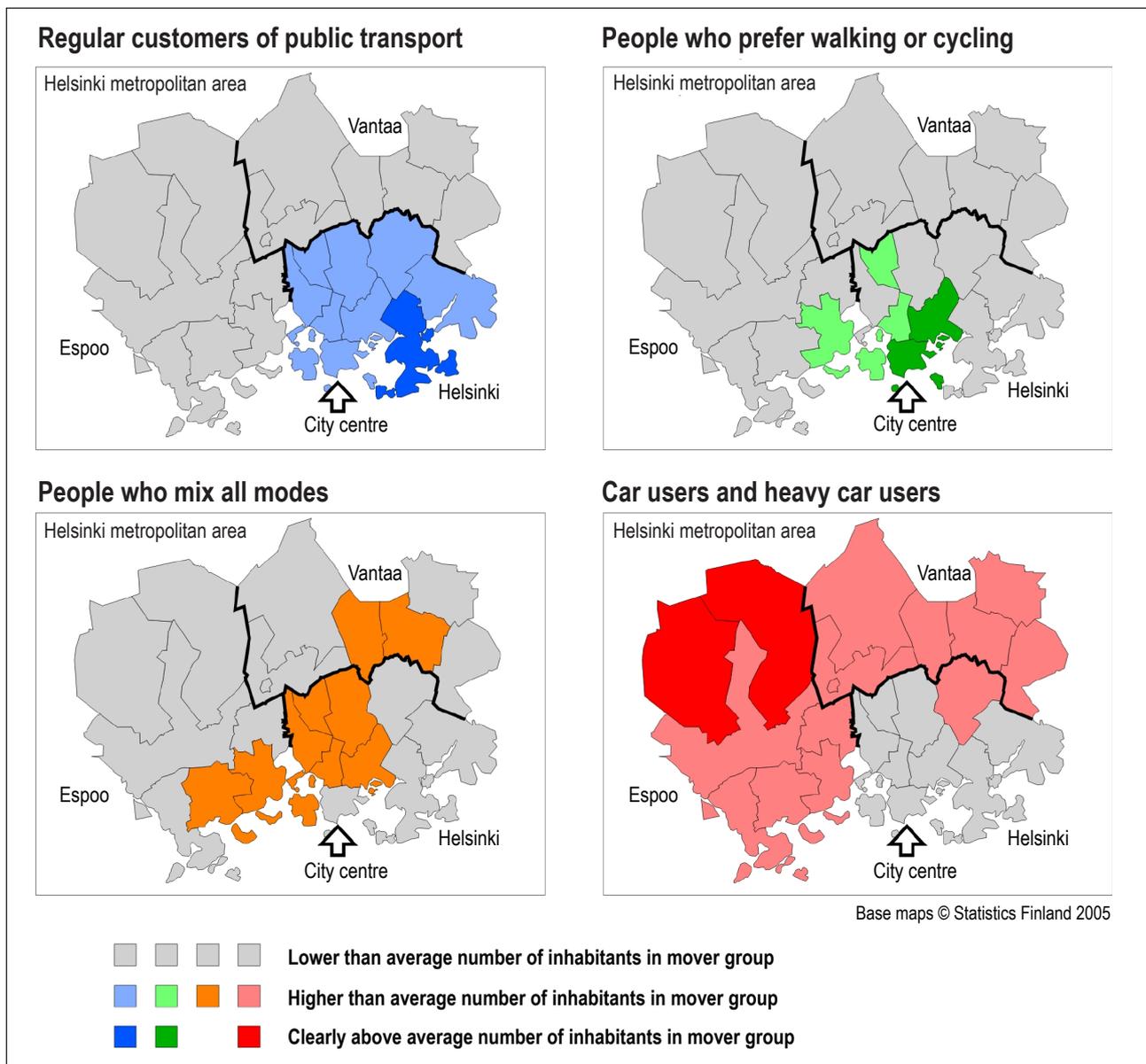


Figure 4–2. Shares of mover groups in the HMA by area of residence.

## Mover groups based on travel habits

The mover groups were formed on the basis of respondents' travel habits. For **heavy car users**, the passenger car was the most common travel mode on all trips, while cycling and public transport were ignored completely. **Car users** had their car and **regular customers of public transport** public transport as their most common travel mode on most trip types. **People who prefer walking or cycling** were defined correspondingly but walking and cycling were treated as a single travel mode. **People who mix all modes** used all travel modes. Mixed users might in a given trip type use several travel modes with equal frequency or have a different travel mode depending on trip type. The determination of the mover groups is an iterative

process and the actual definitions more complex than the generalised descriptions given above.

The group of heavy car users turned out to be clearly male-dominated while that of regular customers of public transport mostly consisted of women. Gender differences were clearly smaller in the HMA than in other cities studied. The most families with children appeared in the two groups of car users while clearly the fewest were found in the group of regular customers of public transport.

The typical heavy car user is a man over the age of 45 living in an area of single-family houses on the outskirts of a city. The family may consist of children under 18 and the family usually owns two or more cars. The typical car user may be male or female but is usually over the age of 30. The car user's household usually has children and one or more cars. People

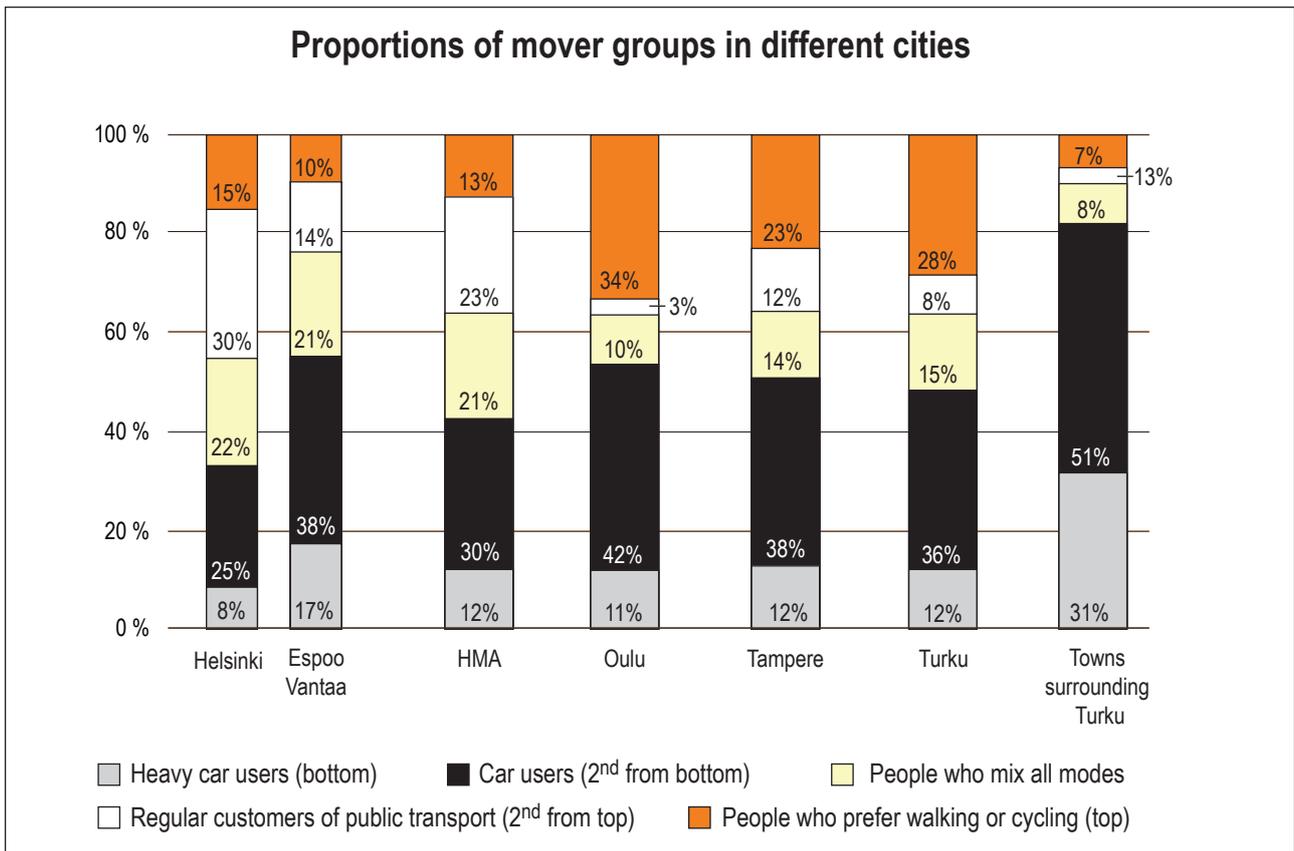


Figure 4–3. Distribution of mover groups in the Helsinki metropolitan area (Helsinki, Espoo and Vantaa), Oulu, Tampere and Turku and the towns surrounding Turku.

who mix all modes can be found among women and men of all ages living along public transport corridors and usually owning one car. Their families may also consist of children. The typical regular customer of public transport is a woman, or a man under the age of 30, who often lives alone and usually does not own a car. People who prefer walking or cycling consisted of women and men of all ages living in city centres, often by themselves, and owning no more than one car.

There were clear regional differences in the proportions of mover groups. Figure 2 represents HMA regions with above-average shares of inhabitants in the various groups. Regular customers of public transport and people who prefer walking or cycling in particular but also people who mix all modes reported choosing their place of residence so that they can manage without a car.

Modal habits and the opportunity for car use are of course closely connected. About 70 percent of car owners are car users or heavy car users while about 70 percent of non-car owners are regular customers of public transport or people who prefer walking or cycling. The category of people who mix all modes was the only one consisting of a substantial proportion (20%) of both car owners and non-car owners. Persuading persons with car access to become regular

users of public transport is thus a rather hopeless task, while almost a third of car owners were people who mix all modes or people who prefer walking or cycling. In this context, persons who reported having access to a car at least usually were counted as car owners.

## Proportions of mover groups in the various cities

Obvious differences were observed between cities in the shares of mover groups (Figure 3). In the HMA, there were clearly more regular customers of public transport and clearly fewer people who prefer walking or cycling. Compared to other cities, walking and cycling was clearly favoured in Oulu.

The share of heavy car users would seem relatively constant in comparisons of cities while significant differences could be found between different areas within cities. In addition, the results from towns surrounding Turku show that the share of heavy car users doubles or even triples outside city limits.

The greatest differences between cities were observed in the sizes of the groups of regular customers of public transport and people who prefer walking or cycling. The combined share of the two groups was fairly constant, however. The share of regular custom-

ers of public transport and people who mix all modes is clearly linked to the level of service of public transport.

## Opinions of car users differ from those of the other groups

Car users and heavy car users held opinions about travel and housing clearly diverging from those of the other three groups. The opinions of regular customers of public transport, people who prefer walking or cycling and people who mix all modes tended to converge, though not always. Although the opinions of the mover groups differed from each other, the opinions of those in a given group were clearly parallel in all cities.

The exercise obtained from walking and cycling was a strong motive encouraging the use of pedestrian and bicycle transport for all mover groups while environmental factors played a much lesser role in modal choice. Positive marketing highlighting personal benefits may indeed be more effective than appeals to the greater good such as conservation of the environment. The cost of travel was of no significance to car users but did play a role in the choices of other mover groups. Affordable fares are unlikely to attract car users to public transport while existing customers may be driven away by fare hikes.

Heavy car users and, to a certain extent, also car users felt the routes and timetables of public transport did not meet their needs and that public transport was troublesome to use. However, the walking distance to the public transport stop was not too long even for heavy car users. All mover groups felt they could easily find out the routes and timetables of public transport. Regular customers of public transport, people who mix all modes and people who prefer walking or cycling had a very positive view of the level of service of public transport.

## Conclusions

The inhabitants of the areas studied used the various travel modes in a diverse manner and were not committed to a single mode. Although commitment to a

travel mode almost always involved passenger cars, the majority of car users also used other travel modes as well. The number of car users and people who mix all modes is more than four times higher than that of heavy car users.

Unfortunately there is no reason to expect that current car users could to any substantial degree be persuaded to use public transport only. Instead, the goal of getting as many car users as possible to take a substantial number of their trips by public transport or by walking or cycling is wholly within the realm of possibility. As many as one third of those who usually have access to a car already now belong to a group other than car users or heavy car users.

The level of service of public transport clearly plays a role in the distribution of mover groups. In terms of increasing the share of public transport in the modal split, however, it would be more important to study how each individual mover group perceives the level of service of public transport.

Regular customers of public transport appreciate affordable fares and speed, two attributes commonly used to describe the level of service of public transport. However, these attributes are not attractive to car users, especially when the car is usually the faster alternative and the single fare is higher than the cost of fuel for the trip. It seems likely that car users would appreciate the clarity of the public transport route network and other quality-related factors much more than regular customers. In addition to travel time and frequency, increasing attention should be paid to other quality factors and the needs of occasional users of public transport.

Motorisation will continue and increase car usage, yet this development is not unavoidable in all regions, especially in working urban settings. Although the car-free lifestyle is above all dependent on the service level and quality of public transport, walking, cycling and public transport should, to an increasing degree, be studied as a whole. A combination of sustainable travel modes has the best chances of achieving a mobility service level competitive with the passenger car and thus of supporting both the wholly car-free lifestyle and the sustainable use of cars. ■

## Sources

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