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Author: Randi Johanne Hjorthol
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Summary:

Daily Travel in the 90s. Analyses of the Norwegian Personal Travel Surveys from 1991/92 and 1997/98

Three national travel behaviour surveys are accomplished

In Norway, three national travel behaviour surveys (NTS) are carried out, the first in 1984/85, the second in 1991/92, and the third in 1997/98. Institute of Transport Economics has been responsible for all three. In the future, such surveys will be carried out every fourth year. In this report the development of travel patterns from 1992 to 1998 are presented.

The aim of travel behaviour surveys is to establish knowledge about facts like the amount of journeys, use of transport modes, and length, time use and the purpose of the journeys. The findings from the surveys are utilised as a basis for transport and land-use planning, development of models for travel and environmental consequences, prognoses, calculation of exposure for traffic safety research, and several other research topics.

A journey or a trip is defined as any movement (outside the home, workplace, school etc) independent of length, duration, purpose and transport mode. A journey is concluded on arrival at the destination place. One or several modes of transport can be used during one single journey. Walking and use of bicycle are considered as means of transport similar to use of a car or public transport.

The two last surveys were carried out as telephone interviews.

In NTS 1997/98, 6,061 interviews were carried out in the period 29 September 1997 to 28 September 1998. At the request from local authorities in Møre and Romsdal and Oslo/Akershus, extra interviews were carried out, 995 and 1,782 respectively. Altogether, 8,838 persons were interviewed. The sample comprises people 13 years and older.

In this report the analyses contain only the national sample from 1997/98 to make it comparable with NTS 1994/85.

In NTS 1984/85, 6,000 persons 13 years and older were interviewed. The duration of this survey was also one year, starting 23 September 1991.

Increased car access from 1992 to 1998

In average, the number of cars per person has increased in the years from 1992 to 1998. The amount of driving licence holders increased from 83 to 89 per cent and 66 per cent of the population had always access to a car in 1998 while the

The report can be ordered from:
Institute of Transport Economics, PO Box 6110 Etterstad, N-0602 Oslo, Norway
Telephone: +47 22 57 38 00 Telefax: +47 22 57 02 90

percentage was 63 in 1992. The average annual driving length did also increase. Both in 1992 and in 1998 the average car age was 8 years, and about 4 years when bought.

Distinguishing characteristics of people with always access to a car are: they are men, have high income, are in the age between 35 and 55 years, and live in small towns and densely populated areas. In the period from 1992 to 1998 women improved their car access, in company with people over 55 years, and the differences between urban and rural areas has grown.

In 1992, 68 per cent owned their own bicycle, and in 1998 the percentage was 76. Very few had a moped or MC, and there was no significant change in the period.

The public transport service has not changed essentially in the period. A little less than 15 per cent of the population live less than 1 km from the nearest station or bus stop, and have four or more hourly departures, which is defined as a very good service. Nearly half of the population has a poor or very poor public transport service. People supplied with a good public transport service live in larger cities, and the metropolitan area of Oslo has the best, as 37 per cent of the residents have a very good supply.

People's health is also a determining factor on travel activity, and is clearly related to age. Among people aged 67-74 years approximately 20 per cent say they have problems with walking and cycling. Among people aged 75 or older this share has increased to 30 per cent. In this age group, 20 per cent have problems travelling by public transport, and 10 – 15 per cent have difficulties with driving a car. With an increasing share of elderly people in the population, this will be a challenge that both the road traffic and the public transport system must face.

Number of trips did not change in the period

Nearly 90 per cent of the population undertake one or more trips during a day. Younger people travel more than older, and people in the working force travel more than people outside. More than half of those who did not travel on the actual day said that they had no need for travelling or no special reason for not travelling. About 20 per cent were ill, and only 5 per cent referred to bad weather and road conditions. There were no changes in reasons for not travelling.

The extent of travelling has not changed from 1992 to 1998. In average, the population undertakes 3.2 – 3.3 journeys every day, some more on weekdays, a little less on weekends. A single trip is about 11,5 km, and the duration is 20 minutes. During a day the travel length is about 37 km and the time used 65 minutes.

Increase in car use and number of car trips, reduction in number of trips on foot and by bicycle

During the period there has been an increase in the share of trips undertaken as a car driver, from 51 to 55 per cent, while the share as a car passenger has been reduced. Else there is no significant changes in mode of transport.

The number of trips by car has increased from 1.66 to 1.78 per day. The most marked growth is on weekdays. Duration and length of journeys by car have not changed in the period.

The extent of car use varies with gender, age, income and occupational status. Men travel more and longer than women do. Elderly people travel least. People with low income travel less than people with higher income. Those with high occupational status travel more than people with low do. Variations related to place of living in the country are small.

From 1992 to 1998 women have increased their car use, both in number and length of trips. For men, there has been no change. Still men travel as a car driver twice the length as women do.

There has been a reduction in the number of trips by car among people between 18 and 25 years, an age group that has experienced reduced access to a car during the period. There is also a tendency towards an increase in the number of car trips for people over 54 years.

The most significant increase is to be found in the Oslo area, from 1.4 to 1.7 trips as a driver per person per day. One explanation of this phenomenon might be the reduction of workplaces in the inner parts of the city and the following increase in the outer parts and in the neighbouring municipalities.

In smaller towns and sparsely populated areas there has also been a significant increase in the number of trips by car while no change is seen in other cities and medium-sized towns.

During the period there has been no change in use of public transport. In average, 0.3 trips per person per day are undertaken by public transport, some more on weekdays and some less in weekends. Journey length is about 7 km and the duration a little more than 40 minutes.

The most frequent users of public transport are young people under 18 years. Women undertake some more trips than men do, but men's single trips are longer.

Travelling by bicycle is reduced from 0.22 to 0.17 trips per person per day. The length was about 3 km both in 1992 and in 1998. The reduction has occurred only on weekdays. The number of trips by bicycle is highest among people under 18 years and among school children and students.

In 1992, men had some more trips by bicycle than women did. In 1998 this difference had vanished. Neither place of living, income or occupation have any impact on the extent of cycling, and there are no significant changes during the period among different groups.

In 1992, 0.66 trips per person per day were undertaken on foot. In 1998, the number was reduced to 0.61. In 1992, every trip was 1.4 km, increasing to 1.8 km in 1998.

Young people, less than 18 years, walk more often and over longer distances than other age groups do. Women have more trips on foot than men, but total length is the same. There are few variations between income- and occupational groups.

People between 18 and 25 years walked longer and used more time in 1998 than in 1992. Among the oldest groups the tendency are shorter walk trips.

Both length and duration have increased for trips on foot in Oslo/Akershus during the period. In other areas there has been no increase in length of this kind of trips.

More work trips and car use

In 1992, the number of journeys to work was 0.64 per person per day, in 1998 it had increased to 0.70 trips per day. Distance, 13 km, and duration, 20 minutes, had not changed.

The work trips are longest in the metropolitan area of Oslo, both in 1992 and in 1998. Women's work trips are shorter than men's are, and this relation has not changed in the period. The length of the journey to work increases with increasing income. During the period there has been an increase in travel length among the highest income group. This group are more free to choose on the housing market and perhaps also on the labour market. They also have the best access to cars.

Even though flextime schedules is getting more common, it seems like people adjust their starting and ending hours within restricted time intervals. No significant changes have appeared during the period. About one third of the work trips start between 7 and 9 in the morning, and a little less than 30 per cent of the return trips start between 3 and 5 in the afternoon.

From 1992 to 1998, the share of car drivers to work has increased from 63,5 to 66,4 per cent, while fewer travel as car passenger. The use of other transport modes on work trips remained unchanged.

Car use related to work is lowest in Oslo/Akershus, and highest in small towns. From 1992 to 1998, it was a significant increase in car use in small towns and sparsely populated areas outside the urban regions, and also an increasing tendency in the greatest cities.

More than 70 per cent of all work trips undertaken by men are done as a car driver. While men's share as a car driver has been relatively constant, women have increased their share as a car driver from 53 to 58 per cent.

In 1992, 33 per cent had an errand in connection with the work trip, in 1998 the share had risen to 36 per cent. The increase is related to shopping. More women than men do such errands.

Fringe benefits related to car use have expanded during the period. For instance, the share of workers with free parking at work has increased from 77 to 87 per cent.

Car use for business trips has increased from 1992 to 1998. 46 per cent used their private car in connection with their work in 1992 and in 1998 55 per cent accordingly.

Even though public transport service has remained almost unchanged in the period, people regard this transport mode on journey to work as more inconvenient in 1998 than they did in 1992, 28 versus 18 per cent.

Small changes in business journeys

Business journeys comprise all journeys undertaken in connection with work, and the purpose might be meetings, conferences and various tasks as service, buying

and selling or exchange of information. The number of business trips has been constant during the period, 0.11 trips per person per day. On weekdays, however, there has been a reduction both in length and duration. Car is the most common transport means for business trips.

In 1992, gender had greatest impact on car use on business trips; men used the car more than women did. In 1998, there were no differences between men and women. Place of living had no impact on car use.

Young people walk or travel by public transport to school and university

Between 1992 and 1998 there has been no increase in the number of school trips and trips related to education for young people aged 13 years or older. I average, the number is 0.2 trips per person per day on weekdays. The length is 9 km, and the duration is 20 minutes, both in 1992 and in 1998.

More than 40 per cent of all school trips are undertaken by public transport, 20-25 per cent walk, and 10 per cent cycle. During the period there is a tendency towards a reduction in trips by bicycle and an increase in trips on foot. The share of drivers and car passengers is stable: about 10 per cent both in 1992 and in 1998.

Trips related to children's activities are done by car

Trips connected to following, fetching and bringing children and others to various activities is termed chauffeuring trips. In 1992, these trips comprised two categories: taking/fetching children to and from kindergarten or other day-care facilities and taking children or others to various activities. In 1998, this category also comprised taking children to sports and leisure activities.

In average, individuals have 0.3 chauffeuring trips per day, unchanged in the period. Both in 1992 and in 1998, about 40 per cent of the trips were related to taking children to or from kindergarten etc. In 1998, taking children to leisure activities represented 20 per cent of these trips.

An average chauffeuring trip is 8-9 km, a little shorter on weekdays and a little longer on weekends. The duration is about 15 minutes. Most of these trips are undertaken by car, more than 80 per cent. 6-7 per cent are done on foot, and very few are undertaken by bike or public transport. There have not been any significant changes in the period.

Fewer, but longer shopping trips

In 1992, the number of shopping trips was 0.81 per person per day. In 1998, this was reduced to 0.72 trips per day. This indicates changes in the shopping pattern.

The number of trips is reduced, while the length of each journey has increased, especially those undertaken during weekends, from about 2 km to about 7 km. One probable explanation is that more people travel to big shopping centres outside their neighbourhood on Saturdays for shopping.

In 1992, the shopping trips were longest in Oslo and in the rural areas. In 1998, this was changed. The longest journeys are still in rural areas, and they have grown significantly longer in the period. Travel length has been constant in the metropolitan area and in the other big cities in the country. However, in the middle-sized and smaller towns there has been a significant increase.

There is a tendency towards a shifting of shopping activities till later in the evenings. There has been a reduction in shopping trips between 10 am and 3 p.m. in 1998 compared to 1992, on weekdays as well as Saturdays. The population has adjusted their shopping habits to the extended opening hours legalised in 1985, and used them even more in 1998 than in 1992.

There has been a significant increase in car use as a driver in the period, from 53 to 63 per cent. At the same time, fewer walk to the shop, a reduction from 21 to 16 per cent. About 10 per cent travel as car passenger both in 1992 and in 1998, and about 4-6 per cent use bicycle or public transport on shopping trips.

Journeys connected to leisure and visits are reduced

From 1992 to 1998 there has been a reduction in the number of trips connected to leisure activities, from 1.08 to 0.93 trips per person per day. Primarily, trips related to organised activities are reduced. This has happened in favour of more individually oriented activities.

Average length is 13-14 km, shorter on weekdays and a little longer in the weekends. The duration is about 25 minutes. On weekdays most of the trips are undertaken after 5 p.m., and nearly 45 per cent are done after 7 p.m., and there is no change during the period.

The most common mode of transport is car as a driver, a little less than 40 per cent, both in 1992 and in 1998. In relation to other kinds of journeys the car use is low. Walking is almost as common as driving a car. There has been only a small increase from 1992 to 1998, from 28 to 32 per cent. A little less than one fifth travel as a car passenger to their leisure activities, both in 1992 and in 1998. Bicycle and public transport are used for about 6-7 per cent of the trips.