

Summary:

Craftsmen transport in urban areas: Volume and structural estimates

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During the past decade the number of registered vans in Norway has increased by almost 70 percent, more than twice the growth in passenger cars. A further increase in the number of vans is expected, especially in the large cities. A significant share of these vehicles are associated with the transport of craftsmen and the equipment they carry. Our estimates show that craftsmen transport amounts to 11 per cent of the vehicles passing through the toll gates in Oslo on an average workday (Monday to Friday), amounting to a total of over 50,000 trips. For Bergen, it is estimated that craftsmen transport amounts to 15 per cent of the vehicles passing through the toll gates (about 24,000 trips) and for Trondheim, it comes to five per cent (7,600 trips).

Background

This report documents results from work package 2 in the project “Innovating for more efficient and sustainable transportation among Norwegian craftsmen” (CRAFT*TRANS). The purpose of work package 2 has been to: (i) estimate the volume of the transport undertaken by craftsmen in Bergen, Oslo and Trondheim, and (ii) describe the structure of the transport that is performed by craftsmen’s service vehicles in these cities.

In general, there is little knowledge about craftsmen transport despite the fact that it probably constitutes a substantial percentage of traffic, especially on workdays, Monday-Friday. Data from the Central Register of Motor Vehicles shows that vans and small lorries are increasing in number and in recent years, this class of motor vehicles has become more important for the transport of goods. A significant percentage of these vehicles are associated with craftsmen transport. A further increase in the number of vans and small lorries is expected, especially in the large cities.

There is a need for more knowledge about the relative importance of craftsmen transport for traffic in the large cities. The craftsmen contribute to increased traffic at the same time as traffic gives rise to challenges for the performance of their vocation (e.g., delays caused by traffic congestion).

About the survey

In order to describe the structure of the transport that is performed by craftsmen's and service vehicles in Oslo, Bergen and Trondheim, data from Statistics Norway's (SSB) survey, "Transport med små godsbiler" (Transport by vans and small lorries), are utilised. The survey includes structural data for all transport with vans and small lorries in Norway. Service vehicles operated by craftsmen are registered as a separate category and can be

specially analysed. The data are based on a sample survey conducted in 2008. We assume that the structure of the transport has not changed in the last six years.

In order to make estimates of the volume of craftsmen transport compared with other types of road traffic, data from Q-Free about vehicles passing through toll gates is used. Data have been selected for week 36 in September 2013. In these data, it is possible to distinguish between private and company cars, but not craftsmen's vehicles in particular. Supplemental data from the Central Register of Motor Vehicles and The National Person Travel Survey was utilised for this purpose.

Structural data for the transport of craftsmen

The transport of craftsmen occurs “locally” in the sense that only to a limited extent it crosses county boundaries. Of craftsmen transport originating in Oslo, 80 per cent occurred within the county (68 per cent of the km driven) and 12 per cent went to Akershus County (16 per cent of the km driven). Almost all of trips originating in Bergen or Trondheim was driven within Hordaland or Sør-Trøndelag counties respectively.

The average transport distance per trip with load for craftsmen transports that start in Oslo is 27 km, in Bergen 25 km and in Trondheim 22 km (a trip can include several stops).

On the average, a craftsman's vehicle performed nine trips with loads per week (figure A). There was little difference between the national average and trips that started in one of the three cities, Oslo, Bergen and Trondheim.

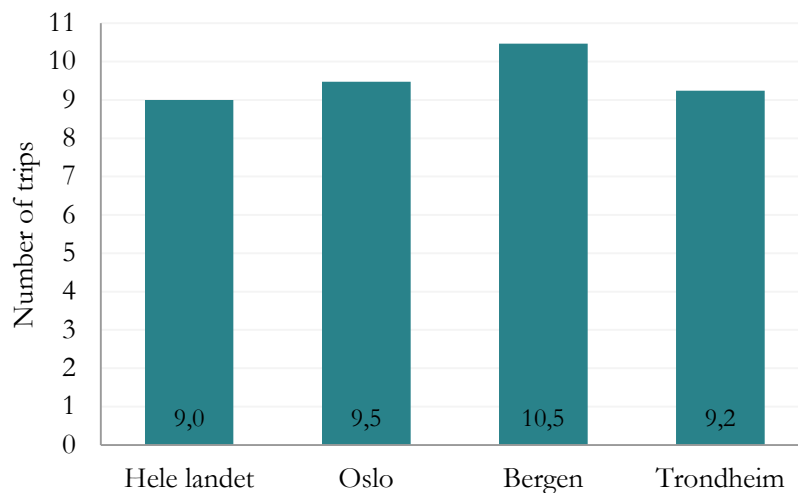


Figure A: Vans and small lorries. Average number of trips undertaken by craftsmen with a load per week. 2008

Volume of transport of craftsmen

According to our calculations, craftsmen transport constitutes 11 per cent of the vehicles passing through toll gates in Oslo on an average working day (Monday to Friday), or a little over 50,000 trips (estimated on the basis of the traffic in September 2013). An alternative method of calculation is to estimate the traffic that is generated within the municipality of Oslo and look at the craftsmen's percentage of it. That method of calculation gives a somewhat higher percentage – 16 per cent of all automobile trips that

are generated in Oslo are related to the transport of craftsmen. All in all, vans and small lorries in commercial transport (including all types, not only craftsmen transport) account for about 20 per cent of the traffic in the capital.

For Bergen, it is estimated that craftsmen transport constitutes 15 per cent of the vehicles passing through toll gates on an average working day (the alternative method of calculation gives an equivalent percentage). All in all, this amounts to about 24,000 trips (traffic data for September 2013). In general, vans and small lorries in commercial transport account for about 20 per cent of the traffic in Bergen.

The estimates for Trondheim show that craftsmen transport accounts for five per cent of the vehicles passing through the toll gates on an average working day, approximately 7,600 trips (September 2013). If all commercial transport is included, vans and small lorries account for a total of 8-9 per cent of the traffic in Trondheim.

Uncertainty in the estimates

We have based our estimate on statistics from Q-Free for the number of various types of vehicles passing through toll gates. The advantage of so doing is that we can count many places continually and get precise data for the traffic in the given toll gates. The disadvantage is that the data do not give any information about craftsmen's vehicles in particular.

In order to estimate the volume of transport of craftsmen, we have used supplemental data from The National Survey of Travel Behaviour 2009, the SSB survey "Transport med små godsbiler" (Transport by small commercial vehicles) and information from the Central Register of Motor Vehicles. However, data from all of these sources are uncertain. This is discussed in Section 4.2.