

Summary:

Travel demand and modal split in three main corridors of Norway

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The report analyses travel behavior in three transport corridors in Norway for the period November 2009 – October 2010: Oslo-Trondheim, Oslo-Bergen and Bergen-Stavanger.

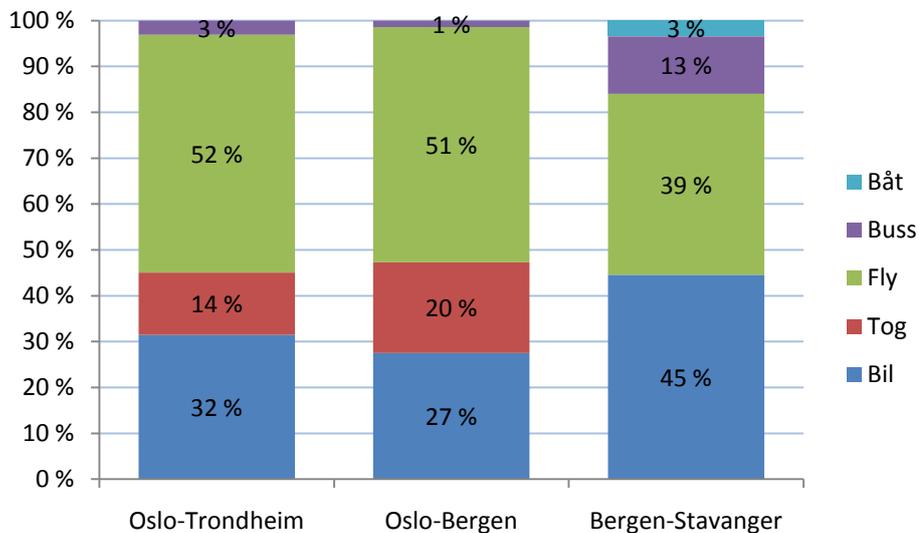
Air travel is the most frequently used mode of transport for person trips between Oslo and Trondheim/Bergen with a market share of 52%. Market shares for air travel are particularly high in winter and for business travel. Car is the secondly most used mode, accounting for about 30% of the market. Car use is dominated by leisure travel and is concentrated around the summer season. The market structure in the two corridors display large similarities, although bus and car have a somewhat larger market share to/from Trondheim, while the train is more frequently used on trips to/from Bergen (20% market share compared with 14% for Trondheim).

The traffic between Bergen and Stavanger is only half of the volumes between Oslo-Bergen/Trondheim. Shorter travel distances and an easier passage (no mountain crosses) contributes to increased car use (45%) in this corridor, while market shares for the other modes are 39% air, 13% bus and 3% boat.

Travel demand, trip purposes and modal split

The aim of the study has been (i) to estimate market shares of the different transport modes in the respective corridors, (ii) to estimate the distribution of car traffic on the various mountain crossings, and (iii) to examine strengths and weaknesses of the different transport modes. For the public transport means, data were gathered through on-board surveys, while motorists were stopped on the mountain crossings (for Oslo-Bergen/Trondheim) and at the ferry landing Halhjem-Sandvikvåg (Bergen-Stavanger).

There are clear similarities between the two transport corridors Oslo-Bergen and Oslo-Trondheim regarding traffic flow, travel purpose of modal split. In both corridors, 1,9 million trips were made in the 12-month period Nov. 2009-Oct. 2010, of which 35% were work related and 65% private trips. Air travel is the most frequently used mode with a market share of some 50%, followed by car. As shown in the diagram, rail travel is more strongly preferred on trips to/from the Bergen region, while bus has a somewhat higher share to/from the Trondheim region.



Distribution of travels by transport mode between Oslo-Trondheim, Oslo-Bergen, and Bergen-Stavanger

The traffic flow between Bergen and Stavanger is smaller than in the other two corridors, just below 900 000. One third is work related travel and two thirds private travel. The car is the most frequently used mode, which can be explained by shorter travel distance and an easier passage (mountain pass). The bus also displays significantly higher market shares in this corridor.

Car and air travel display large seasonal variations. Air travel is preferred in winter, while car use is concentrated around the summer season. Rail travel is more evenly distributed throughout the year, although peaks are observed during the holiday periods.

Average travel costs are almost identical in the three corridors. According to information provided by the respondents, a trip between the Oslo and Trondheim regions costs on average NOK 659,- (one-way), compared to NOK 649,- for Oslo-Bergen and NOK 652,- for Bergen-Stavanger. The bus is the cheapest travel mode to/from Trondheim (NOK 312), while train is the cheapest way to get to/from Bergen (NOK 458). Air travel is the most expensive travel mode with an average cost of NOK 700-750.

Car travel and mountain crossings

Travelers going by car to/from Trondheim have two possible routes: Rv3 via Elverum or E6 via Lillehammer and Dombås. The Elverum route is generally preferred. Contributing to this choice is shorter travel distance and time, and a mountain pass which is less exposed to stormy weather.

Between Oslo and Bergen there are five alternative routes by car: E134 Kongsberg-Odda (Haukelifjell), Rv7 Gol-Eidfjord (Hardangervidda), Fv50 Hol-Aurland, Rv52 Hemsedal-Lærdal (Hemsedal) and E16 Fagernes-Lærdal

(Filefjell). The Haukelifjell crossing has the highest travel volumes, although only 10% of the traffic runs between the endpoints of the corridor (Oslo and Bergen). In comparison, almost every fourth car that crosses Hardangervidda or Hemsedal runs between the zones. There are clear seasonal variations with a preference for Hardangervidda in summer. Shorter distance and spectacular views make this a popular route. In spring, fall and winter, Hemsedal is the chosen crossing by most travelers.

Why choose the respective transport modes?

The most important reasons for choosing the car mode are related to practical issues such as carrying luggage, needing the car at the destination, and the flexibility provided by having a car at one's disposal. The most important reasons for choosing the rail mode are comfort and economy. For air travel, travel time is by far the most frequently reason mentioned, whilst a clear majority of bus travelers state that they went by bus for economic reasons (cheapest way to get to the destination).

Are other transport modes considered?

Respondents were asked if ahead of the trip they had considered traveling by another mode. Some 35% of the respondents answered affirmatively. The remaining thus considered the chosen mode to be the only viable alternative for the trip made.

Car travelers are less likely to consider alternative modes. If they do, air travel is the preferred alternative. Correspondingly, those traveling by air are also reluctant to consider other transport modes. If options are considered, rail seems to be the most likely alternative. On the other hand, passengers traveling by train, boat (Bergen-Stavanger) and bus express greater flexibility. The majority of these travelers had considered choosing an alternative means. Generally, air is considered the most relevant option.