Institute of Transport Economics
Norwegian Centre for Transport Research

ENGLISH Summary

Increased use of train on long-distance passenger travel?

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The Norwegian Railway Directorate is working on a new long-distance train strategy. This report summarizes market knowledge on long-distance person travel to assess measures that can strengthen the train's competitiveness against air and car travel. Data from the National Travel Survey, Avinor's Air Travel Survey, and two other surveys indicate significant potential for shifting travel from air and car to train.

Background

This report provides input for the Norwegian Railway Directorate's work on a new long-distance train strategy. The purpose has been to summarize relevant market knowledge on long-distance passenger transport collected by the Institute of Transport Economics in previous projects. These data serve as a basis for assessing measures that can strengthen the competitiveness of long-distance trains against other transport modes. The data sources include Avinor's air travel surveys, the National Travel Surveys, a survey among owners of private cabins and "PATHWAYS" (a project exploring how to facilitate more sustainable holiday and leisure travel). The report addresses questions such as:

- How significant are the travel time disadvantages of trains journeys compared to air travel?
- What is the potential for shifting passengers from air travel to long-distance trains?
- Which air passengers are most likely to switch to trains?
- Can trains capture a larger share of the market by transferring part of the car-based cabin traffic?
- How can reductions in travel time, cost factors, and service improvements help realize this potential?

Potential Shift from Air to Rail on Key Routes

The estimated potential for transferring traffic from air to rail includes eight routes: (i) Oslo-Bergen, (ii) Oslo-Trondheim, (iii) Oslo-Stavanger, (iv) Oslo-Kristiansand, (v) Oslo-Ålesund, (vi) Oslo-Molde, (vii) Oslo-Kristiansund, and (viii) Trondheim-Bodø. Except for Oslo-Kristiansand,

air travel is the dominant mode on these routes. In 2013/14, train market shares ranged from 5% to 18%. Data from the 2022 National Air Travel Survey (RVU Fly) indicates a transfer potential of approximately 700,000 air journeys on these routes (excluding train passengers who might consider switching to air travel). It should be emphasized that this estimate is based on non-binding statements, but it nevertheless highlights a significant potential. The transfer potential is greater for leisure travel than for business travel. The likelihood of considering rail as an alternative to air travel is generally negatively correlated with income and age (except for the age group over 70). Women generally show a greater tendency to switch from air to rail.

Travel time disadvantages are also a key factor preventing air passengers from choosing trains. These disadvantages vary by route. On the two largest routes, Oslo-Bergen and Oslo-Trondheim, they are estimated at 3 hours and 25 minutes (Bergen) and 3 hours and 3 minutes (Trondheim), respectively.

Market Opportunities in the Intermediate Travel Market

Market opportunities in the intermediate travel market are assessed using the National Travel Survey (2013/14) and the Institute of Transport Economics' "Cabin Traffic Survey." The National Travel Survey provides figures for the intermediate market along major routes. On the Oslo-Stavanger route, Oslo-Arendal and Oslo-Kristiansand are major intermediate markets (700,000–800,000 trips in 2013/14). Car travel dominates these routes, while train market share remains modest. Between Oslo and Trondheim, major intermediate markets include Oslo-Hamar, Lillehammer, and Østerdalen. Train shares are high in these segments, at 20% for Oslo-Hamar and 18% for Oslo-Lillehammer. Oslo-Østerdalen has similar traffic volumes to Oslo-Lillehammer but a significantly lower train share. Between Trondheim and these intermediate markets, travel volumes are much lower than in the southern segments to/from Oslo.

Hallingdal is a major intermediate market on the Oslo-Bergen route (estimated 800,000 trips to/from the Oslo area and nearly 300,000 to/from the Bergen area in 2013/14). The train market share is significantly higher between Bergen and Hallingdal than between Oslo and Hallingdal (19% vs. 4%).

Today, nearly 450,000 registered holiday homes exist in Norway, generating substantial car traffic. At the same time, this market presents an opportunity for rail and bus travel on routes where public transport is available. Findings from the "Cabin Traffic Survey," analyzing travel mode choices for around 1,200 holiday homeowners in the Oslo area, show that 96% of cabin traffic from Oslo is car-based, with the remainder using public transport. Estimated in terms of person-trips for 2023, around 220,000 collective transport trips were made to/from holiday homes owned by Oslo residents. This number could potentially increase to 830,000 trips annually. The greatest transfer potential is expected for trips to holiday homes in Follo, Østfold, and southern Sweden.

Scenarios for Traffic Development and Realizing the Transfer Potential through Major Train Service Improvements

A survey conducted in late 2022 among 1,070 respondents examined travel preferences and the potential for increased train use. The sample reflected the Norwegian population in terms of gender but had a higher share of university-educated individuals and higher household incomes. The study included a hypothetical scenario featuring improved train accessibility, increased frequency, and higher speeds.

The results showed that nearly half of the respondents would replace car and air travel with trains if the scenario were implemented, and around 70% believed trains would become more

relevant for domestic and Nordic travel. Specific factors such as seat reservation options, baggage check-in services, and reduced transfers were important to many respondents.

A choice experiment compared trains and flights for trips over 1,000 km with different time and cost variations. Findings revealed that a significant share of travelers would opt for trains, particularly when train prices were lower than airfares. When train travel time was 50% longer than flights but cost 20–50% less, the train share increased significantly.

A segmentation analysis identified three main groups: those who highly valued train quality, those with moderate preferences, and those with low interest. Respondents with strong preferences for train services exhibited greater willingness to pay for improvements.

Validation of these results against previous studies, including the Norwegian Railway Directorate's **Train Opportunity Study 2040**, indicated that service enhancements could significantly boost train ridership. Estimates suggested that travel between Oslo and Stockholm could increase by up to 450% if the scenario was realized.

Overall, the findings suggest a significant potential for shifting travelers from air and car travel to trains, provided that infrastructure, service quality, and price competitiveness improve.