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## Travel Behaviour and Perceptions in Trips with a Ferry Connection

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Abstract: The west coast of Norway features numerous islands and fjords. Ferry services connect the roads when these features make the construction challenging. Currently, scientific effort is designated to assess potential ferry replacement projects along the European road E-39. The inconvenience of ferry dependency is imprecisely represented in the transport models, thus transport analyses of ferry replacement projects appear as guesstimates rather than reliable input to decisionmaking processes of such costly projects. Trips including ferry connections imply more inconvenient elements than just travel time and cost. The goal of this paper is to understand and explain the extra inconveniences associated to the dependency of the ferry. The first scientific approach is to identify the characteristics of the ferry travelers and their trips' features, as well as whether the ferry represents an obstacle for some specific trip types. In doing so, a survey was conducted in 2011 in eight E-39 ferries and in 2013 in 18 ferries connecting different road categories. More than 20,000 passengers answered with their trip and socioeconomic characteristics. The travel patterns in the different ferry connections were compared. The analysis showed that the trip features differed based on the location of the ferry connections, yet independently of the road category. Additionally, the patterns were compared to the national travel survey to detect differences in the travel patterns due to the use of the ferry connections. The results showed that the share of commuting trips within the same travel time was lower if the ferry was part of the trip. The second scientific approach is to know how the different travelers perceive potential benefits for a ferry replacement project. In the 2011 survey, some of the questions were about the relevance of nine different benefits this project might bring. Travelers identified the better access to public services and job market as the most valuable benefits, followed by the reduced planning of the trip. In 2016, a follow-up survey in some of the ferry connections was carried out in order to investigate variations in travelers' perceptions. The growing interest in ferry replacement projects might make travelers more aware of the potential benefits these would bring to their daily lives. This paper describes the travel behaviour of travelers using a ferry connection as part of their trips, as well as the potential inconveniences associated to these trips. The findings might provide valuable input to further development of transport models, concept evaluations and cost benefit analysis

**Keywords:** ferry connections, ferry trip, inconvenience costs, travel behaviour

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