Institute of Transport Economics
Norwegian Centre for Transport Research

ENGLISH Summary

How Fare Zones Affect Travel Behaviour

Effects of Zone Boundaries on Passengers' Choice of Starting Stop

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This report examines whether increased price differences between one-zone and two-zone public transport tickets affect where passengers start their journey. The analysis is based on automatic passenger count data for train services between Nordre Follo and Oslo (Norway). The results provide little evidence that higher zone surcharges lead passengers to shift their starting point to avoid paying for two zones.

This report examines whether increased price differences between one-zone and two-zone monthly passes affect where public transport users start their journey. More specifically, the report analyses whether a higher zone surcharge encourages passengers who would otherwise start their trip in zone 2 to instead start within zone 1 in order to avoid paying for two zones.

The main analysis focuses on train travel between Nordre Follo and Oslo, using automatic passenger count data for weekday boardings in the direction of Oslo. The case is particularly relevant because Rosenholm station is located just inside zone 1, close to residential areas in zone 2S, and offers park-and-ride facilities. If the increased price difference affected passengers' choice of starting point, we would expect weaker growth in boardings at stations closest to the zone boundary in zone 2S compared with stations farther away.

The results do not support this hypothesis. Boardings increased also at the stations closest to the zone boundary, and the regression analysis finds no statistically significant relationship between distance from the zone boundary and changes in boardings after the fare change. The findings, therefore, suggest that the increase in the zone surcharge in week 36 of 2024 did not lead to a measurable shift in where passengers started their train journeys.

A likely explanation is that the fare saving is not large enough to outweigh the additional generalized travel costs associated with changing the starting point of the journey. These costs may include longer walking time, the need for access transport by car or bicycle, uncertainty, reduced comfort and established travel habits. Another possible explanation is that passengers with low costs of starting in zone 1 had already adapted before the fare change.

The report also includes a supplementary analysis of selected bus lines crossing the zone boundaries between Oslo and Akershus. This analysis provides a broader empirical basis, but it is methodologically more uncertain because of variation in distances between bus stops and possible substitution between buses and other public transport modes, such as the metro. The bus analysis points in the same general direction as the train analysis: there is little evidence

that increased price differences between zones systematically shift boardings to stops just inside zone 1.

Overall, the results indicate that the observed increase in the zone surcharge did not produce a clear and measurable change in passengers' choice of starting stop or station. This does not mean that zone boundaries are irrelevant. They may still affect perceived fairness, accessibility and travel choices. However, within the fare changes and time periods studied in this report, such effects are not clearly reflected in the boarding data.