



Ministry of Infrastructure
and Water Management

KiM Netherlands Institute for
Transport Policy Analysis

Summary

The development of the use of
public transport in the
Netherlands 2005-2016 better
explained

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LMS proved better for accounting growth

The total number of passenger-kilometres travelled by train in the Netherlands increased by 24 percent, from 15.2 billion in 2005 to 18.9 billion in 2016.

The National Transport & Traffic Modelling System (LMS) proved better at accounting for this growth than the previously used method based on elasticities.

Of the total 24 percent growth, the LMS could not explain 8 percent of the total growth, compared to 12 percent for the previously used method. The LMS determined that improved supply was an especially greater contributor to growth.



Purpose

The KiM Netherlands Institute for Transport Policy Analysis strives to include in its annual Mobility Report an explanatory analysis detailing the development of public transport use in the Netherlands over the past ten years. The 2016 Mobility Report therefore includes an explanation of how train use has developed.

Because the previously applied method failed to account for an increasingly larger share of the growth in train use, a more detailed method, using Rijkswaterstaat's National Transport & Traffic Modelling System (LMS), was developed in preparation for the 2017 Mobility Report.

This new method is more accurate, as it does not calculate according to national averages but rather accounts for exactly where the various factors (e.g. inhabitants, jobs, supply of trains) have developed. Moreover, once a consistent time-series of relevant usage figures becomes available, KiM endeavours to use this same method for explaining the development of bus, tram and metro use.



Explaining train use

The total number of train passenger-kilometres increased by 24 percent, from 15.2 billion in 2005 to 18.9 billion in 2016.

Increases in population, number of jobs and income levels, as well as greater use of the public transport student pass, collectively accounted for a 10 percent increase in train-kilometres. Train fares increased at a faster rate than the average price development for 2005-2016; consequently, train fares *dampened growth* (approximately -5 percent train-kilometres).

Work-related trip purposes did not contribute to the growth that occurred from 2005 to 2016; rather, the increase in 'leisure' trips accounted for the majority of growth in train usage during that period.

Improvements in supply (train frequencies, network expansion, connections between trains) accounted for 10 percent of the growth in passenger-kilometres from 2005-2016. During that same period, the number of train-kilometres travelled for passenger trips increased by 26 percent.



Explaining train use (2)

Major changes were made to train timetables in 2007, 2012 and 2013. Approximately half of the 10 percent growth derived from decreased waiting times, one-third from improved transfer options, and one-sixth from improved in-vehicle trip times.

Developments in fuel prices and congestion on the main trunk road network had virtually no impact on how train use developed from 2005 to 2016. Increased air traffic – including additional access-egress transport for Amsterdam Airport Schiphol – accounted for approximately 1 percent more train-kilometres during this period.



LMS also more versatile

The LMS and its various determinants not only explained the development of train usage but also that of the bus, tram and metro. However, the LMS calculations suggested that bus, tram and metro use had slightly increased from 2005 to 2016, while the OViN Netherlands Travel Survey revealed a sharp decrease (KiM, 2017).