

To: Transport & Health Policy Makers, & Practitioners
From: Professor Adrian Davis
Date: 14th September 2022
Subject: Essential Evidence 4 Scotland No.59: Perceived Journey time increases with a speed limit reduction

Top line: Perceived loss in journey time by opponents of a national speed limit reduction from 90 to 80km/h appears to be significantly greater than the projected loss.

In November 2012, France announced that the fight against road insecurity is a national priority. The French government set a national target of reducing the number of road deaths to less than 2,000 by 2020, i.e. a 50% reduction in fatalities. On 1 July 2018, the French government lowered the maximum authorised speed on two-way rural roads without a central separator from 90 km/h to 80 km/h. The network considered represents around 400,000 km of roads outside built-up areas, accounting for 55% of road deaths. The main objective of the measure was to reduce the number of deaths and injuries on the roads concerned, but also to entice drivers to reduce their average speed. Among the measures announced, the 10 km/h speed reduction is the one that has generated the most opposition. It generates strong protest in civil society with regard to the time supposedly lost on the road for the user.

Understanding of the societal effects related to the measure of lowering the maximum authorised speed to 80 km/h on two-way rural roads without a central separator involved evaluation of the societal effects of the measure. It was focused on identifying the effects on road safety, the environment (air and noise) and travel times. An assessment was carried out using two complementary methods: with the Google Maps application and with historical GPS tracks.¹ Google Maps data make it possible to cover road networks spread across France. Researchers took a reading of journey times from the Google Maps application algorithm “before” and “after” the measure to reduce the speed limit to 80 km/h was implemented. 298 routes spread across mainland France with a length of approximately 30 km were selected. It corresponds to the average length of a usual daily trip between home and work.

In terms of results, on average, over all 298 routes, the results obtained with Google Maps show an increase in travel time from 1 July 2018 of roughly one second per kilometre on a commuting trip (average daily time lost on weekdays). Between 2017 and 2019, the average increase in journey times revealed by the historical GPS tracks, weighted by the volume of traffic on the routes studied, amounts to 0.98 s/km travelled. This result confirms the estimate obtained with the Google Maps application. Of the 154 routes studied: 88% of the routes saw an increase in travel time, mostly less than 3 s/km travelled; 12% of the routes saw a reduction in travel time, the vast majority of which is less than 1 s/km travelled.

Loss of journey time is the main social cost (between €720 and €920 million), which is largely offset by the reduction in accidents, with a positive balance (between €280 and €480 million). This positive balance is further marked by the benefits of lower fuel consumption and lower CO2 emissions. The balance sheet shows that the gains for users in terms of fuel consumption are significant (between €250 and €320 million). In terms of GHG emissions, the balance sheet shows a gain of €50 to 70 million. The gains in terms of noise and air quality, although slightly positive, are considered negligible and were not monetised.

For opponents to the measure, arguments referred to the drivers’ wanting to drive fast and enjoying it. Nevertheless, these opponents estimated that it would cause them to lose between 2 and 5 minutes on their usual route. In view of the evidence gathered in terms of the speeds practised and the estimated journey time, the estimated average increase is 30 seconds for a typical commute. Loss aversion (an expression of fear)² to ideas and beliefs as well as material things is hard to shift but such evidence helps.

¹ Buttignol, V. 2020 French policy of reducing speed limit from 90 to 80km/h: How to assess social effects, European Transport Conference.

² [What Is Loss Aversion? | Psychology Today](#) accessed 14th September 2022.