

# Science for Environment Policy

## Commuting study reveals the factors affecting sustainable transport use

**Factors influencing people's decisions** about how they travel to work are highlighted in a new study on commuting in Europe. Key findings include: cycling rates increase with the length of a city's bicycle network and public transport use rises with a city's population and GDP per capita. Based on the findings, the researchers propose policy measures for reducing the number of car journeys.

**Journeys to work** are a major source of [pollution](#) and traffic congestion. In this study, researchers used data from 112 European cities with populations of between 100 000 to 500 000 to examine factors influencing how people [travel](#) to work.

The authors used a mathematical model that allowed them to calculate the probability of commuters choosing certain modes of transport, based on different factors. For instance, they considered petrol prices and the length of the cycling network in the city. The five modes of transport they considered were bicycle, motorcycle, car, walking and public transport.

Some of the key findings from the study were:

- Public transport is used more often in cities with larger populations and higher numbers of buses.
- Public transport is used less often in cities where monthly bus tickets are more expensive, where there are more days of rain annually and where there are higher proportions of elderly residents and families with children.
- Wealthier cities had higher proportions of people driving but also walking to work and taking public transport.
- In cities with larger student populations, people use public transport more, and are more likely to cycle and walk.
- Commuting by car and motorcycle was more common in cities where more individuals owned such vehicles.
- Motorcycles were more likely to be used when petrol prices were low.
- The likelihood of commuters cycling to work increased with the length of the cycling network (calculated as the combined length of cycle lanes and separate cycle paths).

Based on these findings, the researchers propose that policies discouraging car ownership, for example, through high registration fees, could reduce the numbers of people commuting by car and that subsidised fares could increase use of public transport. They also suggest that reallocating road space from motorised transport to bicycles, for example by designating or building cycle lanes, would be an inexpensive and effective way to increase the number of people cycling. However, the study does not consider how making cycling safer, for instance by increasing the length of separate cycle paths versus cycle lanes, would alter travel behaviour.

These results seem to confirm findings from previous, smaller studies. However, the authors are careful to point out that there are a number of factors which may influence commuting decisions which were not accounted for, such as average distance between home and work, and road and parking charges. They also suggest it might be useful for future research to consider commuting that extends beyond city boundaries.



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