Is fare-free public transport enough to reduce the number of cars?

Author: Diogo Ferreira Nunes (HiMolde/MUC)

This article is a summary based on the MSc thesis at HiMolde in Spring 2025. Further details can be found in the thesis

SUMMARY

Reducing the number of cars in circulation on roads and streets is one of the main reasons for implementing fare-free public transport (FFPT) in terms of public policy, as it helps tackle the effects of climate change. However, academic evidence and outcomes of initiatives in Europe demonstrate that such an initiative is not enough to promote modal change. On top of that, a survey conducted in the Lisbon's Metropolitan Area demonstrates that the population values other public transport characteristics such as frequency and network coverage rather than price.

INTRODUCTION

The usage of private cars is perceived as one of the contributors to greenhouse gas (GHG) emissions. And, even if we convert all the internal combustion fleets to electric or hydrogen sources, some effects remain in society, like noise pollution and congestion, which has a side effect of lost time for drivers and their passengers - a driver is not allowed to do anything but pay attention to the road.

Reducing GHG emissions is mandatory, although there is a long road ahead. That does not correspond to the political timings. With elections occurring every four years, local, regional and national leaders need to show they care about the environment and sustainable mobility. Over the years, the introduction of FFPT has become an important measure to attract people to public transport.

Despite the popularity of the initiative and the academic consensus about FFPT initiatives, there are not many research papers reflecting on the effects of reducing car traffic in the cities. This Master's thesis

intends to understand which are the concrete modal shift effects, which are the real benefits and what costs for taxpayers.

METHOD

This Master's thesis aimed to develop and further discuss how FFPT is an effective initiative to reverse the usage of private cars for commuting purposes. This required a combination of background information from experiences of FFPT and the case study in discussion, with a questionnaire for users of public transport and private cars in the Lisbon's Metropolitan Area to understand their choices.

The survey also wanted to learn what was the evaluation of certain characteristics of public transport, such as frequency, flexibility, comfort/place to sit, time of travel, number of changes, network coverage and reliability.

The academic research was conducted between November 2024 and January 2025. This information was also used to write the benchmark section of this Thesis and it was combined with information provided by official sources.

The online questionnaire asked users of public transport and private cars in the Metropolitan Area of Lisboa about why they take their options for their daily commuting and what are the reasons justifying it. A total of 321 valid answers were collected between the 15th of February and the 1st of April, 2025.

Information from secondary sources was researched while the questionnaire was being answered. Those sources provided data about travels to Lisboa by private car and public transport, socio-demographic information about the Portuguese population, different levels of net salary and the Sustainable Urban Mobility Metropolitan Plan.

RESULT

Lisboa is, by a long distance, the city which is the main destination of commuting for workers responding to this survey. Besides that, the majority of the respondents prefer to use public transport. However, private cars have almost as many users as public transport. When people are asked about whether they would skip the private car in case of a fare-free public transport, besides an increase in collective modes passengers, it does not necessarily correspond to an equivalent decrease in private car users.

The evaluation of public transport characteristics by the respondents explains why there are so many people still using the private car: collective modes do not provide enough frequency, flexibility and network coverage to convince people, even if it would be free of cost.

A fare-free initiative would also contribute to a weaker importance of all the characteristics of public transport, which could represent a deterioration in the quality of service, with consequences in the long term to promote sustainable mobility.

CONCLUSION

The academic evidence, combined with primary and secondary sources used to write this document, demonstrated that FFPT is not sufficient to reduce the number of car trips per day, to attract new types of passengers and that price, at the current costs of fares, is not the main reason why people choose public transport.

Without other interventions in the mobility ecosystem, FFPT is not sufficient to promote the necessary modal change to reduce road congestion and negative externalities to them associated: noise and air pollution, lost of quality of life, road accidents - with consequences to families and to the healthcare system -, less space for soft mobility – outdoor sport or social activities -, and less liveability.

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