

Are the policies of promoting bicycle use socially profitable?

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A study carried out by the research group Applied Economics & Management, which is based at the University of Seville, has included a Cost-benefit Analysis that estimates that the socio-economic returns of the constructions of the network of cycle paths in Seville. The work was based on a survey of more than 1,900 cyclists, who use both public and private bicycles. The project was financed with funds from the European Regional Development Fund and by the Agency for Public Works of the Junta de Andalucía, the Andalusian Regional Government.

The University of Seville Economics Professor, José Ignacio Castillo Manzano, main author of the study, states that "the policies promoting the use of bicycles are very intensive and extensive in the use of public space. Specifically, in the case of Seville, we are talking about 140 kilometres of cycle paths, plus the space needed for 260 public [bicycle](#) stations and the different bicycle parking areas that have been constructed. This significant use of [public space](#) tends to be the cause of social conflict, and only a positive social return can justify the investment in cycling infrastructure. Its

success, in turn, will depend on variables that the planners cannot control, such as the city's hilliness or level of rainfall.

Published in the internationally recognised review *Land Use Policy*, this project provides the first long-term economic evaluation of the adoption of pro-cycling policies by a Spanish city. To be precise, the time period chosen for the study starts from the first construction of the cycle-path network and look 25 years ahead in its use, to 2032.

On one hand, they have considered both the construction and maintenance costs of the [cycling infrastructure](#), as well as those derived from a possible increased accident rate, due to accidents involving cyclists and car drivers. In light of these costs, they have quantified the undeniable economic benefits, like the savings in the usage and maintenance costs of motor vehicles, the monetary value of the time saved travelling from one place to another on a bicycle, especially for users of public transport, and the drop in the mortality rate due to cycle-path users getting more physical exercise, plus reduced costs due to the reduction of emissions of pollutants, such as HC, NOx, CO₂, SO₂ and particles, each of which has been considered and estimated individually.

Once all the calculations and estimations were complete, it can be shown that there is a social profitability of an average of 130% (on a range of between 116 and 144%) on the public investment made, giving a positive return estimated at some 550million euros for the city of Seville. According to Castillo, "we are talking about an extraordinary rate of social profitability when compared to investment made in transport infrastructure generally, and urban infrastructure in particular, in the recent history of our country. In addition, we adopted a conservative approach, which has probably underestimated the profitability of this policy".

According to the experts, the estimated profit would

be higher if the study had taken into account other clear benefits for the city, such as the reduction of traffic and noise levels. Neither were the economic benefits from the national and international promotion that the use of the bicycle has given to the city taken into account, as Seville has become an example of the rapid success of these policies in cities without previous tradition of bicycle use, that is to say, with marginal use in the past.

Provided by University of Seville

The author also highlights that it is not enough to have a good cycle-path network or bike-rental system. The policy also needs to be accompanied by investment in maintenance and complementary services that favour this change in habits, mainly places to safely and securely park bicycles at the starts and ends of routes. Without these, the long-term success will be limited. "In fact, if the case of Seville shows us anything, it is that without these other measures, the bicycle, as a means of urban transport, will probably enter a period of stagnation, not to say actual decline".

Finally, the article defends the general need to evaluate the socio-economic profitability of all major investment in transport infrastructure, not only that in cycling, especially in a country with a clear tendency towards overspending in such projects. Castillo says that this overspending can be explained, on one hand, by the terms which constructors dictate when renegotiating these cost overruns, added to the strict correlation between corruption and spending on major transport infrastructure projects. "Artificially multiplying infrastructure and its budgets, allows for the possible commissions associated with corruption to be maximised", Castillo points out. The evaluation of the social and economic profitability of [infrastructure](#) projects would lessen the impact of these illegal incentives, at the same time as, according the experts, forcing investment to be more selective, in a climate such as the current one of budgetary restraint.

More information: Raúl Brey et al, Is the widespread use of urban land for cycling promotion policies cost effective? A Cost-Benefit Analysis of the case of Seville, *Land Use Policy* (2017). [DOI: 10.1016/j.landusepol.2017.01.007](https://doi.org/10.1016/j.landusepol.2017.01.007)

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