Do urban tolls really help us breathe easier? An evaluation of the impact of urban tolls on air quality

RÉSUMÉ

We study the environmental impact of the London Congestion Charge (LCC) using a Synthetic Control (SCM) approach applied to the concentrations of several pollutants associated with traffic. We proceed in two steps: we first apply the SCM at the city scale, basing on the Urban Audit, and show that the LCC decreased the number of days with PM10 and Ozone concentrations above the European standards. At the city scale, we can compare the composition of the pool of cities retained to construct the counterfactual. In a second step, we adopt the pollution station scale in order to treat more refined data on air pollution. This allowed us to distinguish between within, boundary and outside LCC zone stations. We show that the introduction of the LCC and its extension has significant impacts on PM10 concentrations, and that the latter also had an impact on NOx concentrations. While these positive results, we show a significant increase on NO2/NOX ratio which reveal an evolution of traffic composition toward Diesel vehicles.