

# In addition to saved travel time, the London congestion charge has saved lives

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*What was the effect of the London congestion charge on traffic accidents injuries and fatalities? Research by [Colin Green](#) finds that the introduction of the London congestion charge reduced the count of traffic accidents in Central London by 30 a month – an enormous 40 per cent reduction. Accidents that result in individuals being killed or seriously injured (KSIs) also fell, by just under 4 a month, or 45 a year.*



London holds the title of one of the world's most congested cities. Transport for London reported average road travel speeds of just 8.6 mph for the early 2000s, with 1/3 of all travel time spent simply not moving. In response, London introduced in 2003 a £5 charge for motor vehicles to enter the central district. Economists have long called for such charges as they serve to internalise the otherwise external social cost that drivers create by increasing congestion for other drivers. Thus, when deciding whether or not to drive into Central London, the individual now faces both their own private cost but also a charge aimed at incorporating the social cost into their decision. While not without controversy, the policy reduced traffic congestion during the times of the charge, weekdays from morning to early evening.

The introduction of congestion charging influences traffic accidents, and related injuries and fatalities. On the one hand, less traffic naturally implies less accidents. On the other hand, the resulting higher travel speeds likely increase the severity of accidents that do occur. This, combined with the fact that some of the reduction in private cars entering the zone coincided with an increase in bike and motorcycle traffic, suggests an increase in severe traffic related injuries. Indeed, it has been claimed that injuries and deaths of cyclists increased following the introduction of the charge. A related issue is whether the accident rate per distance changed, rather than simply the total accident count. Only if the likelihood of an accident actually falls can economists say the external costs were, at least partially, internalised. [Joint research](#) with John Heywood (University of Wisconsin-Milwaukee) and Maria Navarro (Lancaster University) seeks to address these issues using administrative data on traffic accidents matched to the timing and characteristics of the congestion charge and its area.

An obvious difficulty is that we simply do not know what would have happened to accidents in the London congestion zone in the absence of the charge. This means we must identify an appropriate comparison group. We adopt a variety of definitions that use the most populous 20 cities in Britain, not including London. We contrast the change in accidents in the congestion charge zone to the change over the same period in these other cities. We use the fact that a downward trend in accidents happens in both London and the comparison group to more accurately identify the influence of the charge. Our main result is that introducing the congestion charge reduced the count of traffic accidents in Central London by 30 a month – an enormous 40 per cent reduction. Accidents that result in individuals being killed or seriously injured (KSIs) also fell, by just under 4 a month, or 45 a year. In addition to saved travel time, the congestion charge saved lives.

Does this reduction just reflect fewer vehicles in the zone? Mapping traffic flow data to the congestion zone we constructed a measure of the rate of accidents – the number of accidents per million miles driven in the zone. We found large reductions in the probability of a given traveller experiencing an accident, injury or fatality in the zone. For instance, the probability of being killed or seriously injured in a motor vehicle accident fell by approximately 20 per cent. The charge did reduce the number of vehicles in the zone but it also made it safer for those drivers that remained. This approach also allows us to reconcile the earlier debate over bicycle injuries and deaths. There was an initial increase in accidents involving cyclists, roughly one and a half a month up to 2005. Yet, by the end of 2006 this had reversed. And at all times the congestion charge led to a reduction in the *rate* of cycling accidents. This

initial increase in accident levels reflects markedly higher bicycle usage, consistent with it being explicitly encouraged as alternative transport to charged vehicles.

A final policy concern is that the charge just moves the traffic, and hence accidents, to other parts of London, to other times of day, and to non-charged vehicles. We find no evidence of such movement and, to the contrary, find there large positive spill-overs from the policy. Charging in Central London decreased accidents dramatically in an area of 4kms radius around the congestion zone. Similarly there were reductions in in non-charged times (before 7 am and after 6 pm) and for exempt vehicles (largely bicycles, motorcycles, taxis and buses).

These findings are important in terms of the considering the broader public benefits of the London Congestion Charge. They also represent a dimension to be reflected by policy makers, and the general public, in other jurisdictions who have either subsequently implemented congestion charges (Milan, Singapore), have rejected a charge (Manchester, Manhattan) or in the process of putting it to vote (Vancouver). One important note for future policy makers is that London returned the proceeds from the congestion charge into improving mass and alternative transit. Thus, we have measured both the influence of the charge and how it was spent.

*Note: This article gives the views of the author, and not the position of the British Politics and Policy blog, nor of the London School of Economics. Please read our [comments policy](#) before posting. Featured image credit: [Gregory Rinaldi](#) CC BY-SA 2.0*

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