

London tube strike produced net economic benefit

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Credit: Jase Curtis

New analysis of the London tube strike in February 2014 finds that it enabled a sizeable fraction of commuters to find better routes to work, and actually produced a net economic benefit.

Analysis of the London tube [strike](#) in February 2014 has found that despite the inconvenience to tens of thousands of people, the strike actually produced a net economic benefit, due to the number of people who found more efficient ways to get to work.

The researchers, from the University of Cambridge and the University of Oxford, examined 20 days' worth of anonymised Oyster card data, containing more than 200 million data points, in order to see how individual tube journeys changed during the strike. Since this particular strike only resulted in a partial closure of the tube network and not all [commuters](#) were affected by the strike, a direct comparison was possible. The data enabled the researchers to see whether people chose to go back to their normal commute once the strike was over, or if they found a more efficient route and decided to switch.

The researchers found that of the regular commuters affected by the strike, either because certain stations were closed or because travel times were considerably different, a significant fraction – about one in 20 – decided to stick with their new route once the strike was over.

While the proportion of individuals who ended up changing their routes may sound small, the researchers found that the strike actually ended up producing a net [economic benefit](#). By performing a cost-benefit analysis of the amount of time saved by those who changed their daily commute, the researchers found that the amount of time saved in the longer term actually outweighed the time lost by commuters during the strike. An Oxford working paper of their findings is published online today.

The London tube map itself may have been a reason why many commuters did not find their optimal journey before the strike. In many parts of London, the actual distances between stations are distorted on the iconic map. By digitising the tube map and comparing it to the actual distances between stations, the researchers found that those commuters

living in, or travelling to, parts of London where distortion is greatest were more likely to have learned from the strike and found a more efficient route.

Additionally, since different tube lines travel at different speeds, those commuters who had been travelling on one of the slower lines were also more likely to switch routes once the strike was over.

"One of the things we're looking at is whether consumers usually make the best decision, but it's never been empirically tested using a large consumer dataset such as this one," said co-author Dr Ferdinand Rauch from Oxford's Department of Economics. "Our findings illustrate that people might get stuck with suboptimal decisions because they don't experiment enough."

According to the authors, being forced to alter a routine, whether that's due to a tube strike or government regulation, can often lead to net benefits, as people or corporations are forced to innovate. In economics, this is known as the Porter hypothesis.

"For the small fraction of commuters who found a better route, when multiplied over a longer period of time, the benefit to them actually outweighs the inconvenience suffered by many more," said co-author Dr Shaun Larcom of Cambridge's Department of Land Economy. "The net gains came from the disruption itself."

"Given that a significant fraction of commuters on the London underground failed to find their optimal route until they were forced to experiment, perhaps we should not be too frustrated that we can't always get what we want, or that others sometimes take decisions for us," said co-author Dr Tim Willems, also from Oxford's Department of Economics. "If we behave anything like London commuters and experiment too little, hitting such constraints may very well be to our

long-term advantage."

More information: "The Benefits of Forced Experimentation: Striking Evidence from the London Underground Network."

[www.economics.ox.ac.uk/Departm ... -underground-network](http://www.economics.ox.ac.uk/Departm...-underground-network)

Provided by University of Cambridge

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