

Congestion Charge

need or not?

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What is “Congestion Charge”

Cars are good, but too many cars aren't.
Obviously, there are many problems caused
by traffic jams.

- traffic delays
- productivity decline
- air/noise pollution

let's **assume** the goal of roads are to **move
as many vehicles as possible**, since if
“fluent” enough the problems is solved.

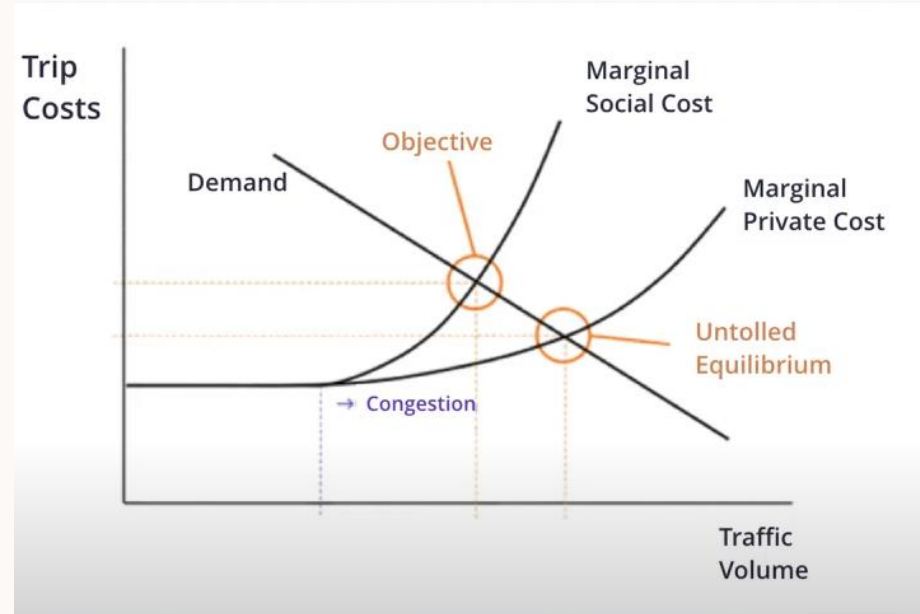


What is “Congestion Charge”

Obviously, congestion **cannot be eliminated** by normal market mechanisms.

To keep the traffic flow at the level of the purple line pointed, the easiest way is to **internalize the external costs** (to charge).

Even better, the government could use these “income” to **cover road maintenance cost**.

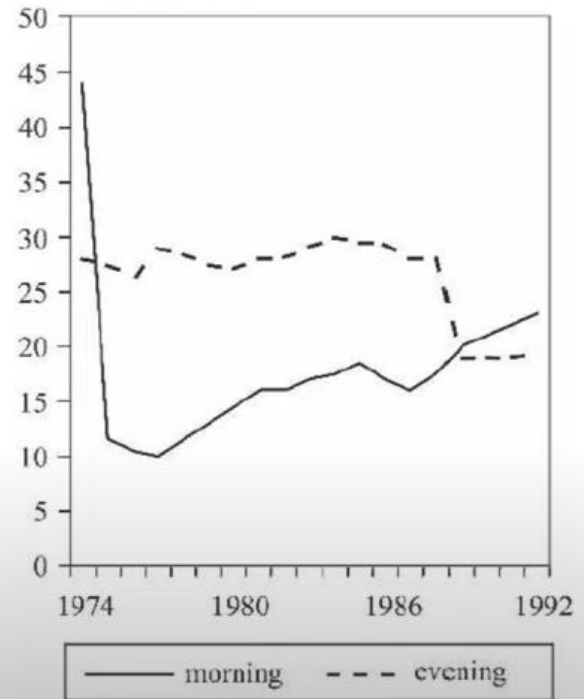


The origin: Singapore

Congestion charge originated in Singapore in 1975 with a name of "Area Licensing Scheme".

- A "sticker" a day for in-and-out CBD
 - \$3 (bus fare x2)
 - free if ≥ 3 passenger
- Requires labor for both citizen and government

THOUSANDS OF CARS AND TAXIS TRAVELING IN SINGAPORE'S RESTRICTED ZONE DURING PEAK HOURS



SOURCE: Polak, Olszewski, and Wong (1994:325).

The origin: Singapore

Electronic Road Pricing started from 1998.

- Automatic gantries instead of sticker and officers
- A large consecutive large portion is marked
- price depend on where and when you drive

A “saying” is that ERP system reduced the traffic levels by 15%

Time Period	Current ERP Rates*	ERP Rates** w.e.f. 1 August 2022
AYE after Jurong Town Hall towards City (Set of 3 Gantries)		
8:00 - 8:30	\$1.00	\$2.00
8:30 - 9:00	\$2.00	\$3.00
17:30 - 18:00	\$1.00	\$2.00
Southbound CTE after Braddell Road & PIE Slip Road into Southbound CTE (Set of 4 Gantries)		
8:00 - 8:30	\$2.00	\$3.00
KPE (ECP) after Defu Flyover		
7:30 - 8:00	\$1.00	\$2.00
8:00 - 8:30	\$1.00	\$2.00
8:30 - 9:00	\$2.00	\$3.00
Northbound CTE after PIE (Set of 2 Gantries)		
19:00 - 19:30	\$1.00	\$2.00

*ERP rate per Passenger Car Unit (PCU)

**Rates for other time slots at previously announced gantries remain unchanged

The case of London

Congestion charge started from 2003.

- daily fee £10(at that time) entering city

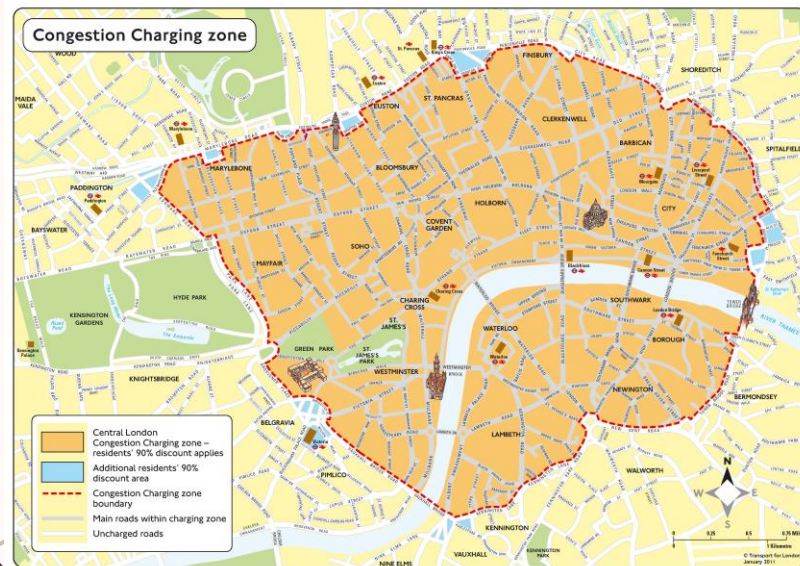
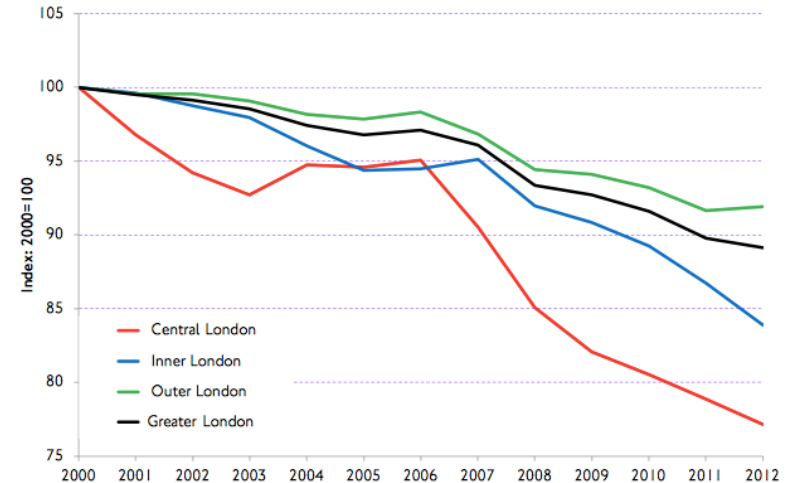
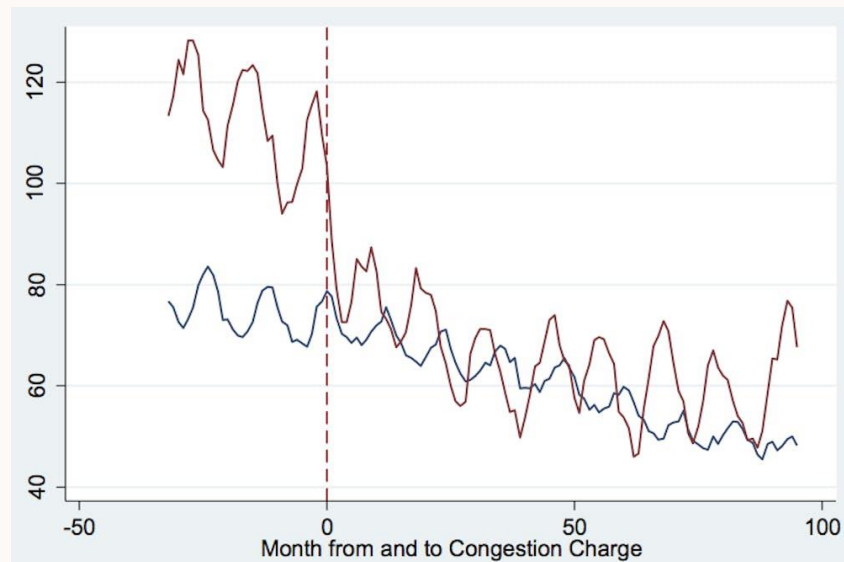
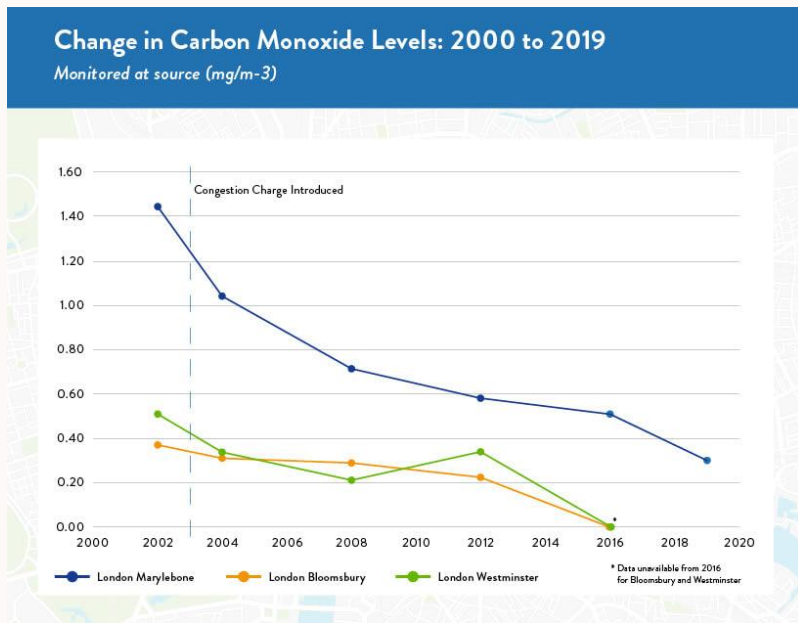


Figure 3.10 Trends in road traffic (vehicle kilometres), all motor vehicles in central, inner and outer London. Index: Year 2000=100.



Source: Department for Transport.

Other benefits



Reduce Inequality

City roads are not highways, **speed is not the only aspect we care** about.

Cars sit stationary about 95% of the time (Donald Shoup).

These valuable **urban space** could be used for other more productive purposes, such as **parks, sidewalks**, or houses.

After all, cities are for people, not for cars.



Neihu Problem

Neihu Science Park is located here;
therefore 100,000 people rush in and out in a
short period of time during working days.

There are too few bridges for external
communication.

Although it's therefore easy to execute such
policy, but people still have to go there to
work with no alternative way to avoid the
charging area.





Thanks!

Do you have any questions?