

NEW POLICIES FOR CONGESTION AND ACCIDENT

THAILAND AND CHINA CASES

OUTLINE



Introduction



Fine plan 'would ease' Bangkok traffic



Police want old cars off Bangkok roads



China's case

Introduction

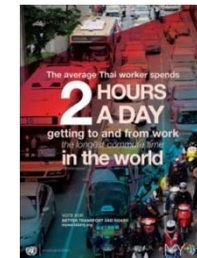
- How many hour(s) you have to prepare for going to the university ?
- If it is rainy or having car accident on the road, what would you expect to happen ? ...LATE?...
- Can you predict the traffic in Bangkok ?



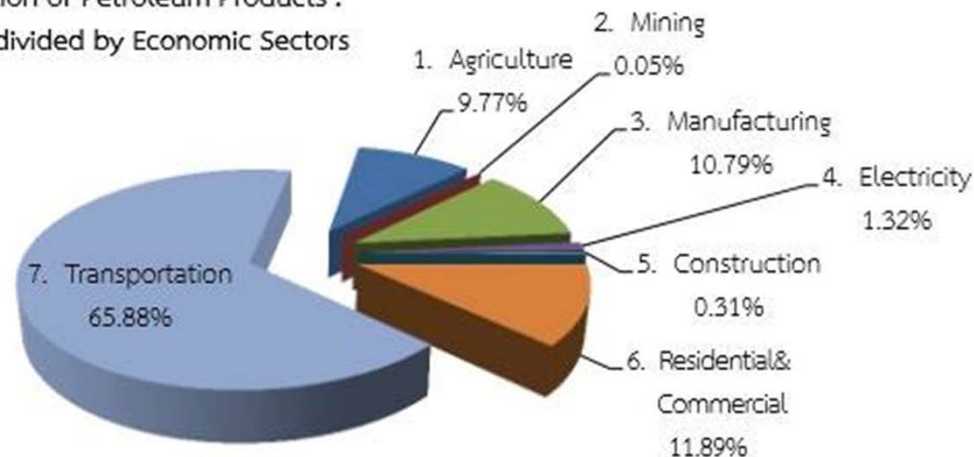
Introduction

■ DO YOU KNOW THAT ?....

- Thai people spends about **2 HOURS** a day commuting work which is **LONGEST** in the world. (Source: MyWorld)
- **HIGHEST** level of petroleum consumption is spend on transportation which is **65.88%**



Consumption of Petroleum Products :
Year 2012 divided by Economic Sectors

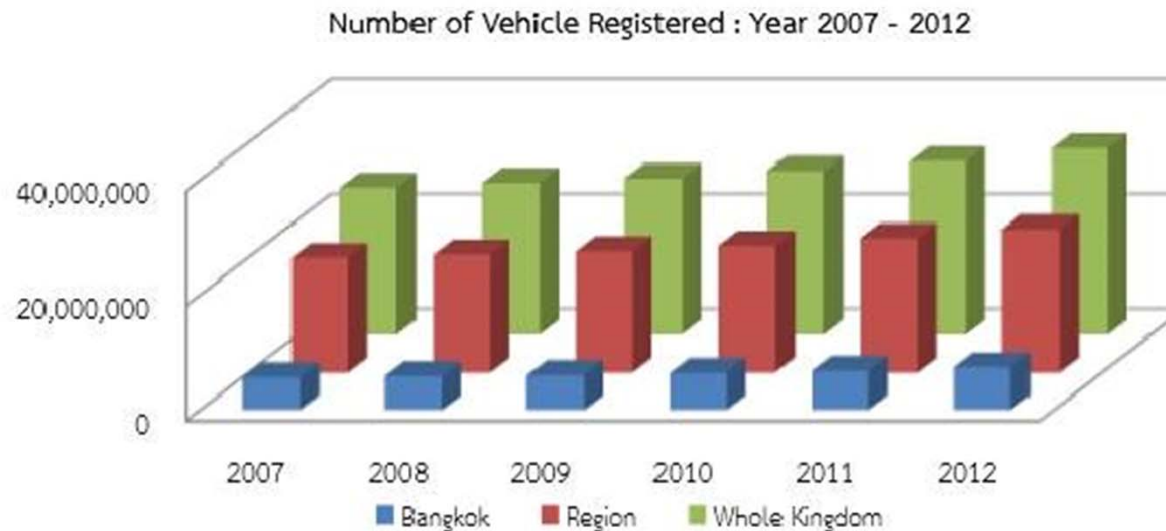


(Source: OTP)

Introduction

■ DO YOU KNOW THAT ?....

- Bangkokians consume **HIGHEST** level of petroleum among other regions. (Source : OTP)
- The number of vehicle registered in Bangkok has **HIGHEST** proportion relative to whole country compared with other regions.

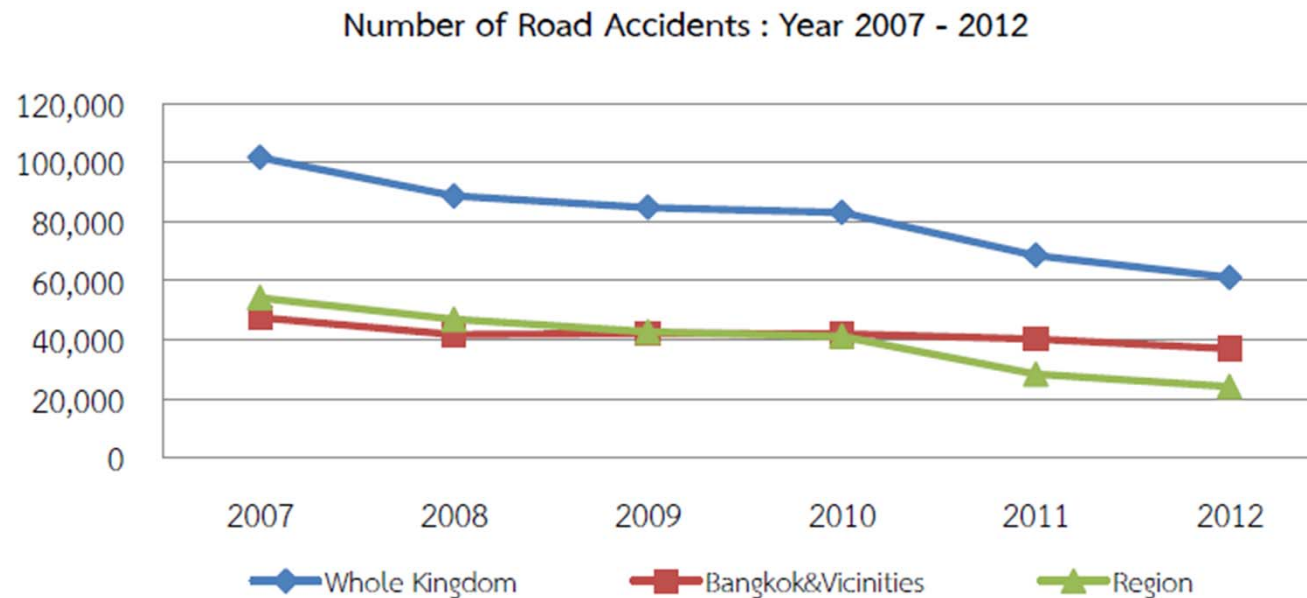


(Source: OTP)

Introduction

■ DO YOU KNOW THAT ?....

- Bangkok also has **HIGHEST** level of road accident in the region and relatively high level to the whole country.



(Source: OTP)

Introduction

■ DO YOU KNOW THAT ?....

- The **LOWEST** traveling speed in the peak period is at **16.2** km/hr.

Unit : km/hr.

Travel Speed		2007		2008		2009		2010		2011	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Survey*	Ratchadaphisek Ring Road (Vicinity)	28.5	30.1	30.1	28.5	29.1	32.7	30.3	30.6	27.8	31.7
	Main Road in Bangkok	18.8	26.0	19.4	23.4	19.4	23.9	18.9	23.3	18.5	22.4
extended Bangkok Urban Model (eBUM)	Main Road in Bangkok	17.6	20.2	19.9	23.3	21.8	23.2	16.7	20.3	16.2	19.6
Percentage Different (%)	Main Road in Bangkok	-6.4	-22.3	2.6	-0.4	12.4	-2.9	-11.6	-12.9	-12.4	-12.5

Source : Office of Transport and Traffic Policy and Planning

Remark : * : AM Peak : 6am - 9am/In Bound

PM Peak : 4pm - 7pm/Out Bound

Introduction

■ DO YOU KNOW THAT ?....



Introduction

- Recently, there are NEW POLICIES created to solve the traffic problems.

- THAILAND:

- (1) ***Fine plan 'would ease' Bangkok traffic***
- (2) ***Police want old cars off Bangkok roads***

Note that these 2 policies have not been enforced yet, both of them just being promote publicity.

- BEIJING,CHINA:

- (1) ***Restrictions of pollutions and cars usage by allowing cars with different ending number on a license plate , odd and even number, to drive on the different day.***



A

CASES IN THAILAND



1

Fine plan 'would ease' Bangkok traffic



Fine plan 'would ease' Bangkok traffic

- Mr. Sriracha Charoenpanich the Ombudsman, have suggested some ways to ease Bangkok traffic which are:

- Fined the owner of the vehicles 100 baht for each minute it takes them to move broken-down vehicles off the road

Suggestion1:



- Check the owner of the vehicles and the owner of the building that they have enough parking space or not

Suggestion2:



- Public trains, buses, and boat services need to be better connected

Suggestion3:



Fine plan 'would ease' Bangkok traffic



- The logic behind this suggestion is that:
 - This punishment would improve traffic and also prompt drivers to regularly perform maintenance on their vehicles
 - The broken-down vehicles and parking vehicles on the road would cause a lot of problem to the traffic
 - Increase level of public transportation would help solve traffic problems

- This policy is aim to:
 - Reduce the traffic congestion in Bangkok
 - Increase the rate of vehicles maintenance for each driver
 - Make the rate of broken vehicles on the road lower

Fine plan 'would ease' Bangkok traffic

ADVANTAGES

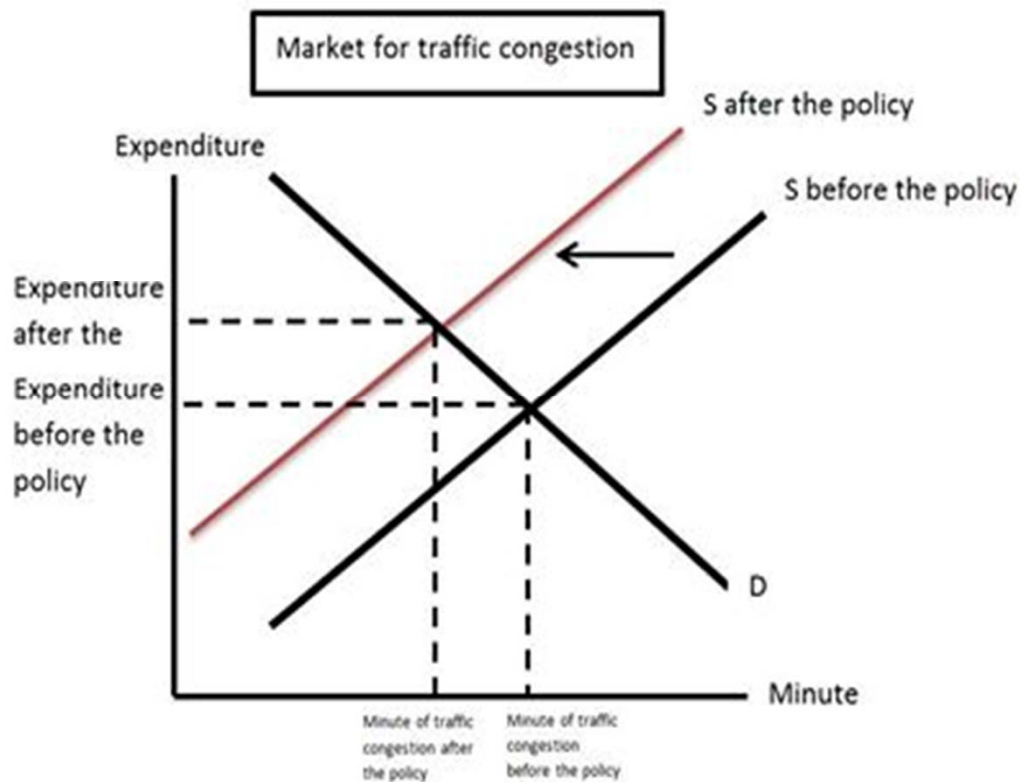
- This policy would reduce the congestion level in Bangkok.
- Increase the level of vehicles maintenance in Bangkok.
- Reduce the broken-down vehicles rate in Bangkok.
- Improve the public transportation connection in Bangkok.

DISADVANTAGES

- The cost for the vehicles driver to drive in Bangkok would be very high
- The structure of the public transportation in Bangkok is hard to connected
- Might be a wasted of time, as this policy have a chance that the vehicles owner will not follow the law enforcement

Fine plan 'would ease' Bangkok traffic

■ Economics Interpretation:



MARKET FOR TRAFFIC CONGESTION

- We expect that after policy is effectively enforced, the supply of the market will shift to the left
- The user of the vehicles expect that the expenditure for using vehicles will be higher.
- Since the fined and maintenance cost incurred.
- Therefore, the minute of traffic congestion goes lower.

RESULTS:

- Higher expenditure ($P \uparrow$)
- Lessen minute of traffic congestion ($Q \downarrow$)

2

Police want old cars off Bangkok roads



Police want old cars off Bangkok roads

- The police , Mr. Adul Narongsak , try to promote the new enforcements to **restrict old-age car usage** (between 7-10 years or above) in Bangkok. By giving 2 alternatives

- Not allowed your old-age car to travel in Bangkok

CHOICE1:



- Allow your old-age car to travel in Bangkok, BUT the owner have to pay the tax as high as brand new car.

CHOICE2:



Police want old cars off Bangkok roads



■ LOGIC BEHIND THE POLICY

- This policy was adopted from Japan.
- The policy aims to reduce...
 - (1) the number of car accident in Bangkok
 - (2) the number of car usage in Bangkok
- Ultimately, the goal of this policy is to solve the congestion problem in Bangkok .

Police want old cars off Bangkok roads

ADVANTAGES

- ***If the policy is successfully enforced,***
 - the congestion problems in Bangkok would be alleviated.
 - the number of car accident would be lessen.
 - the number of car usage would be lessen.
 - the public transportation will be more extensively use.

DISADVANTAGES

- ***The policy may fail to achieve because...***
 - the legal in Thailand might not be strong enough to conduct the policy.
 - the substitution goods (public transportation) still need a lot of improvement.
 - need other policies to back up the spill over effect from this policy (since the structure of automobile market would change)
 - Unequally income distribution of Bangkokians. (some not be able to change their car after 7 years)

ECONOMICS INTERPRETATION:

ASSUMPTIONS

- (1) The supply of available road space simply is limited in short run
- (2) Imposition of the policy has enough of the effects to shift the supply curve to the left.

MARKET FOR PRIVATE MOTORING

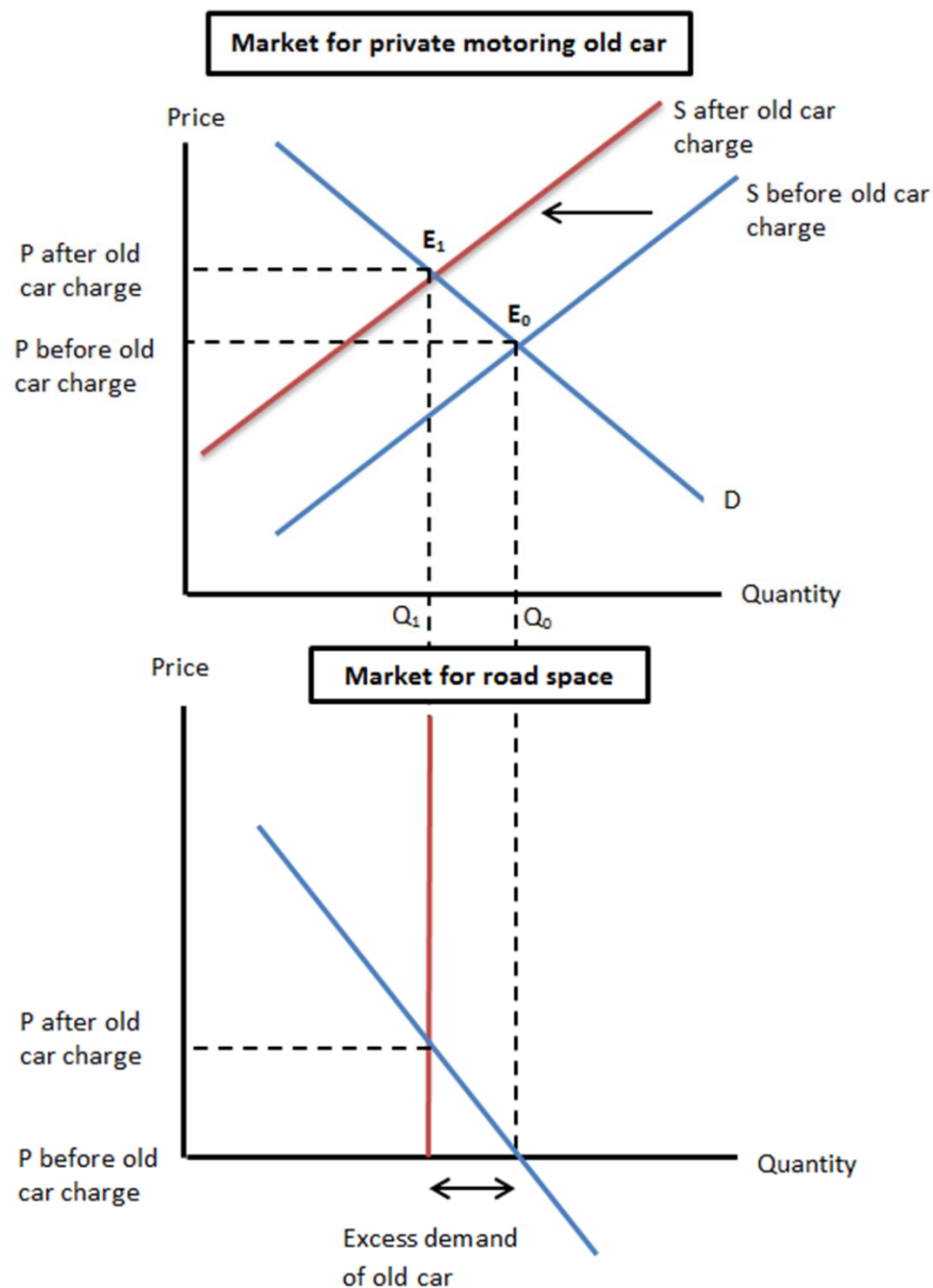
- Initially, the equilibrium in market for private motoring is at E_0 .
- Now the policy has been enforced in either ways ; prohibit old-age car to travel in Bangkok or allow to drive but require the tax payment as high as brand new car.
- Supply for private motoring old car $\downarrow$
- The price of private motoring old car $\uparrow$
- The quantity for private motoring old car $\downarrow$
- The equilibrium is now at E_1 .

MARKET FOR ROAD SPACE

- When quantity of private motoring old car decrease while the road space in Bangkok could not expand in short run, there is an excess demand of old car because some private motoring old car who refuse to pay the charge would not drive their car into the Bangkok.

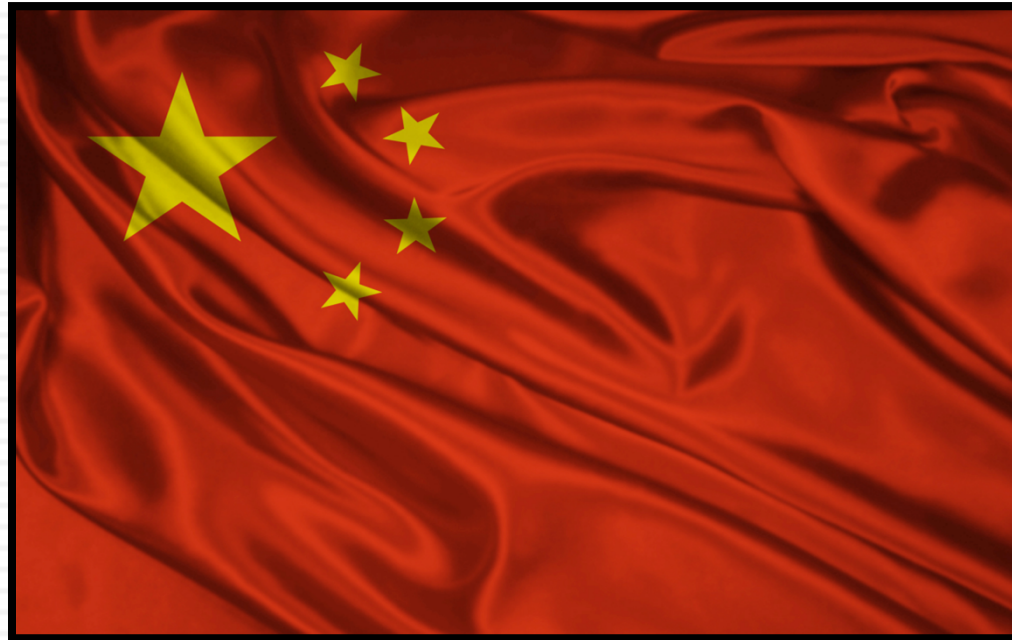
RESULTS:

- Higher price for private motoring old car ($P\uparrow$)
- Restrict the quantity of private motoring old car ($Q\downarrow$)
- **Excess demand** for market road space



B

CASES IN BEIJING, CHINA



Restrictions of pollution and car usage

- In Beijing, there are about 5 millions registered car traveling on the road and one-fourth of the population, 20 millions, have their own private cars.
- Thus ,due to the over number of cars travelling in Beijing, it not only faces with the congestion problems but also faces with the over limited pollution level.



Restrictions of pollution and car usage

- Nowadays, Beijing harshly experiences the pollution problems from industrial sectors and automobile usages.
 - * The pollution level in Beijing signaled by 4 levels : normal case(**blue**), more danger (**yellow**), danger(**orange**) and most dangerous (**red**)
- Especially on **automobile usage**, from the data , automobile usage create high pollution level ,22.2%, which is greater than emission level from the industrial sectors.
- In the case, this policy **primarily** aims to deal with the **over limited pollution level problems** which is the main and severe problem in Beijing year by year.

Restrictions of pollution and car usage



- LOGIC BEHIND THE POLICY

- This policy enforced by allowing the car with different ending number of license plate , odd and even number , to drive in the different day.
- This enforcement could be able to reduce the number of car usage per day , finally, reduce the pollution level in Beijing since the emission level from automobile are declining.

Restrictions of pollution and car usage

■ Economics Interpretations

MARKET FOR PRIVATE MOTORING

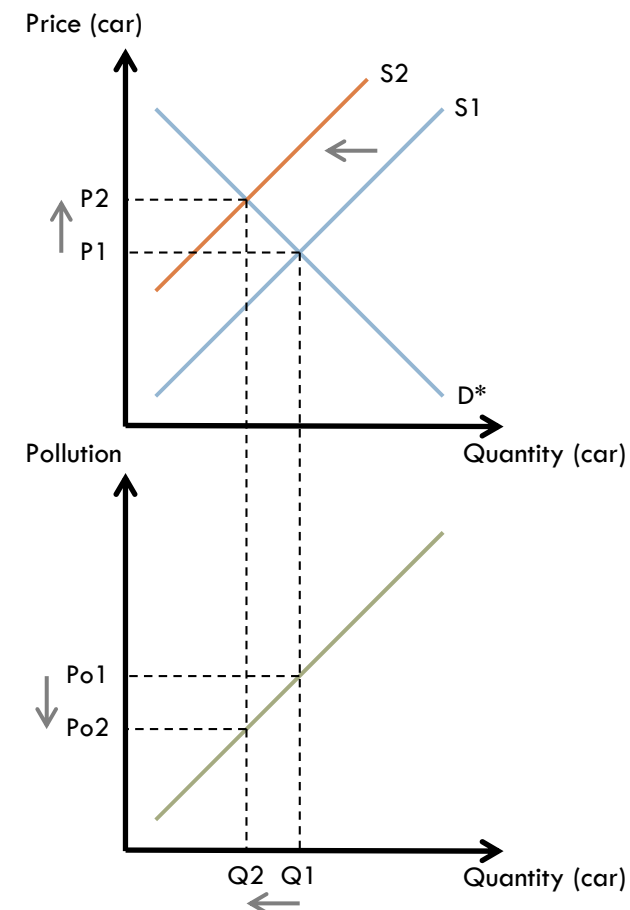
- We expect that after policy is effectively enforced, the supply of the market will shift to the left
- Price for having a car is higher because we can use less. ($P_2 > P_1$)
- Quantity of the car in the market will be less, as half of the car can use on other days. ($Q_2 < Q_1$)

Number of car and Pollution

- When there are less amount of car used on the road, then the amount of air pollution will become lower. ($Po_2 < Po_1$)

RESULT:

- Lower quantity of car on the road.
- Cost of each car get higher because we can use less.
- Amount of air pollution become lower.



THANK YOU