

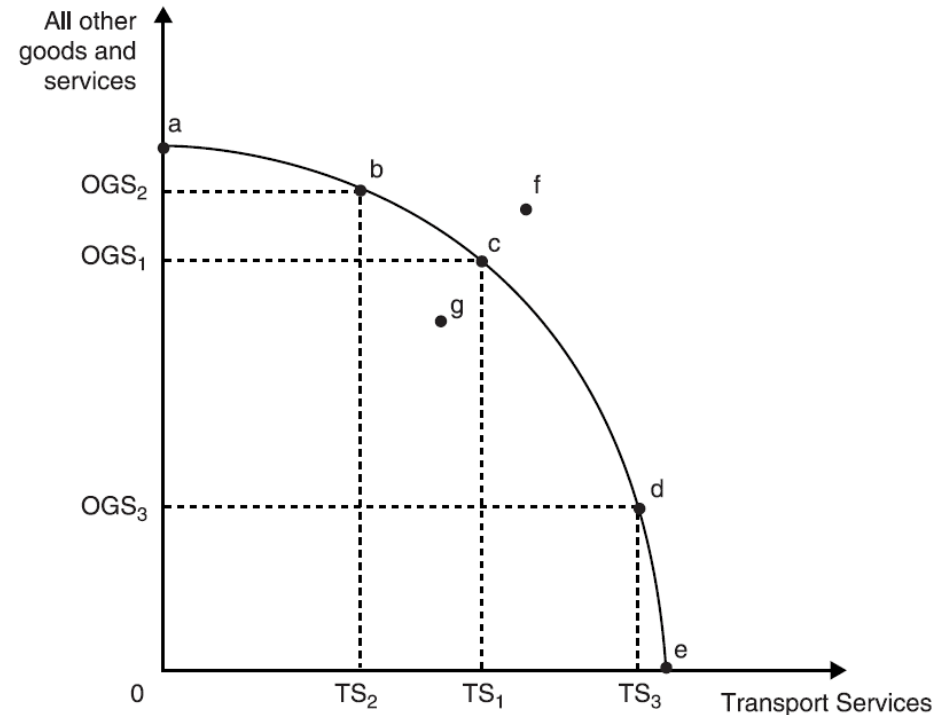
1. TRANSPORT MARKETS

Economics and transport

- Why study **transport economics**?
- Application of **microeconomic theory**
- Economic **toolkit**; economic way of thinking
- Better **understanding** of the underlying issues and principles

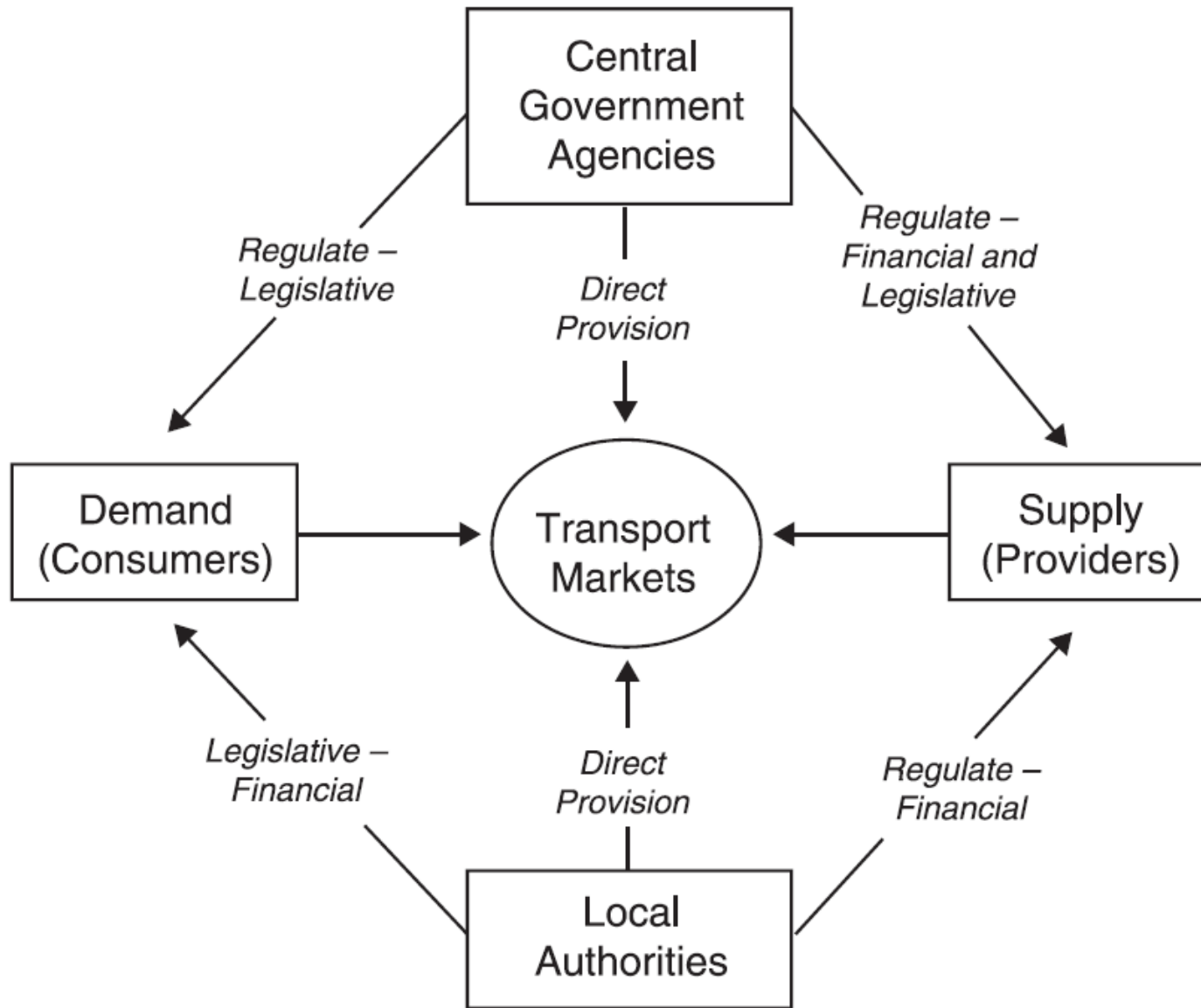
Scarcity and choice

- **What** to produce?
- **How** to produce it?
- And for **whom** to produce it?



Public and private provision

- **Command, free and mixed** market economies
- **Private and public** sector roles in the provision of public transport
- **Q1:** Are private operators more efficient?
- **Q2:** Would you recommend the privatization of the national rail operators in Europe?
- **Q3:** Is private ownership or competition more important in delivering efficiency?



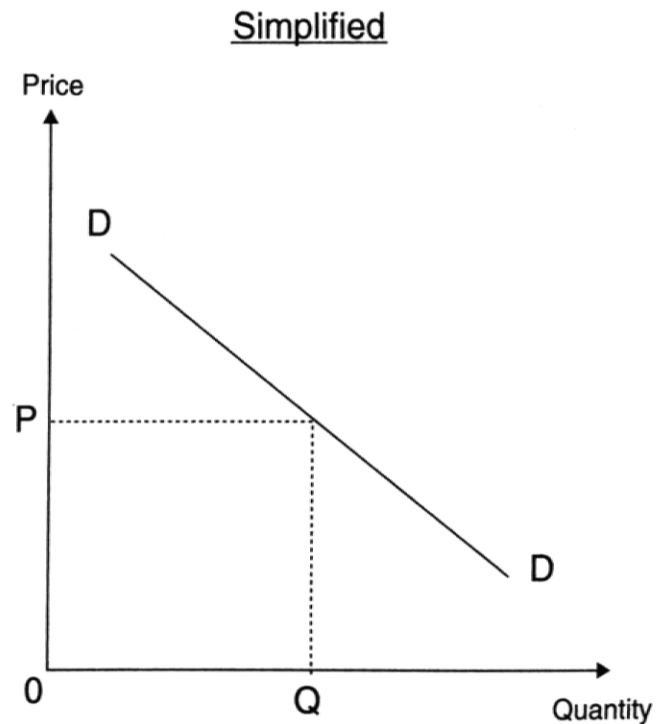
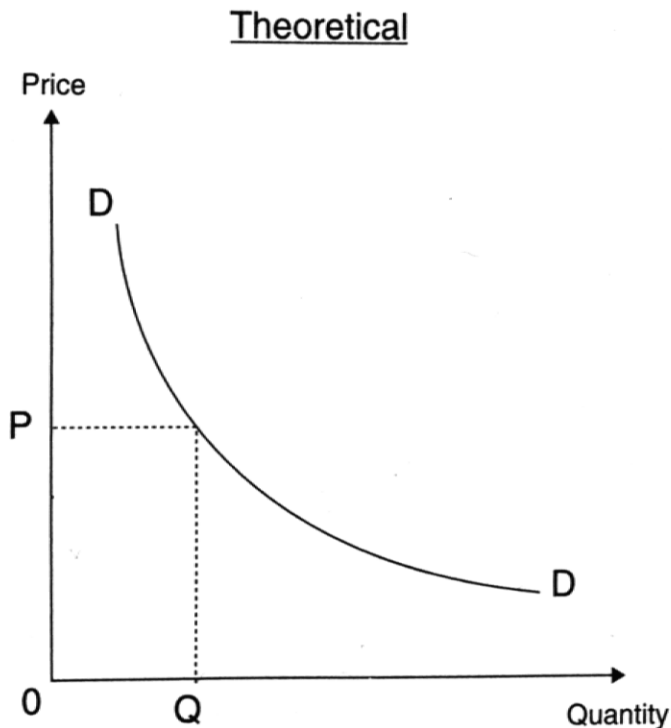
■ *Figure 1.2 The mixed transport market*

CASE: Glasgow public transport

	Operators	Structure	Fares and Services
BUS	PRIVATE	COMPETITION	MARKET
TRAIN	PRIVATE	MONOPOLY	REGULATED
UNDER GROUND	PUBLIC	MONOPOLY	REGULATED

Demand

Law of demand states that, all else being constant, as the price of a product increases (\uparrow), quantity demanded falls (\downarrow)



Demand determinants

- **Price** ↓
- **Income** ↑
- Price of **substitutes** ↑
- Price of **complements** ↓
- Fashion, trends, expectations

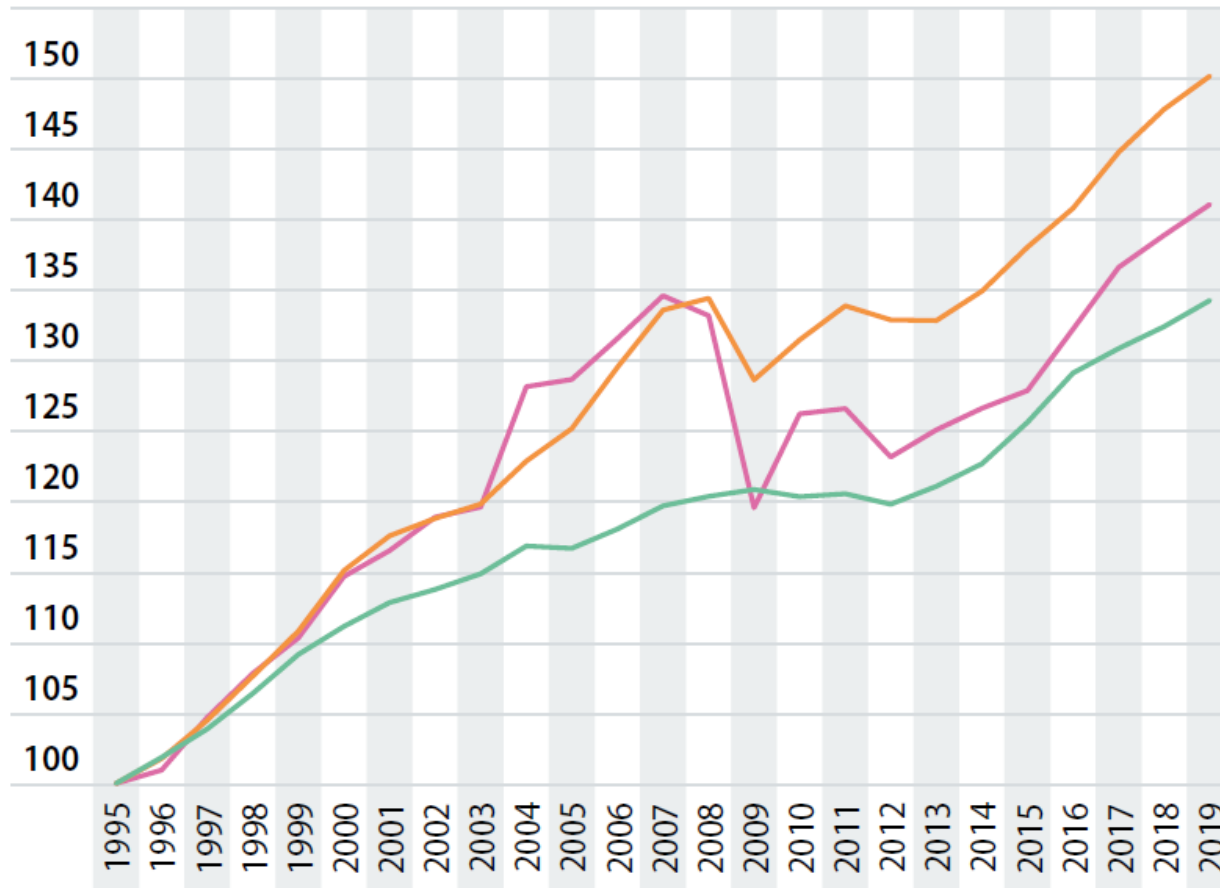
Demand for transport

- **Derived demand** → it usually follows the demand of individuals for something else
- **Time specific** → demand for transport has a very short expiry date
- **Follows peaks and troughs** → morning and afternoon rush hours

Economic and transport growth (EU)

PASSENGERS, GOODS, GDP 1995–2019

YEAR 1995 = 100



PASSENGERS (1) (pkm)

GOODS (2) (tkm)

GDP (AT CONSTANT YEAR 2005 PRICES)

Modal splits 2019 (%)

	EU	USA	Japan	China	Russia
FREIGHT					
Road	82	56	92	66	10
Rail	18	44	8	34	90
PASSENGER					
Car	82	92	1	38	n.a.
Bus	9	7	13	n.a.	49
Train	9	1	86	62	51

Nature or nurture?

- The paper examines the reasons for the difference in **rail's share of freight** in Europe and the United States.
- They find that **83%** of the gap in 2000 is probably due to **natural** or inherent differences, principally geography, shipment distance, and commodity mix.
- However, **17%** of the gap is presumably due to **public policies** including priority of passenger service, lack of interoperability at borders, service quality and rates, and incentives of the rail operators.
- We estimate that if that policy gap were closed, railroads' share of freight in Europe would increase from **8% to 13%**.

Vassallo, J. M., & Fagan, M. (2007). Nature or nurture: why do railroads carry greater freight share in the United States than in Europe?. Transportation, 34(2), 177-193.

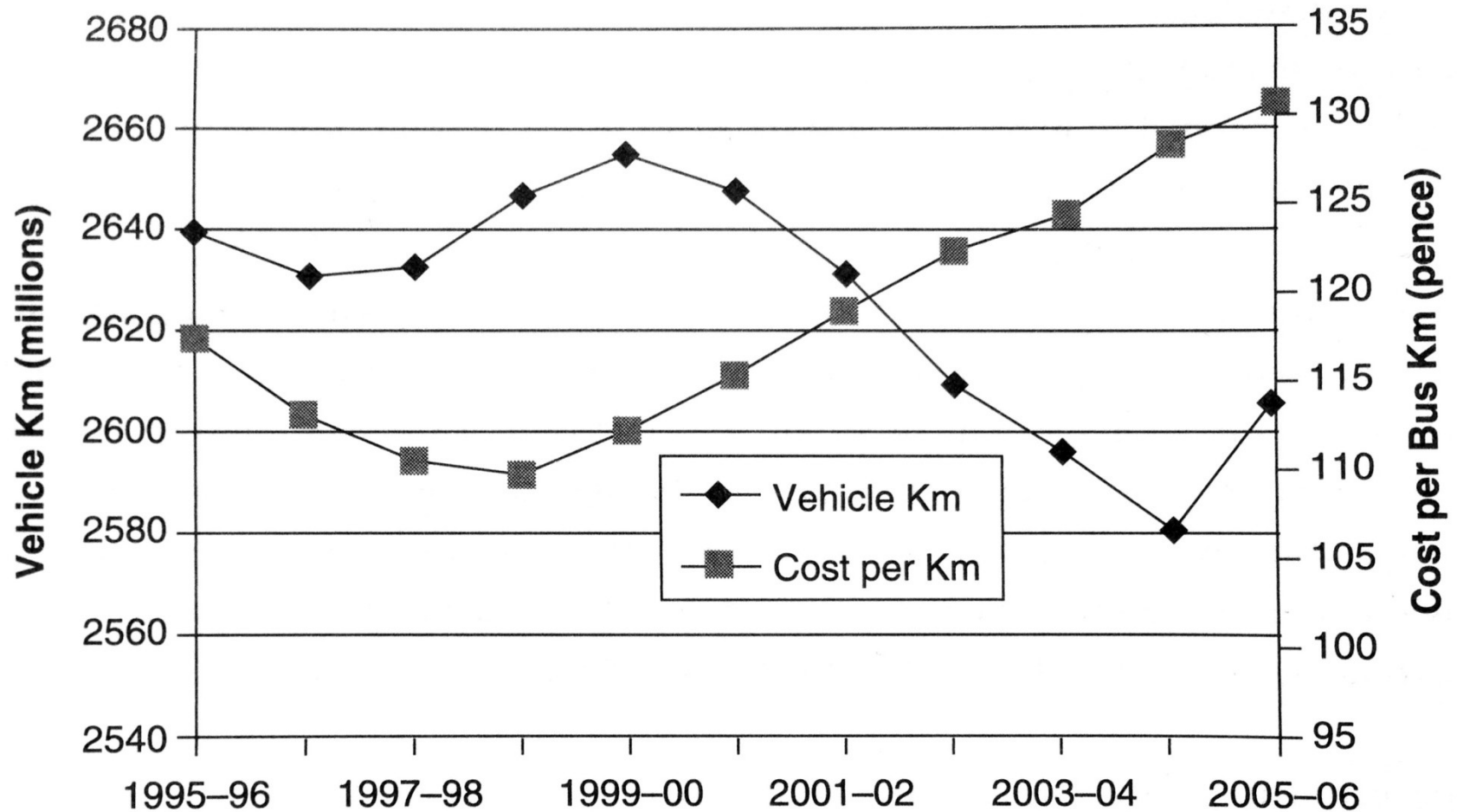
Theory of SUPPLY

The **law of supply** is a fundamental principle of economic theory which states that, all else equal, an increase in price results in an increase in quantity supplied

Supply determinants

- The **cost** of production → main factor
- Government **policy** → regulation, subsidy
- The price of goods in **joint supply** → passengers and freight
- **Aims** of producer → max. profits, revenue, employment

Case: British bus industry



Organization of Supply

- Monopoly or **Competition**?
- Privatization **or/and** Competition?
- Regulation or **Deregulation** (incl. Fares)?
- Laissez Fare or **Environmental/Social** Values?

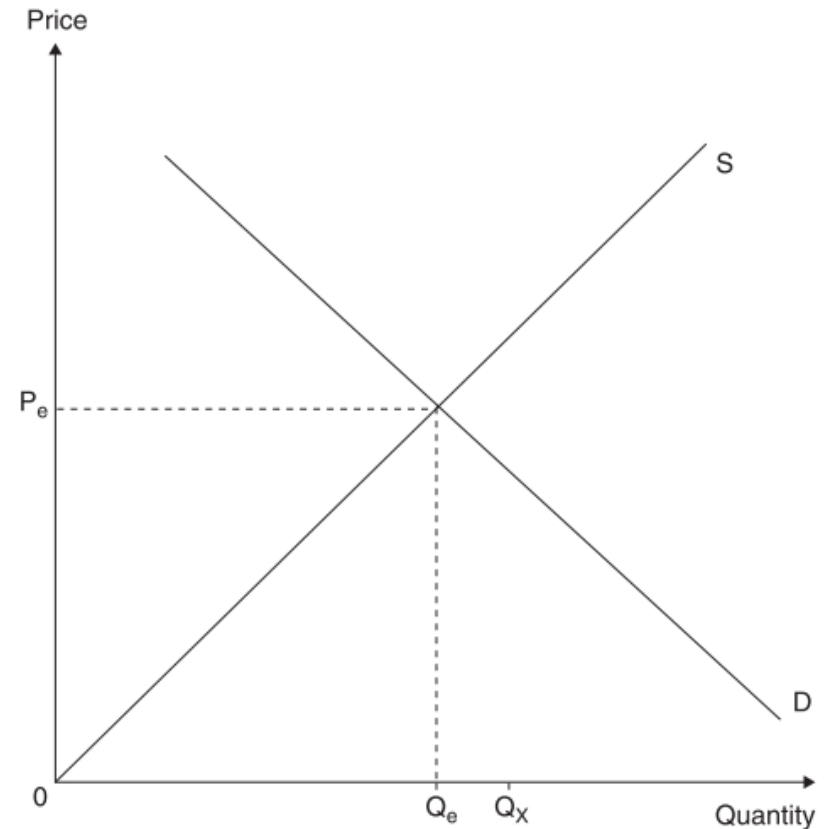
Market workings

- Putting together **demand and supply**
- Incorporate **market imperfections**
- Adding **government intervention** and regulation

EXERCISES

Increasing the use of the railways

- The EU wants an increase in the **use of passenger rail. T**
- The simple question is, **how assist the market to achieve this aim?**
- If we want an increase from the current position of Q_e to the level indicated by Q_x , then you should outline the various options available



Demand and supply exercises (1)

You should consider each of the following scenarios on the price and quantity traded for the market highlighted. You should identify what side of the market, demand or supply, is being affected, which particular determinant has changed and you should explain your reasoning at arriving at your answer:

- A general rise in incomes on the market for **bus services**
- A rise in the demand for passenger air travel on the market for **air cargo**
- An increase in fuel duty on the market for **road haulage services**

Demand and supply exercises (2)

- A fall in the costs of production of bus services on the market for **rail services**
- The publication of a government report on the detrimental effects of environmental change on the market for **private motoring**
- A weekend ban on lorry movements on the market for **rail freight**

Demand and supply exercises (3)

- The abolition of what had been strict government controls on the entry of new airline operators on **the airline market**
- The announcement of increased grants available for the installation of rail freight facilities (infrastructure) on the actual market for **rail freight services**
- A change in the short run aim of a **bus operator** that has a cost advantage away from profit maximisation to sale maximisation in order to eradicate the competition currently in the market

Case 3.3 – The market for urban road space – London car and bus usage

- Market for private motoring
- Market for road space
- Congestion
- Congestion charge (2003)
- The impact of charge → private car declined, PT increased

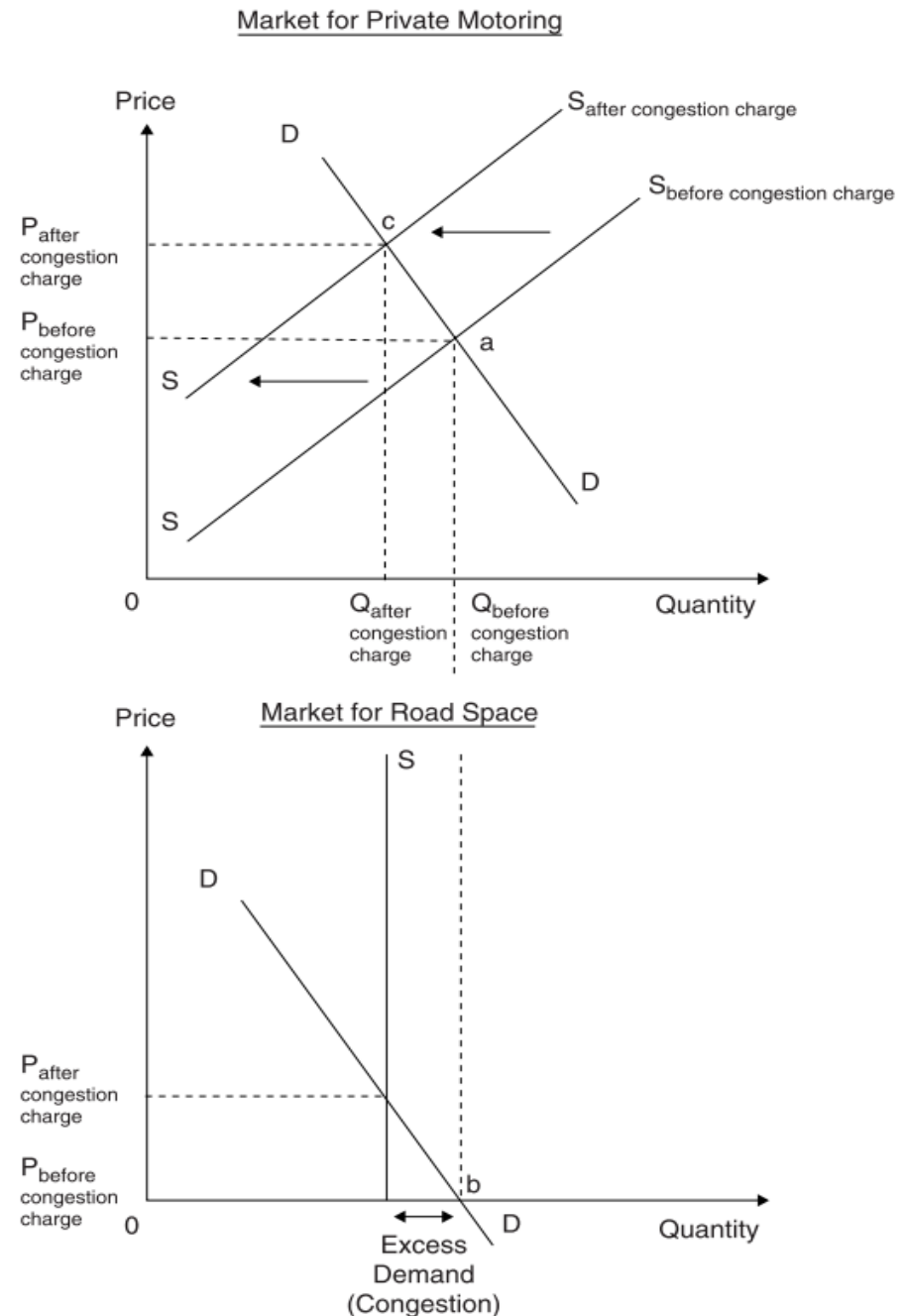
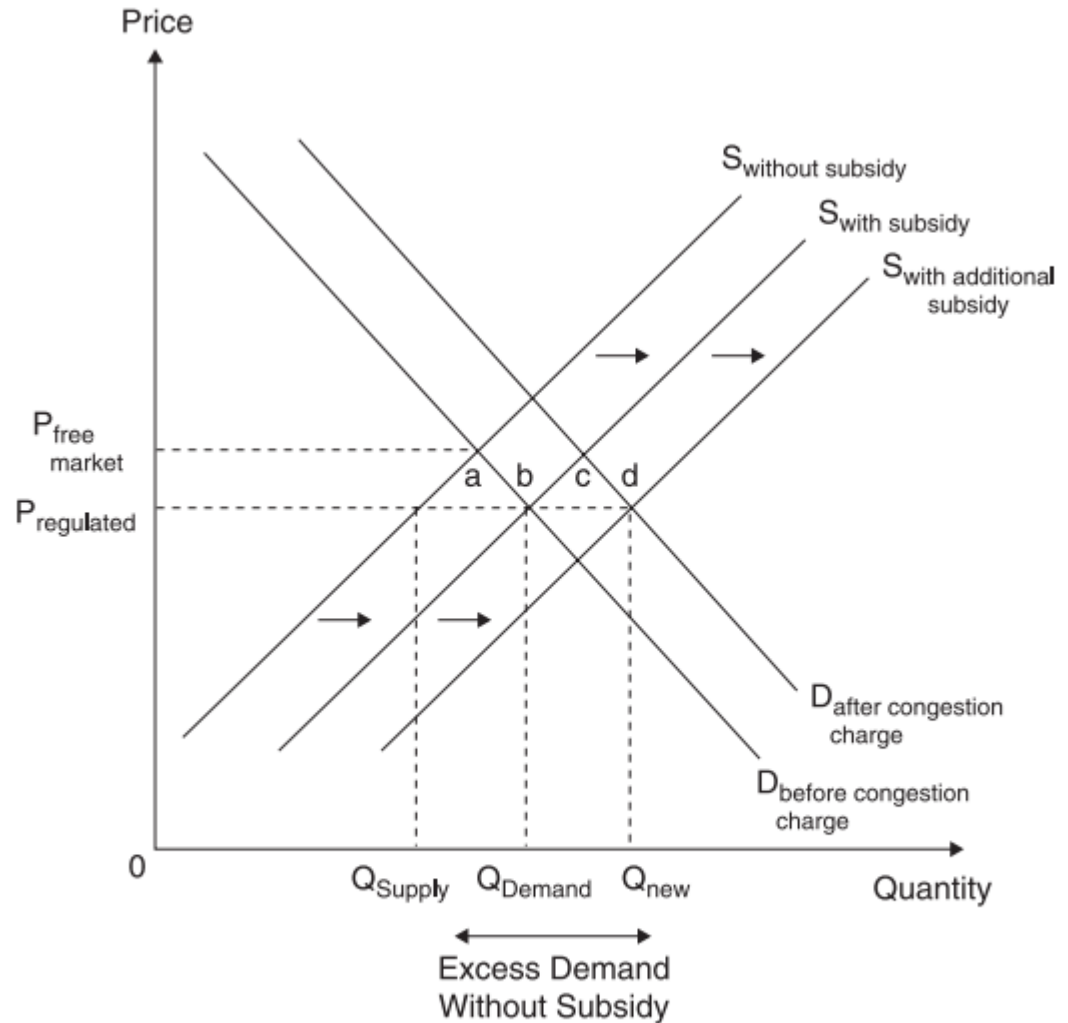


Figure 3.14 Market for private motoring and the market for road space

Case 3.3 – The market for urban road space – London car and bus usage

- Bus usage \uparrow 68%
- Bus fares and services set by TfL, not market
- Subsidy to operators
- Switch from car to bus
- Market equilibrium



e 3.15 The market for London bus services