

UWTSD MBA (Nov 2018 intake)
SBMA7133 Managerial Economics

(3-2)

The Nature of Industry

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27 January 2019; 2:30 am to 6:00 pm

Lecture Agenda :

- Introduction
- The Structure-Conduct-Performance Paradigm
- Market Failure
- Government in the Marketplace
- The Concept of Innovation

Introduction

A firm is an economic unit that operates on for-profit basis and participates in production of goods or services.

An industry a group of firms that participates in a particular category of business activity.

Number of local companies on register

Local companies	2014	2016	2018
Public companies	589	676	762
Private companies	1,259,607	1,327,433	1,386,054
Guarantee companies	12,497	13,114	14,134
Total	1,272,693	1,341,223	1,400,950

https://www.cr.gov.hk/en/statistics/statistics_01_b.htm

Non-HK Companies	2014	2016	2018
No. of companies newly registered as having a place of business	811	874	1,193
No. of companies ceased to have a place of business	445	920	567
Total	9,624	9,983	11,061

Source: https://www.cr.gov.hk/en/statistics/statistics_03.htm

21 Standard Industrial Classification (HSIC) in Hong Kong

Industry Section	Title
A	Agriculture, forestry and fishing
B	Mining and quarrying
C	Manufacturing
D	Electricity and gas supply
E	Water supply; sewerage, waste management and remediation activities
F	Construction
G	Import/export, wholesale and retail trades
H	Accommodation and food service activities

Industry Section	Title
I	Transportation, storage, postal and courier services
J	Information and communications
K	Financial and insurance activities
L	Real estate activities
M	Professional, scientific and technical activities
N	Administrative and support service activities
O	Public administration
P	Education

Industry Section	Title
Q	Human health and social work activities
R	Arts, entertainment and recreation
S	Other service activities
T	Work activities within domestic households
U	Activities of extraterritorial organizations and bodies

Source: Hong Kong Standard Industrial Classification (HSIC) Version 2.0

http://www.censtatd.gov.hk/products_and_services/products/publications/classification_lists/index_cd_B2XX000401_dt_latest.jsp

Gross Domestic Product (GDP) by Economic Activity at Current Prices

HK\$M

Economic Activity	2010	2015	2017
Agriculture, fishing, mining and quarrying	948	1,630	1,736
Manufacturing	30,410	26,716	27,423
Electricity, gas and water supply, and waste management	34,486	34,653	35,076
Construction	56,531	107,902	129,754
Services	1,614,922	2,154,603	2,362,186
GDP at basic prices	1,737,298	2,325,505	2,556,176
Taxes on products	68,707	95,433	113,221
Statistical discrepancy (%)	-1.7	-0.9	-0.3
GDP at current market prices	1,776,332	2,398,437	2,660,983
Services sector contribution to GDP (%)	90.91	89.8	88.8

<http://www.censtatd.gov.hk/hkstat/sub/sp250.jsp?tableID=035&ID=0&productType=8>



In the industry you are familiar with, are there any of them which is operating under constant marginal cost? If yes, please give examples.



Which industries in Hong Kong can be classified as monopoly? Which can be classified as perfect competition?

The Structure-Conduct-Performance Paradigm

Definition

- The **structure** of an industry refers to factors such as technology, concentration, and market conditions.
- Conduct refers to how individual firms behave in the market; it involves pricing decisions, advertising decisions, and decisions to invest in research and development, among other factors.
- **Performance** refers to the resulting profits and social welfare that arise in the market.
- The **structure–conduct–performance paradigm** views these three aspects of industry as being integrally related.

How many firms are there in the industry?
Are the size of these firms big or small?
What is their cost structure?
What is the distribution of market share and market concentration in the industry?

Are the firms price takers or price makers?
Are the setting of prices closer to perfect competition or monopoly?
Do firms collude to limit their output?
Do firms prevent potential rivals to enter the market?

How do consumers, producers and the society to deal with a given market structure and its associated market behavior?

Market structure



Firm behavior or conduct



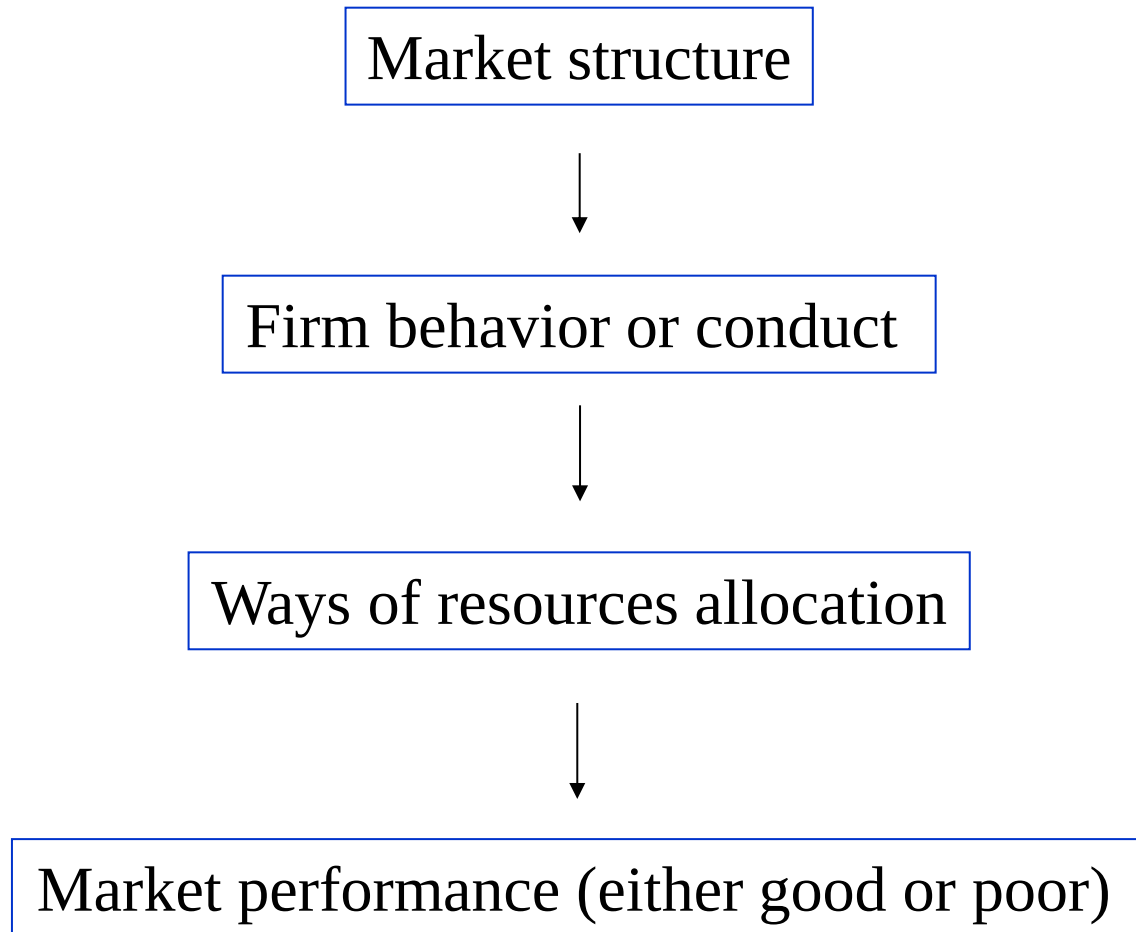
Market performance

- Perfect Competition
- Monopolistic Competition
- Oligopoly
- Monopoly

- Pricing
- Output quantity
- Market Entry
- Market Withdrawal

- Profitability and rates of return
- Rate of technological change and innovation
- Levels of capital investment
- Market Efficiency
- Market share

The Causal View



The Feedback Critique

- There is no one-way causal link among structure, conduct, and performance.
- The conduct of firms can affect market structure; market performance can affect conduct as well as market structure.
- The conduct of firms in an industry may itself lead to a concentrated market.

Remarks

- Modern approach to studying industries involves examining the interrelationship between structure, conduct, and performance.
- The market structure is different across industries.
 - Firm size
 - Industry concentration
 - Technology
 - demand and market condition
 - Potential for entry
- The conduct, or behaviors, of firms is different across industries
 - Pricing behaviors
 - Integration and merger activity
 - Research and development
 - Advertising
- Industry performance is measured by industry profitability and social responsibility.
 - Profit
 - Social responsibility

Market Failure

The concept of market failure

- Pareto optimal means any change to make any person better off is impossible without making someone else worse off.
- The sources of market failure are: market power, externalities, public goods, and incomplete information
- The existence of market failure creates a potential role for government in the marketplace.

Sources of
Market failure

- 
- (1) Market power
 - (2) Externalities
 - (3) Public goods
 - (4) Incomplete information

(1) Market failure due to the presence of market power

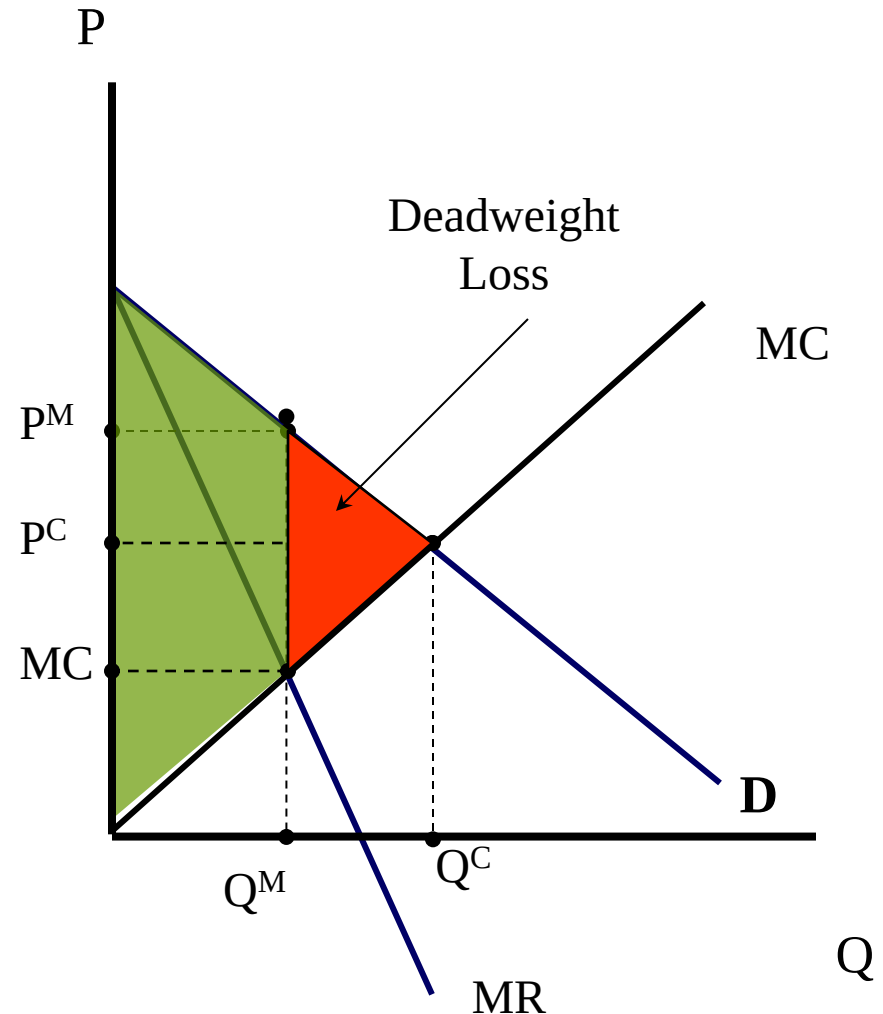
- A firm has market Power when it sells output at a price that exceeds its marginal cost ($P > MC$).
- There are two types of monopoly: natural monopoly is a result of market competition; artificial monopoly is a result of the establishment of legal barriers.
- To earn a natural monopoly profit is an acceptable market behavior, but to make an artificial monopoly profit (or monopoly Rent) is a **rent seeking** behavior which will cause a net loss to society.

Deadweight loss under monopoly

Firms with market power produce socially inefficient output levels:

- Less output compared with perfectly competitive firms;
- Price exceeds marginal cost; and
- Deadweight loss

(The costs to society created by market inefficiency. Mainly used in economics, deadweight loss can be applied to any deficiency caused by an inefficient allocation of resources.)



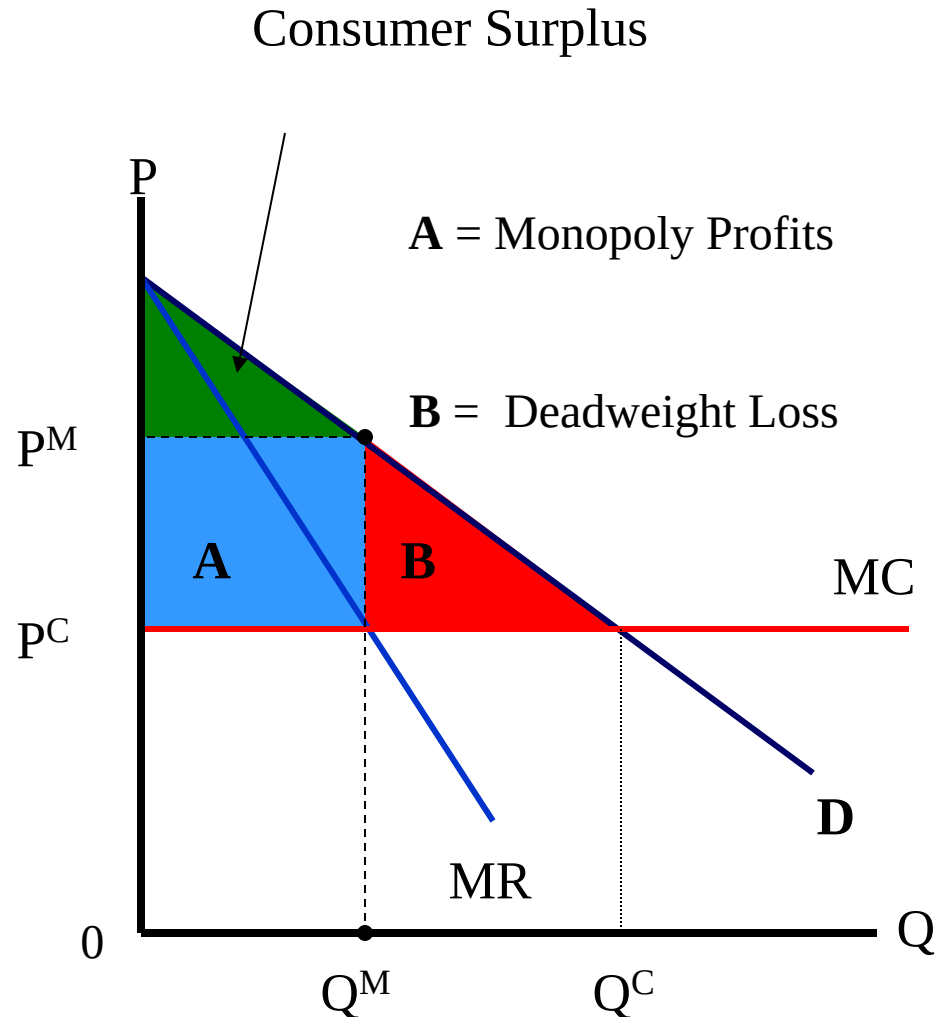
Rent Seeking

Rent-seeking is an attempt to derive economic rent (Abnormal or economic profit) by manipulating the social or political environment in which economic activities occur, rather than by adding value.

- Government policies will generally benefit some parties at the expense of others.
- Lobbyists spend large sums of money in an attempt to affect these policies.
- This process is known as rent-seeking.

An Example of rent seeking (Seeking monopoly rights)

- Firm's monetary incentive (A) to lobby for monopoly rights.
- Consumers' monetary incentive (A+B) to lobby against monopoly
- Firm's incentive is smaller than consumers' incentives.
- But, consumers' incentives are spread among many different individuals.
- As a result, firms often succeed in their lobbying efforts.



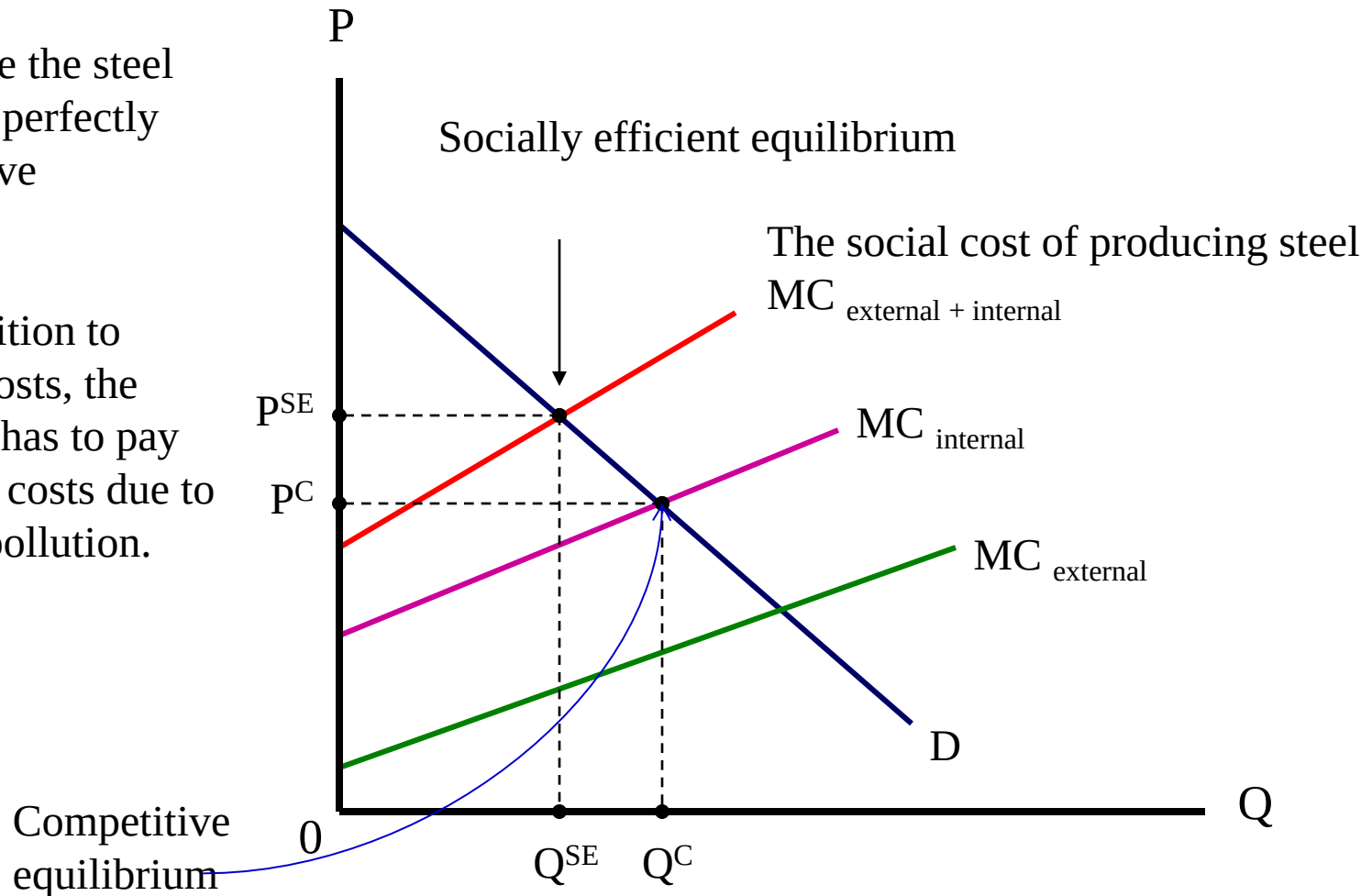
(2) Market failure due to the externalities

- A negative (positive) externality is a cost borne (benefit enjoyed) by people who neither produce nor consume the good.
- Examples: Water Pollution caused by the absence of well-defined property rights.)
- Government regulations may induce the socially efficient level of output by forcing firms to internalize the external costs (benefits).

Socially Efficient Equilibrium: Internal and External Costs

1. Suppose the steel market is perfectly competitive

2. In addition to internal costs, the economy has to pay the social costs due to external pollution.

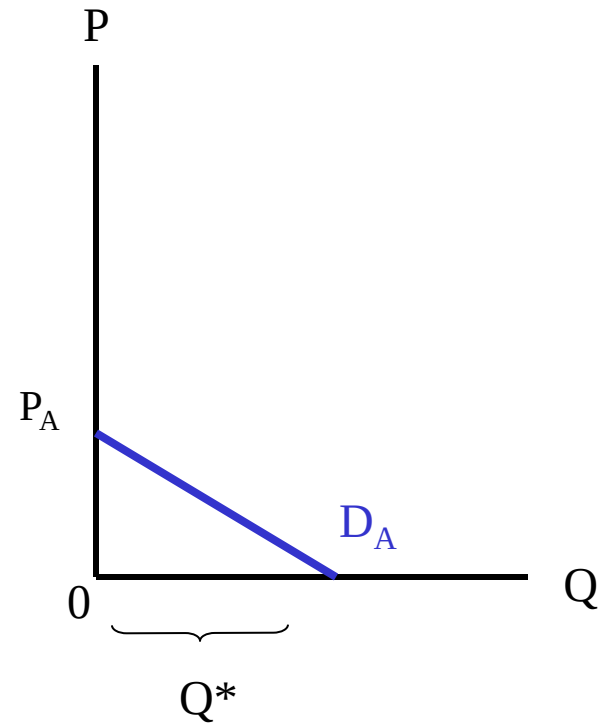


(3) Market failure due to the existence of public goods

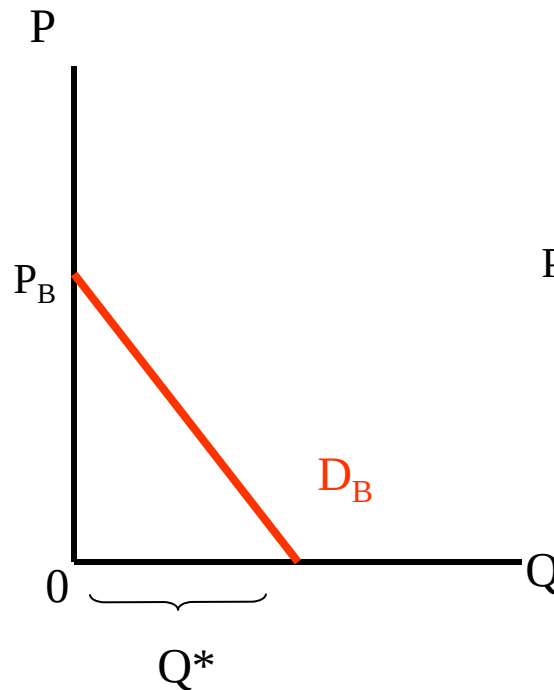
- Public goods are goods that are non-rival and non-exclusionary in consumption.
 - Non-rival good: A good that is consumed by one person does not preclude other people from also consuming the good.
(Example: Street lighting, Public parks)
 - A good that is free to everyone once it is provided.
(Example: Clean air, national defense)
- Free Rider Problem
 - Individuals have little incentive to buy a public good because of their Non-rival & Non-exclusionary nature.

Market Demand for public goods

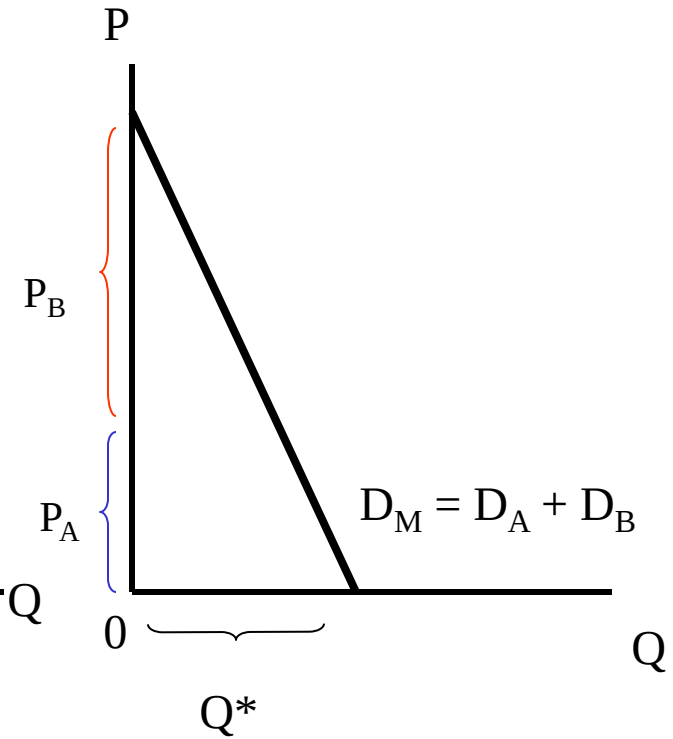
Consumer A



Consumer B



The Market=A+B



Market demand curve for Private goods: Horizontal summation of individual demand curves. Market demand curve for Public goods: Vertical summation of individual demand curves.

Market demand curve
for Private goods:



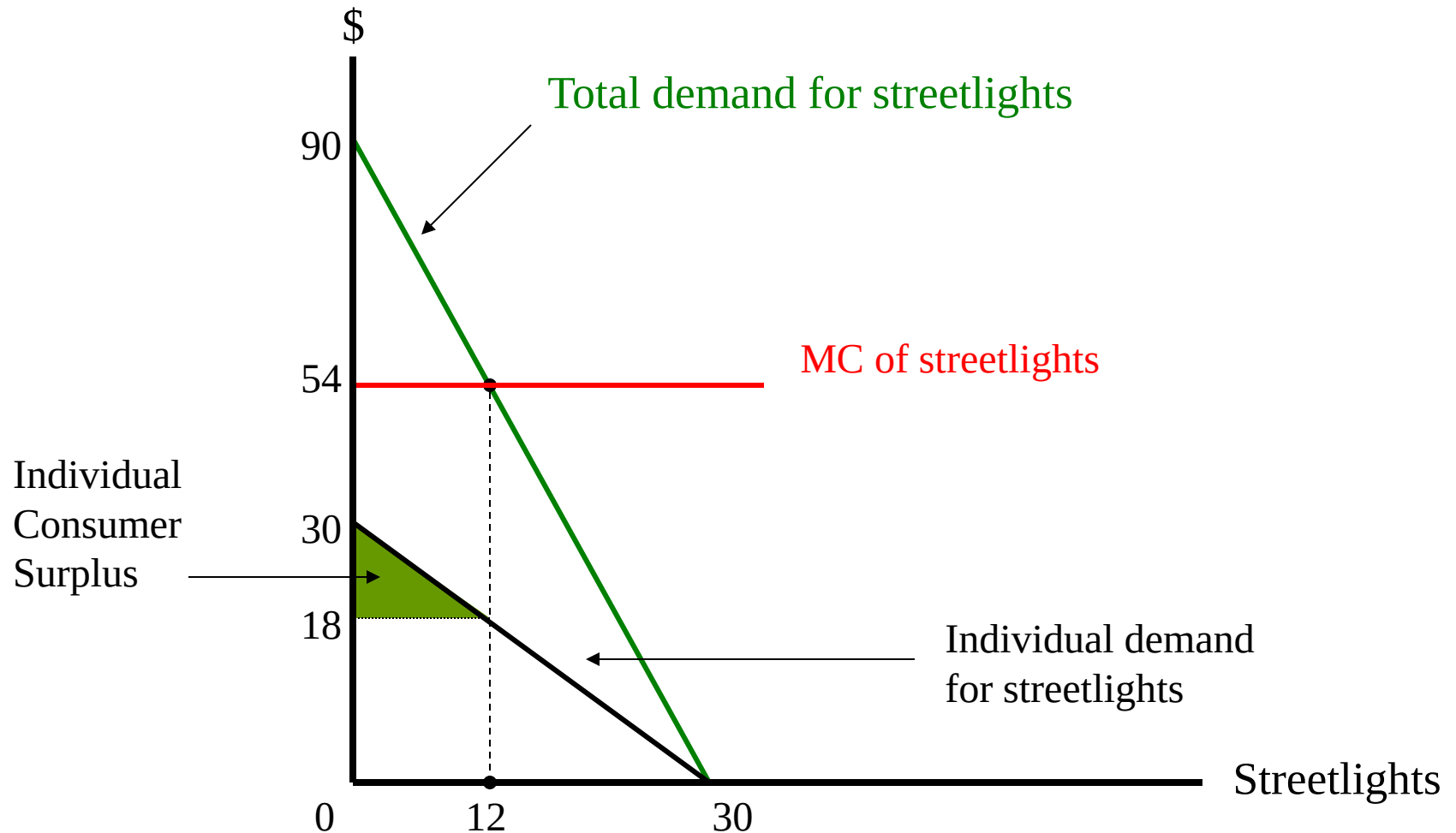
Horizontal summation of
individual demand curves.

Market demand curve
for Public goods:



Vertical summation of
individual demand curves.

Demand curve for Public Goods



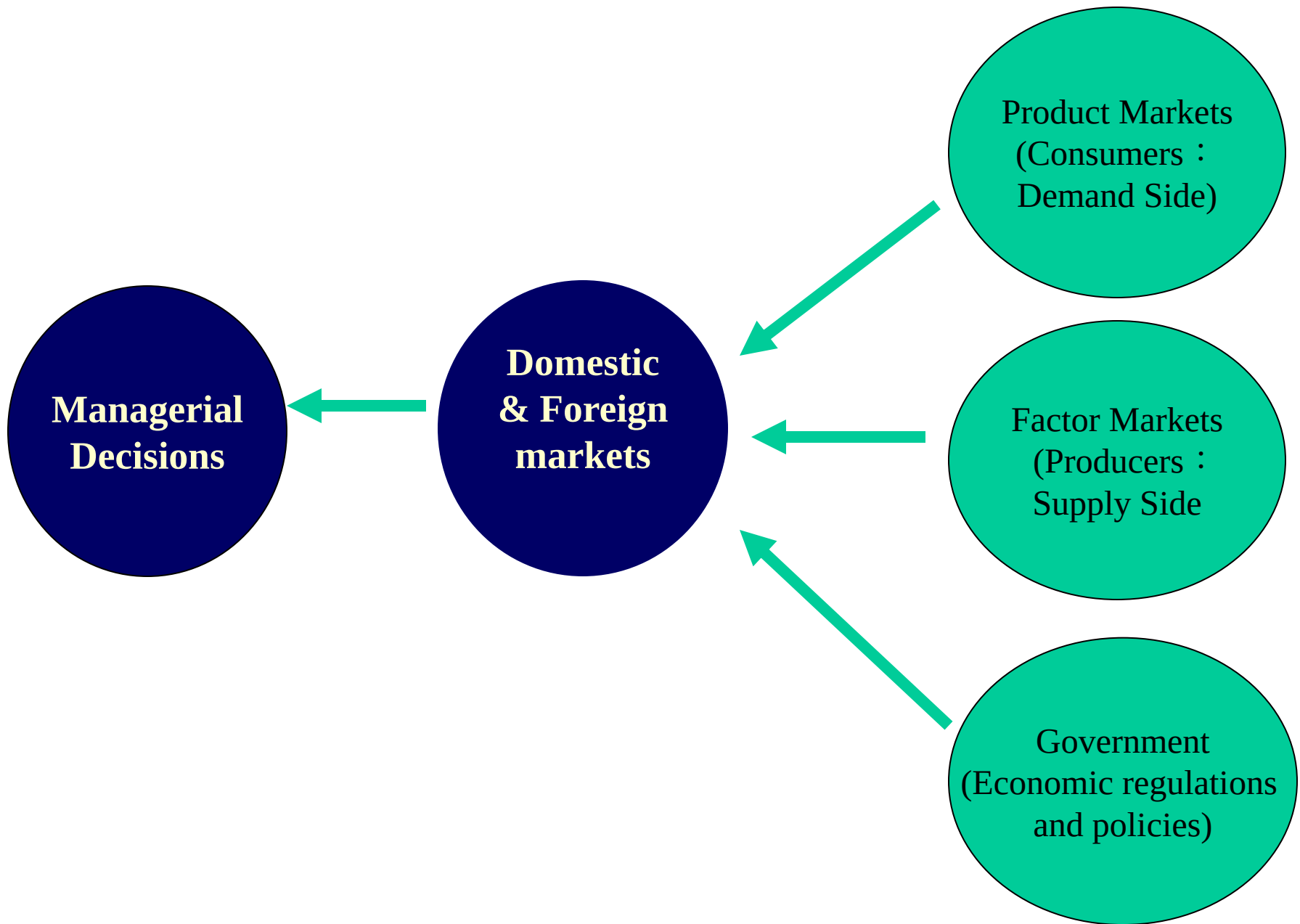
(4) Market failure due To incomplete information

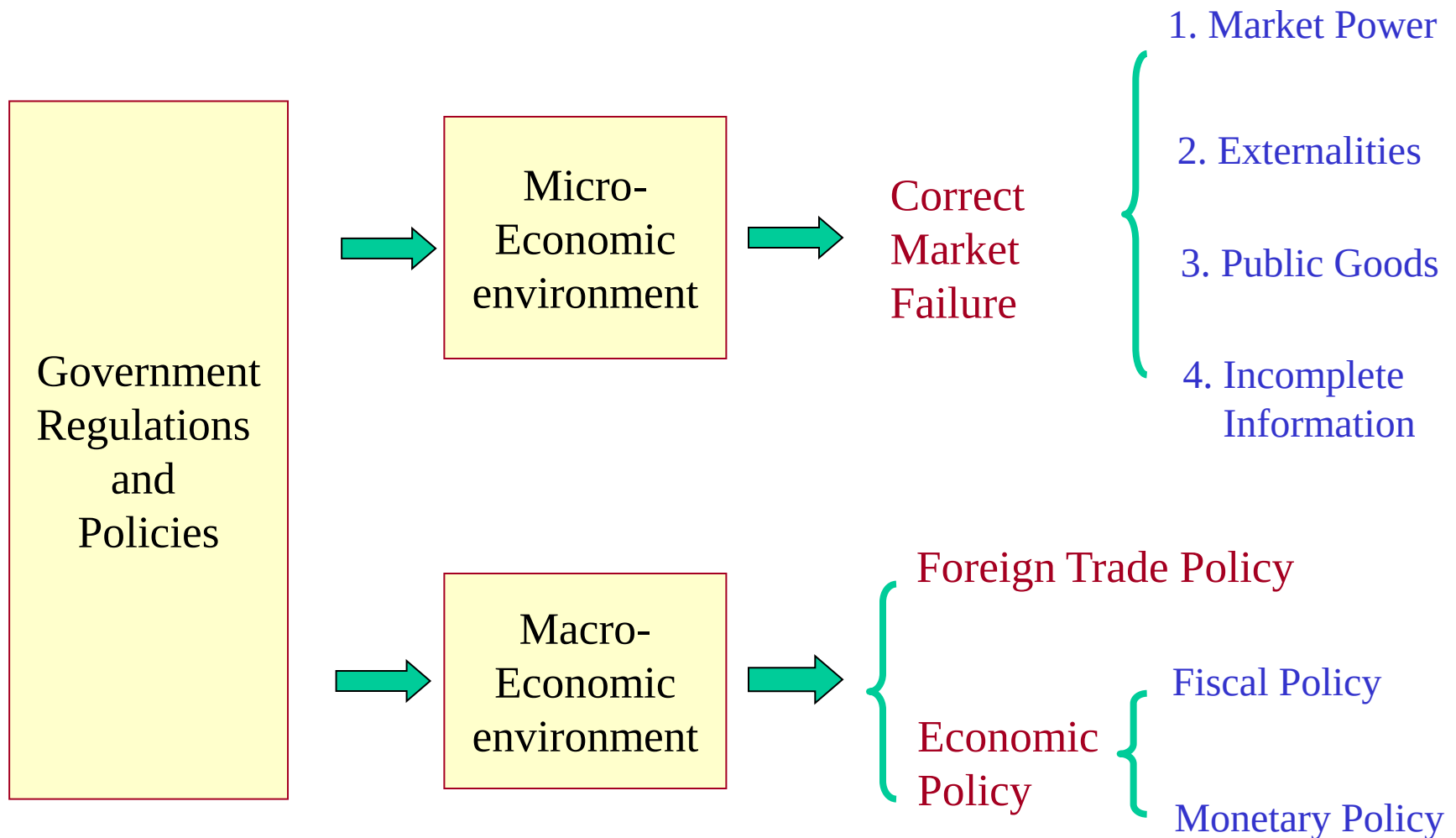
- It is a situation where some market participants have better information than others
- Participants in a market that have incomplete information about prices, quality, technology, or risks is incomplete.
- The Government serves as a provider of information to combat the inefficiencies caused by incomplete and/or asymmetric information.

Government policies designed to mitigate incomplete information

- Government may enact laws and regulations regarding the provision of information to consumers (such as the trade descriptions ordinance chapter 362 of the laws of Hong Kong).
- Rules against insider trading in the stock market.
- The certification of skills and/or authenticity.
- Truth in lending: Positive consumer credit databank in the HK banking sector
- Truth in advertising: false and misleading advertising is prohibited.
- Contract enforcement.

Government in the Marketplace





Economic policy are the actions taken by a government intended to create a healthy economy. Government fiscal and monetary policy intended to moderate changes in economic activity.

The market mechanism including the Government

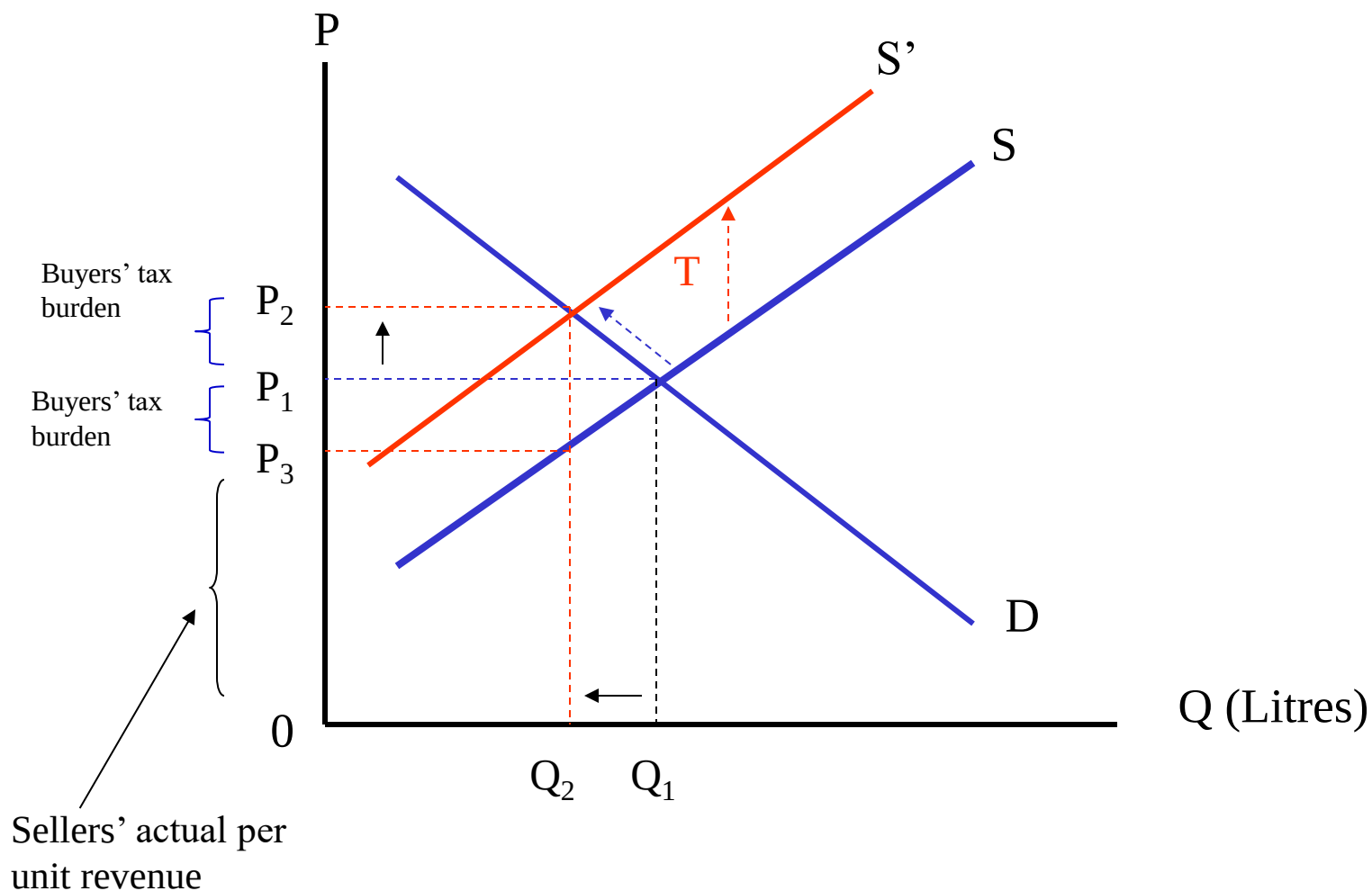
The market quantity demanded for a given good $\uparrow$

= f (the price of the good $\downarrow$; consumers' money income $\uparrow$,
the price of substitutes $\uparrow$, the price of complementary goods $\downarrow$,
consumers' preference $\uparrow$, consumers' price expectations $\uparrow$,
the number of buyers in the market $\uparrow$, government subsidies $\uparrow$,
taxes $\downarrow$)

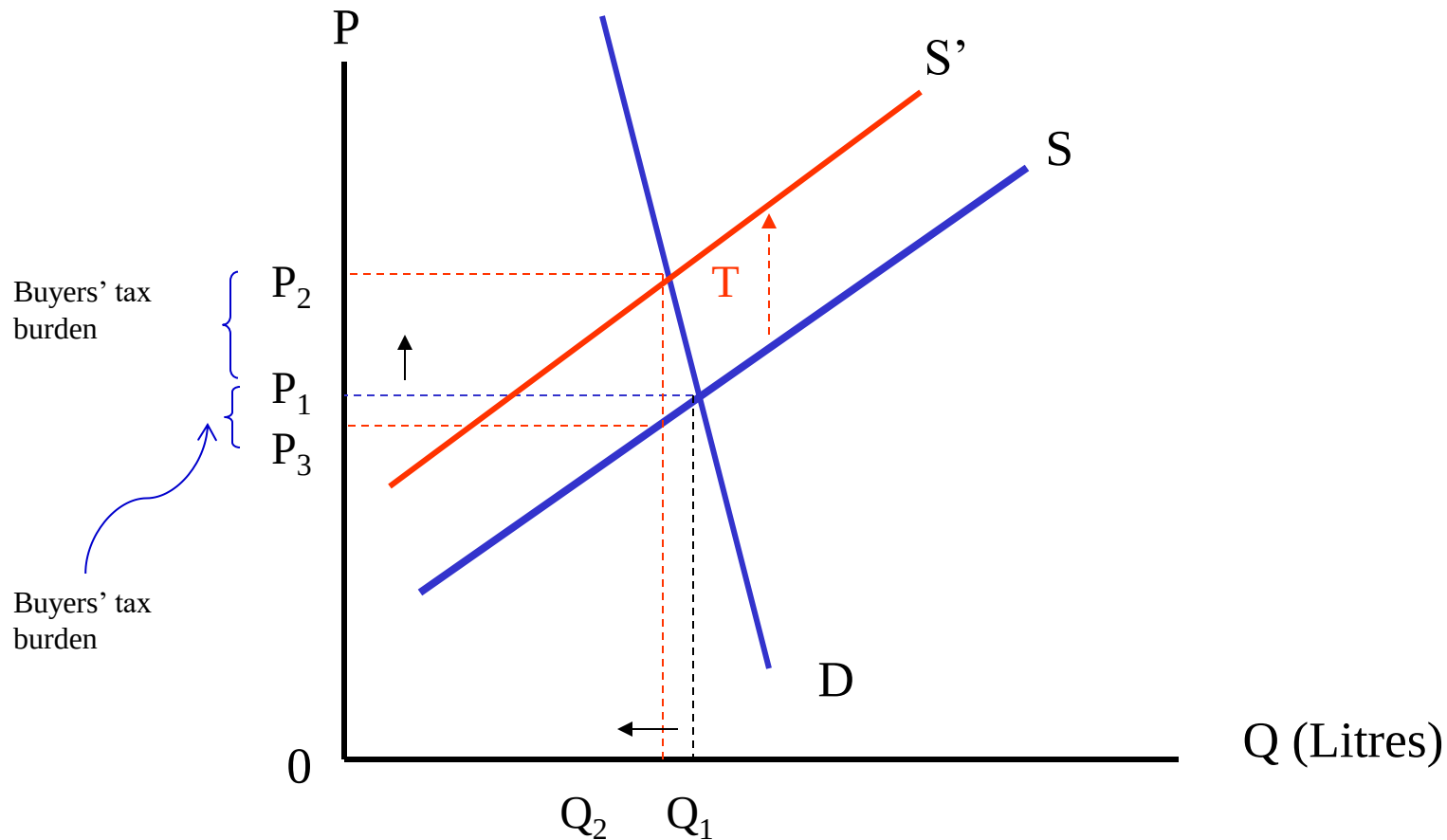
The market quantity supplied for a given good $\uparrow$

= f ((the price of the good $\uparrow$; input prices $\uparrow$, prices of other goods $\uparrow$,
the level of technologies $\uparrow$, producers price expectations $\downarrow$,
the number of sellers in the market $\uparrow$, government subsidies $\uparrow$,
taxes $\downarrow$)

The market effect of an imposition of a per unit tax on gasoline: A elastic demand curve

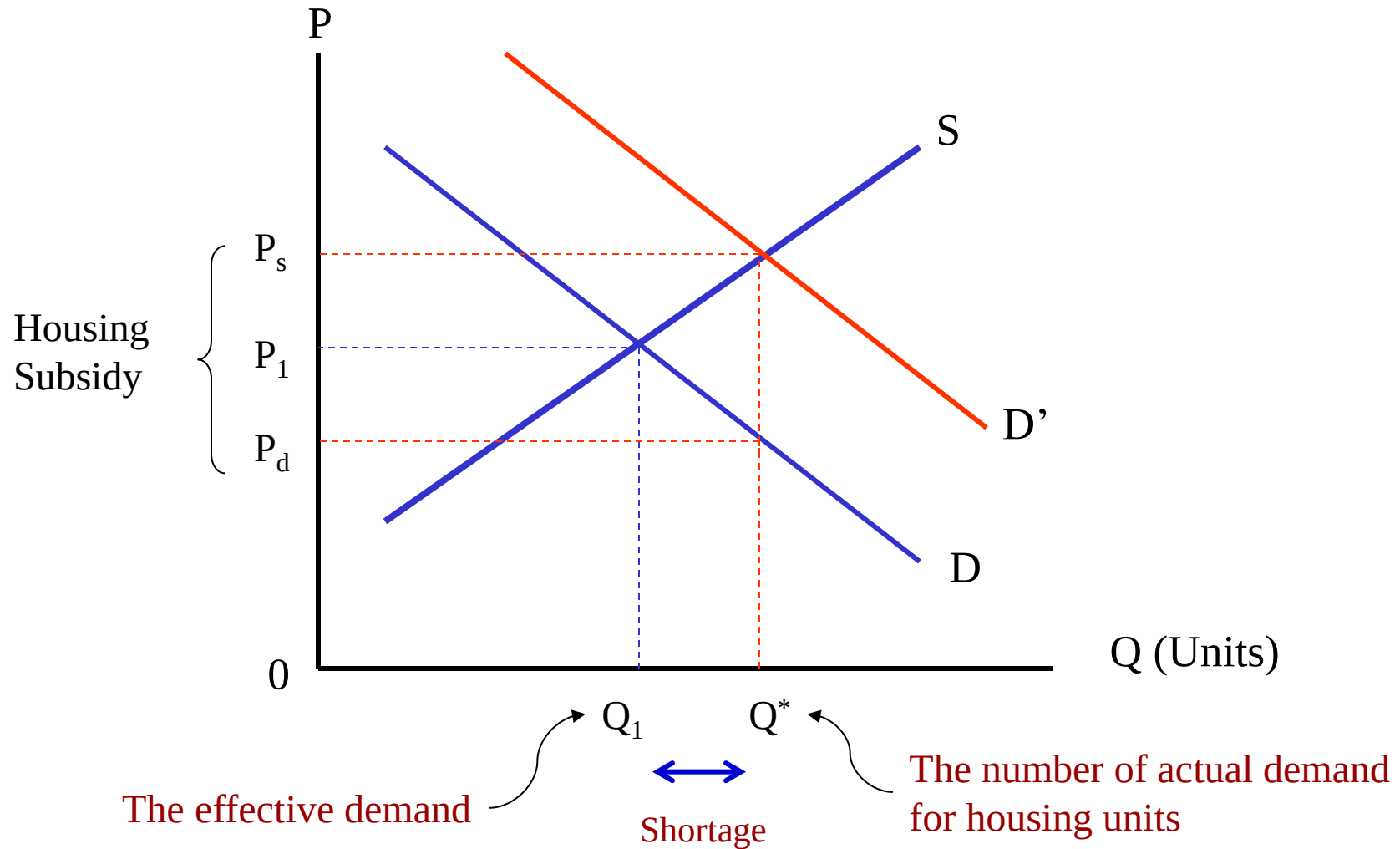


The effect of an imposition of a per unit tax on gasoline: An inelastic demand curve



The Gasoline Market

The effect of a subsidy on housing



Government intervene the international markets

Import Quota

- Limit on the number of units of a product that a foreign competitor can bring into the country.
- The purpose is to reduce competition, thus resulting in higher prices of the imported goods, lower consumer surplus, higher profits for domestic firms, and lower the unemployment rate.

Tariffs

- Lump sum tariff: a fixed fee paid by foreign firms to enter the domestic market.
- Excise tariff: a per unit fee on each imported product.

The Concept of Innovation

The economics literature on technical change

- The economics literature on technical change provides significant tools to appraise the causes and effects of resources devoted to the production and dissemination of new knowledge.
- Mainstream economics (conventional neo-classical framework) highlights resources and incentives for firms while taking technological possibilities and capabilities of firms as a given.
- New growth theory contributes to a better understanding of the conditions for economic convergence between countries.
- Evolutionary economics theory highlights the importance of institutions and of path-dependence in the selection of technologies.

Three Types of innovation

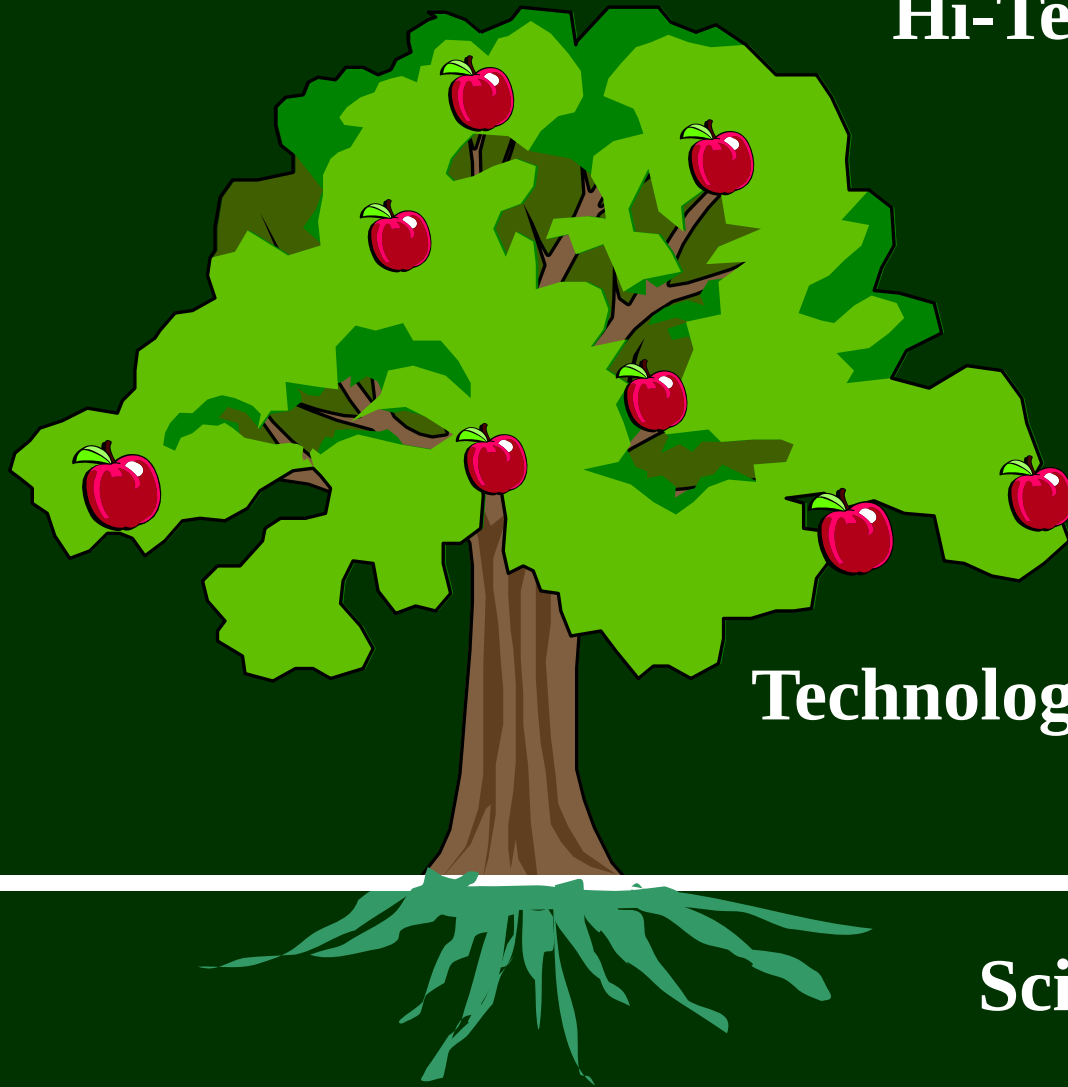
1. Product innovation

- Incremental innovation seeks to improve the systems that already exist, making them better, faster cheaper.
- Radical innovation provides something new to the world that we live in by uprooting industry conventions and by significantly changing customer expectations in a positive way.

2. **Service innovation** is a new or considerably changed service concept, client interaction channel, service delivery system or technological concept that individually, but most likely in combination, leads to one or more renewed service functions that are new to the firm.

3. **Process innovation** means the implementation of a new or significantly improved production or delivery method.

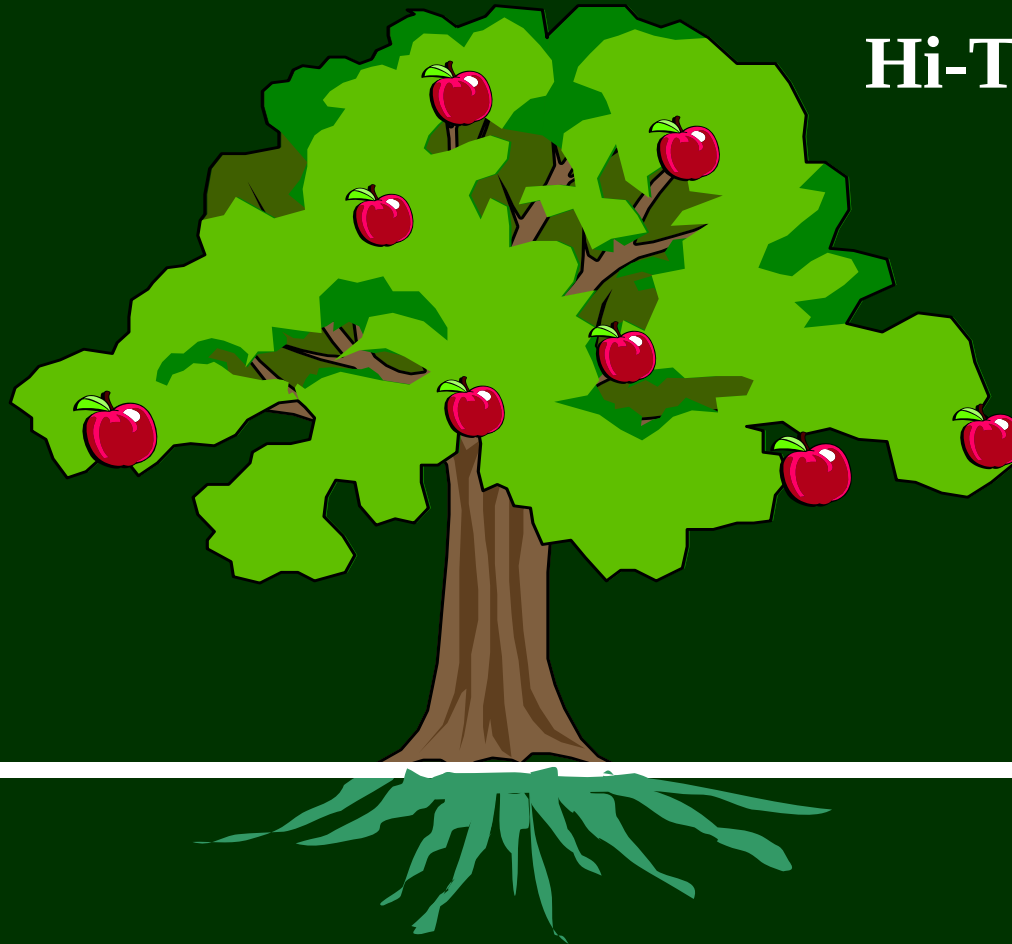
Hi-Tech Industry



Technology

Science

Hi-Tech Industry



National Vision
Strategy
Policy Commitment
R&D Funding
Taxation & Banking
Legal System
Regional Planning

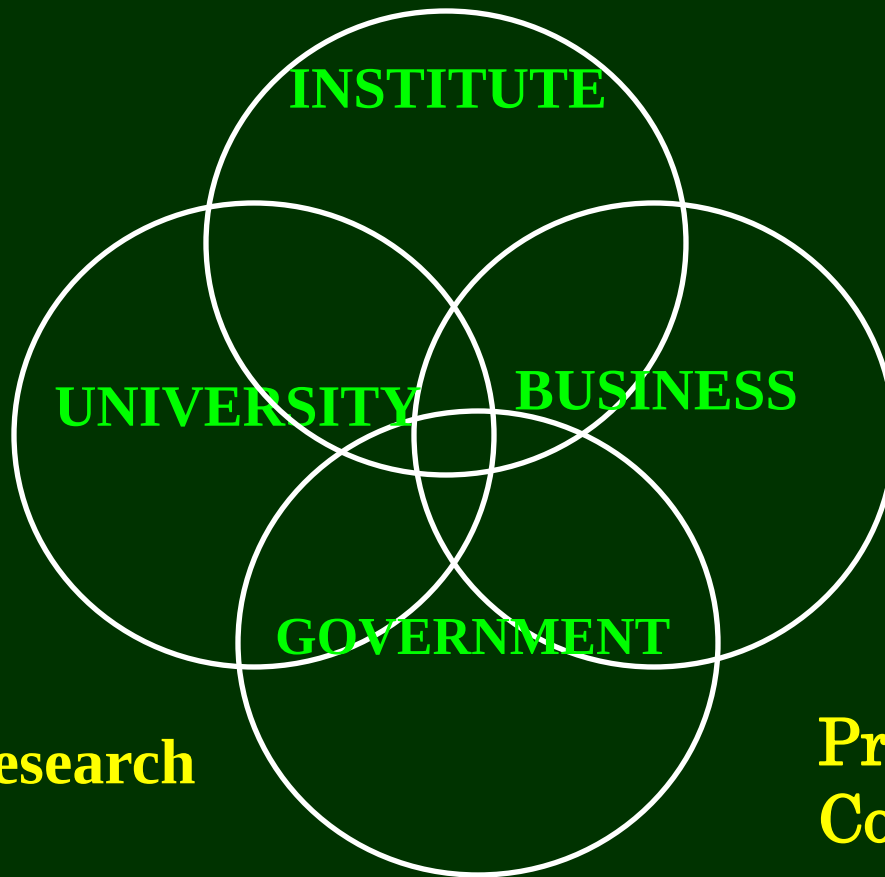
Physical Infrastructure
Basic Sciences
Education & Skilled Workforce
Entrepreneurship
Venture Capital
Social Support
Project Management

The Innovation Process: Creating Wealth from Knowledge



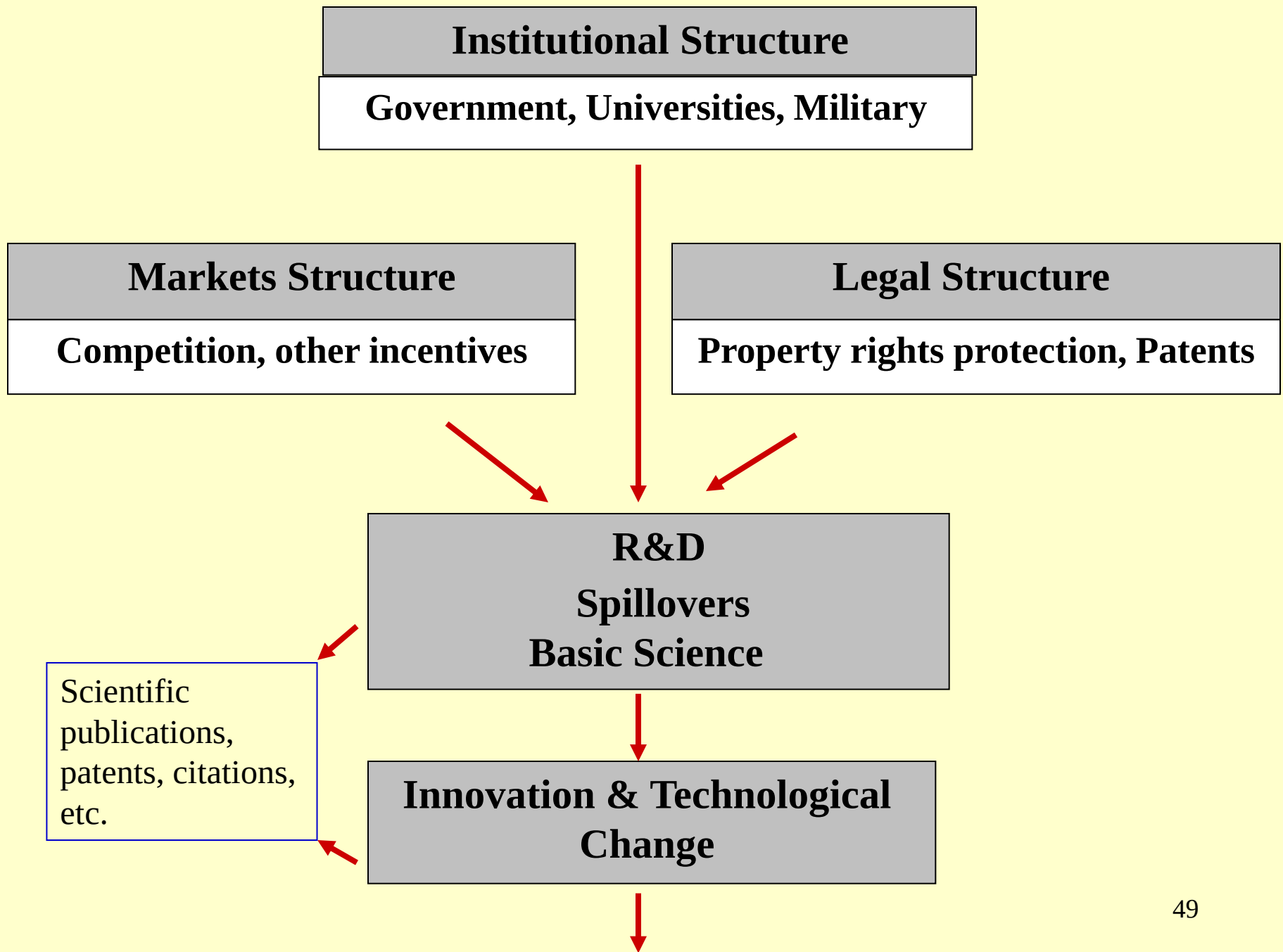
The National Innovation System: The Dynamics

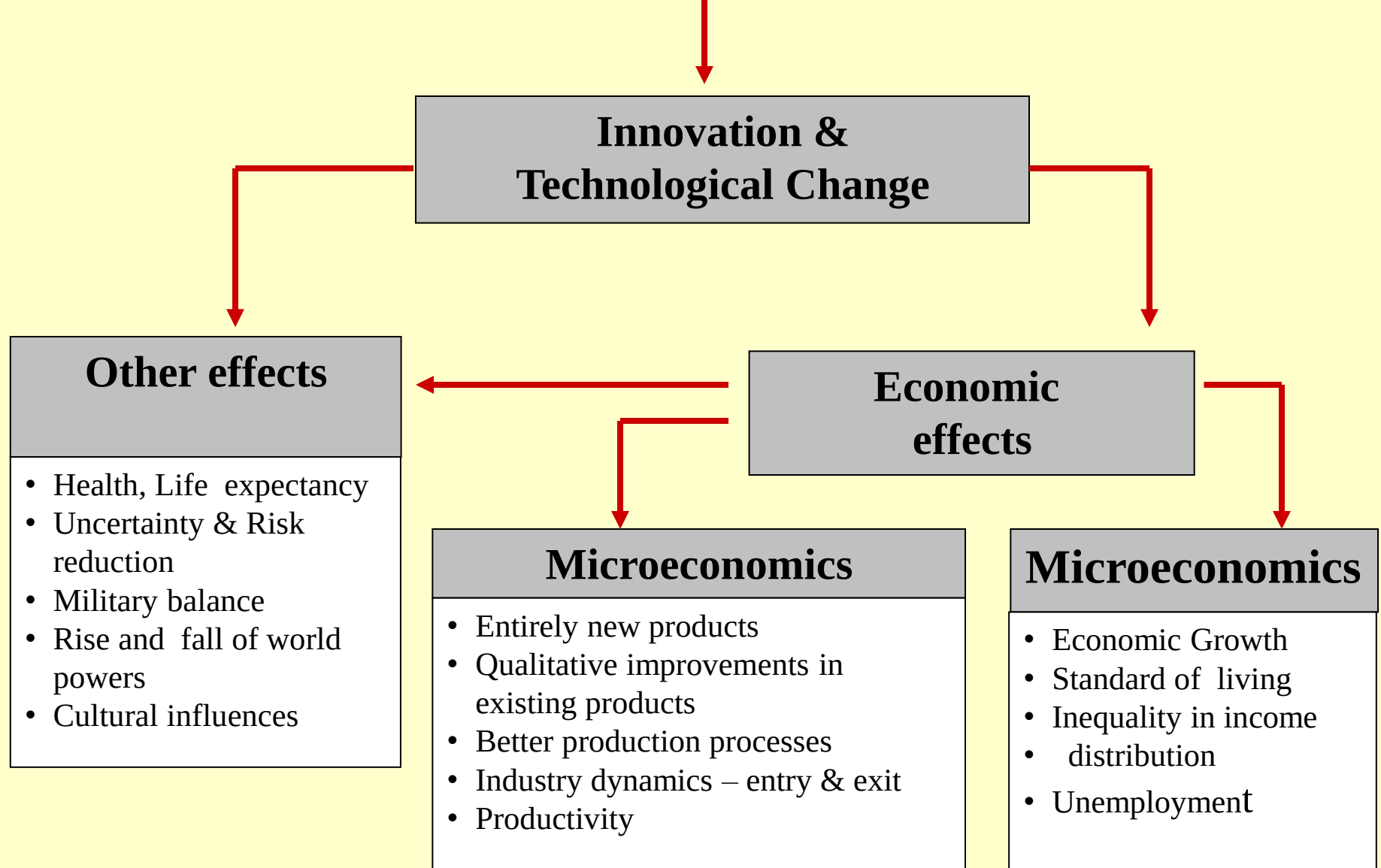
Technology Development



Scientific Research

**Product
Commercialization**





and feedback mechanisms...

Thank You
for
your Attention