

# Chapter 3: Theories of International Investment

- Goal: Reasons for international investment and impacts of international investment at the host country, home country and the world economy.
  
- Objectives:
  - Advantages and limitations of international investment theories
  - Apply theories to explain the investment activities nowadays
  - Development of international investment theories
  
- Contents:
  - Country-based theories (Macroeconomics-based theories/FDI Theories)
  - Firm-based theories (Microeconomics-based theories/TNCs Theories)
  - Review of international investment theories

# Country-based theories (Macroeconomics-based theories)

- H-O-S Theory:

- Assumptions (2 x 2)
- Theory contents
- The foundation theory

- Macdougall-Kemp model (1964):

- Assumptions
- Model analysis
- Advantages and limitations of the model

# Assumptions

- Labor intensive commodity
- Labor-capital ratio
- Constant returns to scale
- Internal factor mobility
- Relative factor prices
- Derived demand
- Factor proportion theory
- Specific factors model
- Input-output table
- Important substitutes
- Leontief paradox
- Elasticity of substitution



# Assumptions of H-O Theory



**Bertil Ohlin (1899-1979)**  
**Nobel Prize for Economics 1977**  
**Interregional and International Trade (1933)**

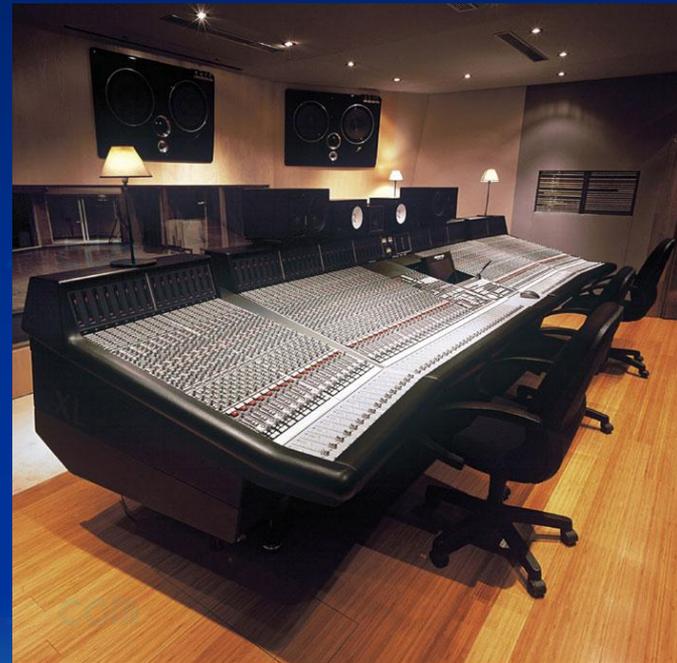
# Assumptions of H-O Theory

- 2x2x2 model
- Same technology
- X is L-intensive and Y is K-intensive
- Constant returns to scale
- Incomplete specialization
- Equal tastes
- Perfect competition
- Internal factor mobility
- No transportation costs
- All resources are fully employed
- Exports equal imports.

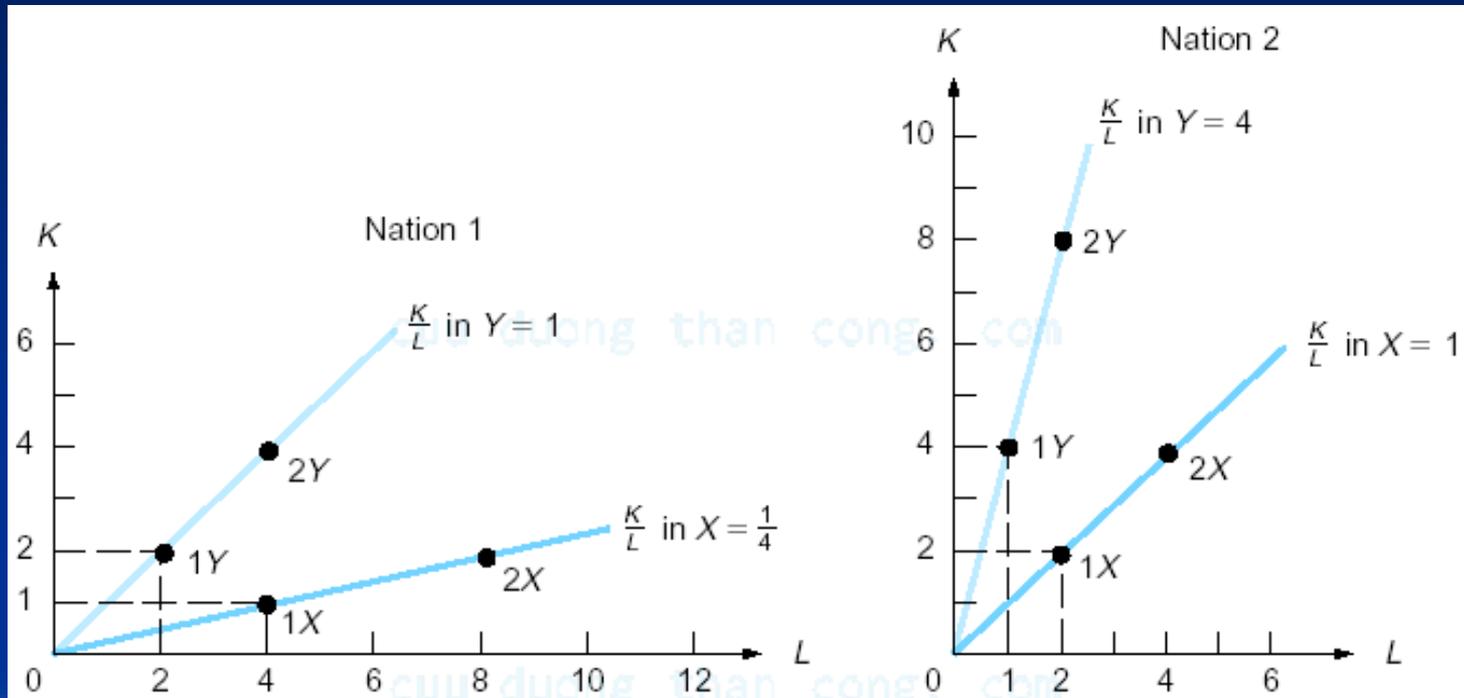
# Factor Intensity

If the capital-labor ratio ( $K/L$ ) used in the production of  $Y$  is greater than the capital-labor ratio ( $K/L$ ) in the production of  $X$ , commodity  $Y$  is capital intensive.

It is not the absolute amount of capital and labor used in the production of commodities, but the amount of capital per unit of labor ( $K/L$ ).



# Factor Intensity



# Factor Abundance

- In Physical Units

Nation 2  
TK/TL

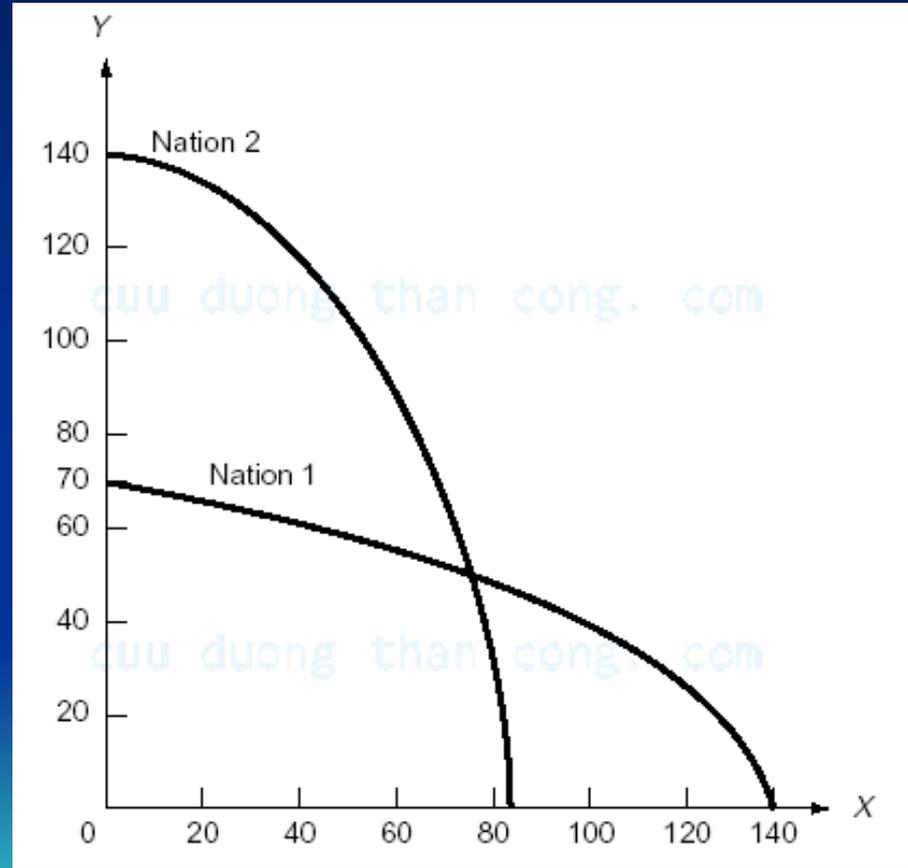


Nation 1  
TK/TL

- In Relative Factor Prices  $P_K/P_L < P_K/P_L$

In terms of physical units, the definition of factor abundance considers only the supply of factors. But in terms of relative prices, the definition considers not only the supply of factor but also the demand for factor.

# Factor Abundance and the Shape of the PPF



# Heckscher-Ohlin Theory

## H-O theorem

*It deals with and predicts the pattern of trade.*

## Factor price equalization

*It deals with the effect of international trade on factor prices.*



# H-O Theorem

A nation will export the commodity whose production requires the intensive use of the nation's relatively abundant and cheap factor and import the commodity whose production requires the intensive use of the nation's relatively scarce and expensive factor.

The relatively labor-rich nation exports the relatively labor-intensive commodity and imports the relatively capital intensive commodity.



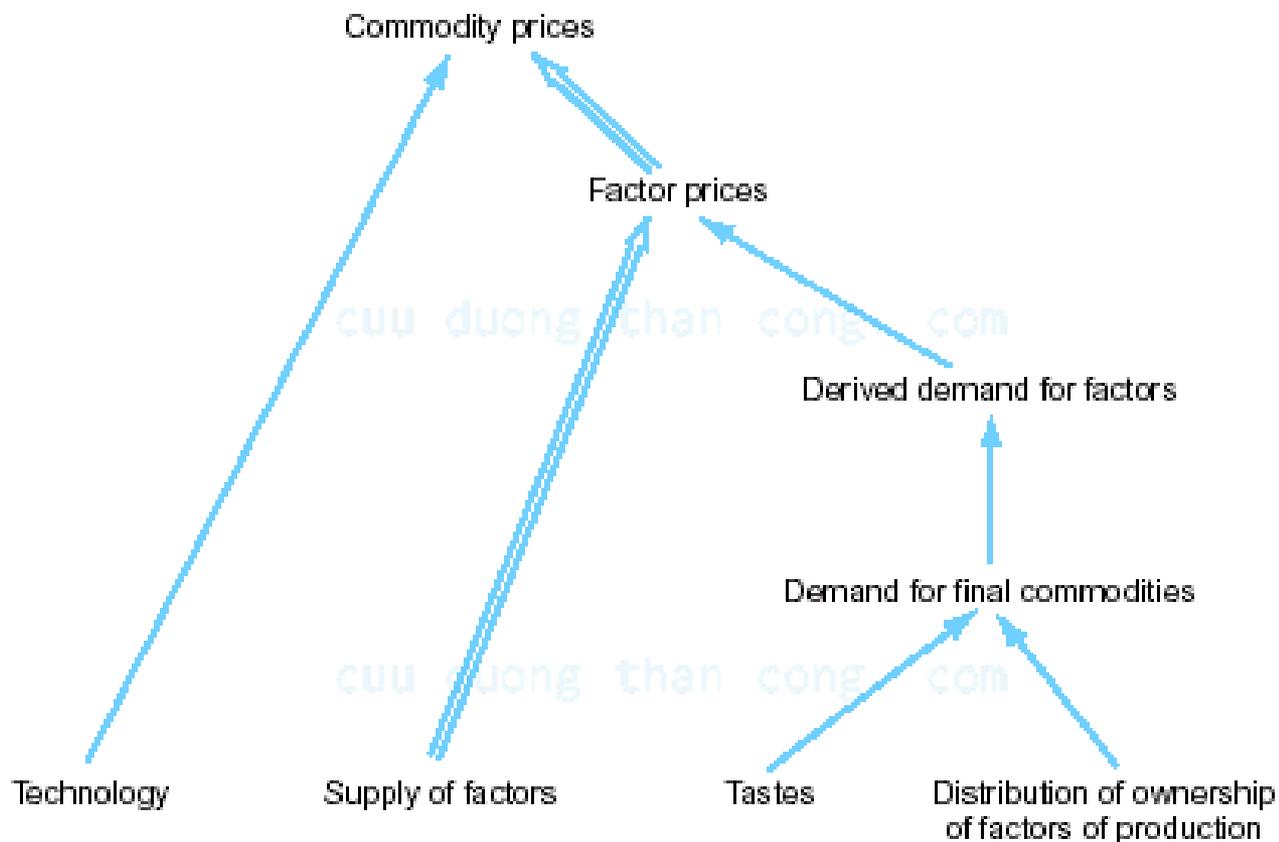
# Factor Endowments

Of all the reasons for differences in relative commodity prices and comparative advantage among nations, the H-O theorem isolates the difference in relative **factor endowments among nations as the basic cause of comparative advantage and international trade**. For this reason, the H-O model is often referred as the **factor-proportions or factor-endowment theory**.

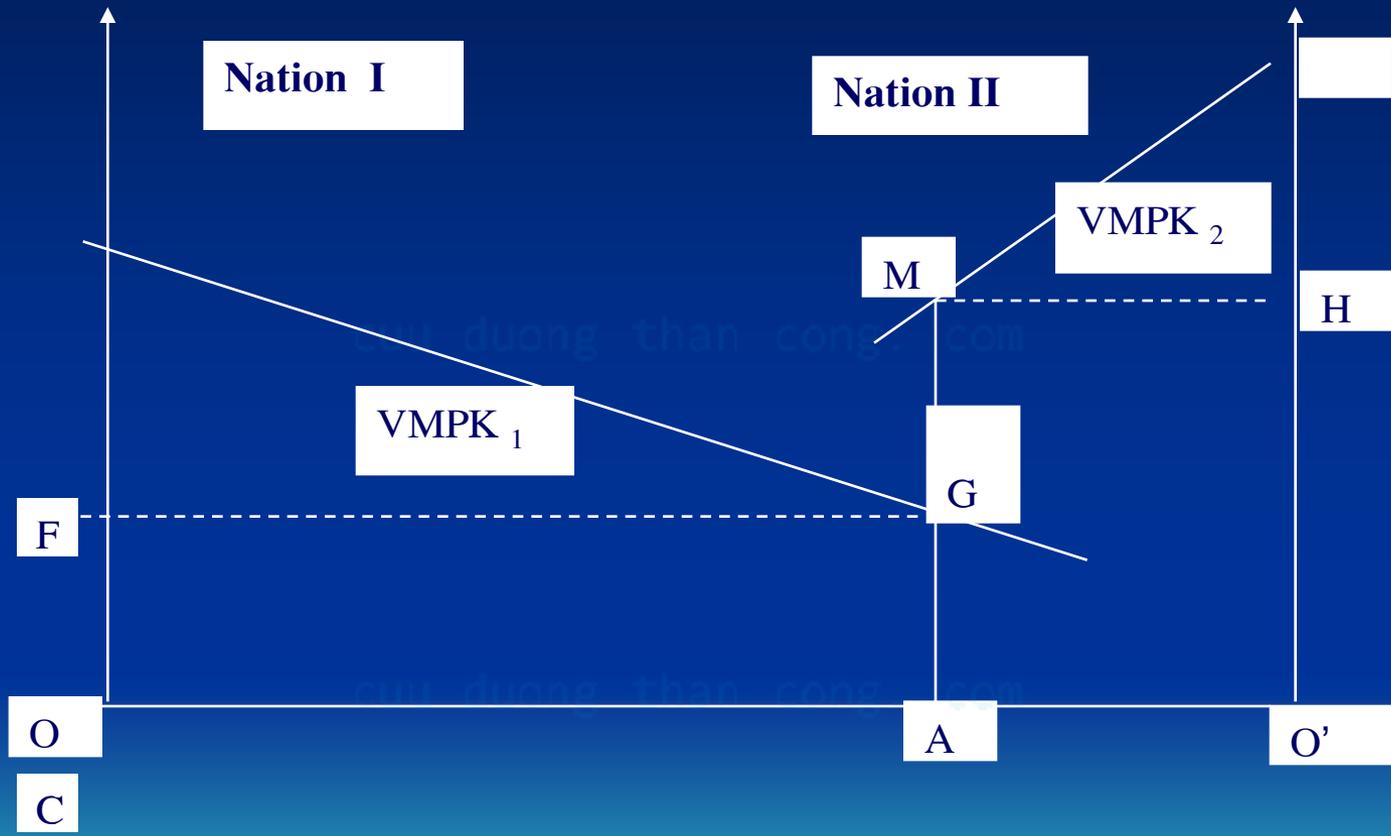
Each nation should specialize in the production of and export the commodity intensive in its relatively abundant and cheap factor and imports the commodity intensive in its relatively scarce and expensive factor.

# Illustration of H-O Theory

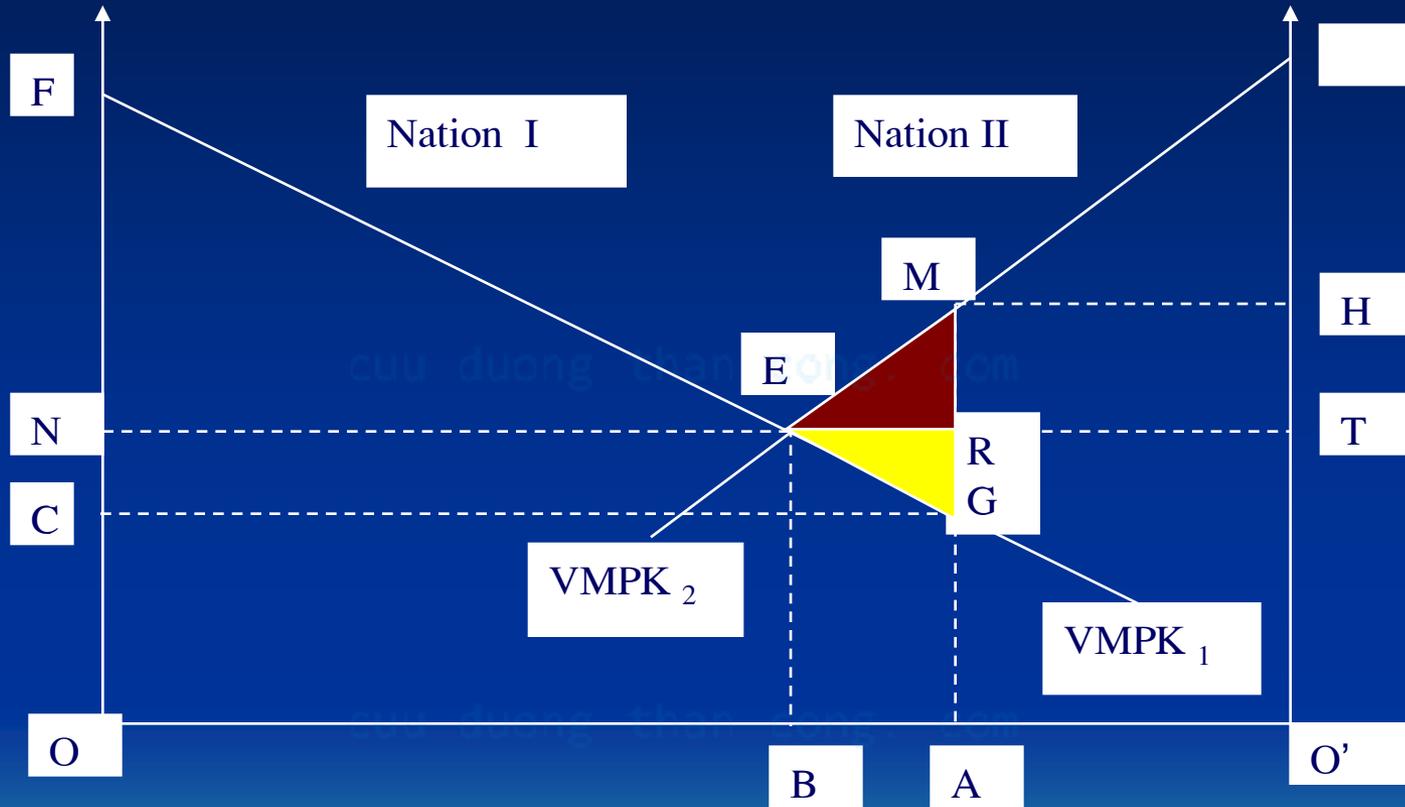
Figure 5-3 General Equilibrium Framework of the Heckscher–Ohlin Theory



# Mac Dougall-Kemp Model (Before)



# Mac Dougall-Kemp Model (after)



# Product Cycle

- Developed by Raymond Vernon
- Argument: Production of a good is cyclical
  - When a manufactured good is developed, producers experiment and seek consumers' reactions
  - When production leaves the early stage, the good begins to be standardized in terms of size, features, and manufacturing process
  - Finally, consumption of the good in a high-income country exceeds its production: production moves where labor costs are lower

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# Risk diversification (Dominick Svalvatore, 1993)

- Risk diversification on bonds and shares:

- Share A and B the same expected return 30%, but

- 50:50 Risk Possibility:

- A is 20% or 40%

- B is 10% or 50%.

- ➔ B is riskier than A, so investors will chose A.

- However, that will make the expected return of A decline, while B increase, so investors will buy both A and B. This is what we call Risk diversification

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## Firm-based theories (Microeconomics-based theories)

There are four stages in a product's life cycle:

- introduction
- growth
- maturity
- Decline

### Stage 1: Introduction

New products are introduced to meet local (i.e., national) needs, and new products are first exported to similar countries, countries with similar needs, preferences, and incomes. If we also presume similar evolutionary patterns for all countries, then products are introduced in the most advanced nations. (E.g., the IBM PCs were produced in the US and spread quickly throughout the industrialized countries.)

## Firm-based theories (Microeconomics-based theories)

### Stage 2: Growth

A copy product is produced elsewhere and introduced in the home country (and elsewhere) to capture growth in the home market. This moves production to other countries, usually on the basis of cost of production. (E.g., the clones of the early IBM PCs were not produced in the US.)

### Stage 3: Maturity

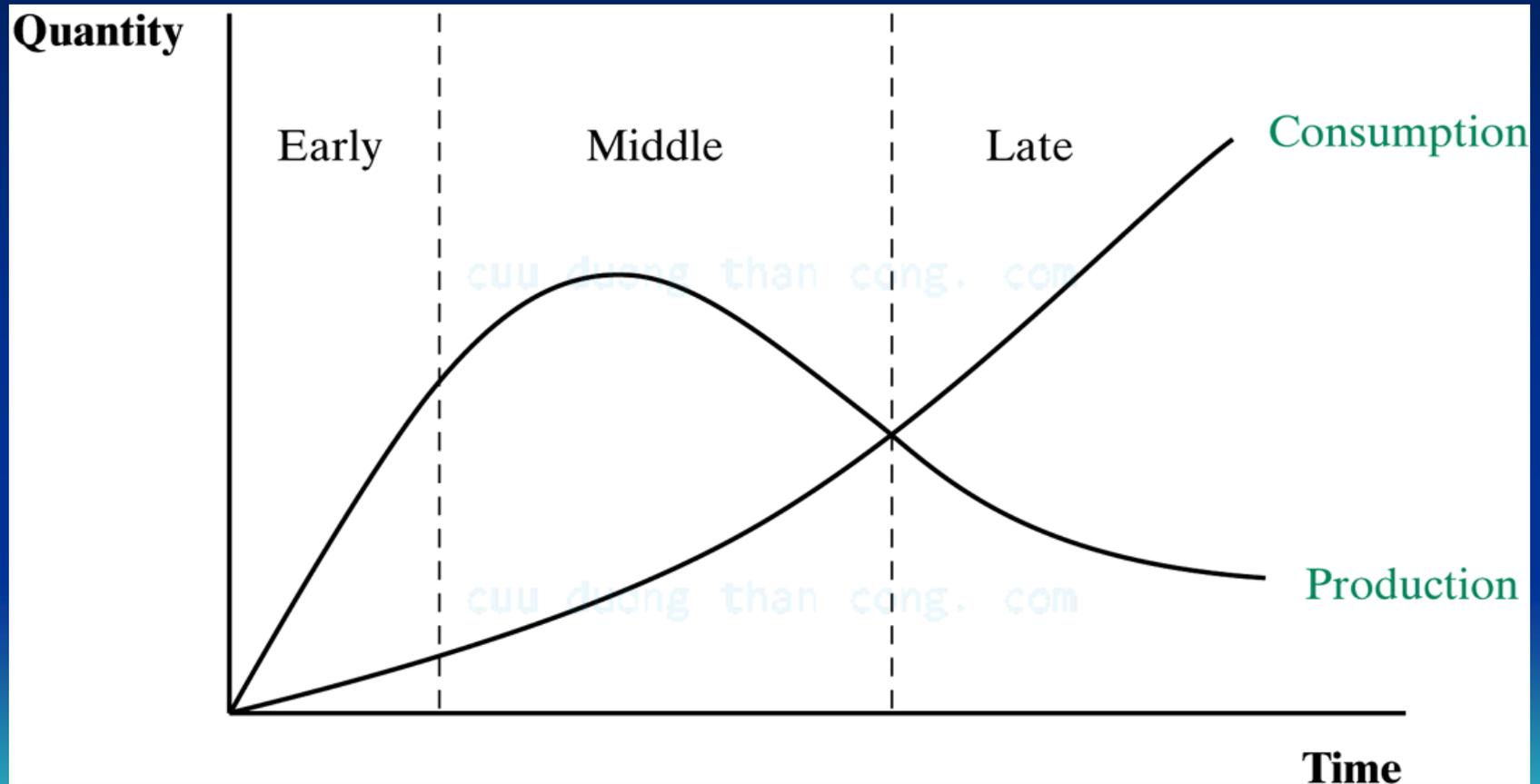
The industry contracts and concentrates -- the lowest cost producer wins here. (E.g., the many clones of the PC are made almost entirely in lowest cost locations.)

### Stage 4: Decline

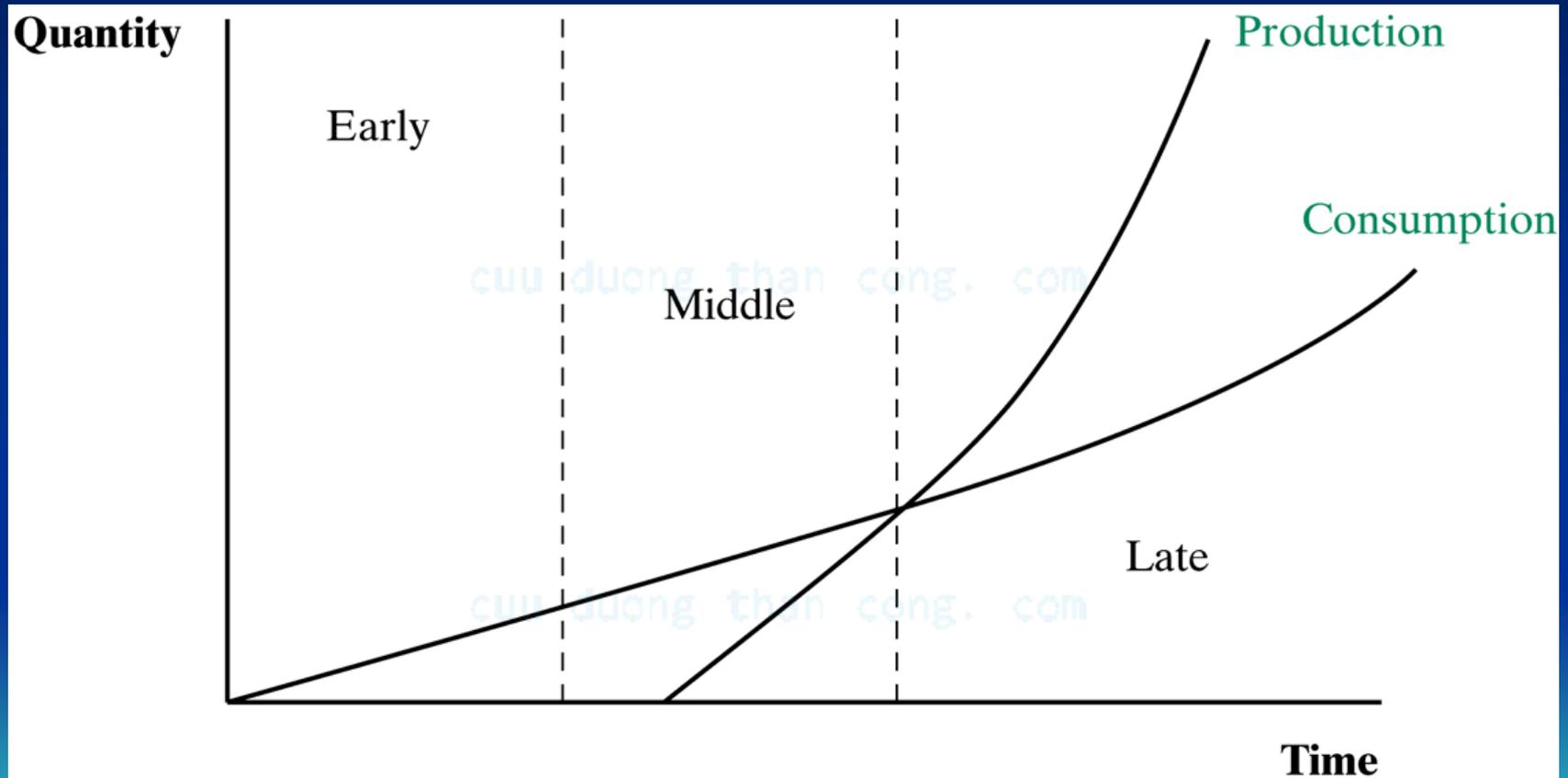
Poor countries constitute the only markets for the product. Therefore almost all declining products are produced in developing countries (E.g., PCs are a very poor example here, mainly because there is weak demand for computers in developing countries. A better example is textiles.)

Note that a particular firm or industry (in a country) stays in a market by adapting what they make and sell, i.e., by riding the waves. For example, approximately 80% of the revenues of H-P are from products they did not sell five years ago.

# FIGURE 4.5 The Product Cycle in High-Income Countries

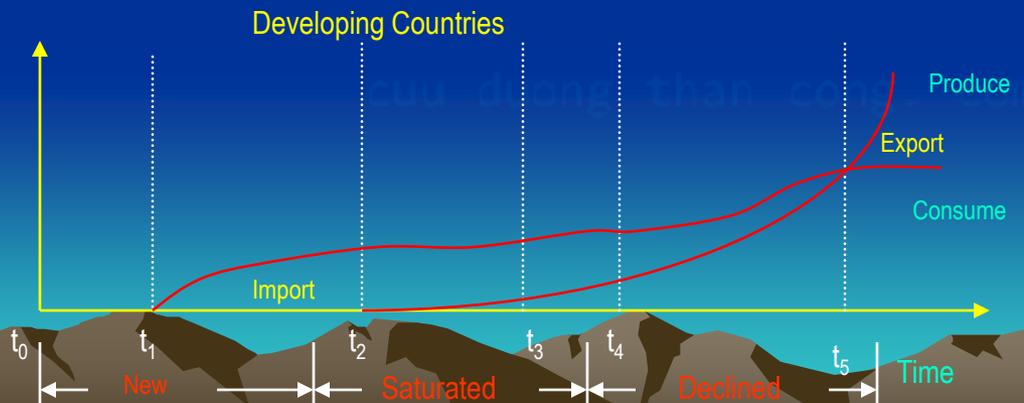
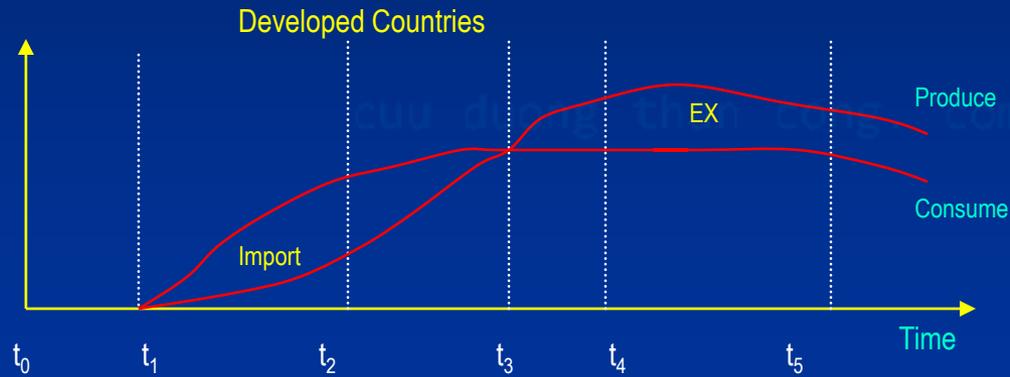
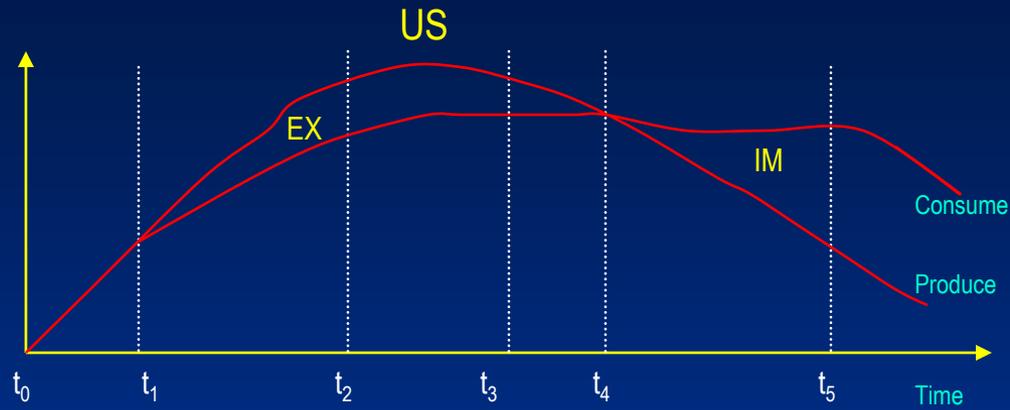


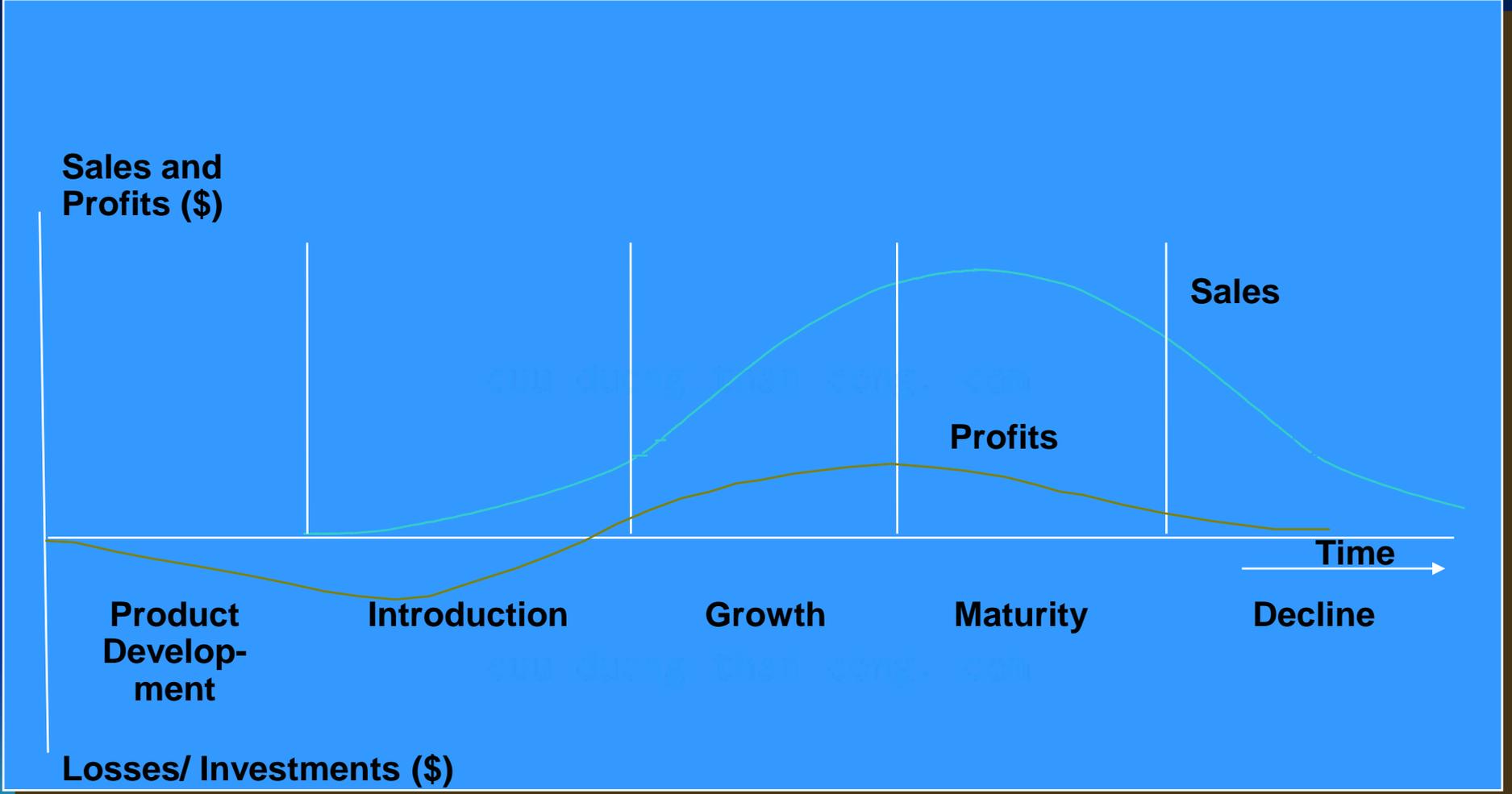
# FIGURE 4.6 The Product Cycle in Low-Income Countries



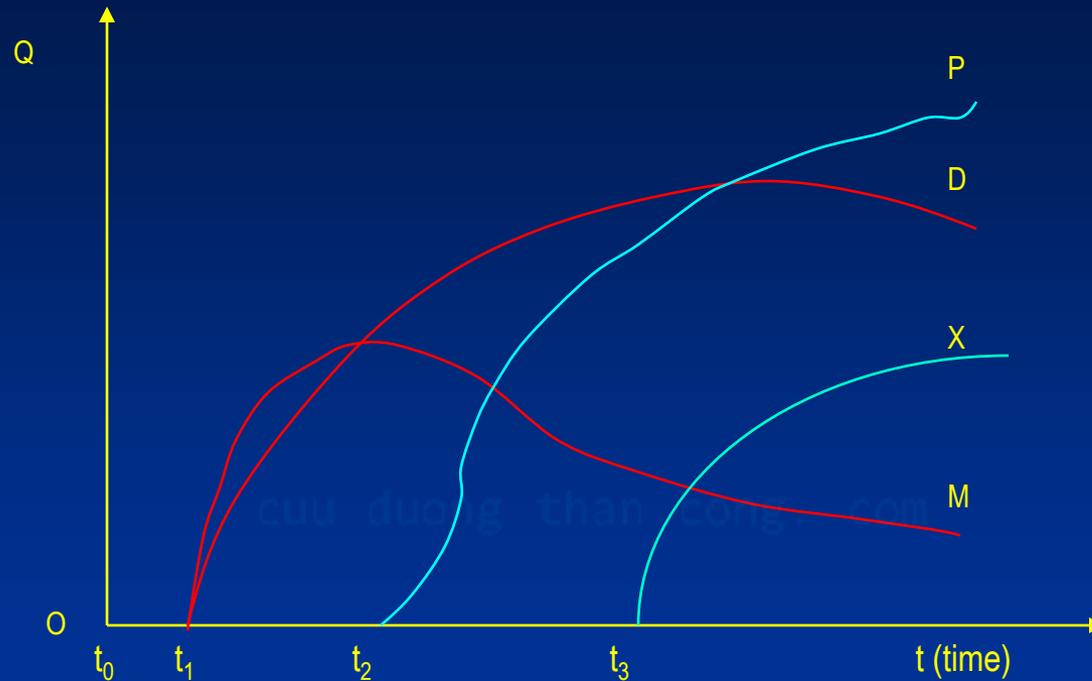
# Firm-based theories (Microeconomics-based theories)

## Product Life Cycle (Vernon, 1966)





# Catching-up Model (Akamatsu, 1969)



Note: OQ: Quantity; Domestic Demand (D); Domestic Production (P); Export (X); Import (M); OT: Time (t<sub>1</sub>, t<sub>2</sub>, t<sub>3</sub>). At first T<sub>1</sub>, M is greater than D and there is no P. Since T<sub>2</sub>, D is greater than M and P appears. At T<sub>3</sub>, X appears due to P is bigger than D.

# Flying Geese pattern

## Flying Geese pattern

*A series of industries take off one after another*

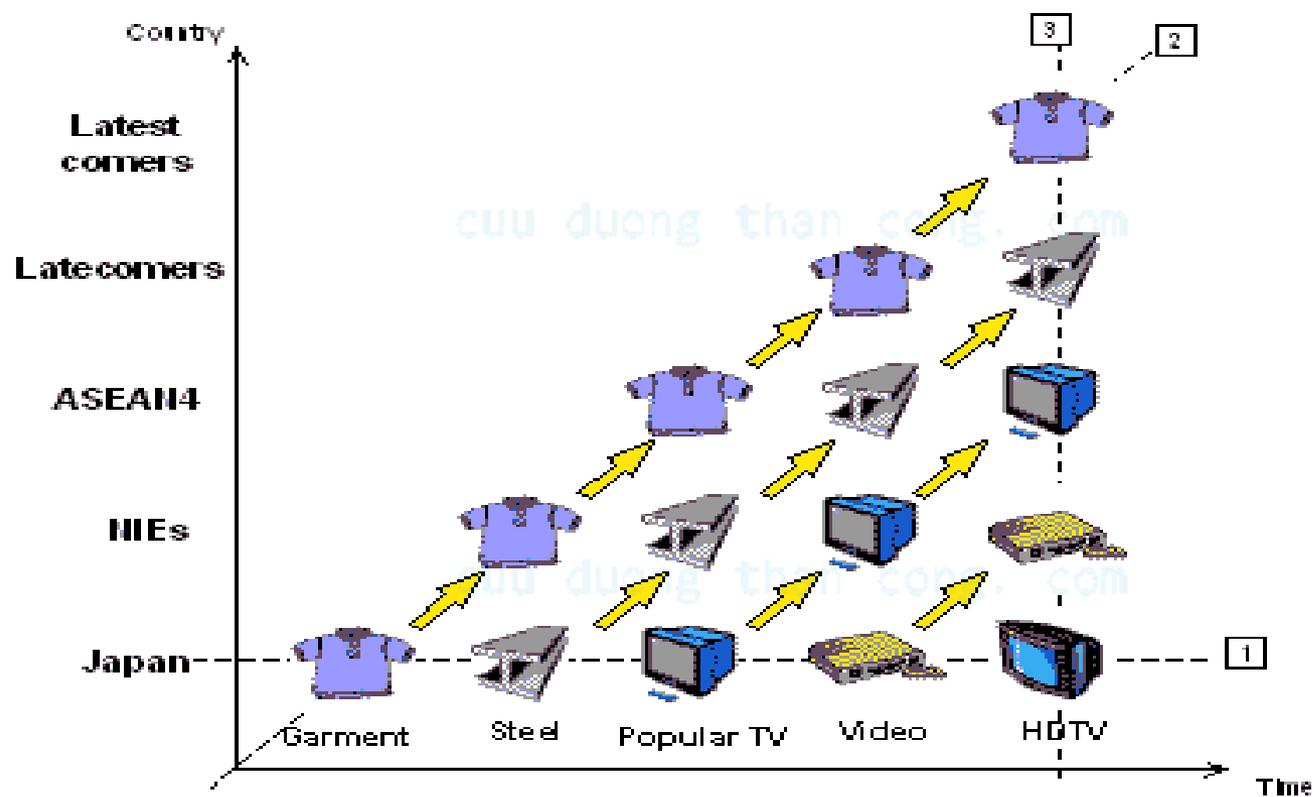
- Created by Japanese economist

***Kaname Akamatsu** intending to explain the catching-up process of industrialization of latecomer economies*

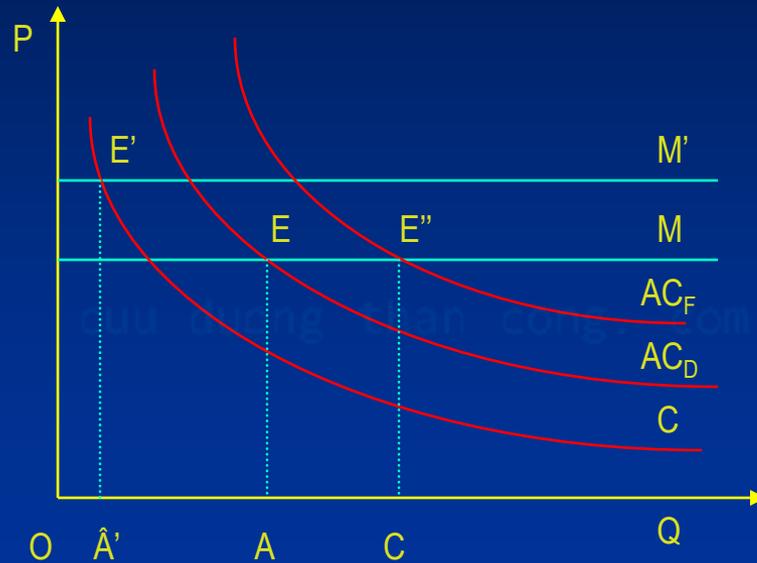
- It works through 3 different channels---  
**Intra-industry** aspect, **Inter-industry** aspect  
and **International** aspect

# An graphical interpretation of FG pattern

## Structural Transformation in East Asia



# Aliber Theory (1970)





# Theory of internalization

- Internalization theory asks why business transactions take place within a firm (hierarchy) rather than between independent firms in a market
- This is of particular relevance for multinational firms – and is it a sufficient explanation for their continued existence?

# Firm specific advantages

- To possess firm specific advantages is a necessary **but not sufficient** condition for FDI to take place
  - Why does the firm not serve the foreign market by **exports** ?
  - Why does it not **licence** a domestic firm to produce ?
  - We must try to understand why the firm wishes to make use of **its advantage itself**

# Market imperfections

- Due to **market imperfections**, there may be several reasons why a firm wants to make use of its monopolistic advantage itself (or organise an activity itself)
- Buckley and Casson (influenced by Coase), suggested that a firm overcomes market imperfections by creating its own market - **internalisation**

# Ronald Coase (Nobel Prize 1991)



- “for his discovery and clarification of the significance of transaction costs and property rights for the institutional structure and functioning of the economy”

# Coase: Nature of the firm

- In his first major study entitled, *The Nature of the Firm*, Coase posed two questions which had seldom been the objects of strict economic analysis and, prior to Coase, lacked robust and valid solutions, *i.e.* , why are there organizations of the type represented by firms and why is each firm of a certain size? A key result in traditional theory was to show the ability of the price system (or the market mechanism) to coordinate the use of resources. The applicability of this theory was diminished by the fact that a large proportion of total use of resources was deliberately withheld from the price mechanism in order to be coordinated administratively within firms.

# Internalisation

- The theory of **internalisation** was long regarded as a theory of why FDI occurs
- By **internalising across national boundaries**, a firm becomes multinational
- Some economists have suggested that even though ownership specific advantages and internalisation advantages are necessary for FDI to occur, it is still not a sufficient explanation

# Internalisation

- Under what circumstances is it likely that a firm would want to replace the open market and instead use an internal transaction?
  - Ensure product quality (forward integration)
  - Ensure stable supply of raw materials (backward integration)
  - Market for knowledge?

# John Dunning eclectic paradigm

- John Dunning attempts to integrate a variety of strands of thinking
- He draws partly on macroeconomic theory and trade, as well as microeconomic theory and firm behavior (industrial economics)

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# John Dunning eclectic paradigm

- If a company wants to service a local or foreign market from a foreign localization, it must have access to firm specific advantages or be able to acquire these at lower cost
- This is what we have called ownership specific advantages or **O** - advantages

# O = Ownership advantages

- Some firms have a firm specific capital known as **knowledge capital**: Human capital (managers), patents, technologies, brand, reputation... [CuuDuongThanCong.com](http://CuuDuongThanCong.com)
- This capital can be replicated in different countries without losing its value, and easily transferred within the firm without high transaction costs

# John Dunning eclectic paradigm

- Given that ownership specific advantages are present, it must be in the best interest for the firm to use these itself, rather than sell them or license them to other firms
- These are Internalization or I-advantages, and can arise because a hierarchy is a more efficient way of organizing transactions than a market

# I – internalization advantages

- Problem:
  - If the agent interrupts the contract it can use the technology to compete with the mother company
  - In the case of brands/reputation: if the agent damages the brand reputation
- Of course there are suitable contracts, but those are potentially
  - Incomplete or difficult to enforce

# John Dunning eclectic paradigm

- In addition to ownership specific advantages as well as internalisation advantages are necessary, it must be in the firms interest to use these in combination with a least some factor inputs located abroad - so called **location specific advantages** or **L-advantages**

# L – Localization advantages

- Producing close to final consumers or downstream customers
- Saving transport costs
- Obtaining cheap inputs
- Jumping trade barriers
- Provide services (for most services production and delivery have to be contemporaneous)

# John Dunning eclectic paradigm

- By combining **O**wnership specific advantages, **I**nternalisation specific advantages and **L**ocation specific advantages, we get the “eclectic” approach to FDI - the so called **O-L-I** paradigm of international production

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# John Dunning eclectic paradigm

- The eclectic, or OLI paradigm, suggests that the greater the O and I advantages possessed by firms and the more the L advantages of creating, acquiring (or augmenting) and exploiting these advantages from a location outside its home country, the more FDI will be undertaken
- Where firms possess substantial O and I advantages but the L advantages favor the home country, then domestic investment will be preferred to FDI and foreign markets will be supplied by exports

# John Dunning eclectic paradigm

- When firms possess O advantages which are best acquired, augmented and exploited from a foreign market, but by way of inter-firm alliances or by the open market, then FDI will be replaced by a transfer of at least some assets normally associated with FDI and a transfer of these assets or the right to their use

# How to service a market?

Market service	O – adv	I – adv	L–adv
FDI	Yes	Yes	Yes
Trade	Yes	Yes	No
Licence	Yes	No	No

# 4 types of FDI in the OLI

- The typology of FDI was developed by Jere Behrman to explain the different objectives of FDI:
  - Resource seeking FDI
  - Market seeking FDI
  - Efficiency seeking (global sourcing FDI)
  - Strategic asset/capabilities seeking FDI

# Resource seeking FDI

- To seek and secure natural resources e.g. minerals, raw materials, or lower labor costs for the investing company
- For example, a German company opening a plant in Poland to produce and re-export to Germany
- Where a iPods produced?

# Market seeking FDI

- To identify and exploit new markets for the firms' finished products
- Unique possibility for some type of services for which production and distribution have to be contemporaneous (telecom, water supply, energy supply)
- Norwegian Telecom have invested heavily in Russia

# Efficiency seeking FDI

- To restructure its existing investments so as to achieve an efficient allocation of international economic activity of the firms
  - International specialization whereby firms seek to benefit from differences in product and factor prices and to diversify risk
  - Global sourcing – resource saving and improved efficiency by rationalizing the structure of their global activities. Undertaken primarily by network based MNCs with global sourcing operations.

# Strategic asset/capabilities seeking FDI

- MNCs pursue strategic operations through the purchase of existing firms and/or assets in order to protect O specific advantages in order to sustain or advance its global competitive position
  - Acquisition of key established local firms
  - Acquisition of local capabilities including R&D, knowledge and human capital
  - Acquisition of market knowledge
  - Pre emptying market entrance by competitors
  - Pre emptying the acquisition by local firms by competitors

# Does the OLI theory work?

- It explains part of the evidence. MNCs active in sectors:
  - With high R&D
  - Intensive in advertisement/reputation
  - Innovative and complex technologies
  - Intangible capital (know how, patents)

# Further discussion

- Can we use int'l investment theories to explain today investment activities?.
- M&As deals recently?.
- The development of int'l investment theories?.

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**End of chapter 3**

**Thank you for your attention!!!**

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