

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)

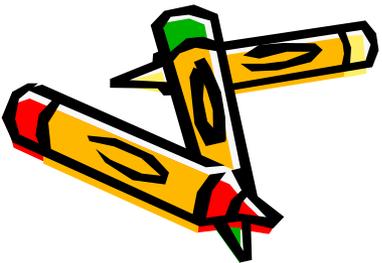
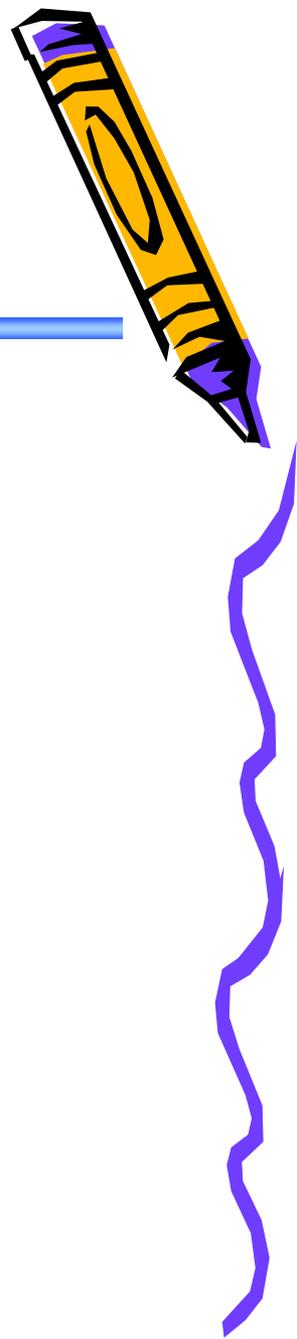
➤ Firm-based theories (Microeconomics-based theories/TNCs Theories)

➤ Review of international investment theories



Country-based theories (Macroeconomics-based theories)

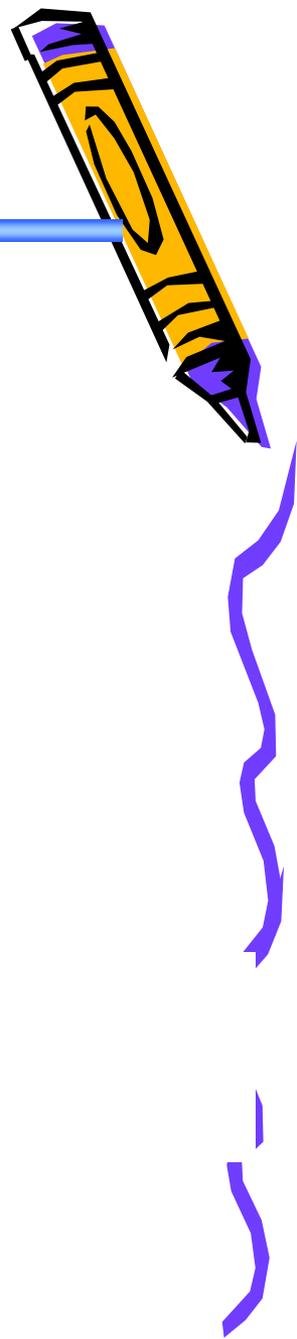
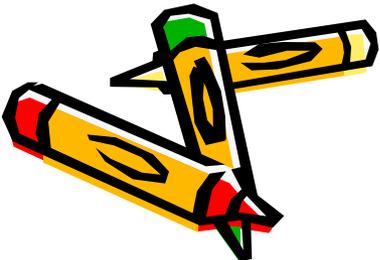
- Heckscher-Ohlin Theory (1933)
- Mac Dougall-Kemp model (1964)
- D. Salvatore ?



Country-based theories: H-O Theory



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



Assumptions of H-O Theory



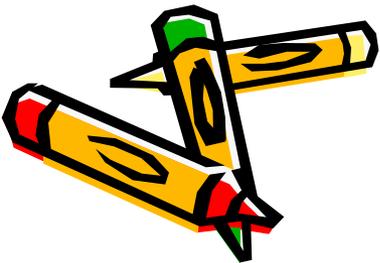
- 2x2x2 model
- Same technology
- X is L-intensive and Y is K-intensive
- Constant returns to scale
- Incomplete specialization
- Equal tastes
- Perfect competition
- Internal factor mobility
- No transportation costs
- All resources are fully employed
- Exports equal imports



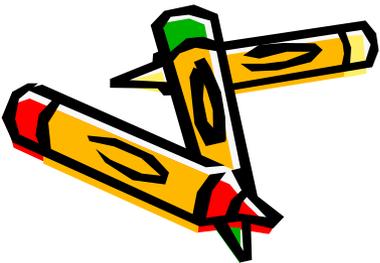
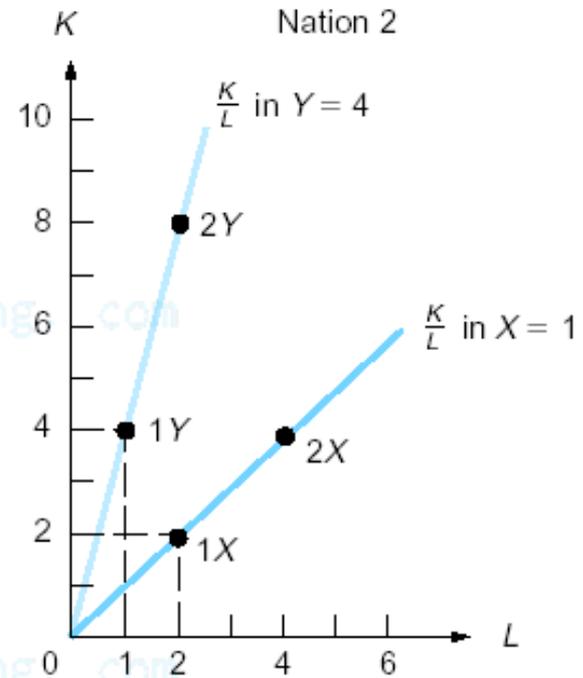
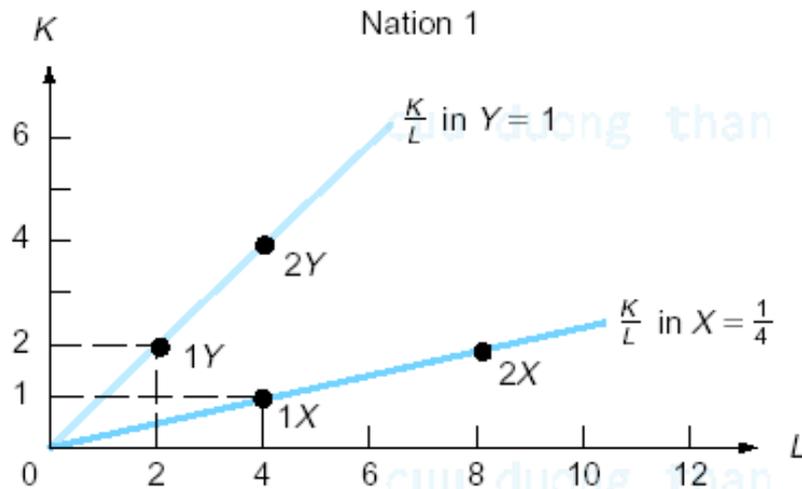
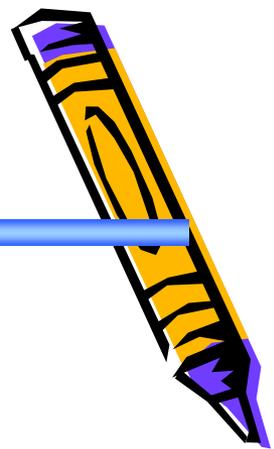
Factor Intensity

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).



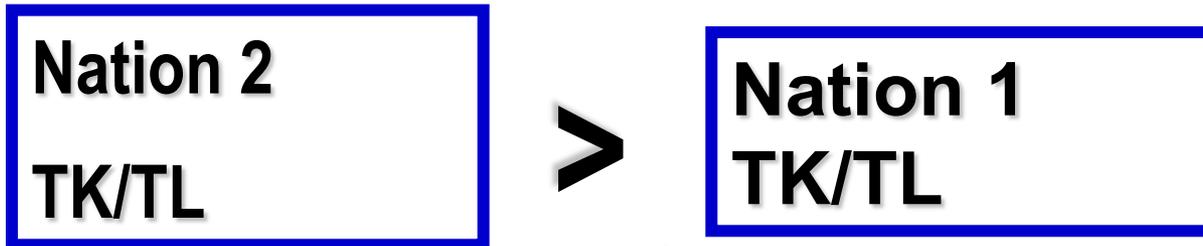
Factor Intensity



Factor Abundance



- In Physical Units



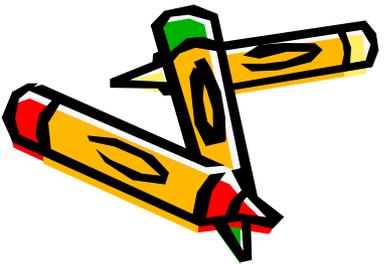
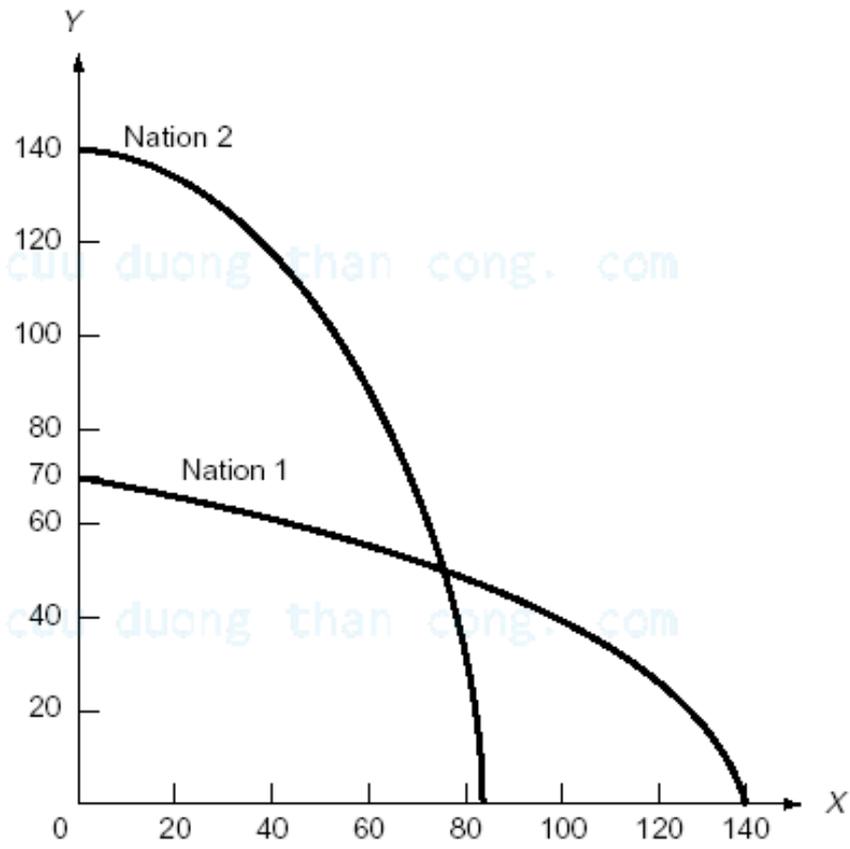
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- In Relative Factor Prices $P_K/P_{L1} < P_K/P_{L2}$;
($r/w1 < r/w2$)

- In terms of physical units, the definition of factor abundance considers only the supply of factors.
- 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



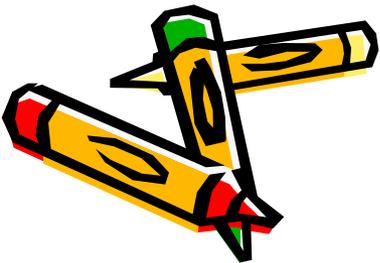
Heckscher-Ohlin Theory

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.



(H-O) Factor Endowment Theory

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.

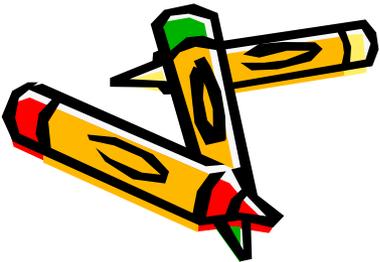
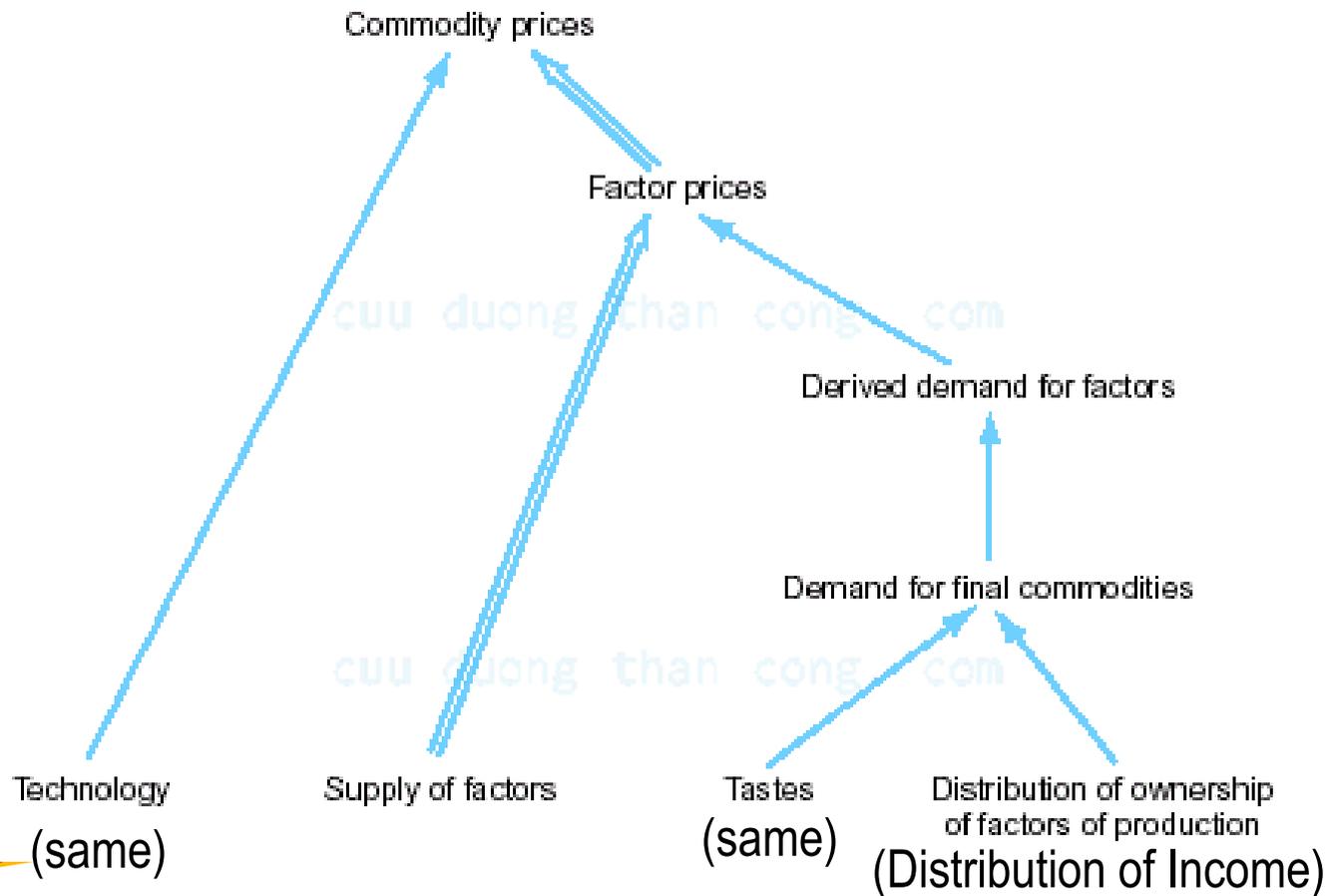


Illustration of H-O Theory

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



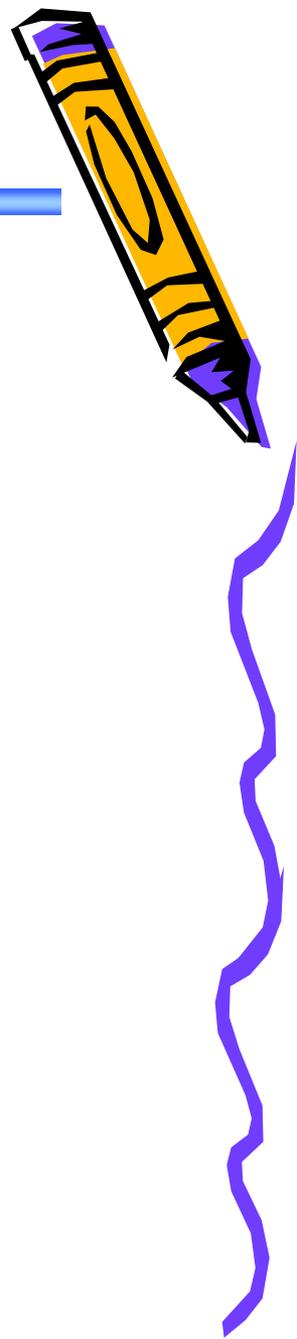
(H-O-S) Factor-price equalization theorem

International trade will bring about equalization in the relative and absolute returns to homogeneous factors across nation.

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=> International trade is a substitute for the international mobility of factors

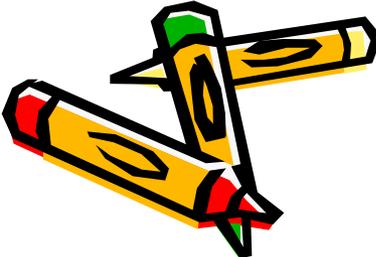
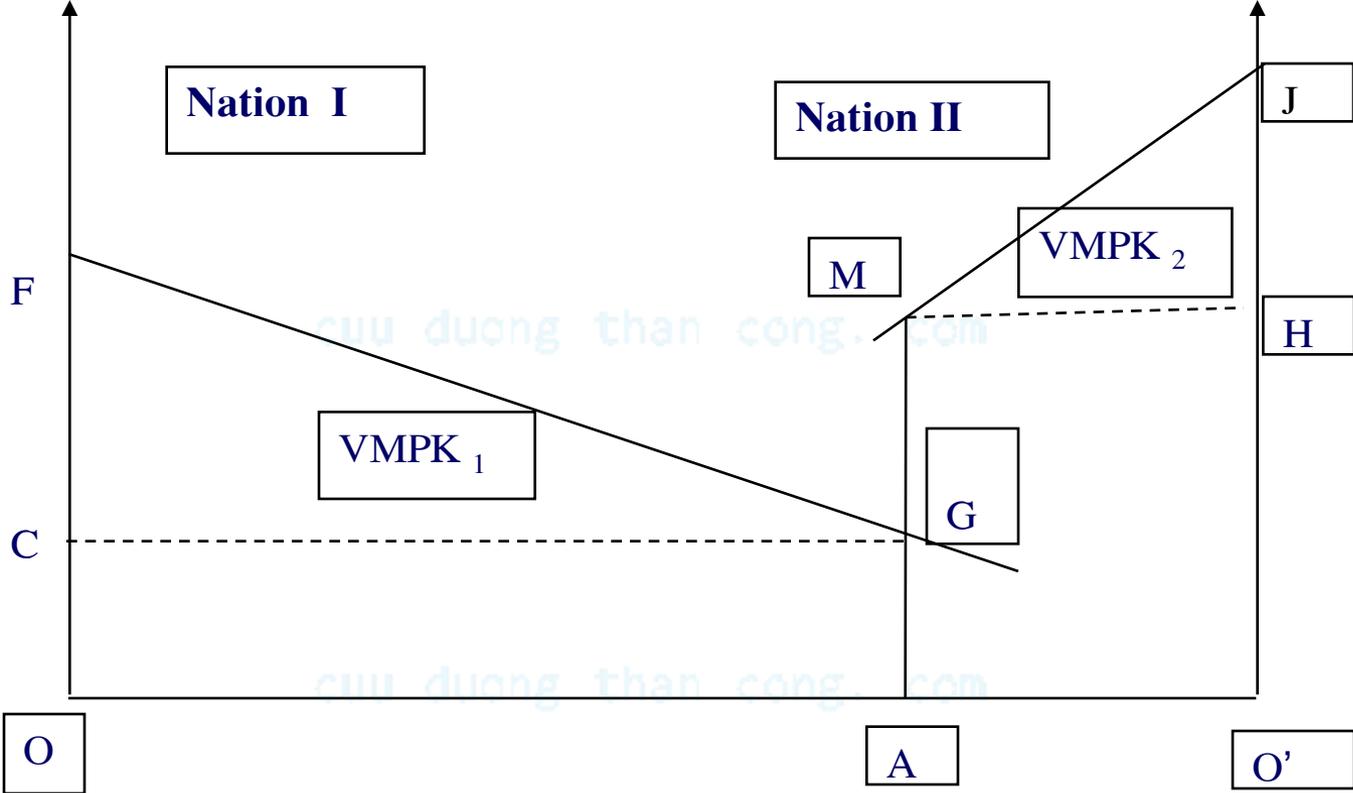
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Country-base theories - Mac Dougall-Kemp Model

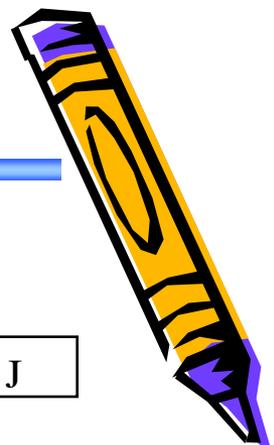
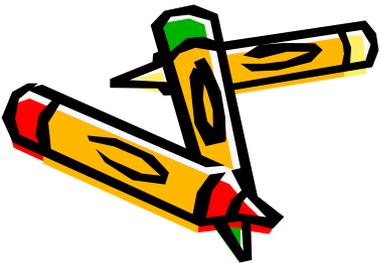
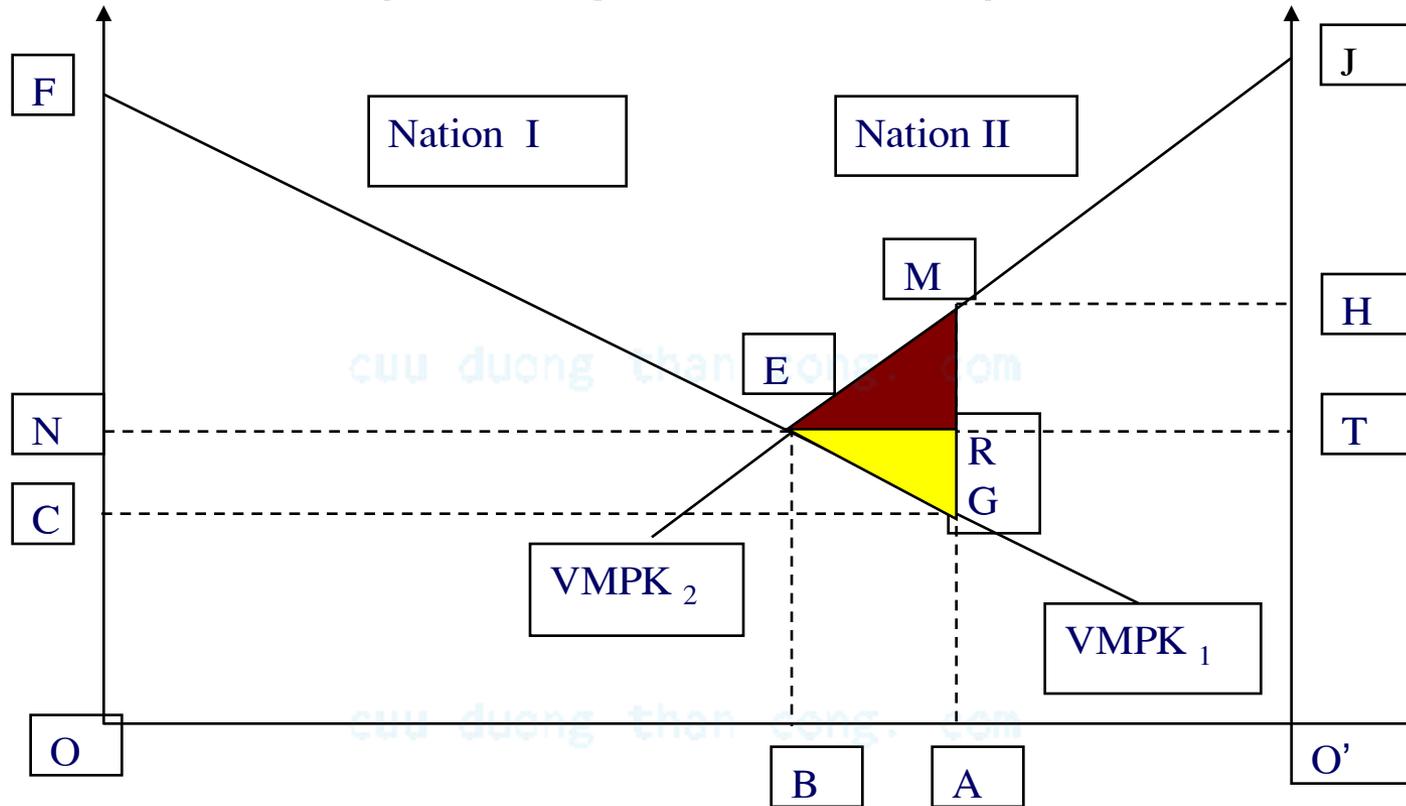


(Before capital movement)



Mac Dougall-Kemp Model

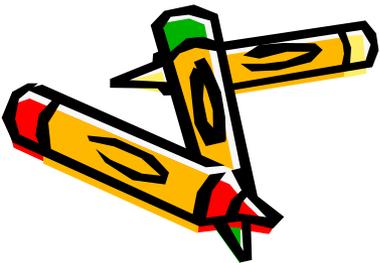
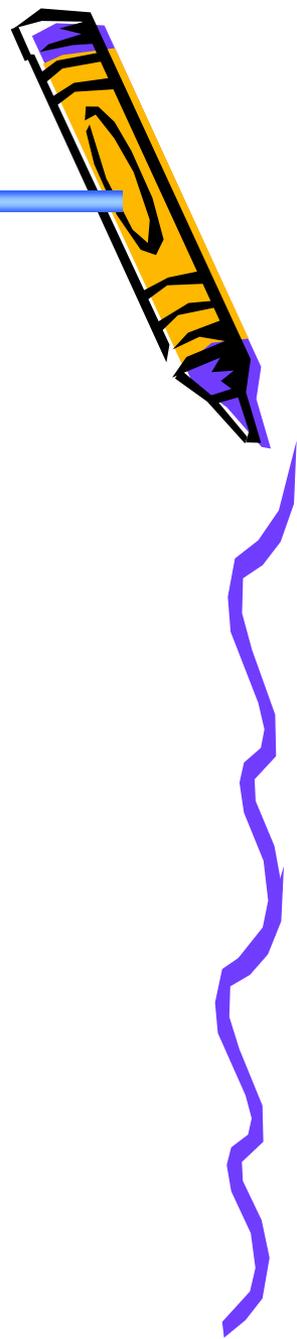
(After capital movement)



Mac Dougall-Kemp Model

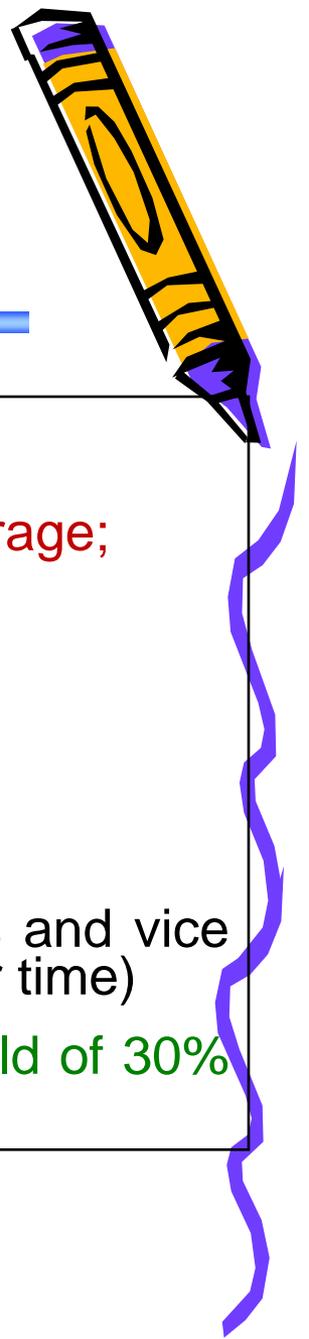
Explains the motive of the capital movement from Nation I to Nation II: to seek higher return (higher rate-profit) abroad

The movement of the capital from Nation I (relatively capital abundant) to Nation II (relatively capital scarce) equalizes the return on capital in the two nations, increases the world output and leads to net gains of both nations



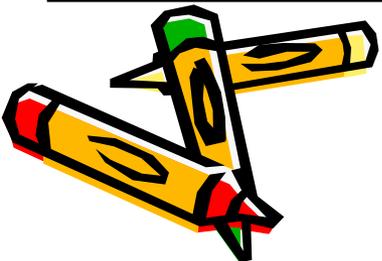
Country-base theories: Risk diversification

(D. Salvatore, 1993)



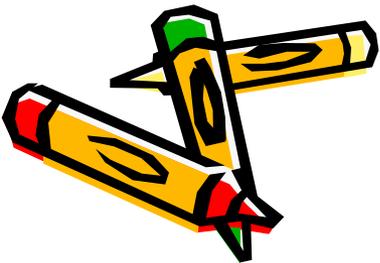
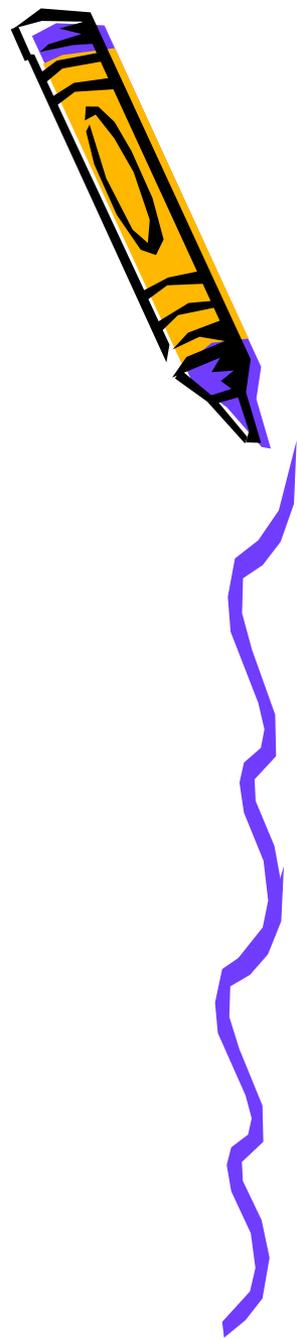
■ Risk diversification on bonds and shares:

- Share A and B have an expected rate of return 30% on average; but there is a 50-50 chance of the yield:
 - either 20% or 40% on A
 - either 10% or 50% on B
- ➔ B is riskier than A, so investor should chose A.
- However, if the yield on A falls when the yield on B rises and vice versa (i.e the changes in yields are negatively correlated over time)
 - By holding both A & B, the investor can still receive a yield of 30% on average but with a much lower risk.

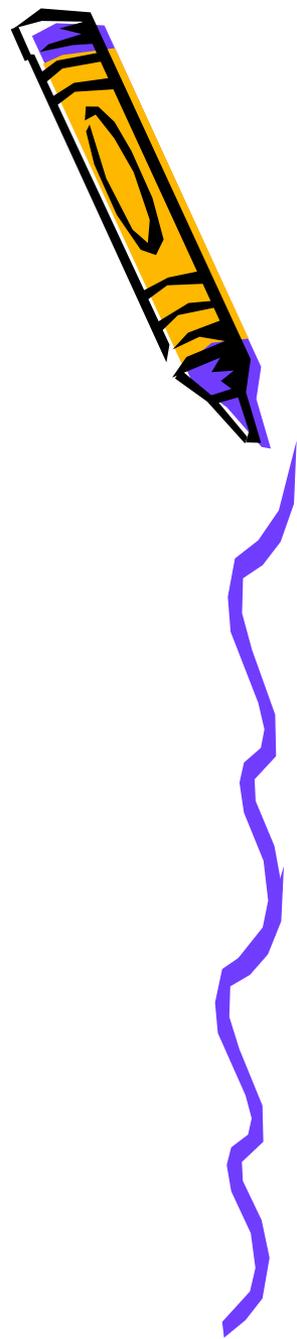


Portfolio theory: was put by *Rugman, Agmon and Lessard*. These researchers argued that international operations allow for a diversification of risk and therefore tend to maximize the expected return on investment.

Rugman and Lessard have further argued that the location of the foreign direct investment would be a function of both the firm's perception of the uncertainties involved and the geographical distribution of its existing assets.



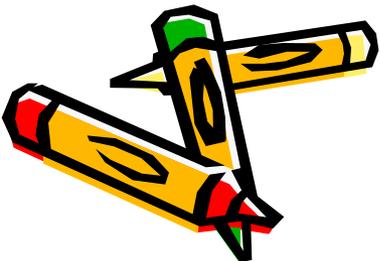
Firm-based theories



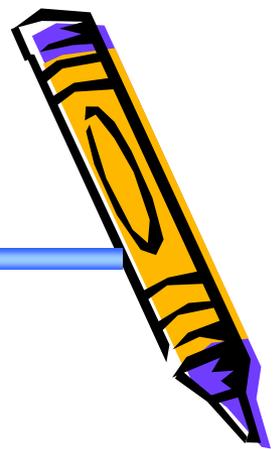
1. Product Life Cycle Theory (R. Vernon 1966)
2. Catching-up Model (Akamatsu, 1969)
3. Theoretical models of the Firm's decision
4. Theory of internalization
5. Eclectic paradigm (John Dunning)

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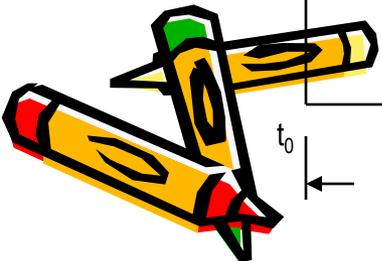
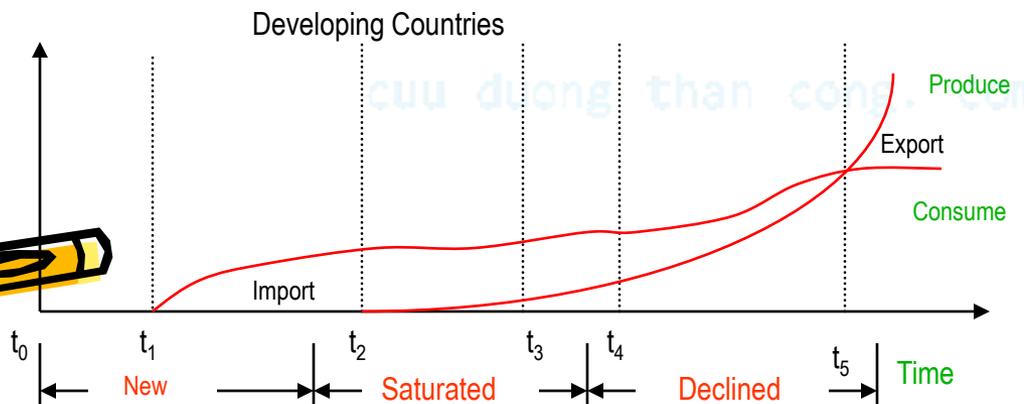
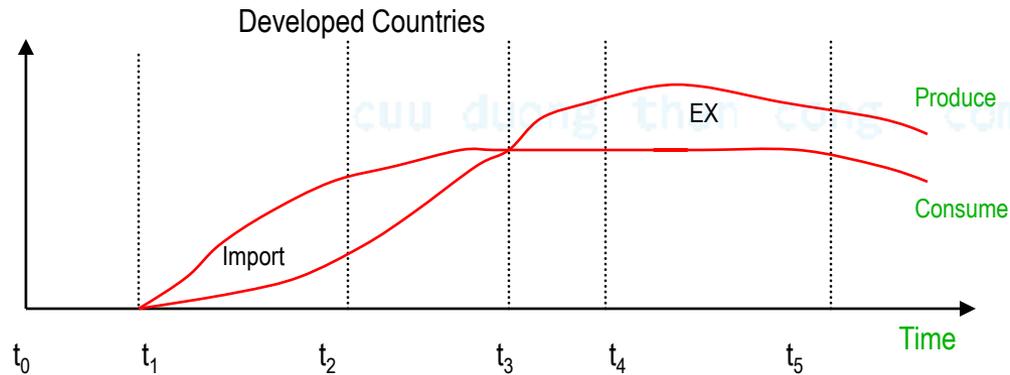
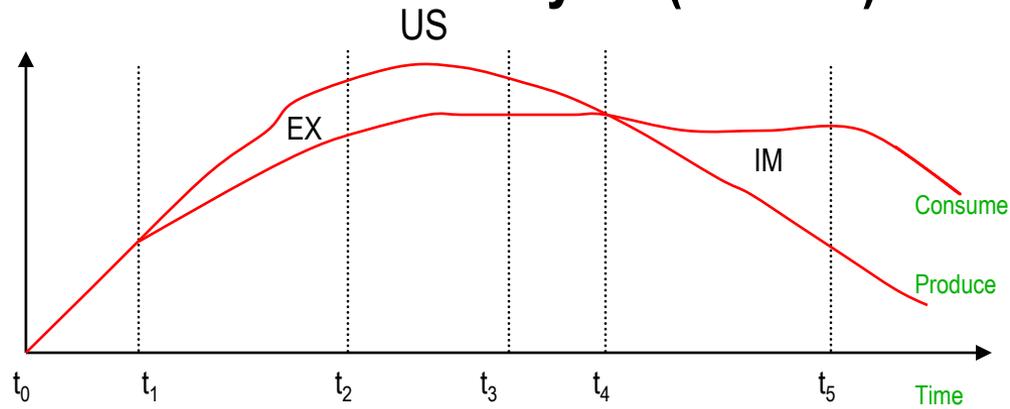
1. Product Life Cycle Theory



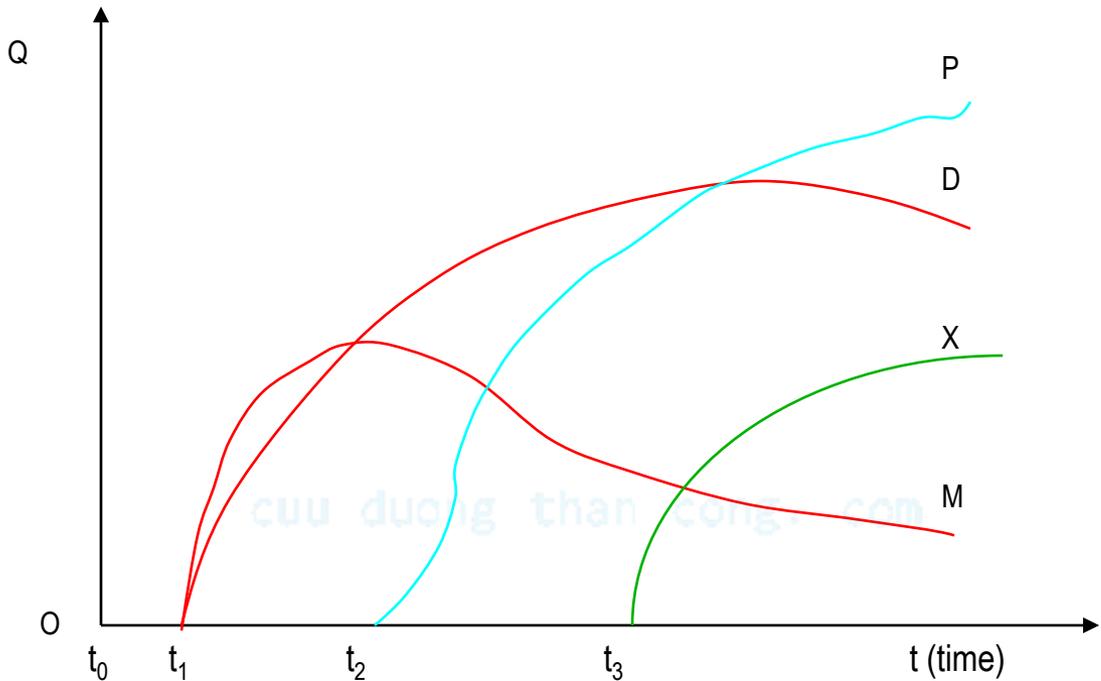
- Developed by Raymond Vernon
- Argument: Production of a good is cyclical
 - When a manufactured good is developed, producers experiment and seek consumers' reactions
 - When production leaves the early stage, the good begins to be standardized in terms of size, features, and manufacturing process
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



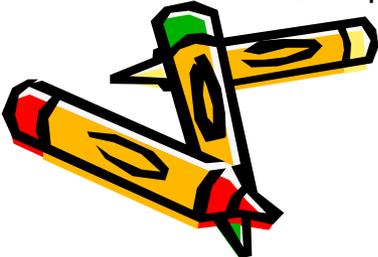
Product Life Cycle (Vernon)



2.Catching-up Model (Akamatsu, 1969)



Note: OQ: Quantity; Domestic Demand (D); Domestic Production (P); Export (X); Import (M); OT: Time (t1, t2, t3). At first T1, M is greater than D and there is no P. Since T2, D is greater than M and P appears. At T3, 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

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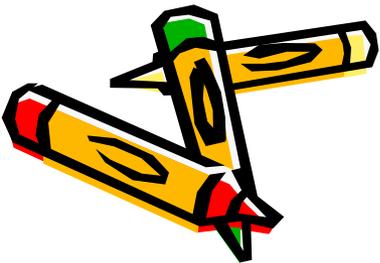
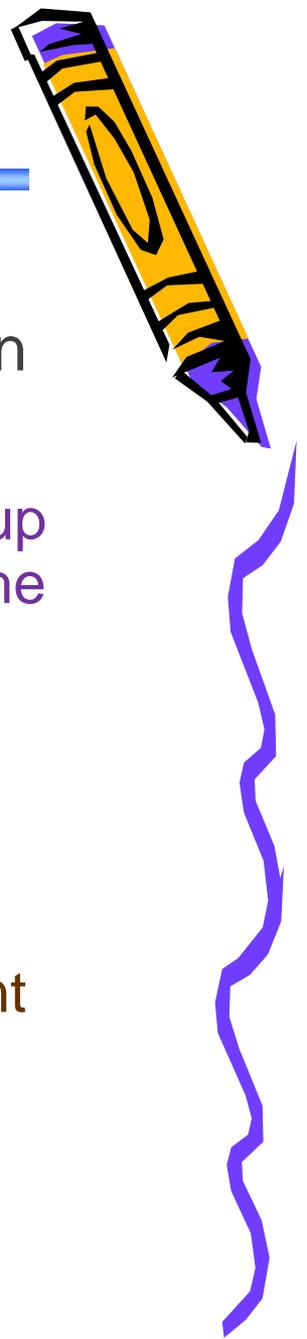


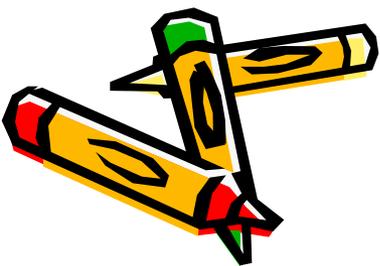
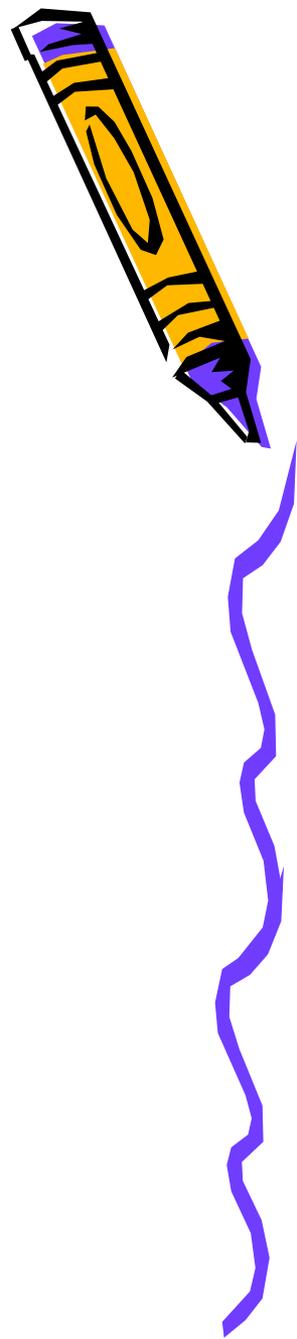
Flying Geese pattern

Akamatsu's Flying Geese Paradigm is a model for international division of labor in East Asia based on dynamic comparative advantage

The paradigm postulated that Asian nations will catch up with the West as a part of a regional hierarchy where the production of commoditized goods would continuously move from the more advanced countries to the less advanced ones.

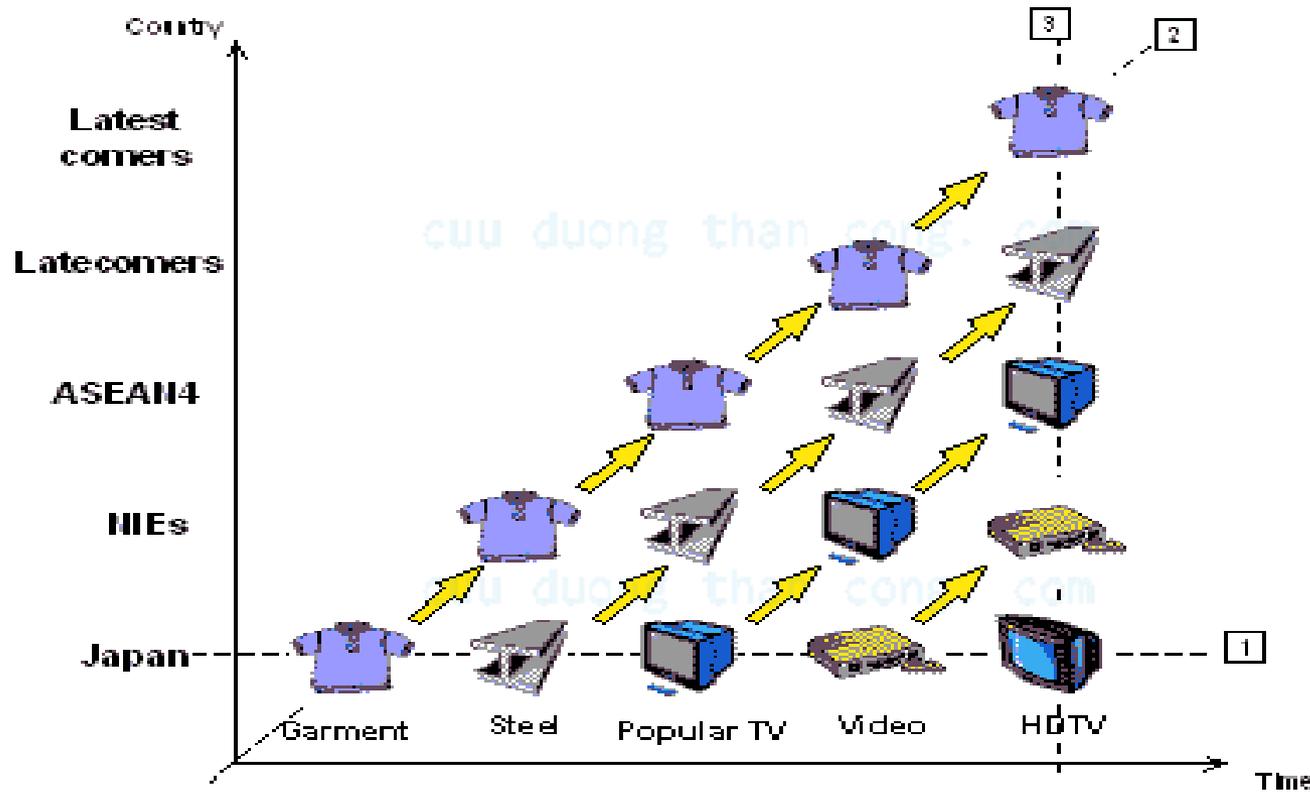
The underdeveloped nations in the region could be considered to be “aligned successively behind the advanced industrial nations in the order of their different stages of growth in a wild-geese-flying pattern”



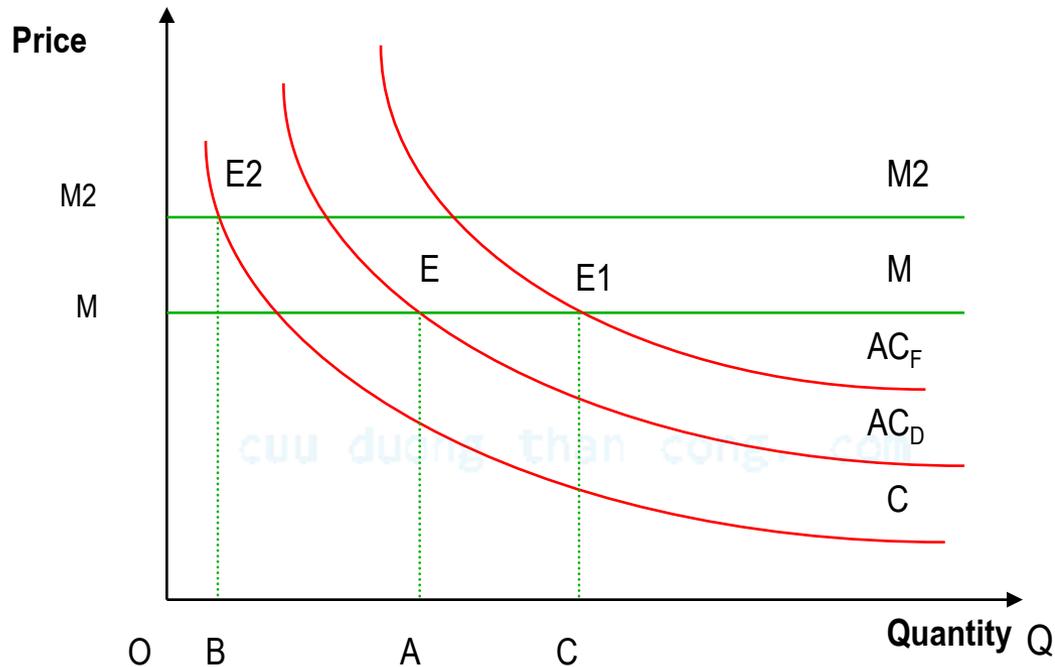


A graphical interpretation of FG pattern

Structural Transformation in East Asia



3.Theoretical models of the Firm's decision

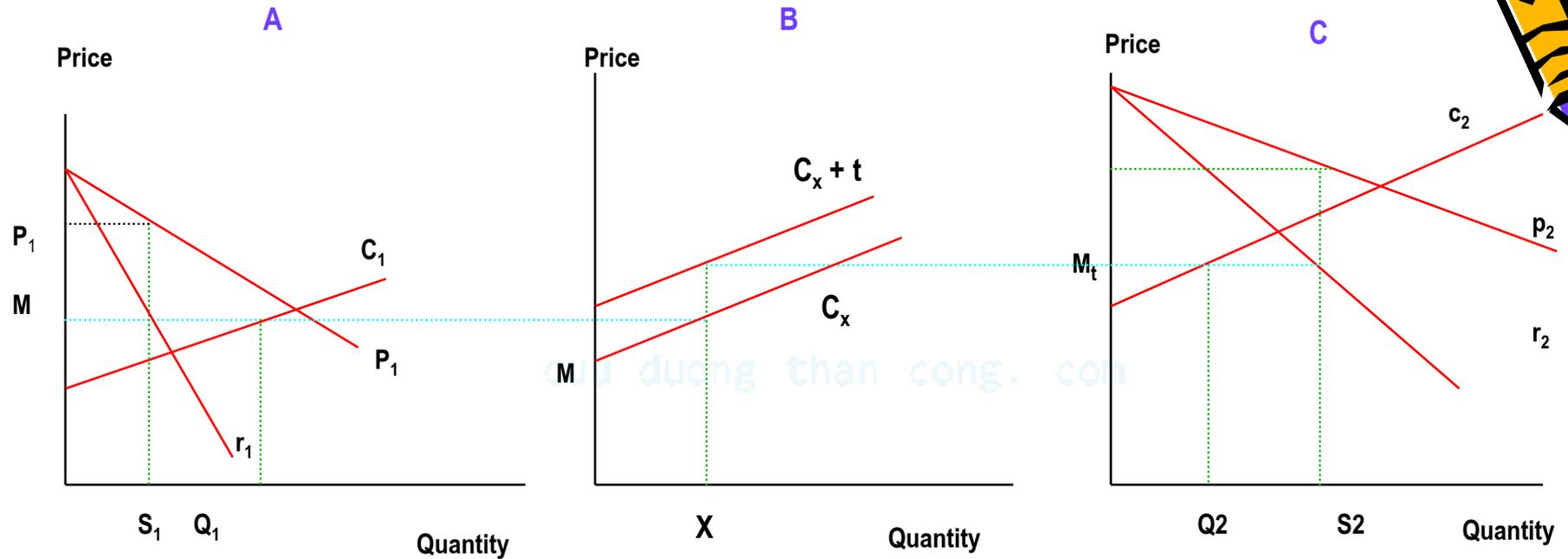
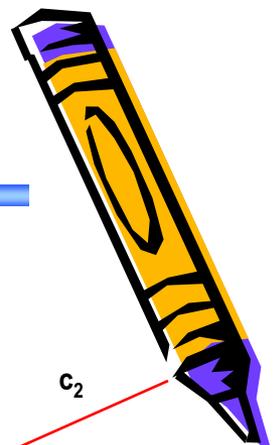


Price and cost functions in a Host country

Source: Phung Xuan Nha, *International Investment*, 2001, p.57 (Aliber Theory)

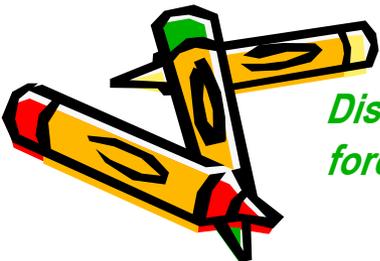
Discussion 1: Please introduce the above graph and explain when a firm choose to export, license or invest abroad?

3. Theoretical models of the Firm's decision



A. Revenue and cost functions in Home country; B. Intra-firm trade ; C. Revenue and cost functions in Foreign country

Source: Richard E. Caves, *Multinational Enterprise and Economic Analysis*, (3rd Ed.), 2007, p. 34



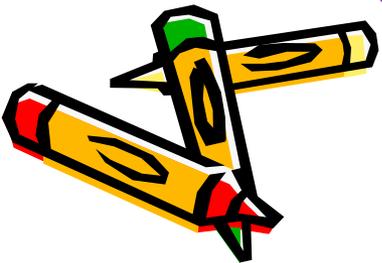
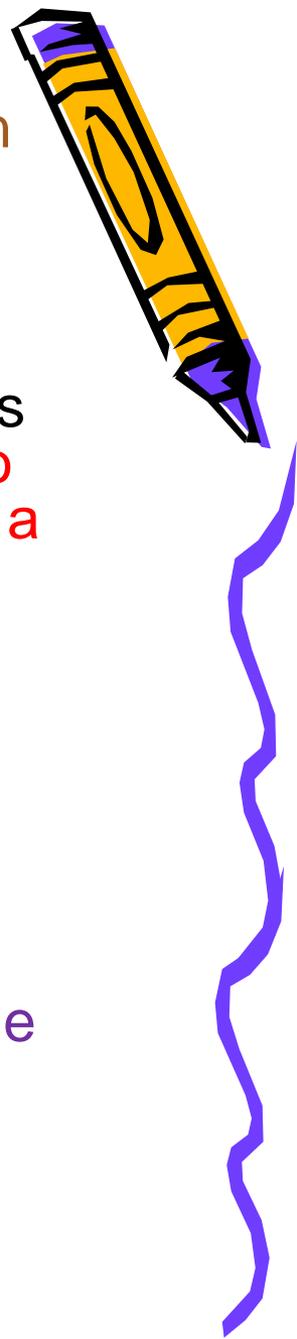
Discussion 2: Please use the above graph to answer the question when the firm supplies a foreign market by export or local production?

1. **Exporting** - producing goods at home and then shipping them to the receiving country for sale exports can be limited by transportation costs and trade barriers

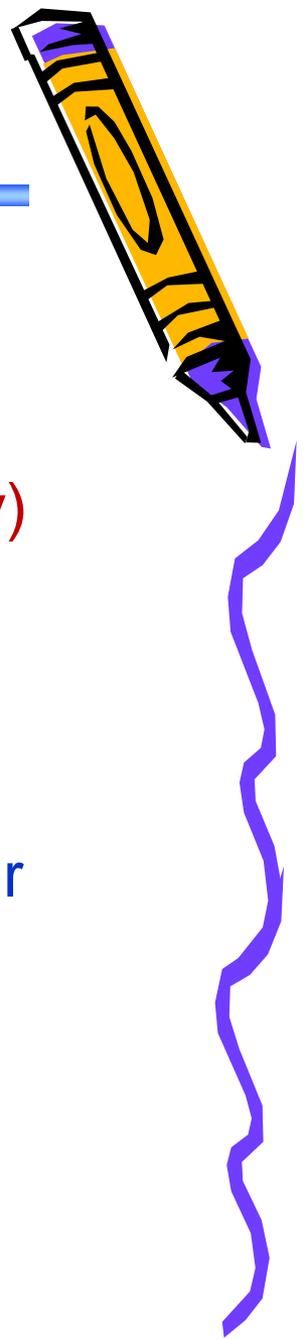
FDI may be a response to actual or threatened trade barriers such as import tariffs or quotas

2. **Licensing** - granting a foreign entity the right to produce and sell the firm's product in return for a royalty fee on every unit that the foreign entity sells

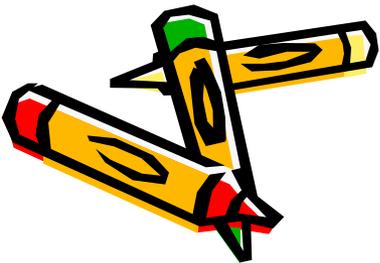
- ❖ **Internalization theory** (aka **market imperfections theory**) suggests that licensing has three major drawbacks compared to FDI
 - ❖ firm could give away valuable technological know-how to a potential foreign competitor
 - ❖ does not give a firm the control over manufacturing, marketing, and strategy in the foreign country
 - ❖ the firm's competitive advantage may be based on its management, marketing, and manufacturing capabilities



4.Theory of internalization



- Internalization theory answers 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?



4.Theory of internalization

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 **export** ?
 - Why does it not **licence** a domestic firm to produce?
 - We must try to understand why the firm wishes to make use of its **advantages** itself



4.Theory of internalization

Market imperfections



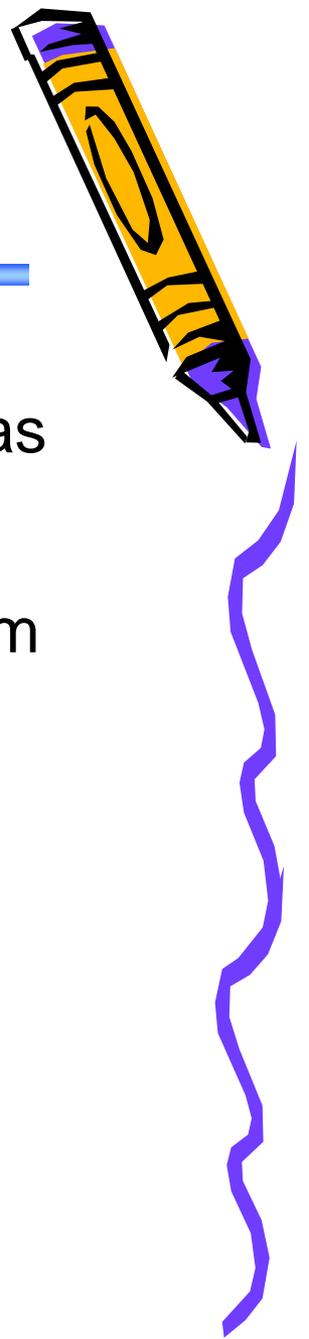
- Due to market imperfections, there may be several reasons why a firm wants to make use of its monopolistic advantage itself (or organise an activity itself)
- Buckley and Casson (influenced by Coase), suggested that a firm overcomes market imperfections by creating its own market - internalisation

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4.Theory of internalization

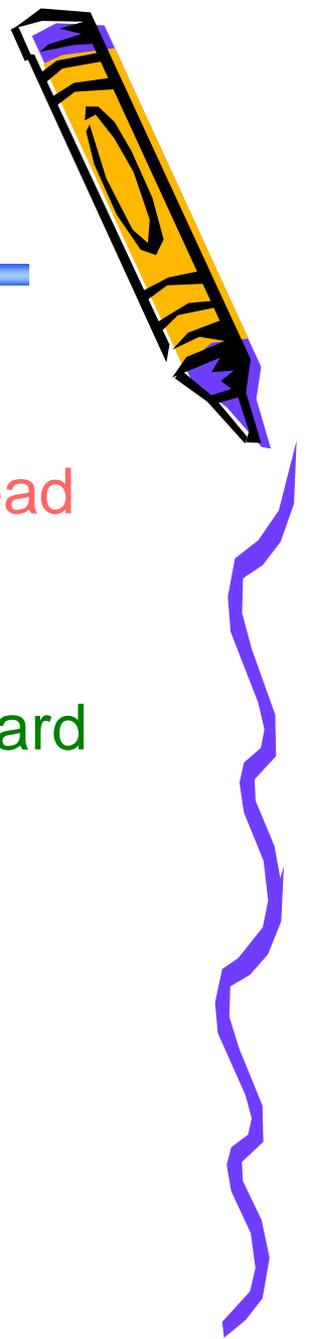
Internalisation



- 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



4.Theory of internalization *Internalisation*

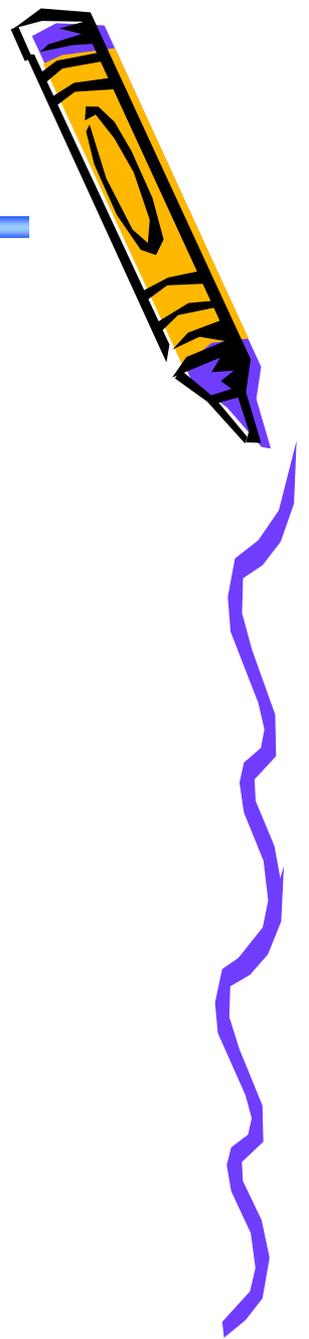


- Under what circumstances is it likely that a firm would want to replace the open market and instead use an internal transaction?
 - Ensure product quality (forward integration)
 - Ensure stable supply of raw materials (backward integration)
 - Market for knowledge?

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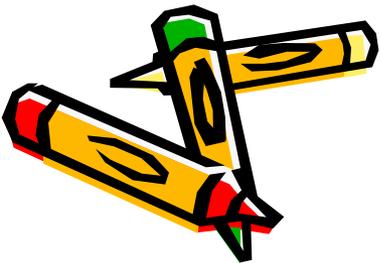


5. Eclectic paradigm (John Dunning)



- 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)

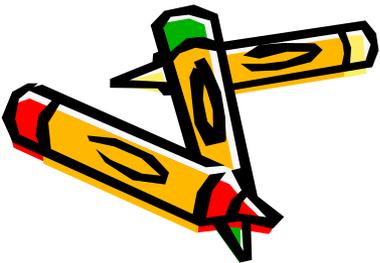
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5. Eclectic paradigm or OLI Paradigm (John Dunning)

O = Ownership advantage

- 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



5. Eclectic paradigm (John Dunning)

O = Ownership advantages



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

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5. Eclectic paradigm (John Dunning)

I = Internalization



- 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

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5. Eclectic paradigm (John Dunning)

1 – 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

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5. Eclectic paradigm (John Dunning)

L = Location Advantage



- 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**

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5. Eclectic paradigm (John Dunning)

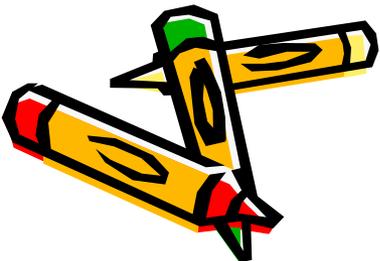
L = Location Advantage



- 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)

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5. Eclectic paradigm (John Dunning) or O-L-I paradigm



- By combining Ownership specific advantages, Internalisation specific advantages and Location specific advantages, we get the “eclectic” approach to FDI - the so called O-L-I paradigm of international production

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How to serve a market?



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



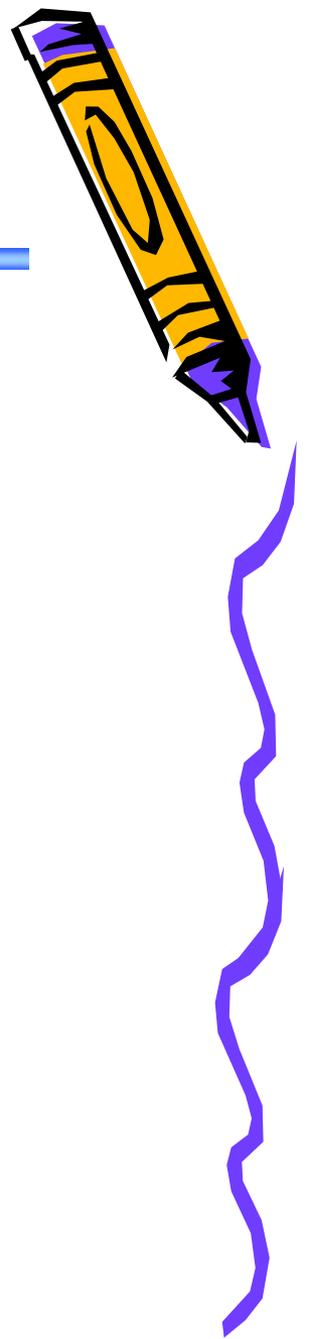
4 types of FDI in the OLI



- 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



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 and self-study



- Knickerbocker's theory to explain why a firm decide to invest abroad?
- Can we use int'l investment theories to explain today investment activities?
 - M&As deals recently?
 - The development of int'l investment theories?
 - Theories on Supply and Value Chains and find examples.



End of chapter 3

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