

International Trade Theory

BUS2200 – Chapter 4 = Chapter 6 on Connect

But First...

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Super Bowl Ads...





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Today's Topic

Trade Theory

- The theoretical foundation of International Business Studies...
- Used to explain the movements in International Trade

Free Markets & Gov't Policy

- All of these trade theories discuss the benefits of international trade – but differ on the role of Gov't in it.
- Government's role in business is often most explicit in case of international trade.

Important Difference

- Theory of International Trade
- Practice of International Trade

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- Theory of International Trade
- Practice of International Trade



Purchase, sale, or exchange
of goods and services
across national borders...

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Definition of Global Trade

Perspective

- World Trade:
 - 80% Goods (\$14 Trillion)
 - 20% Services (\$3 Trillion)
- World Trade grows faster than World Output



- **Free trade** - a situation where a government does not attempt to influence through quotas or duties what its citizens can buy from another country or what they can produce and sell to another country

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- *Trade theory shows why it is beneficial for a country to engage in international trade even for products it is able to produce for itself*

Why Free Trade Works...

- International trade allows a country
 - to specialize in the manufacture and export of products and services that it can produce efficiently
 - import products and services that can be produced more efficiently in other countries

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 - import products and services that can be produced more efficiently in other countries
 - **limits on imports may be beneficial to producers, but not beneficial for consumers**

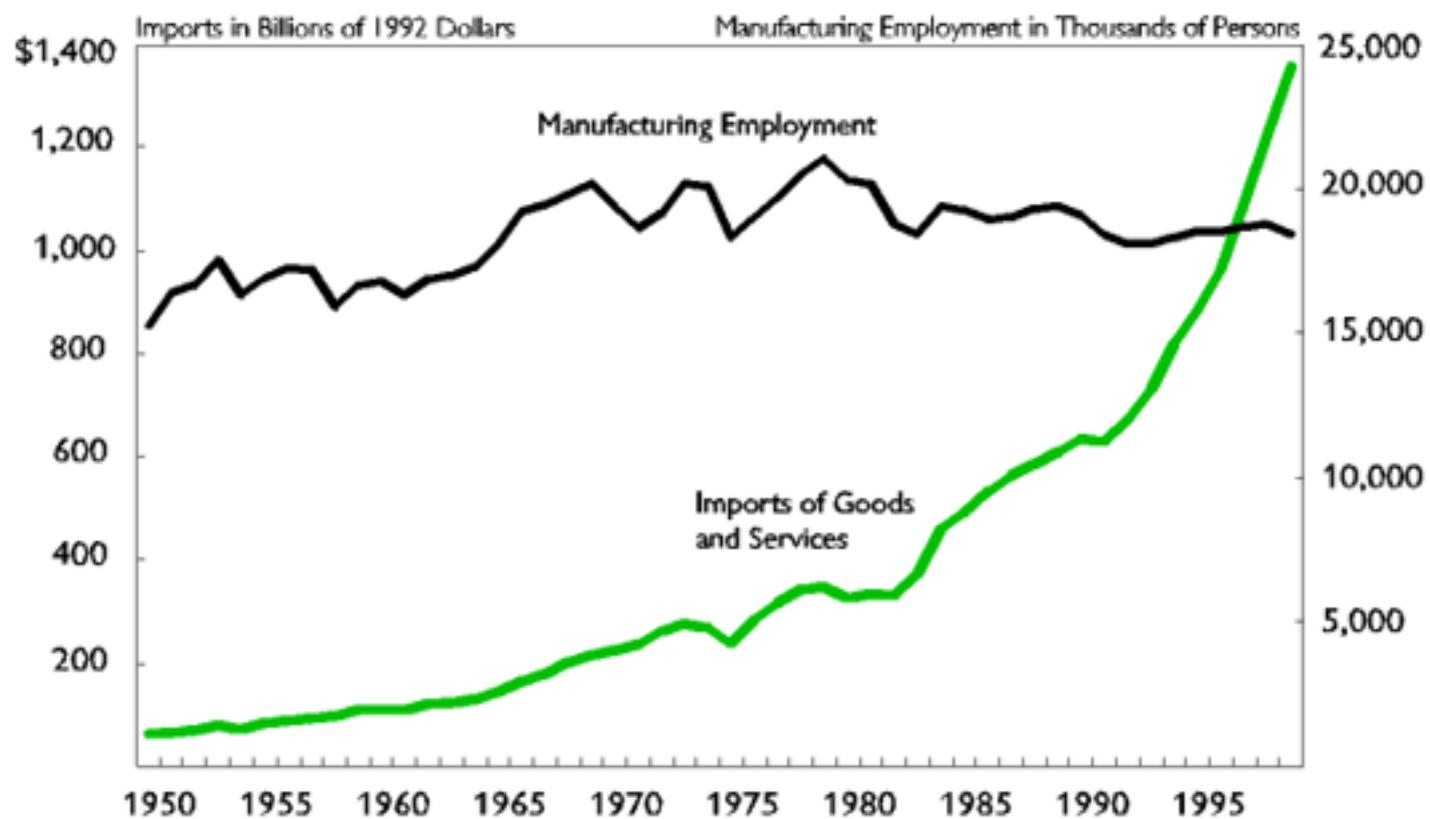
Benefits of Free Trade

- Promotes Innovation and Competition
 - Offers consumers more choices at lower prices.
 - Requires companies to compete for the consumers' dollars – improving products and service.
 - A good example of trade restrictions are found in the agricultural sectors of the US and foreign economies...

Benefits of Free Trade

- Generates Economic Growth
 - US exports support 12 million jobs in the USA.
 - Trade related jobs pay 13%-16% higher wages.
- Note: this comes with a change from blue-collar to white-collar employment, i.e. shift to a “service industry.”

Employment in Manufacturing Industries and Real U.S. Imports of Goods and Services, 1950–1999



Source: Employment data from 2000 Economic Report of the President; import data from WEFA, World Market Monitor.

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 - Which allows the creation of manufacturing jobs in poorer countries, away from semi-servitude in existence in agriculture-based economies.

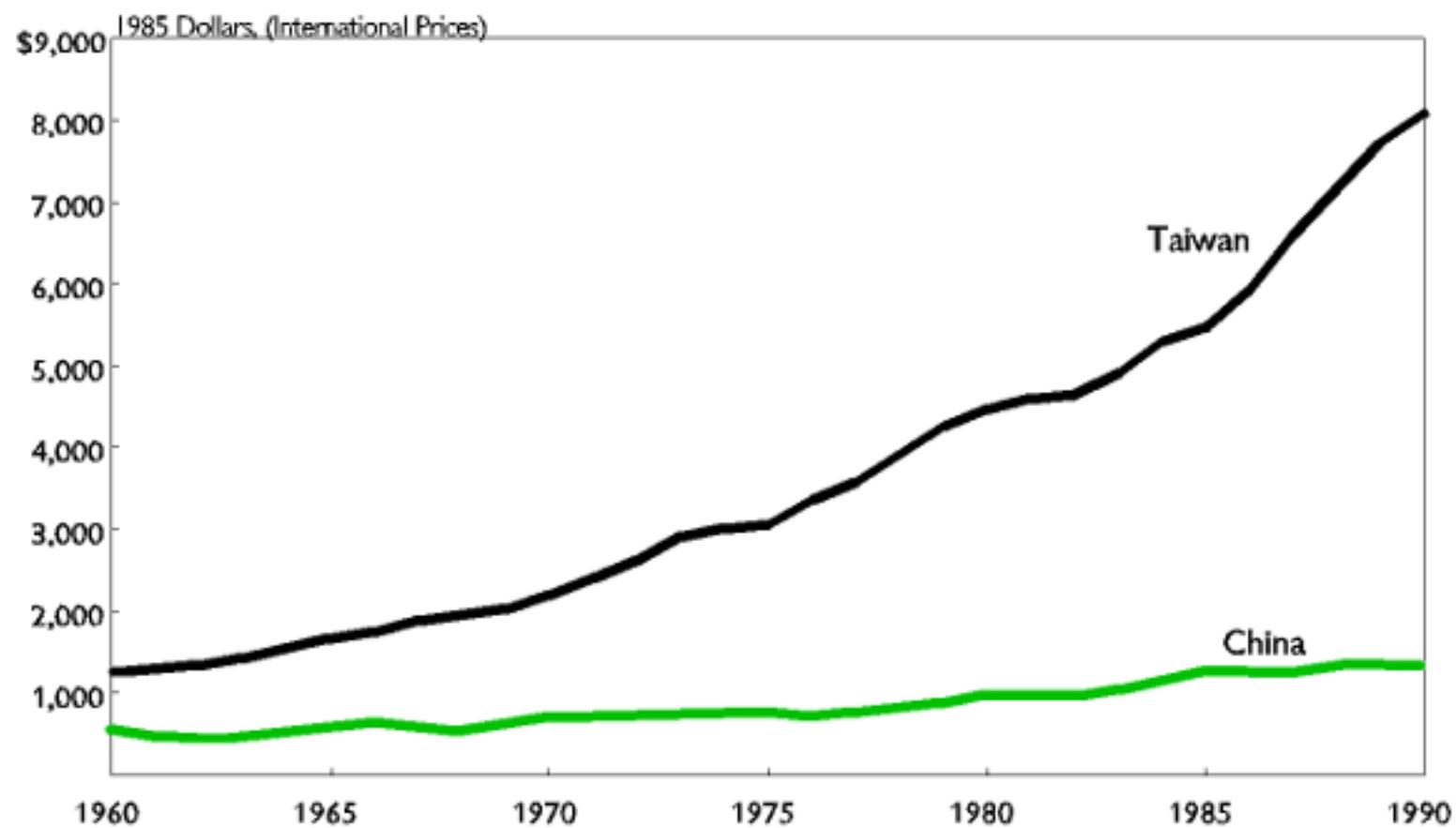
Benefits of Free Trade

- Disseminates democratic values.
 - Supports the rule of law...(see political economy chapter)
 - Inherently fights corruption – because that “scares away” business.

Benefits of Free Trade

- Fosters economic freedom

Real GDP per Capita in Taiwan and China, 1960–1990



Source: Alan Heston and Robert Summers, The Penn World Tables Mark 5.6. Latest update: January 1995.

Index of Economic Freedom

Launched in 1995, the *Index* evaluates countries in four broad policy areas that affect economic freedom: rule of law; limited government; regulatory efficiency; and open markets.

There are 10 specific categories: property rights, freedom from corruption, fiscal freedom, government spending, business freedom, labor freedom, monetary freedom, trade freedom, investment freedom, and financial freedom.

Scores in these categories are averaged to create an overall score.



Least Free

- 178. North Korea
- 177. Cuba
- 176. Venezuela
- 175. Zimbabwe
- 174. Eritrea
- 173. Equatorial Guinea
- 172. Turkmenistan
- 171. Iran
- 170. Rep. of Congo
- 169. Argentina

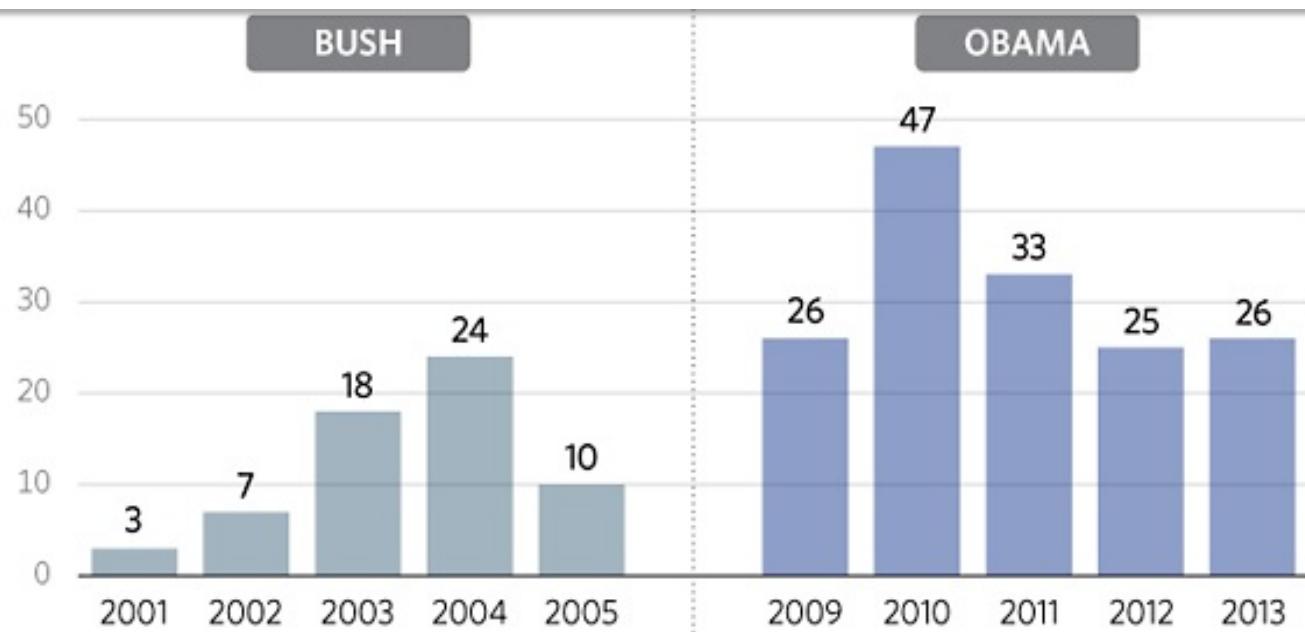
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Most Free

- 1. Hong Kong
- 2. Singapore
- 3. New Zealand
- 4. Australia
- 5. Switzerland
- 6. Canada
- 7. Chile
- 8. Estonia
- 9. Ireland
- 10. Mauritius

In the first five years of President Obama's Administration, 157 major federal regulations were issued. By comparison, only 62 major federal regulations were issued during the first five years of the George W. Bush Administration.



Source: U.S. Government Accountability Office, GAO Federal Rules Database Search, <http://www.gao.gov/legal/congressact/fedrule.html> (accessed March 10, 2014). See Appendix A for the methodology.

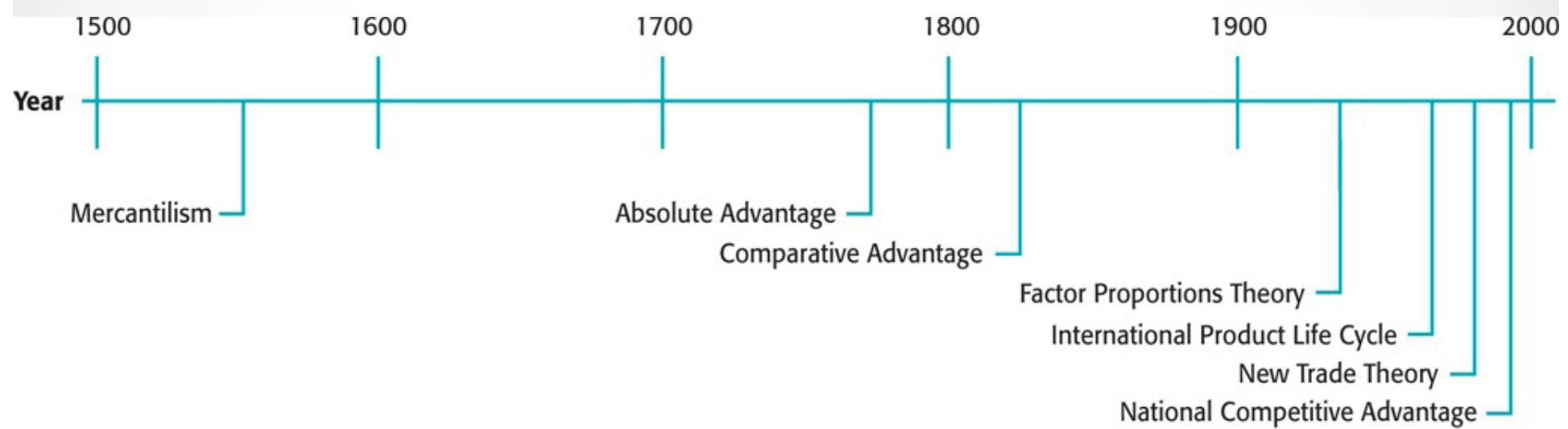
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Explaining Trade Patterns

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History of Trade Theory Development

- Some patterns of trade are fairly easy to explain
 - it is obvious why Saudi Arabia exports oil, Ghana exports cocoa, and Brazil exports coffee
- But, why does Switzerland export chemicals, pharmaceuticals, watches, and jewelry?
- Why does Japan export automobiles, consumer electronics, and machine tools?
-
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What??

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All Sounds Like...



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Mercantilism

- Mercantilism (mid-16th century) suggests that it is in a country's best interest to maintain a **trade surplus**—to export more than it imports
 - advocates government intervention to achieve a surplus in the balance of trade

Mercantilism

- Mercantilism (mid-16th century) suggests that it is in a country's best interest to maintain a **trade surplus**—to export more than it imports
 - advocates government intervention to achieve a surplus in the balance of trade
- Mercantilism views trade as a **zero-sum game**—one in which a gain by one country results in a loss by another

Absolute Advantage

- Adam Smith (1776) argued that a country has an **absolute advantage** in the production of a product when it is more efficient than any other country in producing it
 - countries should specialize in the production of goods for which they have an absolute advantage and then trade these goods for goods produced by other countries

Absolute Advantage

Ability of a nation to produce a good more efficiently than any other nation (greater output using same or fewer resources)



Riceland

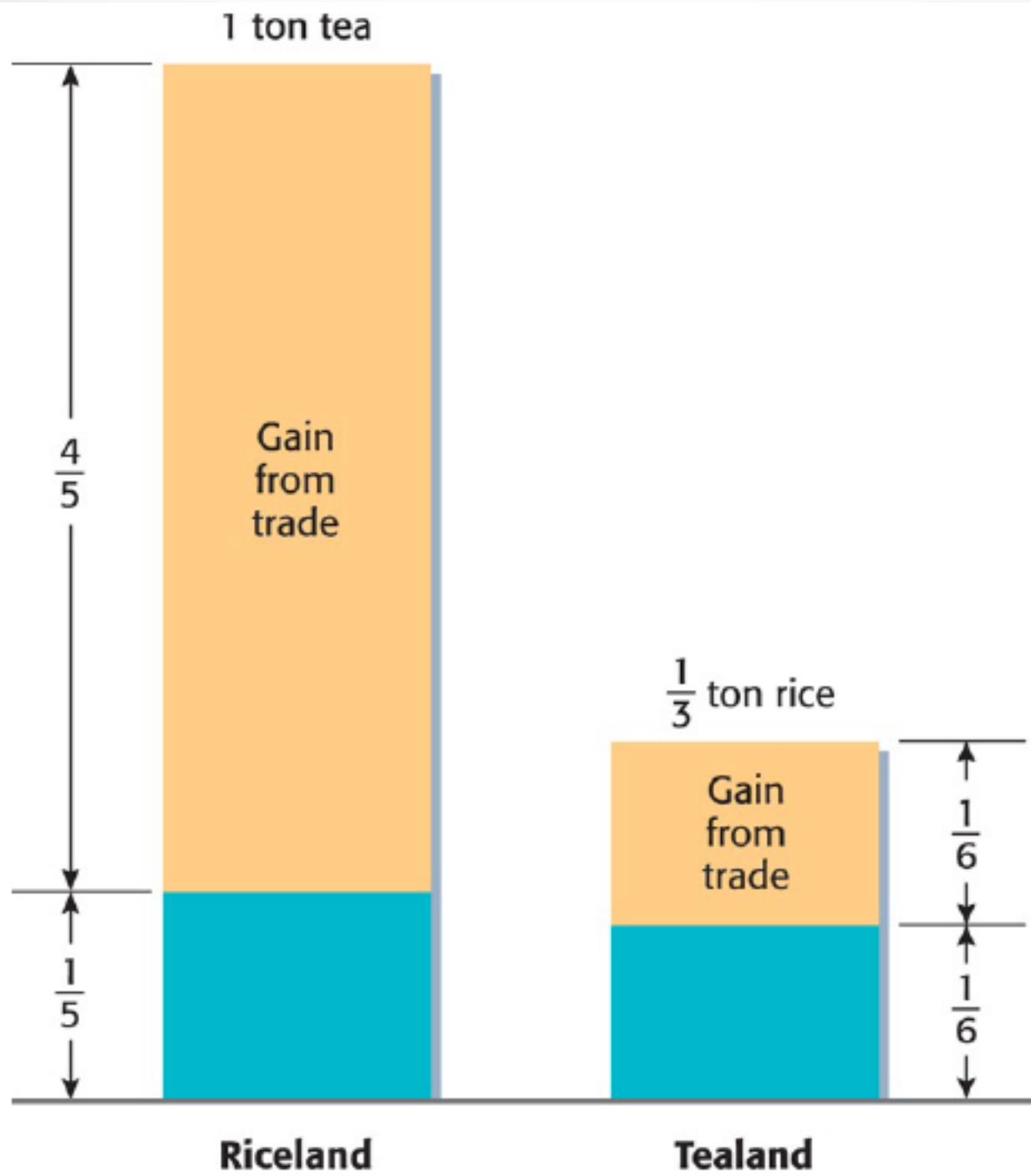
1 resource unit = 1 ton rice *or*
1/5 ton tea



Tealand

1 resource unit = 1/6 ton rice *or*
1/3 ton tea

Specialization and trade allows each to
produce and consume more



Comparative Advantage

- David Ricardo asked what happens when one country has an absolute advantage in the production of all goods
- The theory of **comparative advantage** (1817)—countries should specialize in the production of those goods they produce **most efficiently** and buy goods that they produce less efficiently from other countries
 - even if this means buying goods from other countries that they could produce more efficiently at home

- Assume Ghana is more efficient in the production of both cocoa and rice.
- Assume 200 resources (resource units) available.
- Assume split resources evenly for production of cocao and rice.
- In Ghana, it takes 10 resources to produce one ton of cocoa, and 13 1/2 resources to produce one ton of rice.
- So, Ghana could produce 20 tons of cocoa and no rice, 15 tons of rice and no cocoa, or some combination of the two.
-

- In South Korea, it takes 40 resources to produce one ton of cocoa and 20 resources to produce one ton of rice
- So, South Korea could produce 5 tons of cocoa and no rice, 10 tons of rice and no cocoa, or some combination of the two
- Ghana can produce 4 times as much cocoa, but only 1.5 times as much rice: it has a **COMPERATIVE ADVANTAGE** in producing cocoa...

- With trade
 - Ghana could export 4 tons of cocoa to South Korea in exchange for 4 tons of rice
 - Ghana will still have 11 tons of cocoa, and 4 additional tons of rice
 - South Korea still has 6 tons of rice and 4 tons of cocoa
 - if each country specializes in the production of the good in which it has a comparative advantage and trades for the other, both countries gain

- Comparative advantage theory provides a strong rationale for encouraging free trade
 - total output is higher
 - both countries benefit

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- Trade is a **positive sum game**

Resources Required to Produce 1 Ton of Cocoa and Rice

	Cocoa	Rice
Ghana	10	13.33
South Korea	40	20

Production and Consumption without Trade

	Cocoa	Rice
Ghana	10.0	7.5
South Korea	2.5	5.0
Total production	12.5	12.5

Production with Specialization

	Cocoa	Rice
Ghana	15.0	3.75
South Korea	0.0	10.0
Total production	15.0	13.75

Consumption After Ghana Trades 6 Tons of Cocoa for 6 Tons of South Korean Rice

	Cocoa	Rice
Ghana	11.0	7.75
South Korea	4.0	6.0

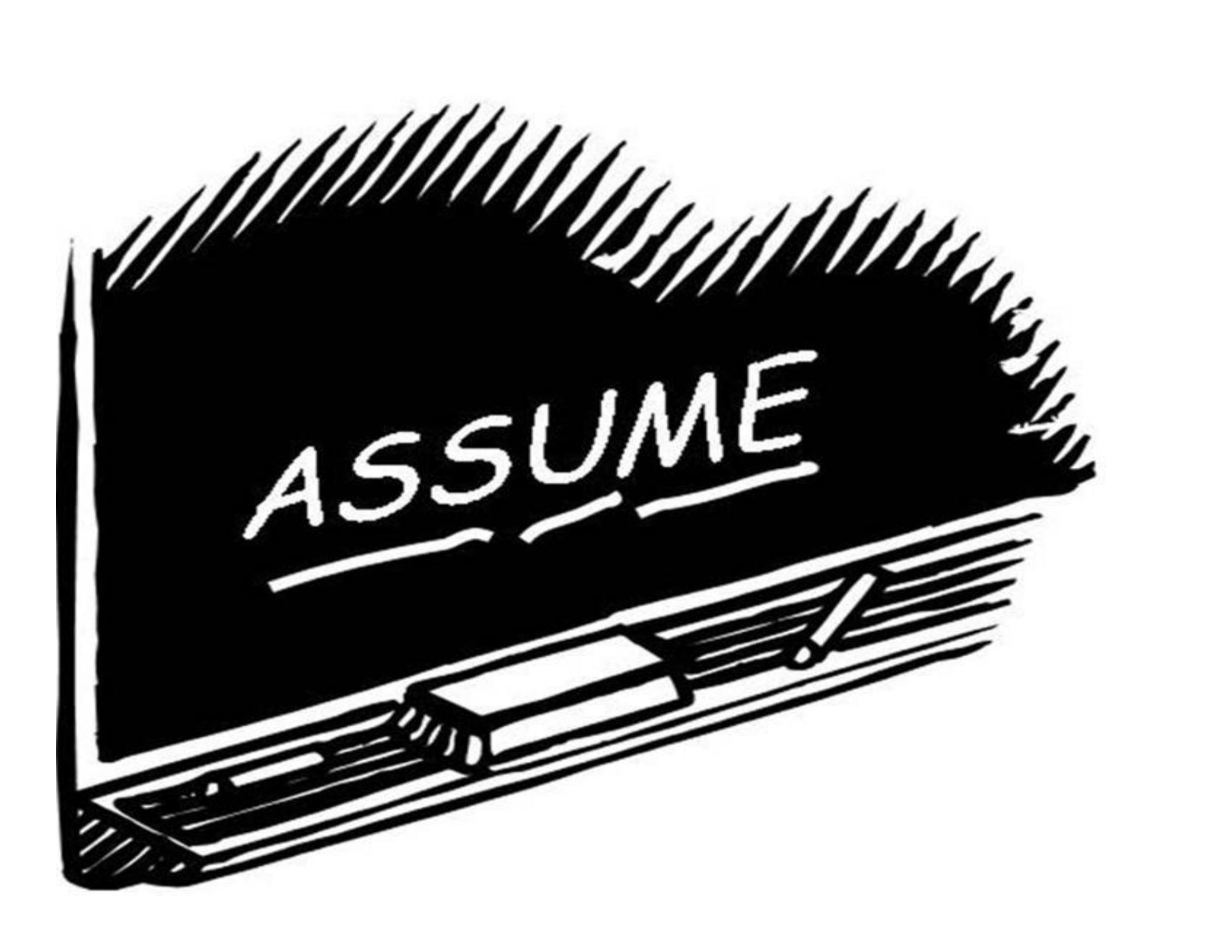
Increase in Consumption as a Result of Specialization and Trade

	Cocoa	Rice
Ghana	1.0	0.25
South Korea	1.5	1.0

However...

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Economic Theory Problem



ASSUME

WARNING

**ASSUMPTIONS
A H E A D**

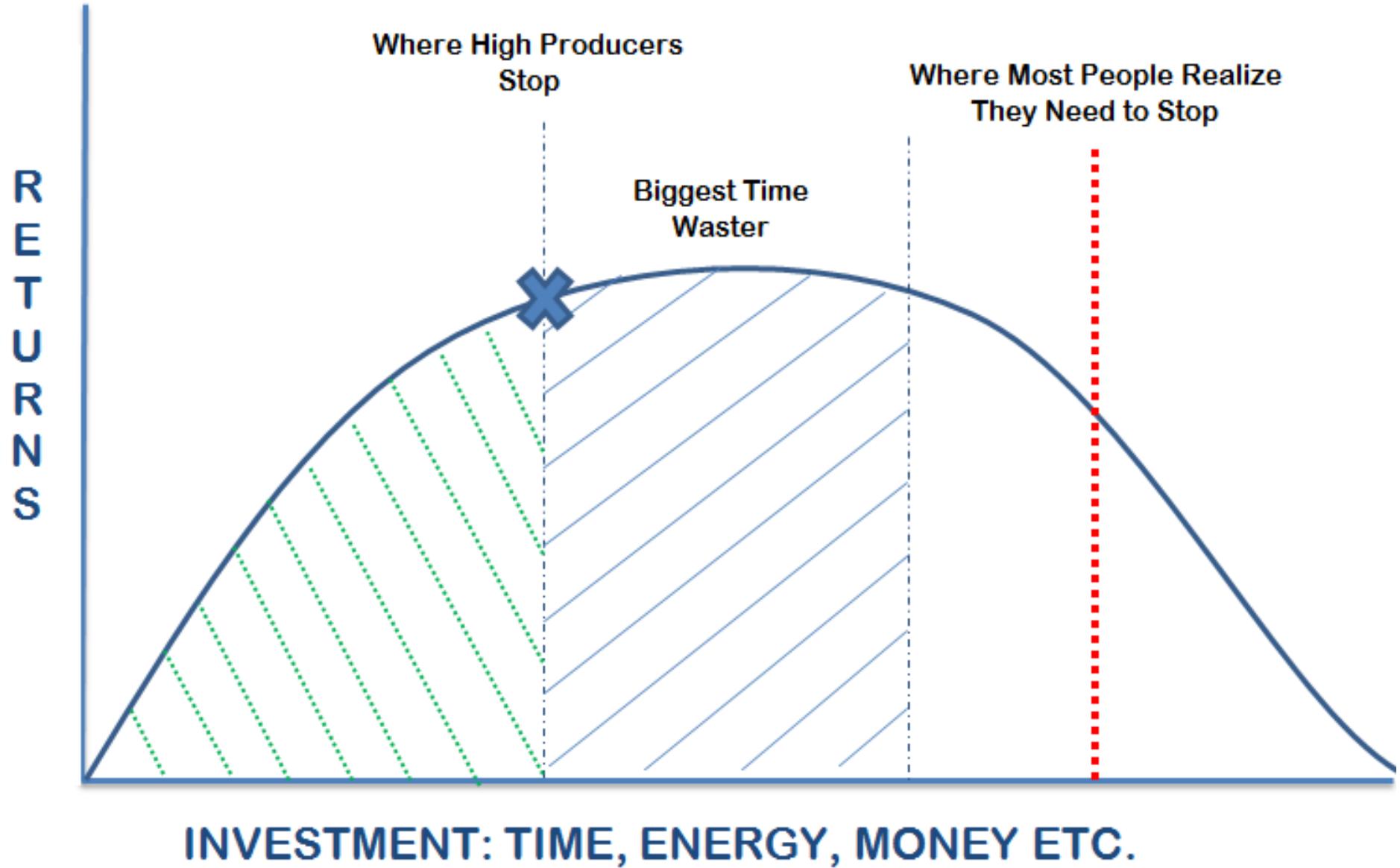


**KEEP
CALM
AND
ASSUME
NOTHING**

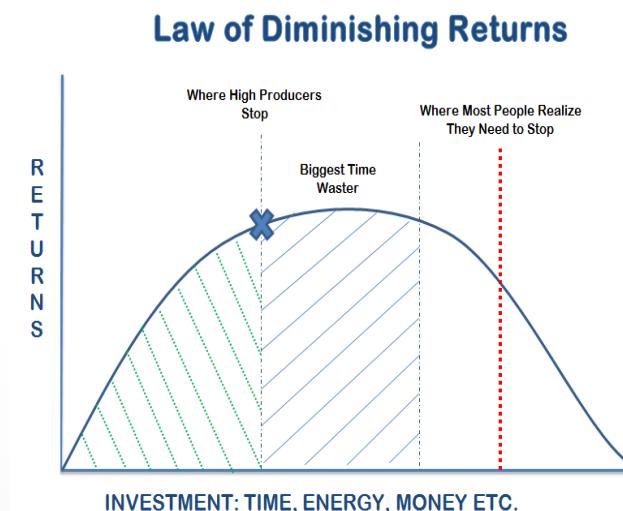
- Unrestricted free trade is beneficial, but the gains may not be as great as the simple model of comparative advantage would suggest
 - immobile resources
 - diminishing returns
 - dynamic effects and economic growth
 - the Samuelson critique

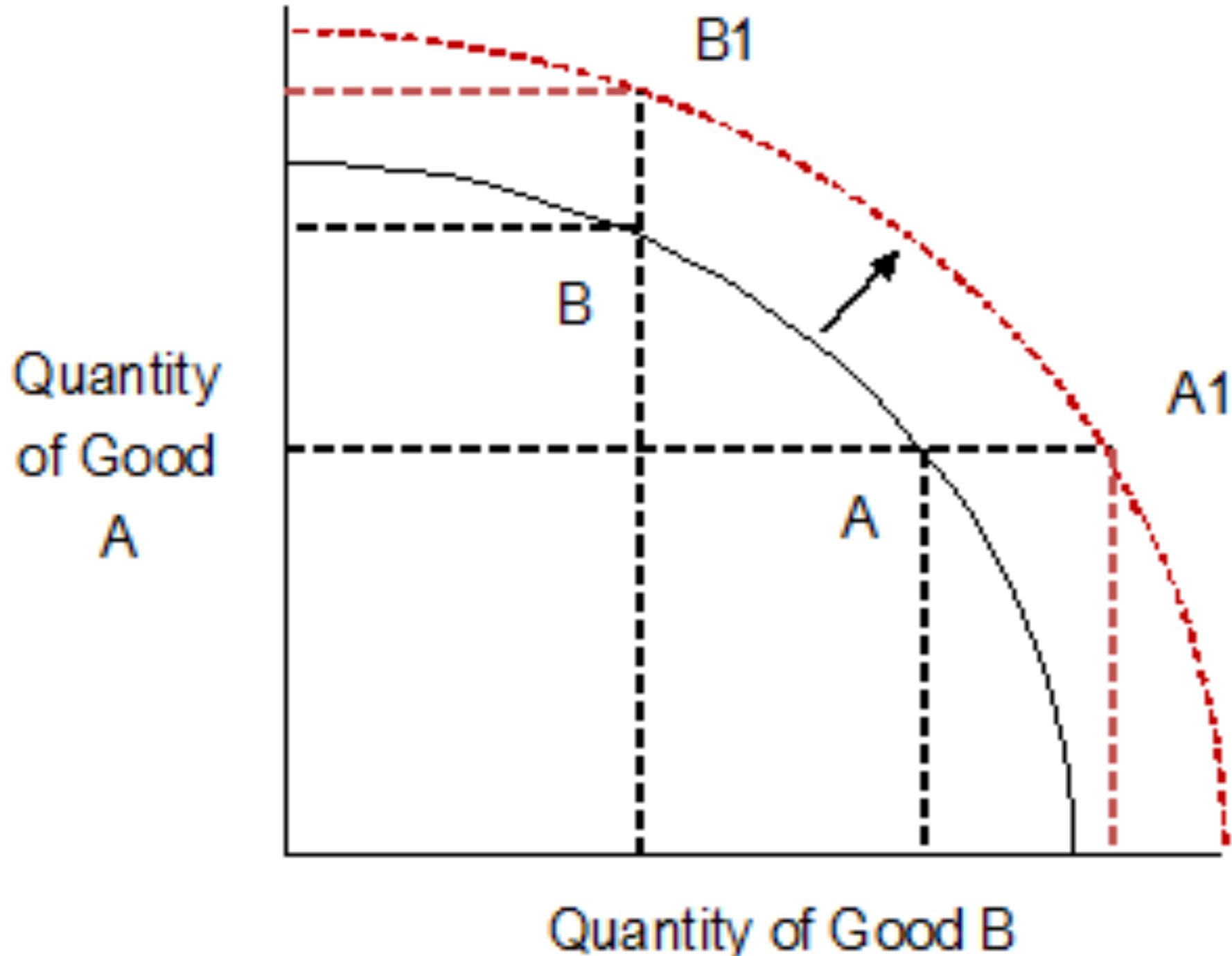


Law of Diminishing Returns

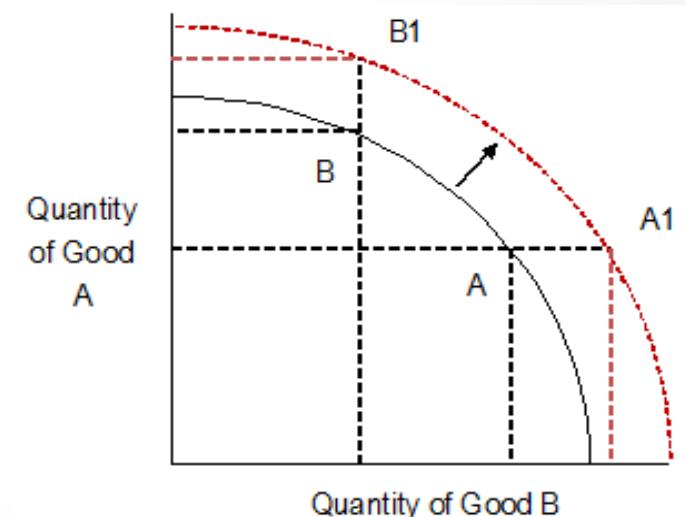
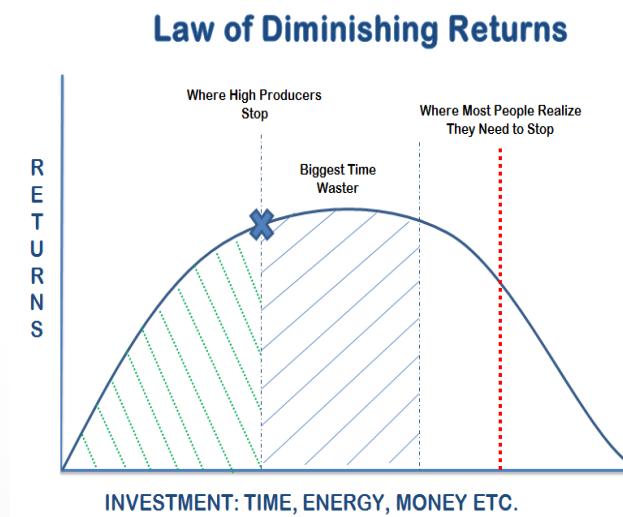


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- Paul Samuelson - the dynamic gains from trade may not always be beneficial
 - free trade may ultimately result in lower wages in the rich country
- The ability to offshore services jobs that were traditionally not internationally mobile may have the effect of a mass inward migration into the United States, where wages would then fall
 - but, protectionist measures could create a more harmful situation than free trade

- Unrestricted free trade is beneficial, but the gains may not be as great as the simple model of comparative advantage would suggest
 - immobile resources
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 - the Samuelson critique
- **But, opening a country to trade could increase**
 - **a country's stock of resources as increased supplies become available from abroad**
 - **the efficiency of resource utilization and so free up resources for other uses**
 - **economic growth**

Heckscher-Ohlin Theory

- Eli Heckscher and Bertil Ohlin - comparative advantage arises from differences in national **factor endowments**
- the extent to which a country is endowed with resources like land, labor, and capital
- The more abundant a factor, the lower its cost...
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-

Heckscher-Ohlin Theory

- The pattern of trade is determined by factor endowments
 - Heckscher and Ohlin predict that countries will
 - export goods that make intensive use of locally abundant factors
 - import goods that make intensive use of factors that are locally scarce

Leontief Paradox

- Wassily Leontief (1953) theorized that since the U.S. was relatively abundant in capital compared to other nations, the U.S. would be an exporter of capital intensive goods and an importer of labor-intensive goods.
 - However, he found that U.S. exports were less capital intensive than U.S. imports
- Since this result was at variance with the predictions of trade theory, it became known as the **Leontief Paradox**.



Product Life-Cycle Theory

- The **product life-cycle theory** - as products mature both the location of sales and the optimal production location will change affecting the flow and direction of trade
 - proposed by Ray Vernon in the mid-1960s
 - At this time most of the world's new products were developed by U.S. firms and sold first in the U.S.

Product Life-Cycle Theory

- According to the product life-cycle theory
 - the size and wealth of the U.S. market gave U.S. firms a strong incentive to develop new products
 - initially, the product would be produced and sold in the U.S.
 - as demand grew in other developed countries, U.S. firms would begin to export
 - demand for the new product would grow in other advanced countries over time making it worthwhile for foreign producers to begin producing for their home markets

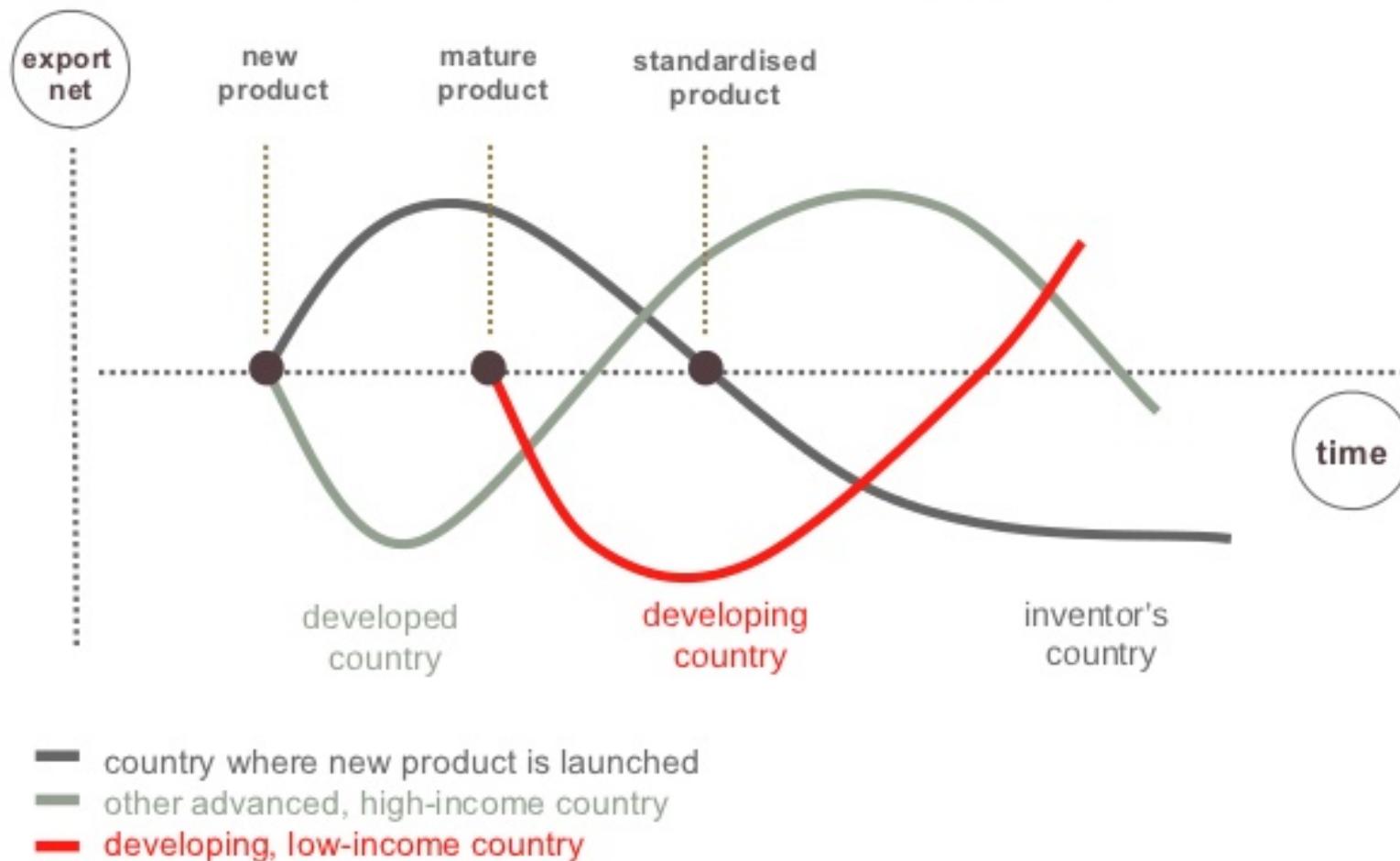
Product Life-Cycle Theory

- U.S. firms might set up production facilities in advanced countries with growing demand, limiting exports from the U.S.
- As the market in the U.S. and other advanced nations matured, the product would become more standardized, and price would be the main competitive weapon

Product Life-Cycle Theory

- Producers based in advanced countries where labor costs were lower than the United States might now be able to export to the United States
- If cost pressures were intense, developing countries would acquire a production advantage over advanced countries
- Production became concentrated in lower-cost foreign locations, and the U.S. became an importer of the product
-
-

international product life cycle



based on: Raymond Vernon , 1966. *International investment and international trade in the product cycle*, The Quarterly Journal of Economics, 80(2), pp. 190-207.

Does It Hold...

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You are hopefully starting to see where this is going all the time...??



- The product life-cycle theory accurately explains what has happened for products like photocopiers and a number of other high technology products developed in the United States in the 1960s and 1970s
 - mature industries leave the U.S. for low cost assembly locations

- But, the globalization and integration of the world economy has made this theory less valid today
 - the theory is ethnocentric
 - production today is dispersed globally
 - products today are introduced in multiple markets simultaneously



New Trade Theory

- New trade theory suggests that the ability of firms to gain economies of scale (unit cost reductions associated with a large scale of output) can have important implications for international trade
- Countries may specialize in the production and export of particular products because in certain industries, the world market can only support a limited number of firms
 - *new trade theory emerged in the 1980s*
 - *Paul Krugman won the Nobel prize for his work in 2008*

1. Through its impact on economies of scale, trade can increase the variety of goods available to consumers and decrease the average cost of those goods
 - without trade, nations might not be able to produce those products where economies of scale are important
 - with trade, markets are large enough to support the production necessary to achieve economies of scale
 - so, trade is mutually beneficial because it allows for the specialization of production, the realization of scale economies, and the production of a greater variety of products at lower prices



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2. In those industries where economies of scale represents a significant proportion of total world demand, the global market may only be able to support a small number of enterprises
 - **first-mover advantages** - the economic and strategic advantages that accrue to early entrants into an industry
 - economies of scale
 - first movers can gain a scale based cost advantage that later entrants find difficult to match

The Non-Free Trade, Free Trade Consequences...

- Nations may benefit from trade even when they do not differ in resource endowments or technology
 - a country may dominate in the export of a good simply because it was lucky enough to have one or more firms among the first to produce that good
 -
 -

The Non-Free Trade, Free Trade Consequences...

- Nations do not have equal technological development
 - a country may have simpler technology than another country

This is thus essentially the same as Comparative Advantage Theory

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But with a cooler name...

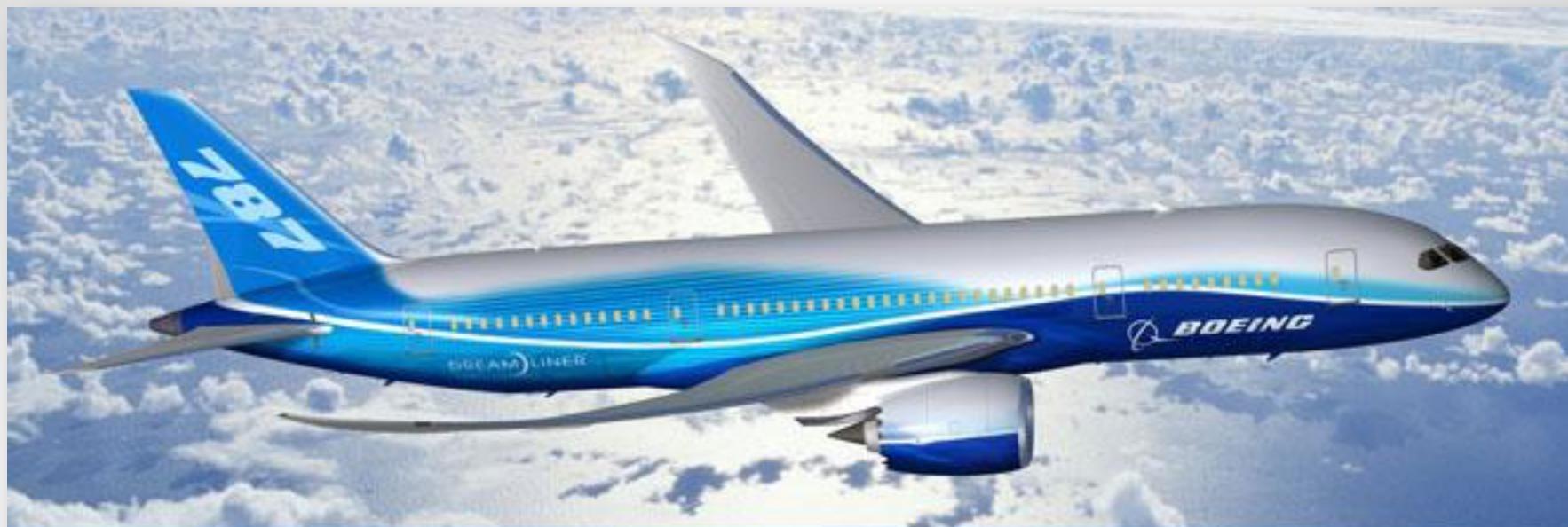
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one or
good

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- **Governments could consider strategic trade policies that nurture and protect firms and industries where first-mover advantages and economies of scale are important**





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Porter's Competitive Advantage

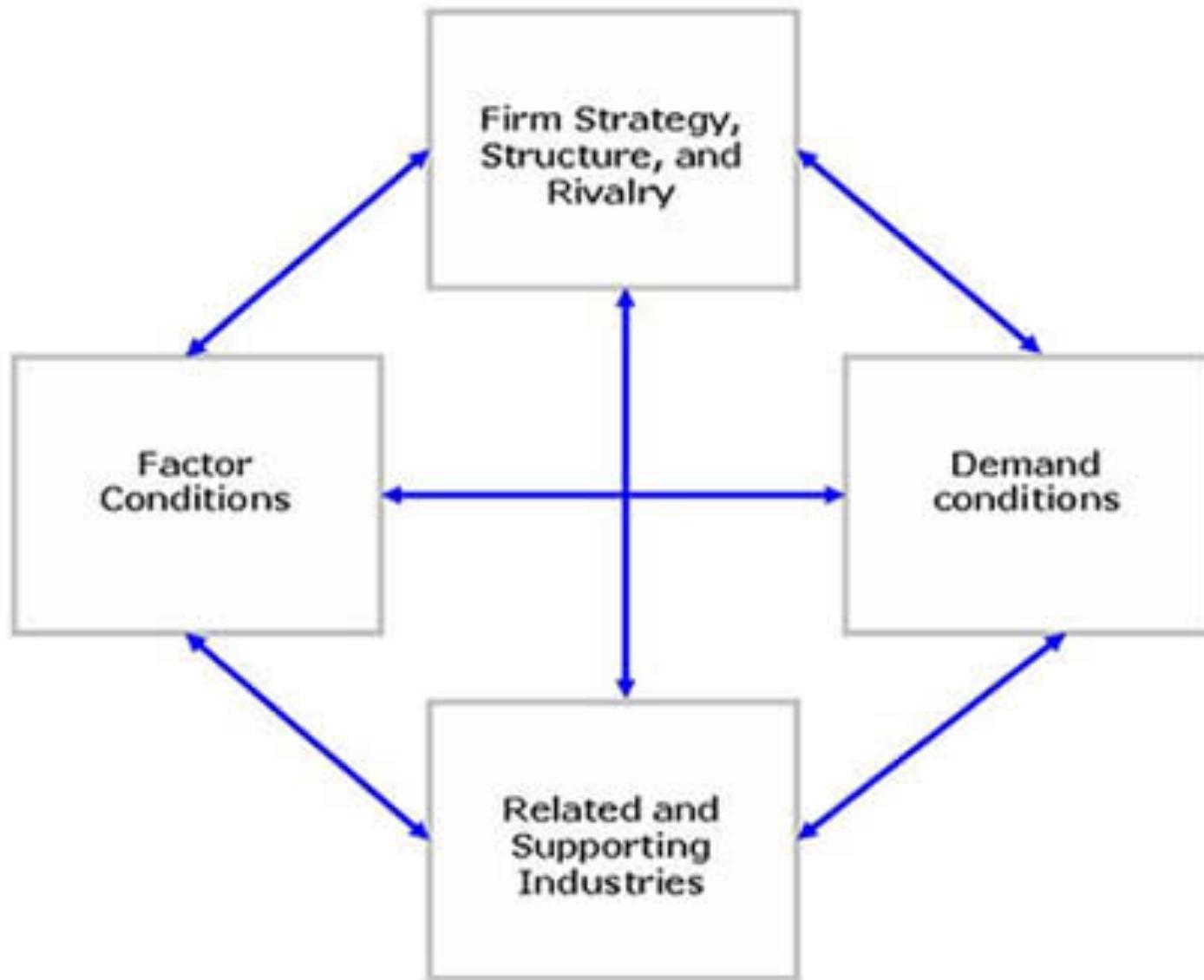
- Michael Porter (1990) tried to explain why a nation achieves international success in a particular industry
 - identified four attributes that promote or impede the creation of competitive advantage
1. **Factor endowments** - a nation's position in factors of production necessary to compete in a given industry
 - can lead to competitive advantage
 - can be either basic (natural resources, climate, location) or advanced (skilled labor, infrastructure, technological know-how)

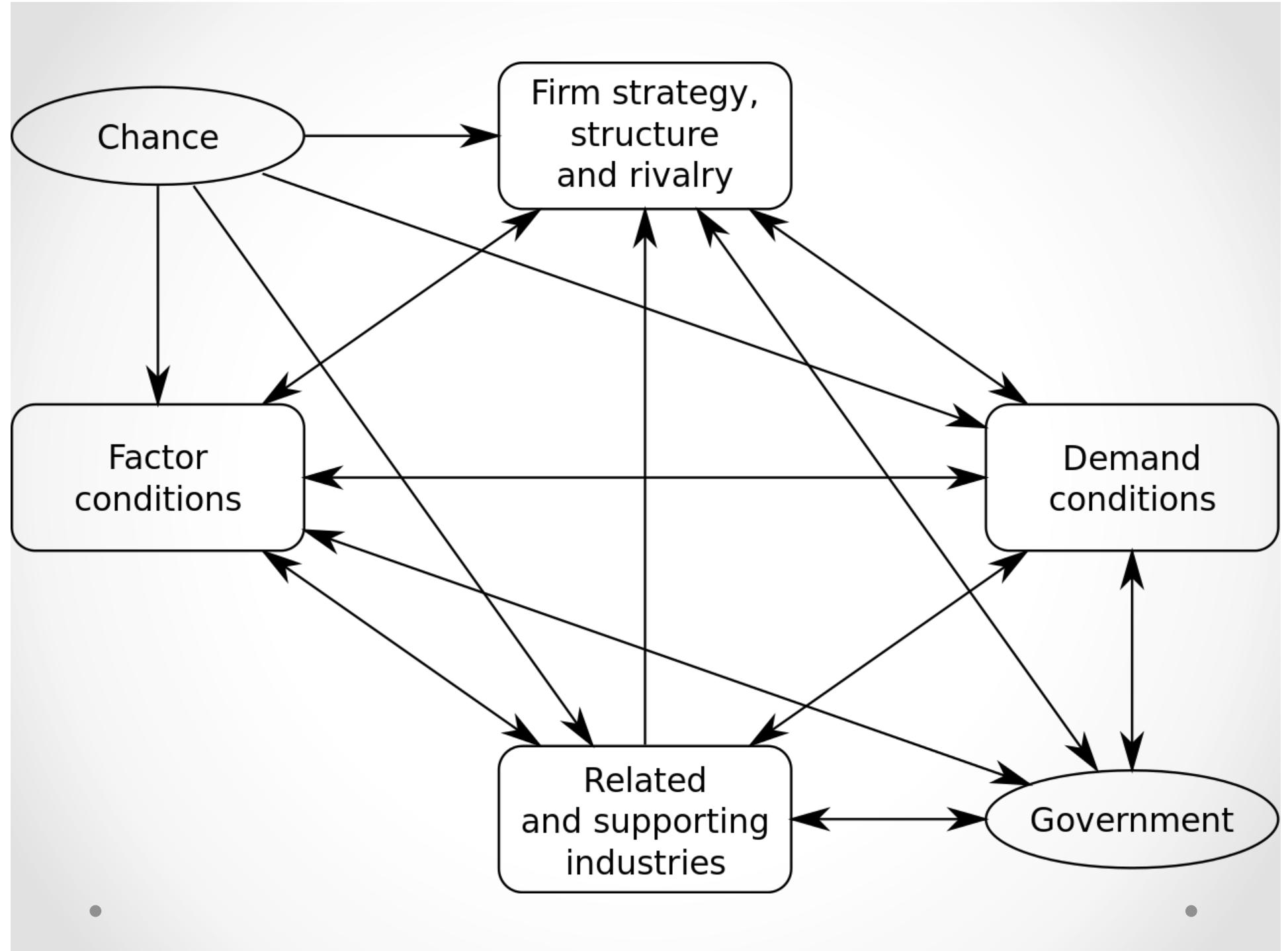
2. **Demand conditions** - the nature of home demand for the industry's product or service
 - influences the development of capabilities
 - sophisticated and demanding customers pressure firms to be competitive
3. **Relating and supporting industries** - the presence or absence of supplier industries and related industries that are internationally competitive
 - can spill over and contribute to other industries
 - successful industries tend to be grouped in clusters in countries

4. Firm strategy, structure, and rivalry - the conditions governing how companies are created, organized, and managed, and the nature of domestic rivalry

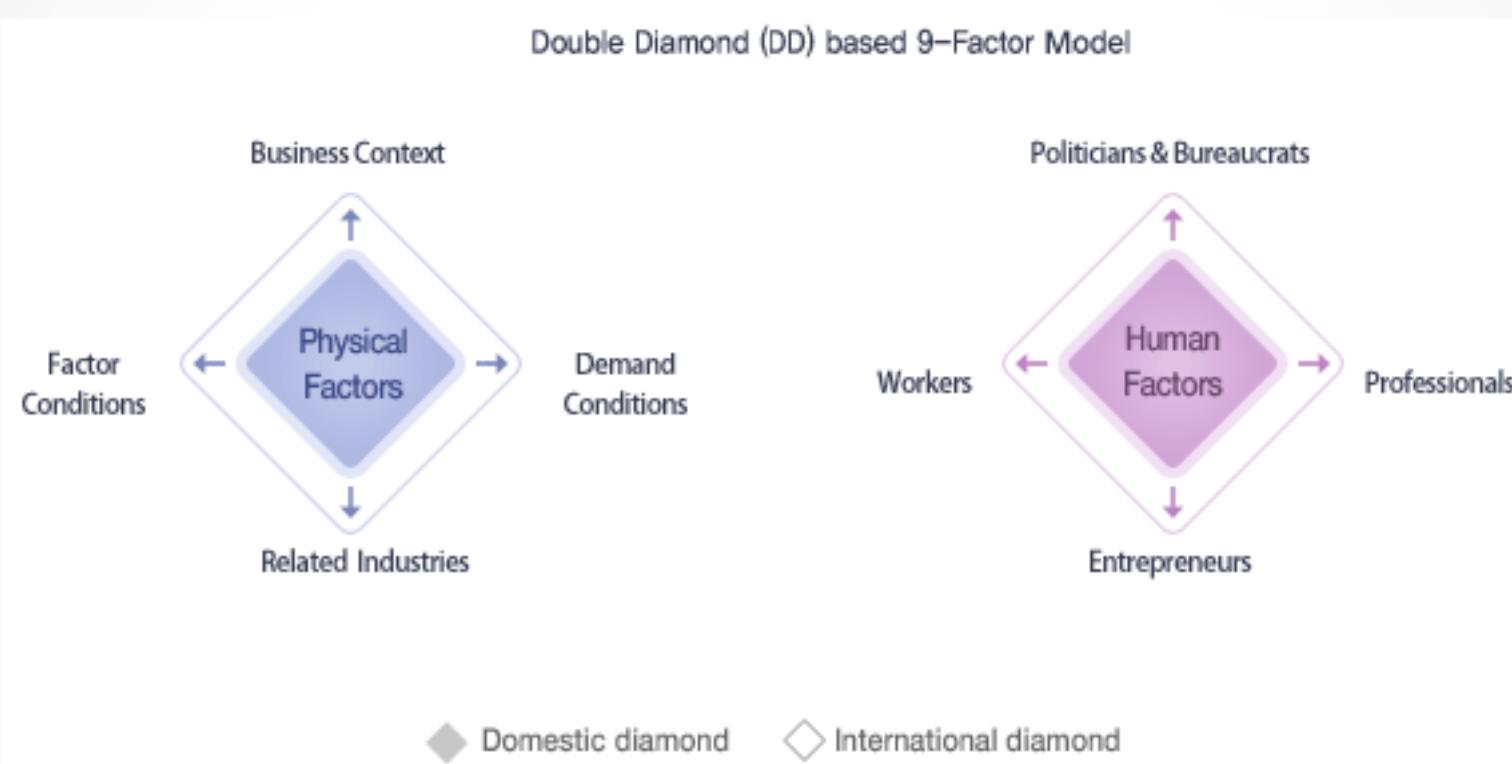
- different management ideologies affect the development of national competitive advantage
- vigorous domestic rivalry creates pressures to innovate, to improve quality, to reduce costs, and to invest in upgrading advanced features

Michael E. Porter's Diamond Model





Double Diamond (DD) based 9-Factor Model



TATA MOTORS



India CSAs

Manufacturing base

Plentiful resources and labour

Diverse market

Growing infrastructure

TML FSAs

R&D

Tata Group reputation

Understanding of domestic market

Wide product offering

Strong support services

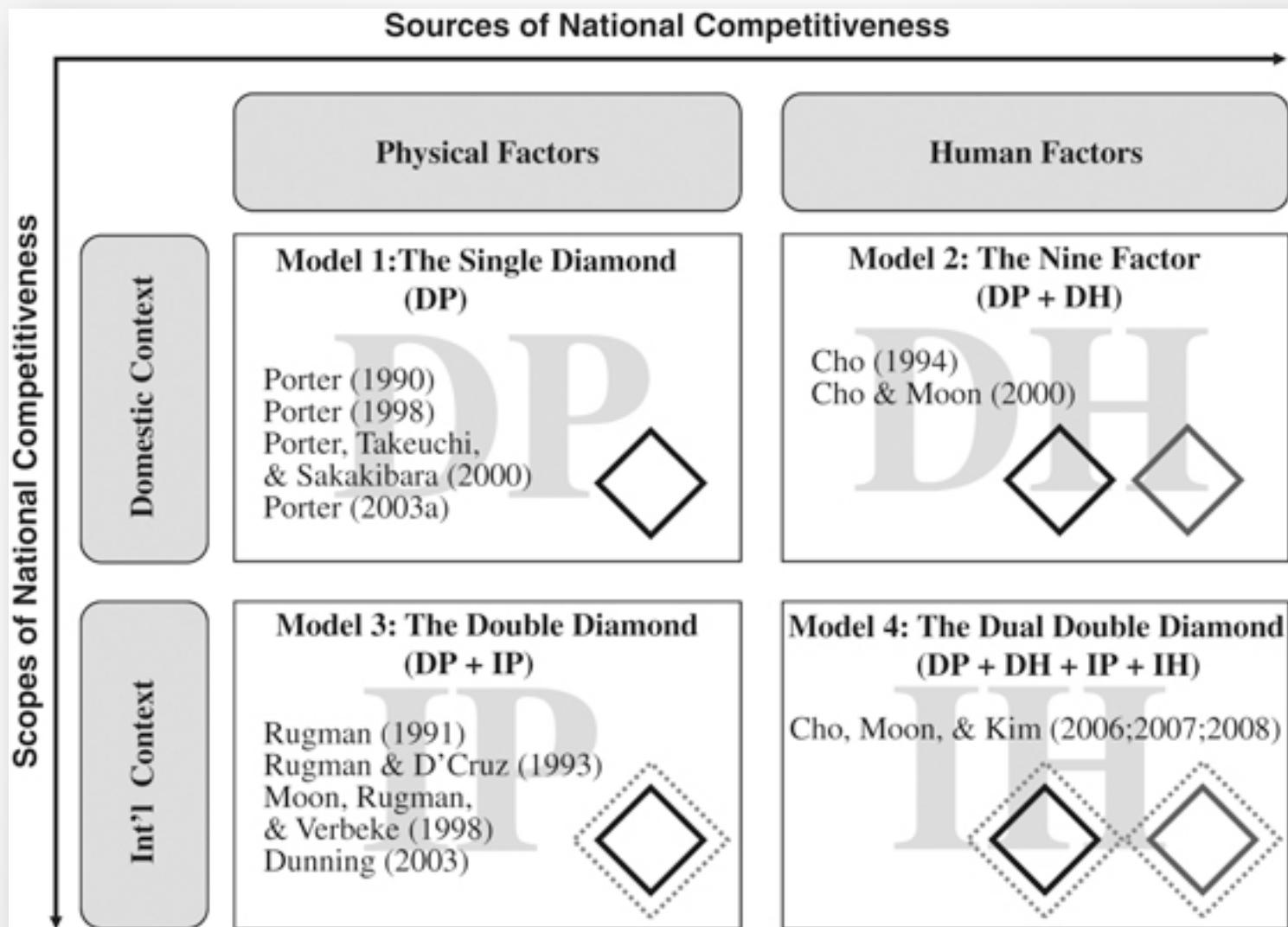
Asian RSAs

Cheap workforce

Demand for commercial vehicles

Investment in infrastructure

Receptive to financing services



End Conclusion?

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- Government policy can:
 - affect demand through product standards
 - influence rivalry through regulation and antitrust laws
 - impact the availability of highly educated workers and advanced transportation infrastructure.
- The four attributes, government policy, and chance work as a reinforcing system, complementing each other and in combination creating the conditions appropriate for competitive advantage
- So far, Porter's theory has not been sufficiently tested to know how well it holds up
-

End Conclusion?

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We do not know...yet...

Why Do We Care...

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Practical Implications (i.e. for managers)



1. **Location implications** - a firm should disperse its various productive activities to those countries where they can be performed most efficiently
 - firms that do not may be at a competitive disadvantage
2. **First-mover implications** - a first-mover advantage can help a firm dominate global trade in that product
3. **Policy implications** - firms should work to encourage governmental policies that support free trade
 - want policies that have a favorable impact on each component of the diamond