International Business Economics

Chapter 1

Globalization

Boeing 787 Dreamliner

Today's Globalized Toy

Topper the Trick Terrier is a robotic dog that can talk and stand on its head. But the real trick is where its parts come from. This year 75,000 copies of the dog were made by Qualiman Industrial Co. in Nanhai, China for a Li & Fung American customer,the Original San Francisco Toymakers. It sells for $29.99 in the U.S.

VOICE-RECOGNITION REQUIREMENTS: San Francisco

VOICE-RECOGNITION PROGRAMMING: Taiwan

PLASTIC EYES: Shenzhen, China

PLASTIC BODY: Malaysia

MICROFIBER FABRIC FOR COAT: Korea

SPEAKER FOR TOY'S VOICE: Dongguan, China

TRANSISTORS: Shenzhen, China

IC CHIPS: Taiwan

WIRING: Dongguan, China

PACKAGING: Hong Kong

MOTOR FOR LEGS: Shaoguan, China

PLASTIC LEGS: Taiwan

Sources: Qualiman Industrial Co. Ltd.; Li & Fung.

What Is Globalization?

- The world is moving away from self-contained (**autarkic**) national economies toward an interdependent, integrated global economic system

- Globalization refers to the shift toward a more integrated and interdependent world economy

Globalization has two facets:

1) the globalization of markets
2) the globalization of production

The Globalization of Markets

- The globalization of markets refers to the merging of historically distinct and separate national markets into one huge global marketplace
- In many industries, it is no longer meaningful to talk about the "German market" or the "American market"
- Instead, there is only the global market, e.g., made in the EU

The Globalization of Markets

- Falling trade barriers make it easier to sell internationally

- Consumers' tastes and preferences converge on some global norm

- Firms help create the global market by offering the same basic products worldwide

The Globalization Of Production

•The globalization of production refers to the sourcing of goods and services from locations around the globe to take advantage of national differences in production costs, availability and quality of productive resources, e.g., land, labor, and capital

…… as we'll see ……

•Firms compete more effectively by lowering their overall cost structure or improving the quality or functionality of their product offering by *internationalizing/globalizing their production process/activity*

The Emergence Of Global Institutions

HOWEVER, …. To keep track and order of this economic internationalization/globalization …..

…International (Global) Supervising Institutions are needed to:

- help manage, regulate, and police the global marketplace
- promote the establishment of multinational treaties to govern the global business system

The Emergence Of Global Institutions

Institutions created over the past half century include:

- the General Agreement on Tariffs and Trade (GATT)
- the World Trade Organization (WTO)
- the International Monetary Fund (IMF)
- the World Bank
- the United Nations (UN)

The Emergence Of Global Institutions

- The World Trade Organization (like its predecessor GATT) is primarily responsible for policing the world trading system and making sure that nation-states adhere to the rules laid down in trade treaties signed by WTO members

- In 2007, the 150 nations that accounted for 97% of world trade were WTO members. Today, (since 2016-) it accounts for 164 country-members.

- The WTO promotes lower barriers to trade and investment

Drivers Of Globalization

Two macro factors underlie the trend toward greater globalization:

- the decline in barriers to the free flow of goods, services, and capital that has occurred since the end of World War II

- technological change

Declining Trade and Investment Barriers

- International trade occurs when a firm exports goods or services to consumers in another country

- Foreign direct investment (FDI) occurs when a firm invests resources in business activities outside its home country

- Since 1950, world average tariffs have fallen significantly: 2014 (2.87%), 2015 (3.08%), 2016 (2.98%), 2017 (2.59%) …. abstracting from the current international economic circumstances

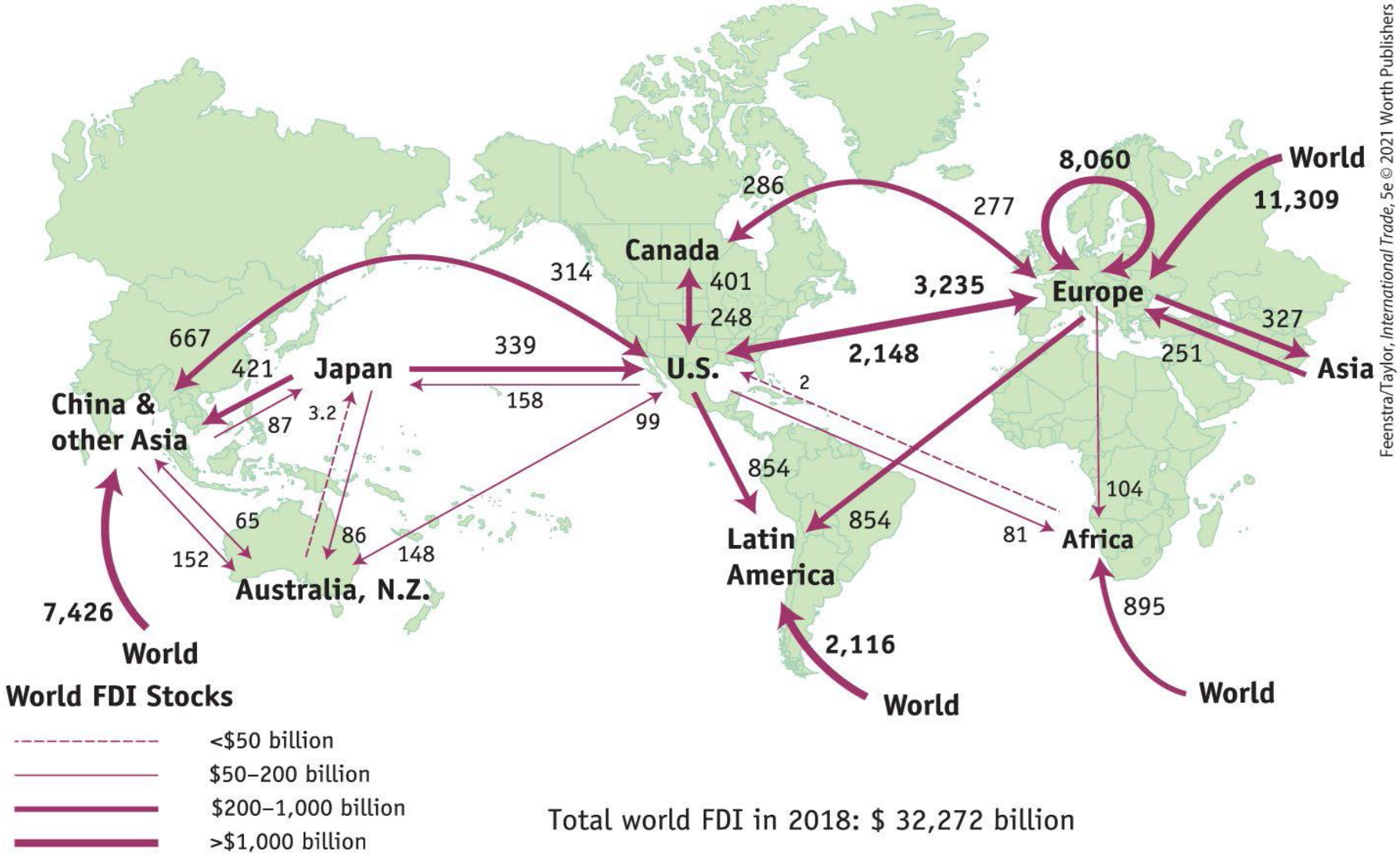
- Countries (National markets) have also been opening markets to FDI

Declining Trade and Investment Barriers

Average Tariff Rates on Manufactured Products as Percent of Value

	1913	1950	1990	2005
France	21%	18%	5.9%	3.9%
Germany	20	26	5.9	3.9
Italy	18	25	5.9	3.9
Japan	30	—	5.3	2.3
Holland	5	11	5.9	3.9
Sweden	20	9	4.4	3.9
Great Britain	—	23	5.9	3.9
United States	44	14	4.8	3.2

Foreign Direct Investment (FDI), 2018-20



Declining Trade and Investment Barriers

Lower barriers to trade and investment mean that firms can:

- View the world, rather than a single country, as their market

- Base production in the optimal location for that activity

Globalization: The Role of Technological Change

- Technological change has made the globalization of markets a reality

Important advances have occurred in:

- microprocessors and telecommunications
- the Internet, World Wide Web, recently AI
- transportation technology

Globalization: The Role of Technological Change

Technological change for the globalization enables firms to lower:

- transportation costs that enable firms to disperse production to economical, geographically separate locations

- information processing and communication costs that enable firms to create and manage globally dispersed production systems

The Changing Demographics of The Global Economy

•There has been a drastic change in the demographics of the world economy in the last 30 years

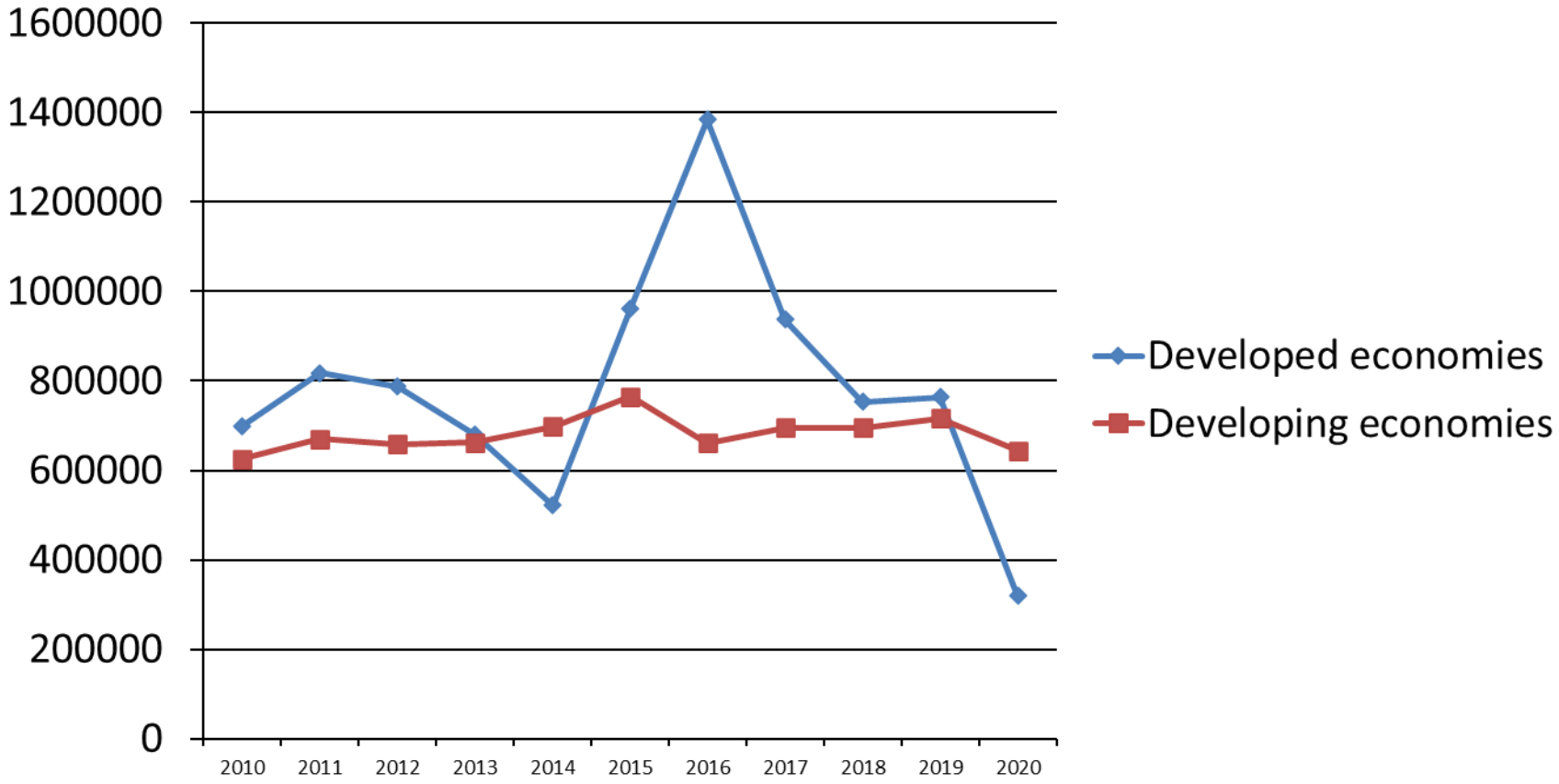
Four trends are important: the changing of

- World Output and World Trade
- Foreign Direct Investment
- Nature of the Multinational Enterprise
- World Order (by and large, non-economic considerations)

G20: Trade-to-GDP & GDP — 2023

Country	Trade (% of GDP), 2023	GDP 2023 (USD billions)
Argentina	35	621
Australia	51	1,716
Brazil	40	2,138
Canada	67	2,122
China	38	17,963
France	66	3,053
Germany	100	4,456
India	49	3,389
Indonesia	45	1,389
Italy	66	2,188
Japan	39	4,210
Mexico	78	1,550
Russia	52	2,240
Saudi Arabia	70	1,108
South Africa	58	405
South Korea	84	1,720
Turkey	61	1,118
United Kingdom	72	3,124
United States	27	26,854

FDI Inflows, 2010–2020: Developed vs Developing Economies



Source: UNCTAD, World Investment Report Annex Tables (WIR 2016 & WIR 2022). Values in millions of current US$.

The Globalization Debate

- **Supporters** believe that increased trade and cross-border investment mean lower prices for goods and services, greater economic growth, higher consumer income, and more jobs

- **Critics** worry that globalization will cause job losses, environmental degradation, and the cultural imperialism of global media and MNEs

Globalization, Jobs, And Income

- **Supporters** contend that the benefits of this trend outweigh the costs—that countries will specialize in what they do most efficiently and trade for other goods—and all countries will benefit

- **Critics** argue that falling barriers to trade are destroying manufacturing jobs in advanced countries

Globalization, Labor Policies, and the Environment

- **Supporters** claim that tougher environmental and labor standards are associated with economic progress, so as countries get richer from free trade, they get tougher environmental and labor regulations

- **Critics** argue that firms avoid costly efforts to adhere to labor and environmental regulations by moving production to countries where such regulations do not exist, or are not enforced, e.g., Pollution Haven Countries, (over-) exploitation of depletable natural resources, e.g., oil or natural gas reserves

Globalization and National Sovereignty

- **Supporters** contend that the power of these organizations is limited to what nation-states agree to grant, and that the power of the organizations lies in their ability to get countries to agree to follow certain actions

- **Critics** worry that today's interdependent global economy is shifting economic power away from national governments toward supranational organizations like the WTO, the EU, and the UN

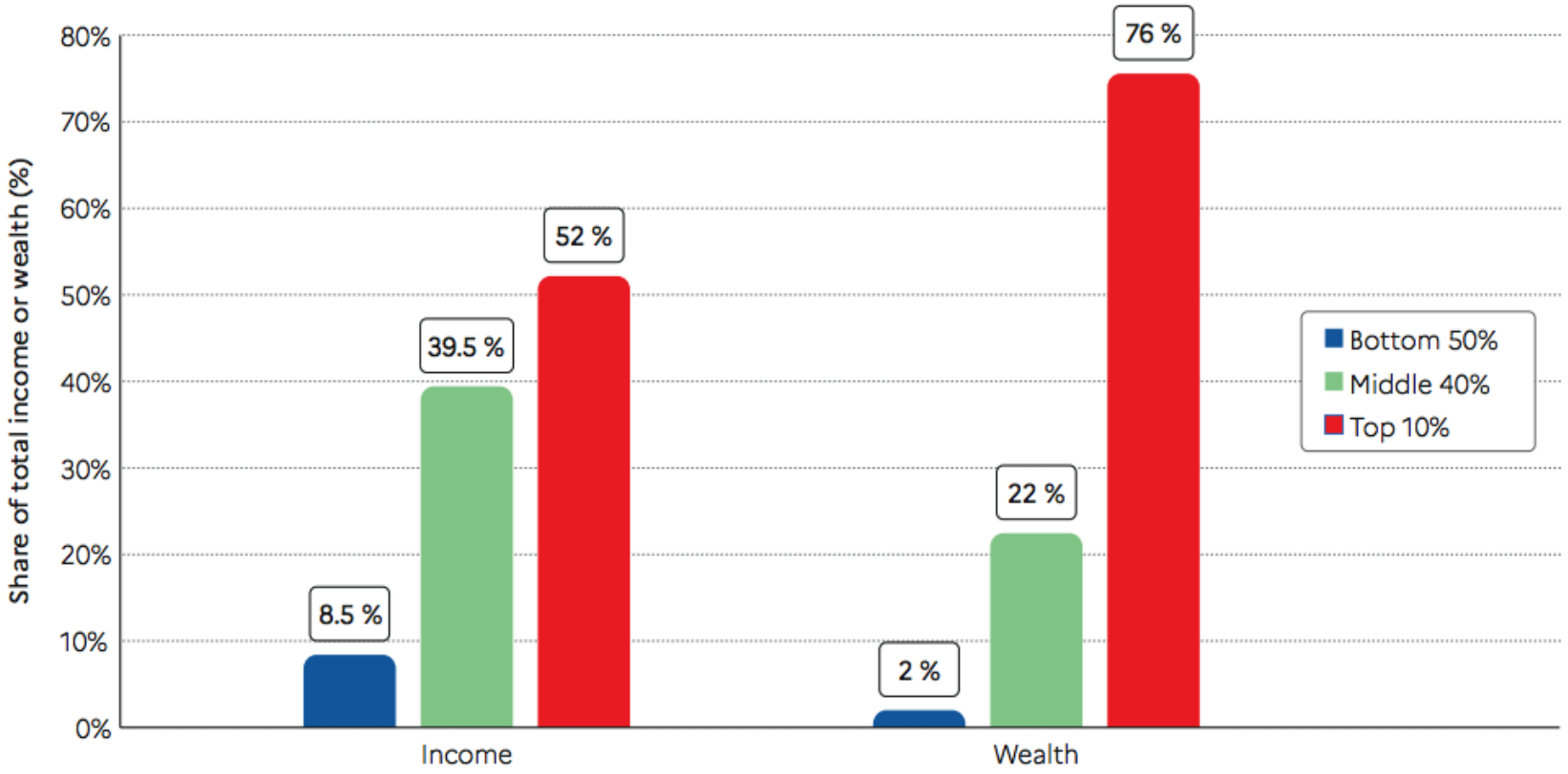
Globalization: Income Inequality and the World's Poor

- **Supporters** claim that the best way for the poor nations to improve their situation is to reduce barriers to trade and investment and implement economic policies based on free market economies, and to receive debt forgiveness for debts incurred under totalitarian regimes

- **Critics** argue that the income gap between rich nations and poor nations is getting wider

Global Income and Wealth Inequality (I)

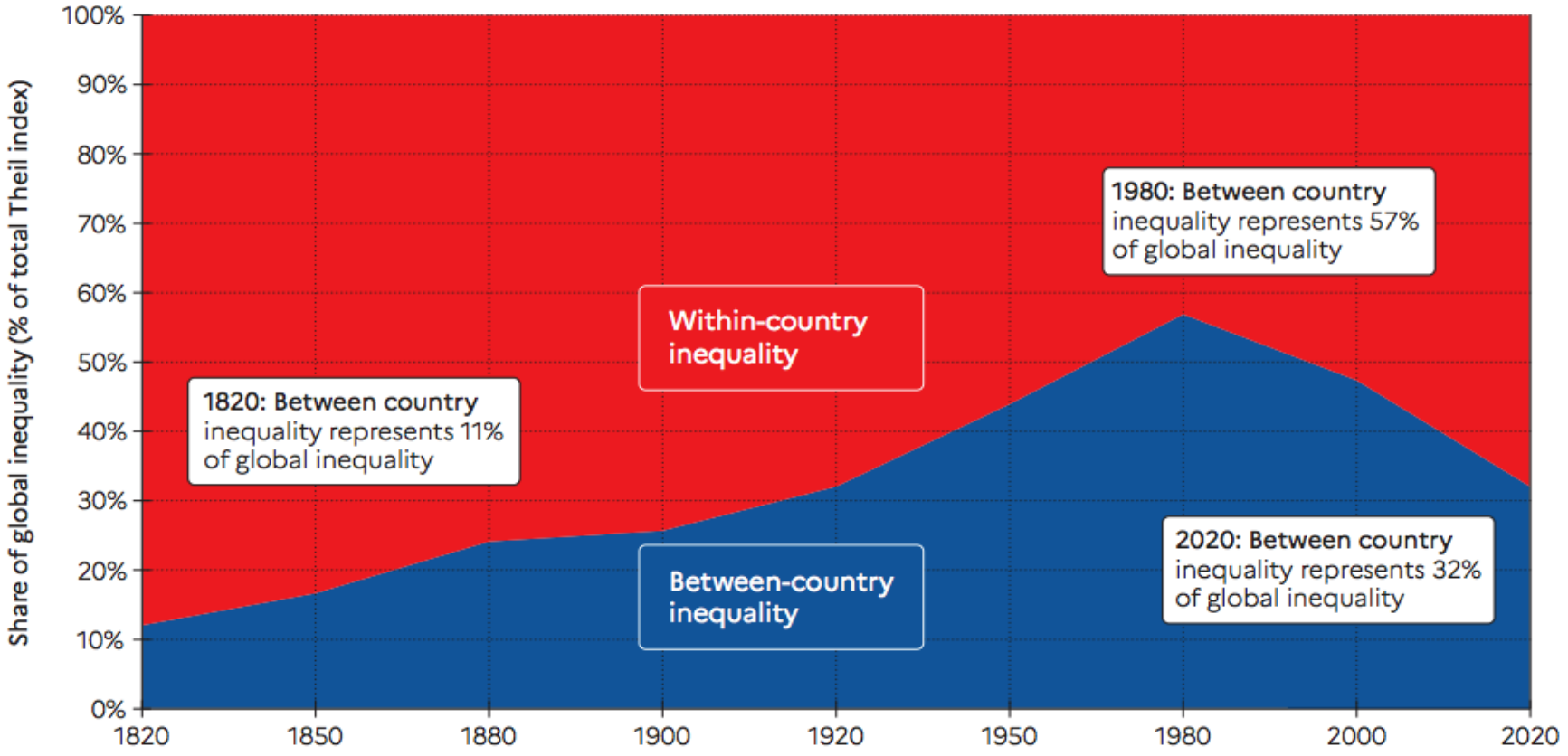
Figure 1 *Global income and wealth inequality, 2021*



Interpretation: *The global 50% captures 8% of total income measured at Purchasing Power Parity (PPP). The global bottom 50% owns 2% of wealth (at Purchasing Power Parity). The global top 10% owns 76% of total Household wealth and captures 52% of total income in 2021. Note that top wealth holders are not necessarily top income holders. Incomes are measured after the operation of pension and unemployment systems and before taxes and transfers.* ***Sources and series:*** *wir2022.wid.world/methodology.*

Global Income and Wealth Inequality (II)

Figure 6 *Global income inequality: Between vs. within country inequality (Theil index), 1820-2020*



Interpretation: *The importance of between-country inequality in overall global inequality, as measured by the Theil index, rose between 1820 and 1980 and strongly declined since then. In 2020, between-country inequality makes-up about a third of global inequality between individuals. The rest is due to inequality within countries. Income is measured per capita after pension and unemployement insurance transfers and before income and wealth taxes.* ***Sources and series:*** *wir2022.wid.world/methodology and Chancel and Piketty (2021).*

Chapter 4

Ethics in International Business

Introduction

- **ETHICS** refers to accepted principles of **right or wrong** that govern the conduct of a person, the members of a profession, or the actions of an organization
- **Business ethics** are the accepted principles of right or wrong governing the conduct of **business people**
- **Ethical strategy** is a strategy, or course of action, that does not violate these accepted principles

Ethical Issues in International Business

- employment practices
- human rights
- environmental regulations
- corruption
- the moral obligation of multinational companies

Employment Practices

If work conditions in a host nation are clearly inferior to those in a multinational's home nation, should companies apply:

- home country standards?
- host country standards?
- something in between?

Human Rights

- In developed countries, basic human rights such as freedom of association, freedom of speech, freedom of assembly, and freedom of movement, are taken for granted

- In other countries, these rights may not exist

Environmental Pollution

- Ethical issues arise when environmental regulations in host nations are far inferior to those in the home nation (Pollution Havens)
- Environmental issues are important because parts of the environment are a public good that no one owns, but anyone can spoil
- The **Tragedy of the Commons** occurs when a resource held in common by all, but owned by no one, is overused by individuals, resulting in its degradation

Corruption

- Economists believe that in a country where political structures distort or limit the workings of the market mechanism, corruption in the form of black-marketeering, smuggling, and side payments to government bureaucrats to "speed up" approval for business investments may enhance welfare
- BUT, on the other hand, it reduces the returns on business investment and leads to low economic growth

Moral Obligations

- Social responsibility: Businesses should take the social consequences of economic actions into account when making business decisions, and that there should be a presumption in favor of decisions that have both good economic and good social consequences

- Advocates argue that businesses need to recognize their honorable obligation and give something back to the societies that have made their success possible

Chapter 5

International Trade Theory

An Overview Of Trade Theory

- Free Trade

A situation where a government does not attempt to influence through import/export quotas or duties (taxes and subsidies) what its citizens can buy/sell from another country or what they can produce and sell to another country

Why countries trade

Model	Determinant of trade	Key assumptions	Original idea
Ricardian model	Differences in technology	Labor is the only scarce factor of production, all occupations pay the same wage, labor unit requirements are constant.	Henry Martyn, *Considerations upon the East India Trade* (1701) David Ricardo, *The principles of Political Economy and Taxation (1817)*
Heckscher-Ohlin model	Relative endowments of productive factors	Two factors of production (capital and labor), same technology, factor mobility between sectors.	Eli Heckscher (1919) and Bertil Ohlin, *Interregional and International Trade* (1933)
Specific factors model ("Ricardo-Viner")	Factor specificity and endowments	Extension of the Ricardian model with three factors of production (one mobile and two that are specific to a sector).	Ronald Jones (1971) and Paul Samuelson (1971)
Models of trade with imperfect competition / New trade theory	Scale economies, size, location, initial conditions	Increasing returns, differentiated products, imperfect competition (monopoly, duopoly, oligopoly, monopolistic competition)	Chamberlin (1933), Dixit and Stiglitz (1977), Krugman (1979,1980), Brander and Krugman (1980), Helpman (1981)
Models of heterogeneous firms / New new trade theory	Organizational choices of firms, trade costs, relationship between trade and FDI, unbundling, sourcing patterns	Intra-industry heterogeneity of producers, imperfect competition, incomplete contracts, trade in tasks	Bernard, Eaton, Jensen and Kortum (2003), Melitz (2003), Antràs and Helpman (2004), Grossman and Rossi-Hansberg (2006)

The Benefits Of Trade

- Smith, Ricardo, first and later on others, show why it is beneficial for a country to engage in international trade even for products it is able to produce for itself

International trade allows a country:

- to specialize (produce) and export products that it can produce more efficiently than others
- import products that can be produced more efficiently in other countries

Adam Smith: Absolute Advantage

- **Adam Smith** 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
- According to **Smith**, a country should specialize in the production of and export goods for which they have an absolute advantage, then trade these goods for the goods produced by other countries, i.e., import goods at which the country has an absolute disadvantage

Absolute Advantage: Gains from Trade

Resources: Ghana 200 units, S. Korea 200 units

Resources Required to Produce 1 Ton of Cocoa and Rice		
	Cocoa	**Rice**
Ghana	10	20
South Korea	40	10
Production and Consumption without Trade		
	Cocoa	**Rice**
Ghana	10.0	5.0
South Korea	2.5	10.0
Total production	12.5	15.0
Production with Specialization		
	Cocoa	**Rice**
Ghana	20.0	0.0
South Korea	0.0	20.0
Total production	20.0	20.0
Consumption After Ghana Trades 6 Tons of Cocoa for 6 Tons of South Korean Rice		
	Cocoa	**Rice**
Ghana	14.0	6.0
South Korea	6.0	14.0
Increase in Consumption as a Result of Specialization and Trade		
	Cocoa	**Rice**
Ghana	4.0	1.0
South Korea	3.5	4.0

David Ricardo: Comparative Advantage

- **David Ricardo:** what may happen when one country has absolute advantage in the production of all goods

- **Comparative advantage:** countries should specialize in the production of goods they produce **relatively most efficiently** (comparative advantage) and buy goods that they produce **relatively less efficiently (comparative disadvantage)** from other countries, even if this means buying goods from other countries that they could produce more efficiently (absolute advantage) at home

Comparative Advantage: Gains from trade

Resources: Ghana 200 units, S. Korea 200 units

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

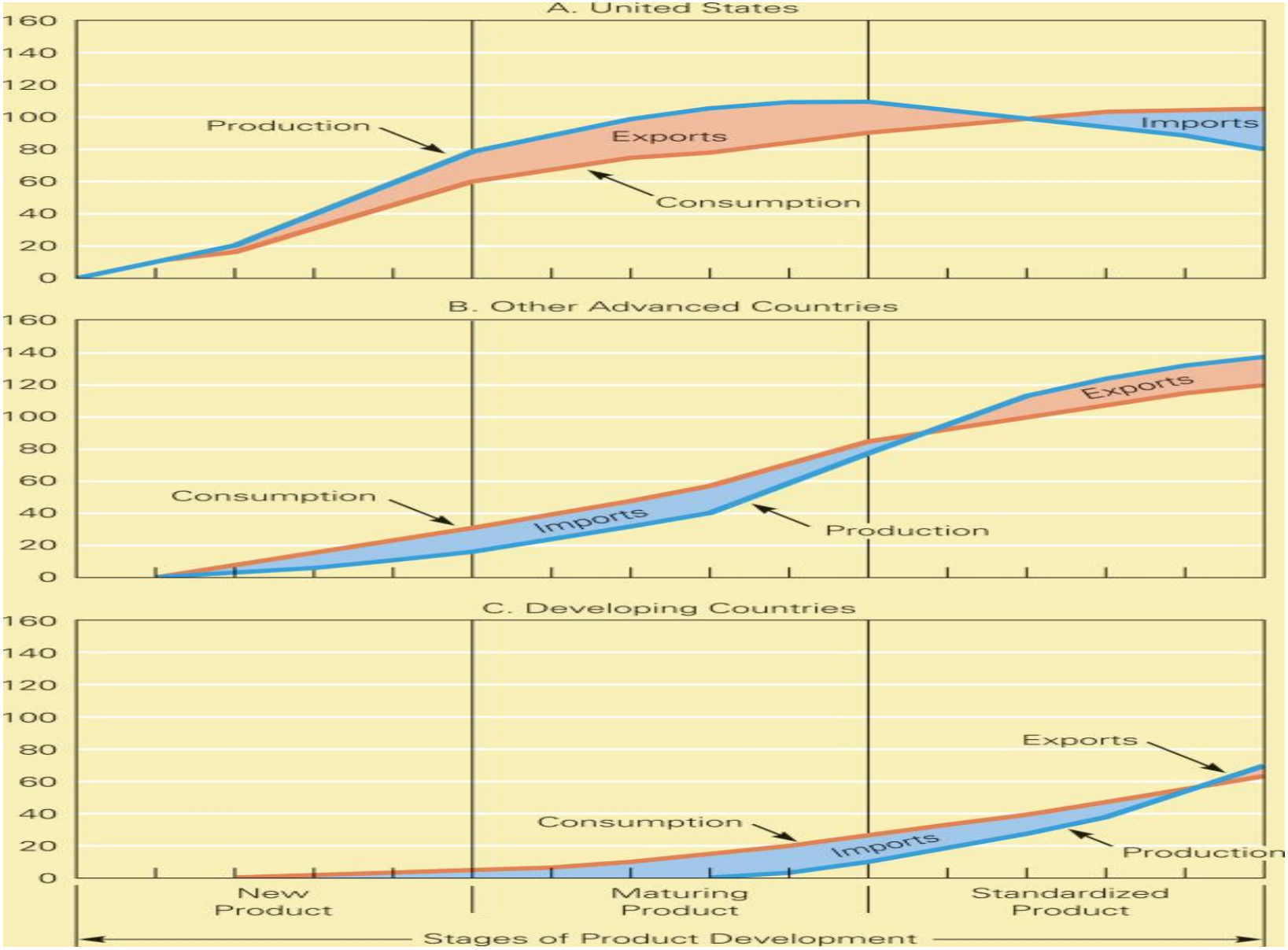
OPPORTUNITY COST

	OPPORTUNITY COST 1C	OPPORTUNITY COST 1R
GHANA	0.77R	1.333C
S. KOREA	2R	0.5C

The Product Life Cycle Theory: Dynamic Comparative Advantage

- Firms might also set up production facilities in those advanced countries where demand was growing limiting the exports from the "home" country
- As local and foreign markets mature, the product becomes more standardized
- Producers based in other advanced countries where labor costs are lower may now be able to export back to the "exporting" country
- If cost pressures become intense, developing countries begin to acquire a production advantage over advanced countries
- The "developed countries" switch from being exporters of the product to importers of the product as production becomes more concentrated in lower-cost foreign locations

The Product Life Cycle Theory: US Growth and Production of PCs



New Trade Theories: Imperfect Competition

- New trade theories suggest 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

- Through economies of scale, trade can increase the varieties of the same goods available to consumers and decrease the average cost of production (unit cost) of those goods

- In those industries when output required to attain economies of scale represents a significant proportion of total world demand, the global market may only be able to support a small number of (large) enterprises

Economies of Scale, First Mover Advantages, and the Pattern of Trade

- The pattern of trade we observe in the world economy may be the result of first mover advantages (the economic and strategic advantages that accrue to early entrants into an industry) and economies of scale

- New trade theories suggest that for those products where economies of scale are significant and represent a substantial proportion of world demand, first movers can gain a scale-based cost advantage that later entrants find difficult to match

Implications For Managers

Three main implications for international businesses:

- Location implications (Dispersion of Production)
- First-mover implications
- Policy implications

Location (Dispersion of Production)

- Different countries have advantages in different productive activities

- It makes sense for a firm to disperse its various productive activities to those countries where they can be performed most efficiently

- International trade theory suggests that firms which fail to do this, may be at a competitive disadvantage

First-Mover (Leader) Advantages

- Being a first mover can have important **competitive implications**, **especially** if there are economies of scale and the global industry will only support a few competitors

- Firms that establish a first-mover advantage may dominate global trade in that product ….

- … but …. First-mover's "disadvantages"? ….

Policy Implications

- Government policies with respect to free trade or protecting domestic industries can significantly impact global competitiveness

- Businesses should work to encourage governmental policies that support free trade

Chapter 6

The Political Economy of International Trade

Introduction

- Free trade occurs when governments do not attempt to restrict **what** its citizens **can buy** from another country or **what** they **can sell** to another country

- Many governments, however, tend to intervene in international trade to protect the interests of economically / socially / politically important groups

Instruments of Trade Policy

The main instruments of trade policy are:

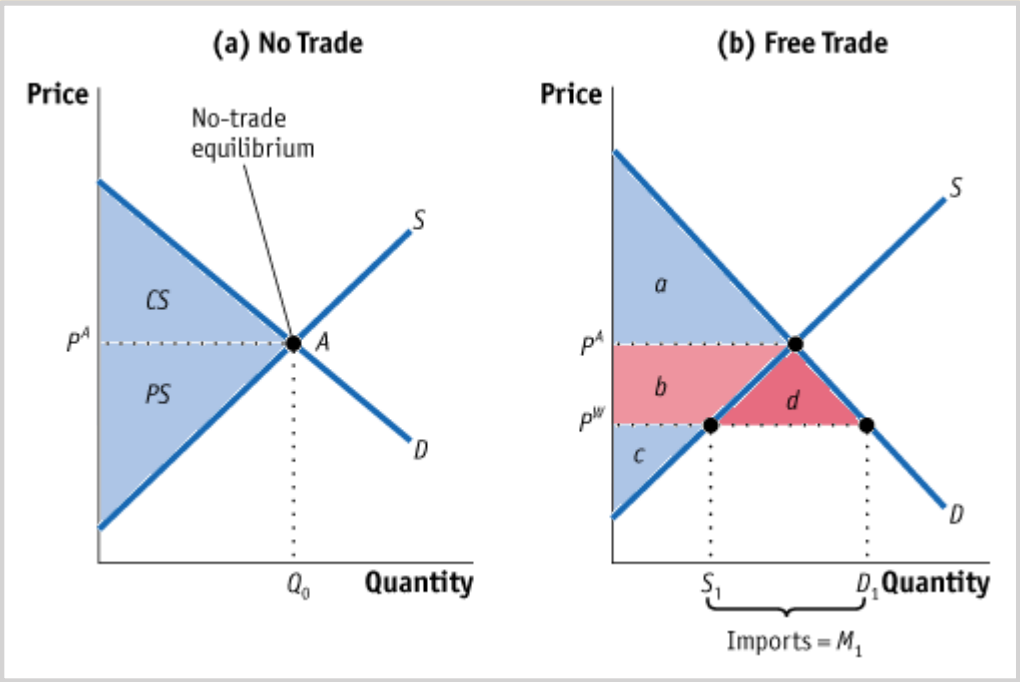
- Tariffs (Imports)
- Subsides (Exports)
- Import / Export Quotas
- Voluntary Export Restraints
- Local Content Requirements
- Administrative Polices
- Antidumping Policies

Tariffs

- Tariffs are taxes levied on imports that effectively raise the cost of imported products relative to domestic products
- Specific tariffs are levied as a fixed charge for each unit of a good imported
- Ad valorem tariffs are levied as a proportion of the value of the imported good
- Tariffs create government revenues, provide protection to domestic producers, and force consumers to pay more for certain imports
- Tariffs are unambiguously pro-producer and anti-consumer, and tariffs reduce the overall productive efficiency of **BOTH** the local and the world economy

GAINS FROM FREE TRADE

No Trade, Free Trade for a Small Country, Gains from Trade



The Gains from Free Trade at Home With Home demand of D and supply of S, the no-trade equilibrium is at point A, at the price P^A producing Q_0.

With free trade, the world price is P^W, so quantity demanded increases to D_1 and quantity supplied falls to S_1.

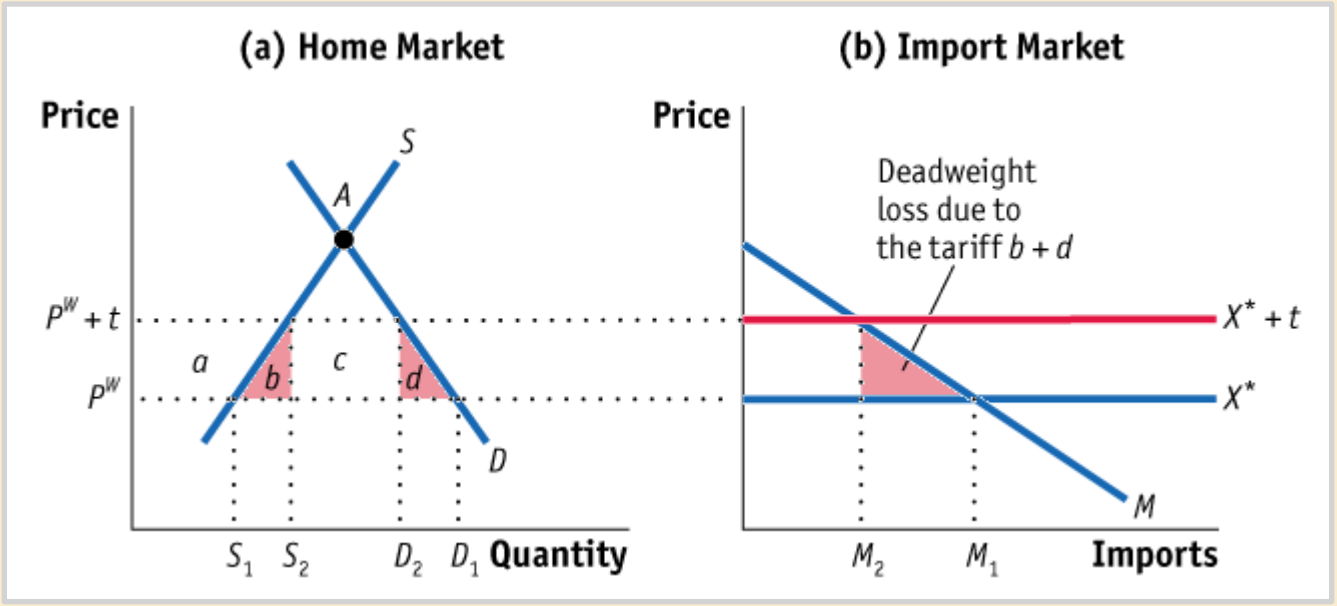
Since quantity demanded exceeds quantity supplied, Home imports $D_1 - S_1$.

Consumer surplus increases by the area $(b + d)$, and producer surplus falls by area b.

The gains from trade are measured by area d.

Import Tariffs

Effect of Tariff on Consumer Surplus, Producer Surplus, Government Revenue, Overall Effect of the Tariff on Welfare, Production Loss and Consumption Loss



Effect of Tariff on Welfare (continued)

Therefore, the net loss in welfare, the deadweight loss to Home, is *(b + d)*, which is measured by the two triangles *b* and *d* in panel (a) or the single (combined) triangle *b + d* in panel (b).

Production / Export Subsidies

- Subsidies are government payments to domestic producers/exporters
- Consumers are those who absorb the costs of export subsidies. Consumers NOT affected by production subsidies

Subsidies help domestic producers in two ways:

- To compete against low-cost foreign imports
- To gain export markets **(Strategic Subsidies)**

- **Countervailing duties to "neutralize unfair subsidies" by governments**

Import Quotas and Voluntary Export Restraints (VERs)

- Import quotas directly restrict the quantity of some good that may be imported into a country
- Voluntary export restraints (VERs) are quotas on trade imposed by the exporting country, typically at the request of the importing country's government
- A quota rent is the extra profit that producers make when supply is artificially limited by an import quota
- Import quotas and voluntary export restraints benefit domestic producers of import competing goods by limiting import competition, **BUT**, harm producers of other goods, and consumers by raising the prices of imported goods

Local Content Requirements

- A local content requirement demands that some specific fraction of a good be produced domestically

- Local content requirements benefit domestic producers of import competing goods, but consumers face higher prices

Administrative Policies

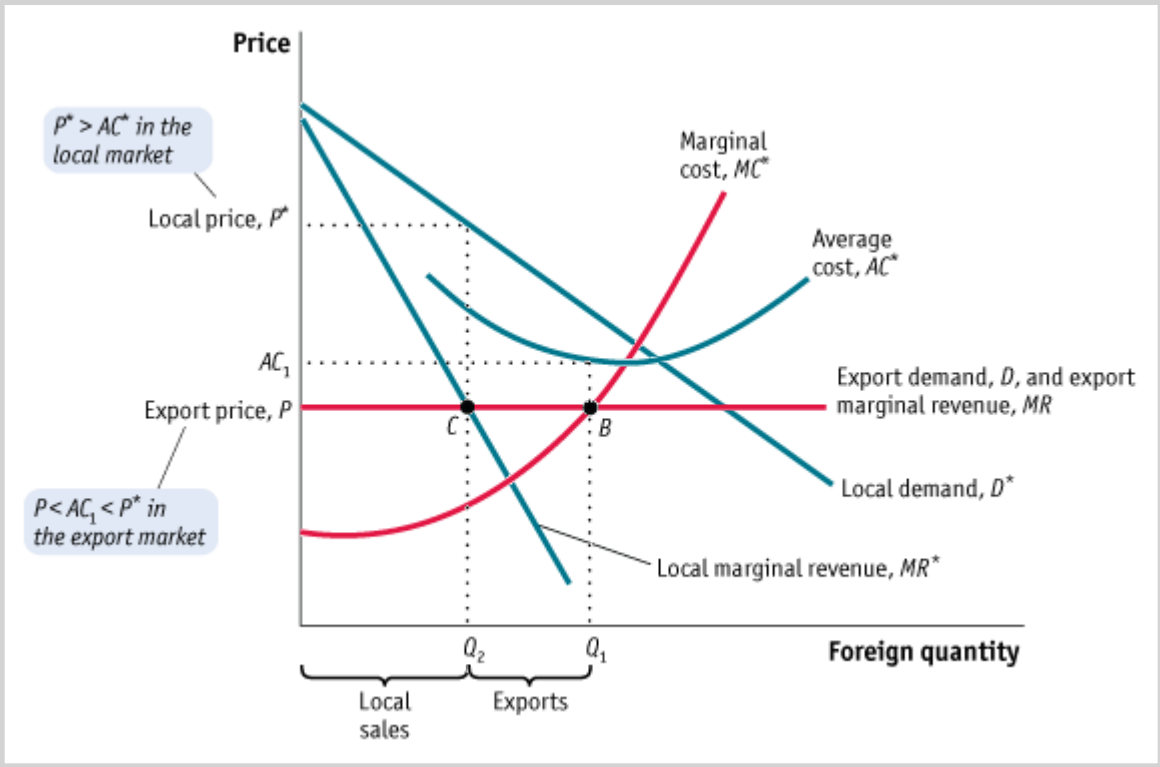
- Administrative trade polices are bureaucratic rules that are designed to make it difficult for imports to enter a country

- These polices hurt consumers by denying access to possibly superior foreign products

Dumping and Antidumping Policies

- **Dumping:** the selling goods in a foreign market below their average cost of production, or selling goods in a foreign market below their "fair" market value
- Dumping enables firms to unload excess production in foreign markets
- Some dumping may be predatory behavior, with producers using substantial profits from their home markets to subsidize prices in a foreign market with a view to driving indigenous competitors out of that market, and later raising prices and earning substantial profits
- Antidumping polices are designed to **"punish"** foreign firms that engage in dumping and protect domestic producers from **"unfair"** foreign competition

DUMPING



Foreign Discriminating Monopoly

The quantity sold in the local market, Q_2 (at point C), is determined where local marginal revenue equals export marginal revenue, $MR^* = MR$.

The Foreign monopolist sells Q_2 to its local market at P^*, and $Q_1 - Q_2$ to its export market at P.

Because $P < P^*$ (or alternatively $P < AC_1$), the firm is dumping.

Numerical Example of Dumping

Suppose the Foreign firm has the following cost and demand data:

Fixed costs	=	$100
Marginal costs	=	$10 per unit
Local price	=	$25
Local quantity	=	10
Export price	=	$15
Export quantity	=	10

The profits earned from selling in its local market are

$$\underbrace{(\$25 \cdot 10)}_{\text{Revenue}} - \underbrace{\$10 \cdot 10}_{\text{Variable cost}} - \underbrace{\$100}_{\text{Fixed cost}} = \underbrace{\$50}_{\text{Profits}}$$

Notice that the average costs for the firms are

$$\text{Average costs} = \frac{\$200}{10} = \$20$$

Now suppose that this firm sells an additional 10 units abroad, at the price of $15, which is less than its average cost of production. It is still worthwhile to sell these extra units because profits become

$$\underbrace{(\$25 \cdot 10 + \$15 \cdot 10)}_{\text{Revenue}} - \underbrace{\$10 \cdot 20}_{\text{Variable cost}} - \underbrace{\$100}_{\text{Fixed cost}} = \underbrace{\$100}_{\text{Profits}}$$

Government Intervention

Arguments for government intervention:

- Political arguments are concerned with protecting the interests of certain groups within a nation (normally producers), often at the expense of other groups (normally consumers)

- Economic arguments are typically concerned with boosting the overall wealth of a nation (to the benefit of all, both producers and consumers), generating government revenues, protecting domestic sectors/industries, e.g., Infant or traditional sectors and industries

Political Arguments For Free Trade

- protecting jobs
- protecting industries deemed important for national security
- protecting consumers from “dangerous” products
- protecting the human rights of individuals in exporting countries

Protecting Jobs And Industries

- Protecting jobs and industries is the most common political reason for trade restrictions

- Usually this results from political pressures by unions or industries that are "**threatened**" by **more efficient foreign producers**, and have more political clout than the consumers that will eventually pay the costs

National Security

- Industries such as aerospace or electronics are often protected because they are deemed important for national security

Retaliation

- When governments take, or threaten to take, specific actions, other countries may remove trade barriers

- If threatened governments don't back down, tensions can escalate and new trade barriers may be enacted

Protecting Consumers

- Governments may intervene in markets to protect consumers

Protecting Human Rights

- Trade policy can be used to improve the human rights policies of trading partners
- However, unless a large number of countries choose to take such action, it is unlikely to be successful
- Some critics have argued that the best way to change the internal human rights of a country is to engage it in international trade
- The decision to grant China MFN status in 1999 was based on this principle

Economic Arguments for Intervention

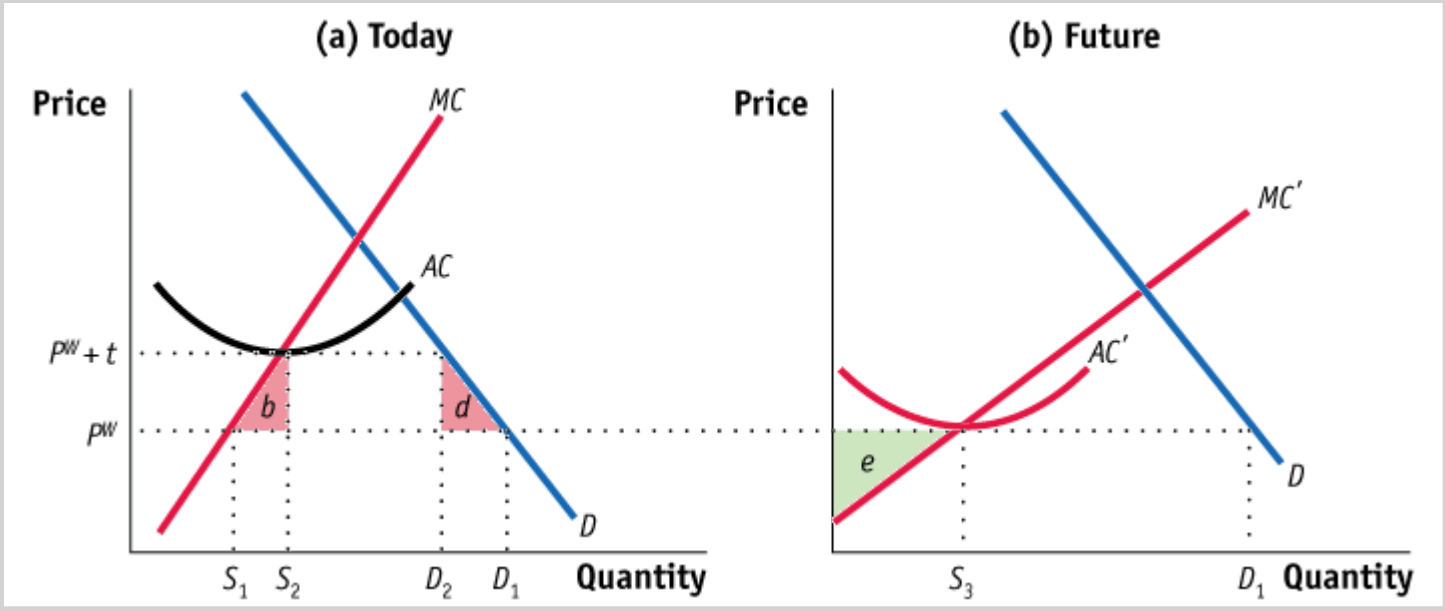
- the Infant Industry Argument
- Strategic Trade Policy (Import Tariffs, Export Subsidies)

The Infant Industry Argument

- The infant industry argument suggests that an industry should be protected until it can develop and be viable and competitive internationally
- The infant industry argument has been accepted as a justification for temporary trade restrictions under the WTO
- However, it can be difficult to gauge when an industry has "grown up"
- Critics argue that if a country has the potential to develop a viable competitive position its firms should be capable of raising necessary funds without additional support from the government

INFANT INDUSTRY-Free-Trade Equilibrium and Tariff Equilibrium

Equilibrium Today, Equilibrium in the Future, Effect of the Tariff on Welfare



Infant Industry Protection

Panel (a): P^W $<AC$ -> Losses t the firm. A tariff (t); new price P^W +t = AC

Panel (b): producing today allows the average cost curve to fall through learning to AC'.

In the future, the firm can produce the quantity S_3 at the price P^W without tariff protection and earn producer surplus of e.

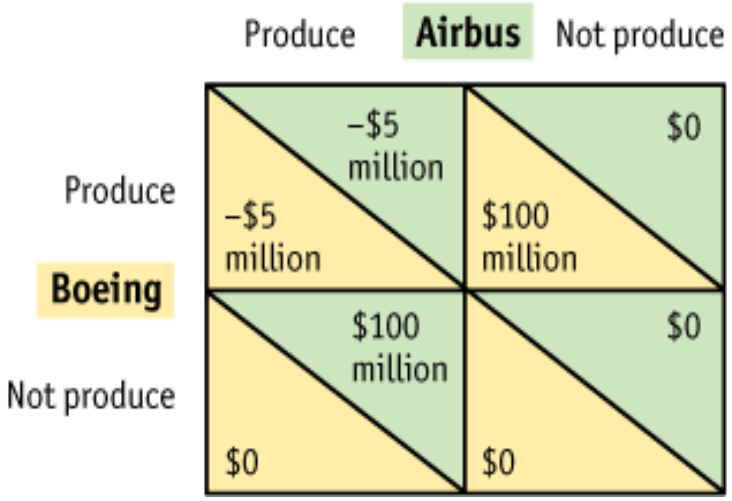
Strategic Trade Policy

- Strategic trade policy suggests that:

- in cases where there may be important **first mover advantages**, governments can help firms from their countries attain these advantages

- governments can help firms overcome barriers to entry into industries where foreign firms have an initial advantage

Payoff Matrix: Boeing and Airbus: Decision to (not) Produce



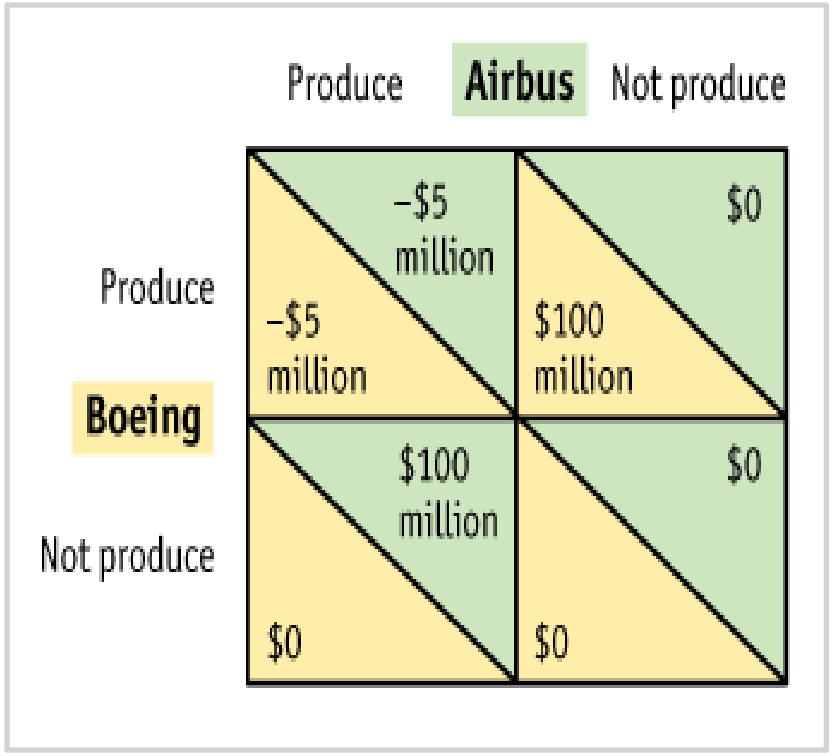
Payoff Matrix: The lower-left number in each quadrant shows the profits of Boeing, and the upper-right number shows the profits of Airbus. Each firm must decide whether to produce a new type of aircraft.

For this pattern of payoffs, there are two possible outcomes, in the upper-right and lower-left quadrants, where one firm produces, and the other does not.

Each firm makes its own best decision, taking as given each possible action of the rival firm.

When each firm is acting that way, the outcome of the *game* is "a non-cooperative equilibrium". The action of each player is the best possible response to the action of the other player.

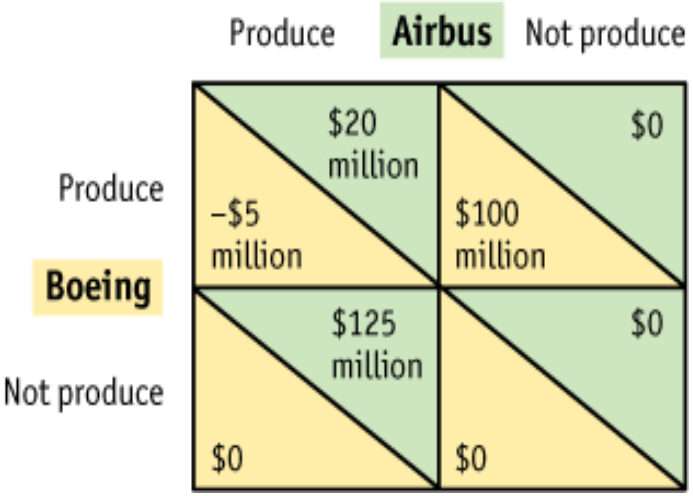
Payoff Matrix: Boeing and Airbus: Decision to (not) Produce



Best Strategy for Boeing If Airbus produces, then Boeing is better off not producing (upper-right quadrant). *H*aving both firms produce is not possible. Boeing would never stay in production, since it prefers to drop out of the market whenever Airbus produces

Best Strategy for Airbus Lower-left quadrant, with Airbus producing and Boeing not producing,

Payoff Matrix with Subsidy: Boeing and Airbus: Decision to (not) Produce



Payoff Matrix with Airbus Subsidy The European governments provide a subsidy of $25 million to Airbus, its profits increase by that much when it produces a new aircraft.

Now there is only one market equilibrium: the lower-left quadrant. Airbus produces but Boeing does not. Airbus profits have increased from 0 to $125 million. The subsidy cost only $25 million, so there is a net gain of $100 million in European welfare

Best Strategy for Airbus With the subsidy, Airbus now earns $20 million by producing instead of losing $5 million

Best Strategy for Boeing Boeing will want to drop out of the market. Once Boeing makes the decision not to produce, Airbus's decision doesn't change

Revised Case For Free Trade

Paul Krugman: Restrictions on trade may not be inappropriate in the cases of:

- Retaliation and Trade War
- Domestic Politics

Retaliation And Trade War

- **Paul Krugman** argues that strategic trade policies aimed at establishing domestic firms in a dominant position in a global industry are beggar-thy-neighbor policies that boost national income at the expense of other countries

- Countries that attempt to use such policies will probably provoke retaliation

Domestic Policies

- When special interest groups can influence governments, strategic trade policy is almost certain to be captured by such groups who will distort it to their own ends

Implications For Managers

- Managers need to consider how trade barriers affect the strategy of the firm and the implications of government policy on the firm

Trade Barriers And Firm Strategy

- Trade barriers raise the cost of exporting products to a country
- Voluntary export restraints (VERs) may limit a firm's ability to serve a country from locations outside that country
- To conform to local content requirements, a firm may have to locate more production activities in a given market than it would otherwise
- All of the above more often than not raise the firm's costs above the level that could be achieved in a world without trade barriers

Policy Implications

- International firms have an incentive to lobby for free trade, and keep protectionist pressures from causing them to have to change strategies

- While there may be short run benefits to having governmental protection in some situations, in the long run these can backfire and other governments can retaliate