

*** these are preliminary and incomplete. Students are responsible for attending all lectures to catch any corrections.

Lecture Notes

Cooperation and Conflict in the Global Economy

Econ 556 /
International Studies 556

By

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Introduction to Course

The word globalization invokes different feelings in different people. To some it is a great driver of economic progress, while to others it is deeply entwined with the forces that are causing environmental degradation, a loss of cultural diversity and other problems. While many definitions are available, our working definition of globalization, from Spulber (2007) is

the gradual reduction in the costs of trade

where the costs of trade are broken down into four categories:

1. Transportation Costs
2. Time Costs
3. Tariff (and non-tariff) Costs
4. Transaction Costs

These are the four T's, and we will be studying them in this class. We will also explore the gains from trade. The gains from trade can be broken down into five categories (Spulber, 2007):

1. preferences for variety and economies of scale
2. comparative advantage
3. comparative availability of factors of production
4. differences in preferences and endowments
5. innovation and technology transfer

For how long has the process of globalization been under way? Transportation costs, for one, have been falling for a long, at least since the Roman's starting building roads. Other noteworthy accomplishments of the Roman Empire that served to reduce the costs of trade were the promotion of a common currency (coins) and a formal language, and the maintenance of relative peace (Pax Romana), all of which served to lower the costs of making transactions.¹ By 1492, sailing ships and scientific knowledge were advanced enough to allow Europeans to discover the American continents. Other intellectual advancements, such as recognition by Adam Smith and others that trade could be a positive-sum game for both parties, are marked by publication of *The Wealth of Nations* in 1776.

The industrial revolution got underway in the earlier part of the 1800s, and this caused further decreases in the cost of transportation; for example, the price of shipping one pound of goods across the Atlantic Ocean fell by 95% from 1815-1900, due to wind power being replaced by steam power. Indeed, one of the fundamental characteristics of the industrial revolution was the use of machine power to replace human, animal or unreliable natural power like wind. With steam power, man was no longer at the whim of nature and goods could be shipped much faster.

1945 is another watershed year, as it was very soon after the Second World War that many of

¹ The Roman Empire was not the only empire to promote such things (Han China, Mauryan India, Parthian Persia were also formed around the same time as Roman Empire). By 1024 Chinese governments were printing *paper* money, centuries before anything comparable in the West (Pomeranz and Topik, 2006, p. 14).

the international institutions that are now part of our everyday reality began to take shape. For example, the General Agreement of Trade and Tariffs (GATT) took place a few years after the war ended. GATT would evolve into what we now know as the World Trade Organization (WTO). One of the primary missions of the WTO is to reduce tariff and other trade barriers between nations. It was also after the Second World War that increased political and military integration began to take place. One example of this is the beginnings of the creation of the European Union (EU) and NATO.²

Finally, the last decade of the twentieth century saw great advancement in communication technologies in the form of the Internet. Thus, when we view globalization as the gradual reduction in the costs of trade, we can point to specific historical examples of things that lead to reductions in each of the four costs of trade. Also, we can see things like increasing interdependence, homogeneity of culture, etc. (definitions that are commonly given as those for globalization) as consequences of globalization rather than causes.

International Institutions

The WTO is the main body that seeks to facilitate trade between countries. As of January, 2007 there were 150 member countries, however some large countries are not members, notably Russia.

Countries supplement the WTO with smaller trade agreements between themselves and smaller groups of other countries. One example of this is the North American Free Trade Agreement (NAFTA) between the Canada, Mexico and the U.S. NAFTA is a free trade area. MERCOSUR on the other hand is a customs union (albeit an imperfect one) which is a higher form of integration. The highest form of integration is an economic union, and the best example of this is the U.S. Other supplemental trade institutions between countries include the Association of East Asian Nations (ASEAN), Asia-Pacific Economic Cooperation (APEC), Caribbean Basin Initiative, and the proposed Free Trade Area of the Americas (FTAA).

Three degrees of economic integration:

1. Free Trade Area -- eliminates tariff barriers among member countries
2. Customs Union -- eliminates tariff barriers among member countries, and also establishes a common tariff policy towards non-member countries (customs is another word for tariff)
3. Economic Union -- free trade in goods, services, people and capital

² IMF and World Bank were also created at this time.

Comparative Advantage

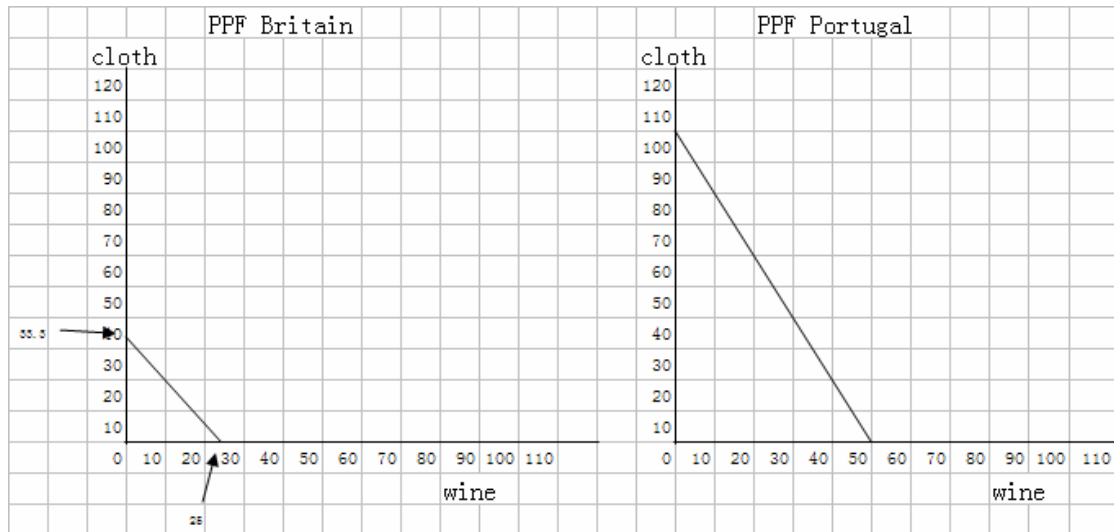
L^i = number of labor inputs (workers, worker hours) in country i

a_j^i = productivity of country i in good j (number of workers required to produce)

For $L^B = 100$, $L^P = 100$, $a_c^B = 3$, $a_w^B = 4$, $a_c^P = 1$, $a_w^P = 2$,

we can draw a PPF for each country with wine on x-axis and cheese on y-axis.

Figure 1



opportunity cost of wine in Britain $OC_w^B = (a_w^B / a_c^B) = (4/3)$ cloth

opportunity cost of cheese in Britain $(OC_c^B = (a_c^B / a_w^B) = (3/4)$ wine

opportunity cost of wine in Portugal $OC_w^P = (a_w^P / a_c^P) = (2/1)$ cloth

opportunity cost of cheese in Portugal $(OC_c^P = (a_c^P / a_w^P) = (1/2)$ wine

Portugal specializes in cloth, Britain in wine

It is easier to put this information into a table

Figure 2

Opportunity Costs		
	Cloth	Wine
Britain	3/4 wine	4/3 cloth
Portugal	1/2 wine	2 cloth

Because Portugal has a lower OC of producing cloth, and Britain has a lower OC of producing wine, we get the pattern of specialization mentioned above.

Box 1

We can also find the opportunity costs with the following formula

$$OC_{\text{goodX}} = \frac{Y_{\text{max}}}{X_{\text{max}}} \quad OC_{\text{goodY}} = \frac{X_{\text{max}}}{Y_{\text{max}}}$$

where $Y^{\text{max}} = L/a_Y$ and $X^{\text{max}} = L/a_X$

Note, this is essentially the same formula given above but may be easier to remember

$$OC_{\text{goodX}} = \frac{Y_{\text{max}}}{X_{\text{max}}} = \frac{L/a_Y}{L/a_X} = \frac{a_X}{a_Y}$$

What is the range of feasible exchange prices?

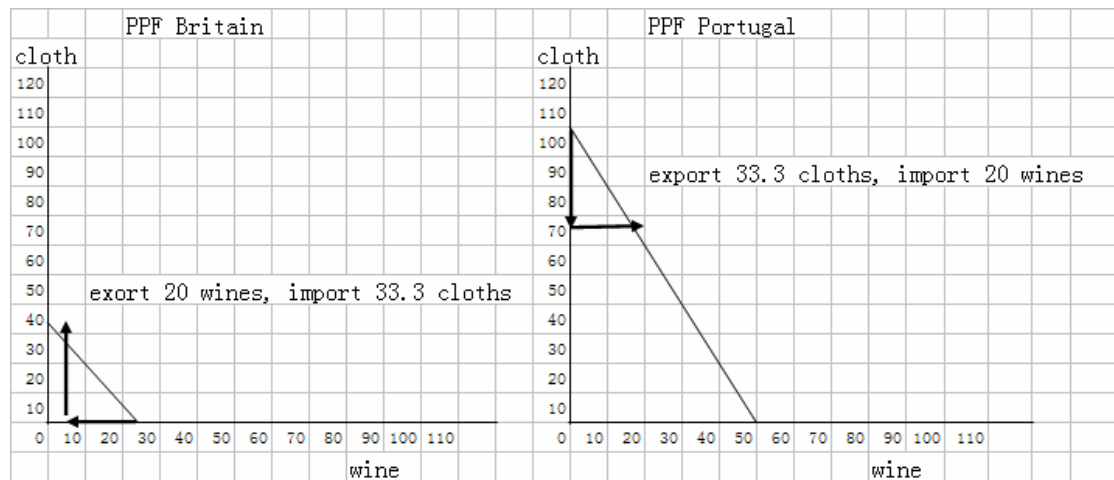
$[(a_c^B / a_w^B), (a_c^P / a_w^P)]$ price of cloth must be between 1/2 and 3/4 wine.

$[(a_w^B / a_c^B), (a_w^P / a_c^P)]$ price of wine must be between 4/3 and 2 cloths.

Note if one of the above price ranges is satisfied, the other must be too.

Say one wine can be exchange for 5/3 cloths; can you show there are gains from trade?

Figure 3



We have been talking about trade as if it is countries trading with each other. But remember:

"The competitive actions of firms that pursue these strategies at the level of individual products determine national comparative advantage. Countries end up specializing in those products where they have relatively lower unit labor costs as compared to other countries. These choices are not made by countries themselves, of course. It is the actions of firms operating in the global market place that determine what goods will be imported and exported by countries. The strategic actions of firms reflect the underlying comparative advantages of countries." (Spulber, 2007, p xx)

Transportation and Time Costs

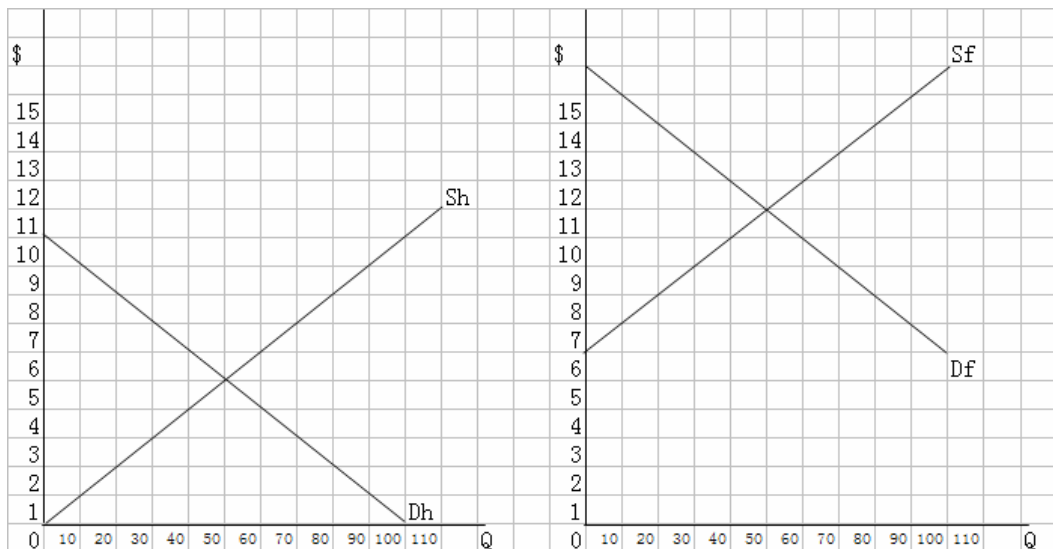
Given price differences between countries, cross-border arbitrage provides profit opportunities, unless the costs of trade are too high. Without trade costs, prices will equate in the two countries.

Demand -- Quantity demanded as a function of price

Supply -- Quantity supplied as a function of price

Figure 4

Home	Foreign
Inverse Demand and Supply Curves	Inverse Demand and Supply Curves
$p = 10 - \frac{1}{10}Q_d^h$ (i-demand)	$p = 16 - \frac{1}{10}Q_d^f$ (i-demand)
$p = \frac{1}{10}Q_s^h$ (i-supply)	$p = 6 + \frac{1}{10}Q_s^f$ (i-supply)
Demand and Supply Curves	Demand and Supply Curves
$p - 10 = -\frac{1}{10}Q_d^h \Rightarrow$	$p - 16 = -\frac{1}{10}Q_d^f \Rightarrow$
$100 - 10p = Q_d^h$ (demand)	$160 - 10p = Q_d^f$ (demand)
$10p = Q_s^h$ (supply)	$p - 6 = \frac{1}{10}Q_s^f$
	$10p - 60 = Q_s^f$ (supply)



Without trade, it is easy to see from the graphs that equilibrium price in home is \$5 and equilibrium price in foreign is \$11. With trade, international businesses will buy some of good x in home and sell it in foreign for a higher price, although the price will have to be less than \$11 to induce foreign buyers to import. As international businesses buy the good in home, they bid up

the price. The exact price at which the price will reach will be where exports equal imports.

Exports are equal to

$$Q_h^s - Q_h^d$$

that is, the amount of home production left after home consumption. Using the demand and supply equations for home and substituting, this becomes

$$(10p - [100 - 10p])$$

which simplifies to $20p - 100 = Q^{\text{exported}}$ (1)

Imports are equal to

$$Q_f^d - Q_f^s$$

that is, the amount of foreign demand not satisfied by foreign production. Using the demand and supply equations for foreign and substituting, this becomes

$$(160 - 10p - [10p - 60])$$

which simplifies to $220 - 20p = Q^{\text{imported}}$ (2)

Setting imports equal to exports,

$$220 - 20p = 20p - 100$$
 (3)

One can solve for p. The answer turns out to be 8. One can check that at a price of 8, the amount exported (quantity supplied minus quantity demanded) in home is 60, and the amount imported (quantity demanded minus quantity supplied) in foreign is 60. Thus a price of \$8 equalizes exports and imports, and there are no further possibilities for international businesses to make money from arbitrage.

Now with transportation costs, not only do imports have to equal exports, but the price difference between foreign and home has to equal transportation costs (TC). That is, the following two conditions must hold:

1.) imports = exports

2.) $p^f - TC = p^h$

Thus with TC, (3) is rewritten as

$$220 - 20p^f = 20(p^f - TC) - 100$$

If TC=2, then this is

$$220 - 20p^f = 20(p^f - 2) - 100$$

Which simplifies to

$$360 = 40p^f$$

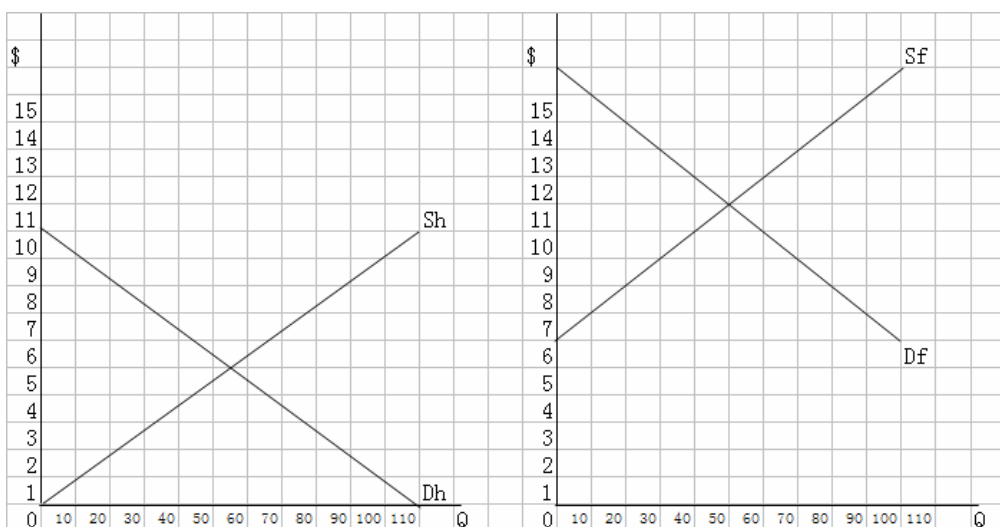
Thus price foreign equals 9, and by the relationship $p^f - TC = p^h$, price home equals 7. (To see this, sub in $p^f=9$, $TC=2$ and solve for p^h). As the before trade price was 8, we can see that p^f

is one dollar higher and p^h is one dollar lower than without transport costs.

Above, both countries bear the burden of the TC. Let's try this procedure with another set of supply and demand conditions. We will see that now, both countries do not bear the burden equally. The conditions in foreign remain the same, but now home has more inelastic demand and more inelastic supply.

Figure 5

Home	Foreign
Inverse Demand and Supply Curves	Inverse Demand and Supply Curves
$p = 10 - \frac{1}{11}Q_d^h$ (i-demand)	$p = 16 - \frac{1}{10}Q_d^f$ (i-demand)
$p = \frac{1}{11}Q_s^h$ (i-supply)	$p = 6 + \frac{1}{10}Q_s^f$ (i-supply)
Demand and Supply Curves	Demand and Supply Curves
$p - 10 = -\frac{1}{11}Q_d^h \Rightarrow$	$p - 16 = -\frac{1}{10}Q_d^f \Rightarrow$
$110 - 11p = Q_d^h$ (demand)	$160 - 10p = Q_d^f$ (demand)
$11p = Q_s^h$ (supply)	$p - 6 = \frac{1}{10}Q_s^f$ (supply)
	$10p - 60 = Q_s^f$ (supply)



Without trade, again the equilibrium price in home is \$5 and equilibrium price in foreign is \$11 (although now the equilibrium quantity in home is higher).

Exports are equal to

$$Q_h^s - Q_h^d$$

that is, the amount of home production left after home consumption. Using the demand and supply equations for home, this becomes

$$(11p - [110 - 11p])$$

which simplifies to $22p-110$.

Imports are equal to

$$Q_f^d - Q_f^s$$

that is, the amount of foreign demand not satisfied by foreign production. Using the demand and supply equations for foreign, becomes

$$(160-10p-[10p-60])$$

which simplifies to $220-20p$. Setting imports equal to exports,

$$220-20p=22p-110 \tag{4}$$

One can solve for p . The answer turns out to be 7.86. One can check that at a price of 7.86, surplus (quantity supplied minus quantity demanded) in home is 62.85 and shortage (quantity demanded minus quantity supplied) in foreign is also 62.85. This price equalizes exports and imports, and there are no further possibilities for international businesses to make money from arbitrage.

With TC of \$2, (4) becomes

$$220-20p^f = 22(p^f - TC) - 110 \quad \rightarrow \quad 220-20p^f = 22p^f - 22(2) - 110 \quad \rightarrow \quad 374 = 42p^f$$

$p^f = 8.91$, and by the relationship $p^f - TC = p^h$, price home equals 6.91.

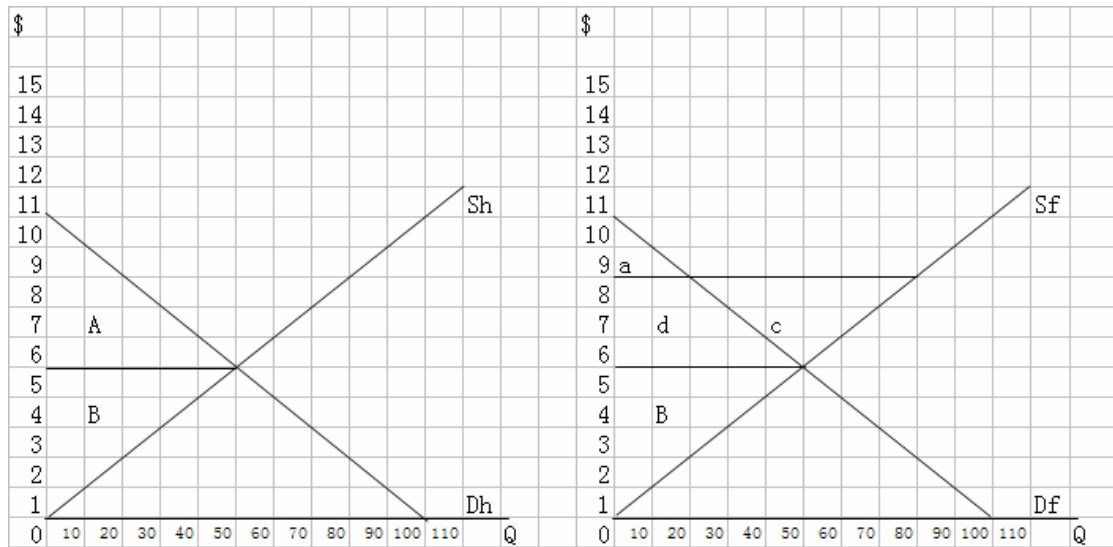
Thus the price stayed closer to home with trade and no transportation costs, and with transportation costs, which party bore a larger share of the transportation cost burden. The price in Foreign increased by 0.91 and the price in home fell by 1.09 \rightarrow home fares worse compared to the first set of supply and demand curves we looked at (those in figure 4).

The last thing we want to explore are the *welfare* effects of trade and transportation costs. We will return to the first set of supply and demand equations (those from figure 4). When looking at welfare, three concepts are important:

- Consumer Surplus – The area under the demand curve and above the price
- Producer Surplus – The area above the supply curve and below price
- Total Surplus – The areas of consumer surplus and producer surplus

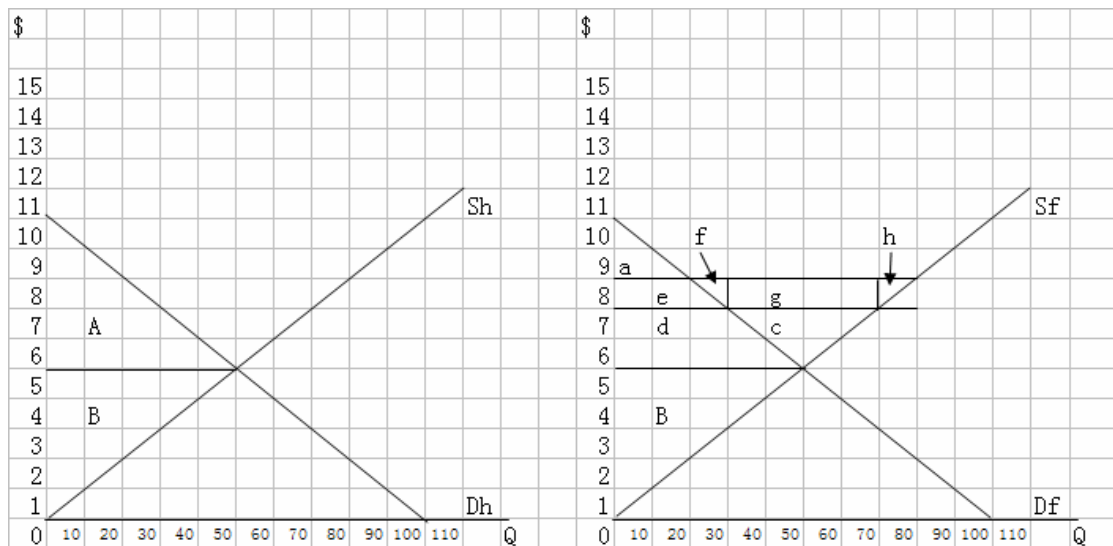
The reason consumer surplus is the area under demand curve and above price is because the demand curve represents how much consumers value the good. So, the difference between how much a consumer values the good and what he actually pays for is his surplus. Similarly for producers; in this case, surplus is profit, because it is the difference between the price the producers receives and what it costs him to produce it.

Figure 6



In figure 6 we can see that before trade (the first graph) consumer surplus (CS) is area A and producer surplus (PS) is area B. After trade (the second graph in figure 6) CS is area a and PS is the sum of areas B, d and c. Thus PS rose, CS fell and total surplus (TS) rose, by the area c. Thus area c represents the gains from trade. Figure 7 below shows the effect of transport costs.

Figure 7



Focus only on the second graph in figure 7. We see that with transport costs, the price falls to \$7, which is bad for sellers but good for buyers. Thus CS rises ($CS=a+e$), PS falls ($PS=B+d+c$) and total surplus falls by $f+g+h$. Transporters actually get g , but we assume transportation is a zero profit industry; thus areas $f+g+h$ are the deadweight loss.

Transportation costs not only affect the price at which goods are traded and the quantity traded, but also the location of industry. This is outside the model we've been discussing, but is an important concept related to transportation costs.

Weight gaining industries – products in these industries get heavier as the production process moves along. For example, soft drinks leave the factory as syrup but become Pepsi or Coke only after they are mixed with water and CO₂. This happens either at regional bottling plants, or sometimes right in front of the consumer, at soda fountains! Thus the final production takes place very near to the consumer.

Weight losing industries -- products in these industries get lighter as the production process moves along. Final production takes place near to the source of raw materials. For example, coal burning electricity generating plants are located near the source of coal, because it is easy to transport the final product (electricity) through power lines.

Footloose industries – these are industries that are neither weight gaining nor weight losing. Thus producers have flexibility in where they locate their products.

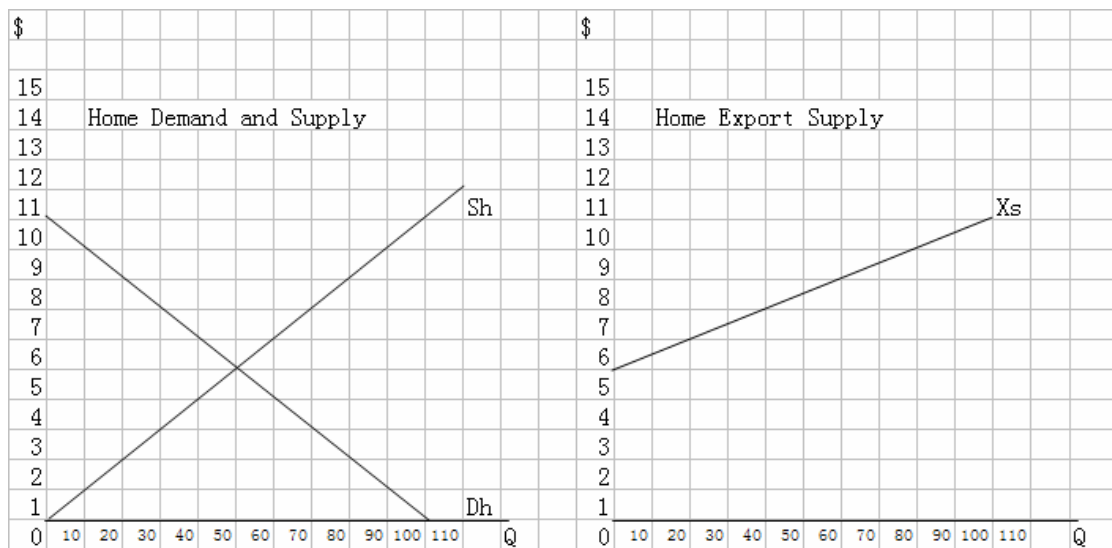
Finally, although we haven't yet mentioned time costs, we can represent them in the same way as transportation costs. One time cost is the interest payments international businesses need to pay on goods while they are in transit. There can be others too, for example, if the good in question is a food product, the product may lose freshness. So both high transport costs or time costs can lead goods to be non-traded.

Tariffs

Now, assume transportation costs are zero. We can study tariffs in (almost) exactly the same way that we studied transportation costs above. (The difference lies in the welfare analysis.) However in this section we will do it with graphs only. The drawback of doing it graphically is that it can be difficult to tell exactly what the price and quantities are, whereas the mathematical method we employed above is exact.

We will derive export supply and import demand curves for Home and Foreign, respectively.

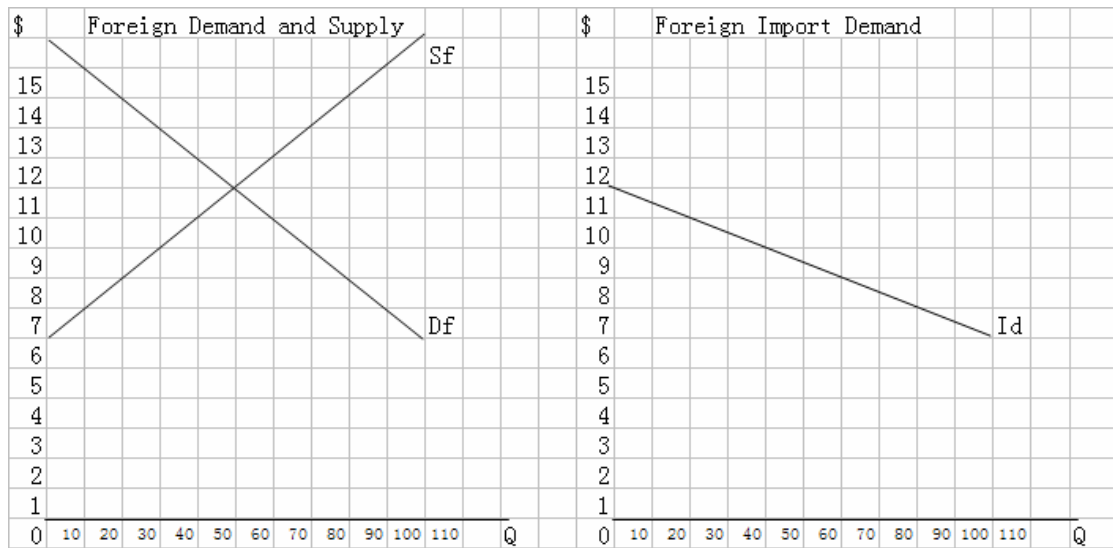
Figure 8



At a price of \$5, producers in Home are not willing to export anything. But as the price rises, they are willing to supply more (by the Law of Supply) and because the quantity demanded by Home consumers goes down as the price rises (by the Law of Demand) there is excess supply, which can be exported. At a price of \$10, Home consumers demand zero units, but Home producers are willing to supply 100; thus Home export supply at \$10 is 100. The second graph in figure 8 shows Home export supply curve. Note the equation of Home export supply curve is $p = (1/20)q + 5$, which is equation (1) on page seven rearranged to solve for p .

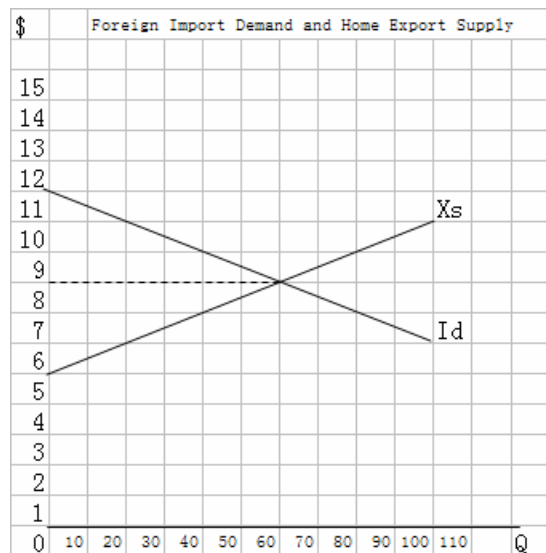
Foreign import demand is derived in an analogous way. See figure 9 below. Note that at a price of \$11, foreign buyers are satisfied by the quantity produced by Foreign producers. But for prices less than \$11, Foreign buyers want to buy more than Foreign producers are willing to supply, so they have a demand for imports at all prices less than \$11. Note the equation for Foreign import supply is $p = 11 - (1/20)q$, and this is equation (2) on page seven, rearranged to solve for p .

Figure 9



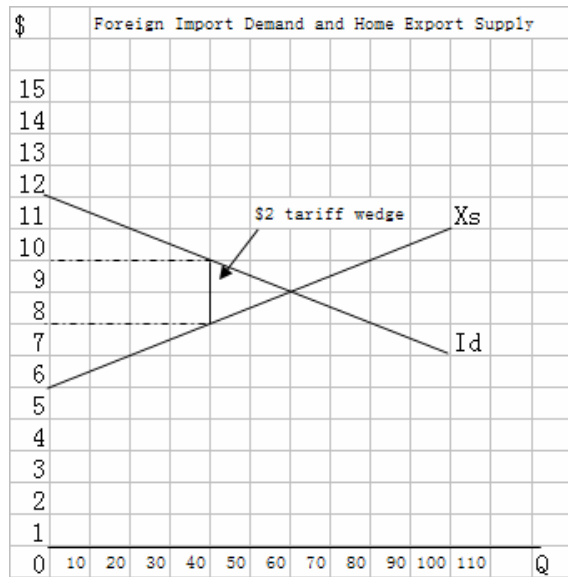
Putting together Home export supply and Foreign import demand, we can see where they are equal. If there is free trade with no costs of trade, the price turns out to be \$8, just as we found mathematically in the transportation cost section above. (It may be easier to see how this price is arrived at here, but note that unless we know the exact equations of the supply and demand curves, we can't be sure the price is \$8.00, because just by looking at it, we might think it could be \$7.99 or \$8.01.)

Figure 10



How do we determine the price received after a tariff is imposed? Insert a wedge between the import demand and export supply curves that is equal to the size of the tariff.

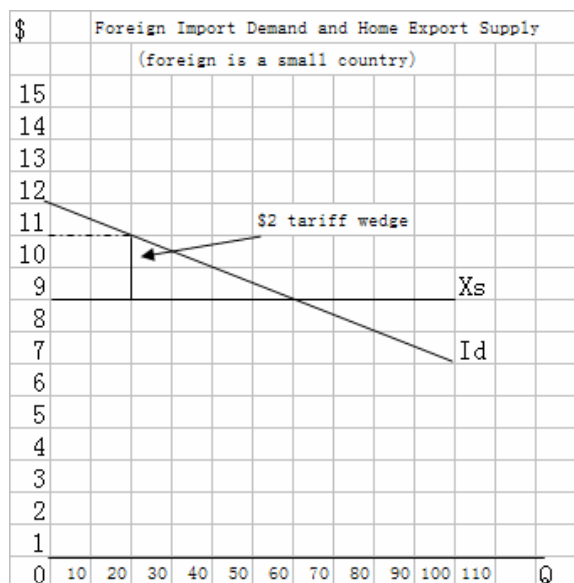
Figure 11



Foreign price rises to \$9, Home price fall to \$7, and the difference between them will be the size of the wedge, which in this case is a \$2 tariff. However the wedge could also represent transportation costs, time costs or transaction costs and the method for determining prices and quantity traded is the same. Note that the degree to which Foreign price rises and Home price falls depends on the elasticity of the curves.

Now let's look at how the picture differs if Home is a big country and Foreign is a small country. In figure 12, we can tell that Home is a big country because it is willing to supply as much of the good as Foreign wants to buy at a price of \$8. If consumers in Foreign offer less than \$8, Home producers will not supply; that is, they will not lower their price at all. The intuition is they have alternative buyers, and so will not lower their price. Above, they did lower their price and thus bore part of the burden of the tariff.

Figure 12



Now let's look at the welfare effects of the tariff. We will keep the assumption that Foreign is a small country, so they bear the entire burden of the tariff (that is, the price rises by \$2, the full size of the tariff. If we assumed instead that Foreign was a big country and the price only rose by \$1 there would be no qualitative change in what follows.)

A two-dollar tariff raises the price in Foreign by two dollars when it is a small country. This causes the amount imported to fall (see figure 13). Consumers lose, but producers gain. In figure 14, the government gains area c, but areas b and d are lost; this is the deadweight loss. Thus the crucial difference between the transport cost case and tariff case is that there is a third player in the tariff case, the government. (Transporters were the third player in the transport cost case, but we assumed they were in a zero-profit industry and so received no surplus.)

Figure 13

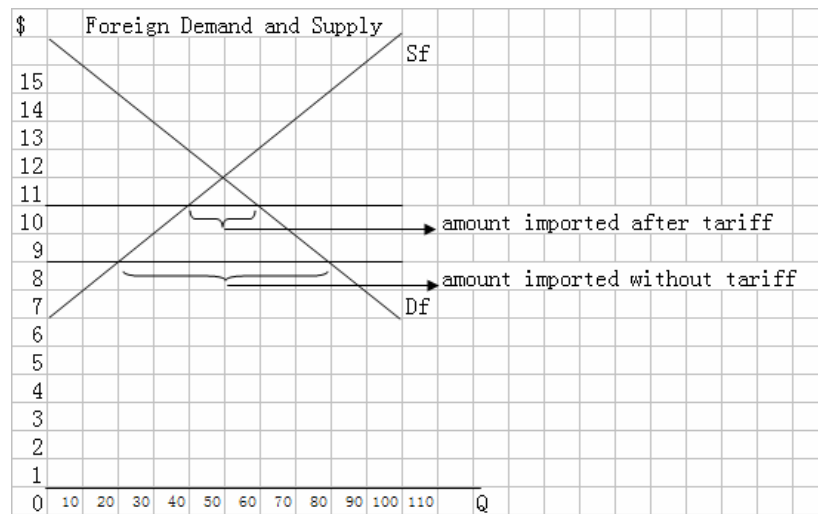
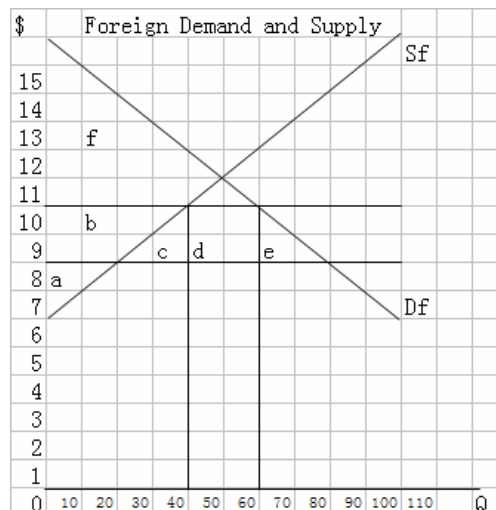


Figure 14



Other Instruments of Trade Policy

- Export Subsidies
- Import Quotas
- Voluntary Export Restraints
- Local Content Requirements
- Export Credit Subsidies (Export-Import Bank)
- National Procurement
- Red Tape Barriers
- FDI Insurance (who can find out which government agency provides this?)

Exchange Rates and Balance of Payments

The balance of payments summarizes the transactions of a country's citizens, govts, businesses with foreigners.

The majority of the *current account* transactions are represented by exports and imports of goods and services.

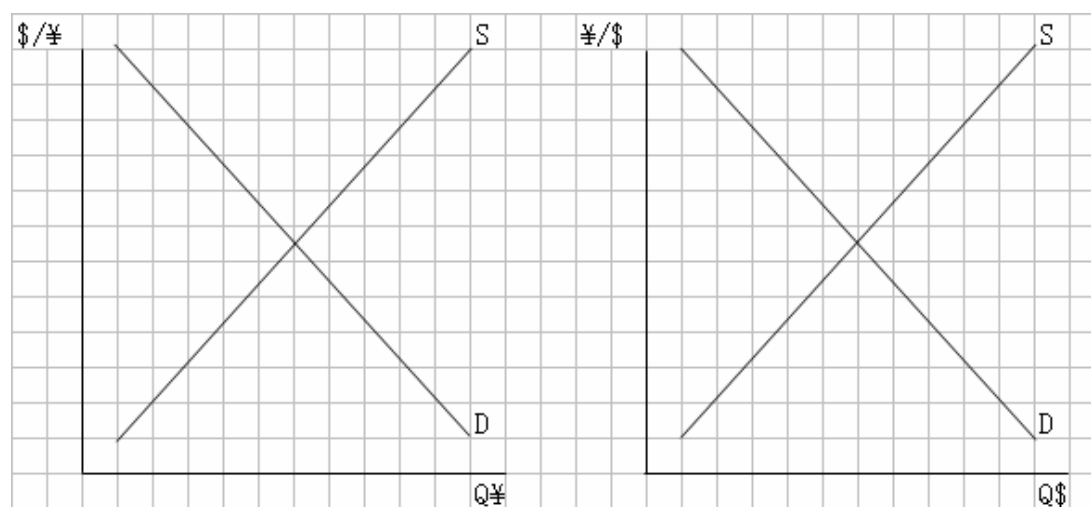
Currently, the U.S. imports more than it exports. However, the balance of payments must balance:

$$\text{Current Account Balance} + \text{Capital Account Balance} + \text{Official Reserve Account Balance} = 0$$

But, each specific component need not balance, and this is why it is possible for exports to be less than imports (current account deficit.) In particular, the U.S. maintains a surplus in the official reserve account balance, and this is partially how we offset the current account deficit. We also have a surplus in the capital account balance (the exchange of ownership rights to real or financial assets or the extension of loans).

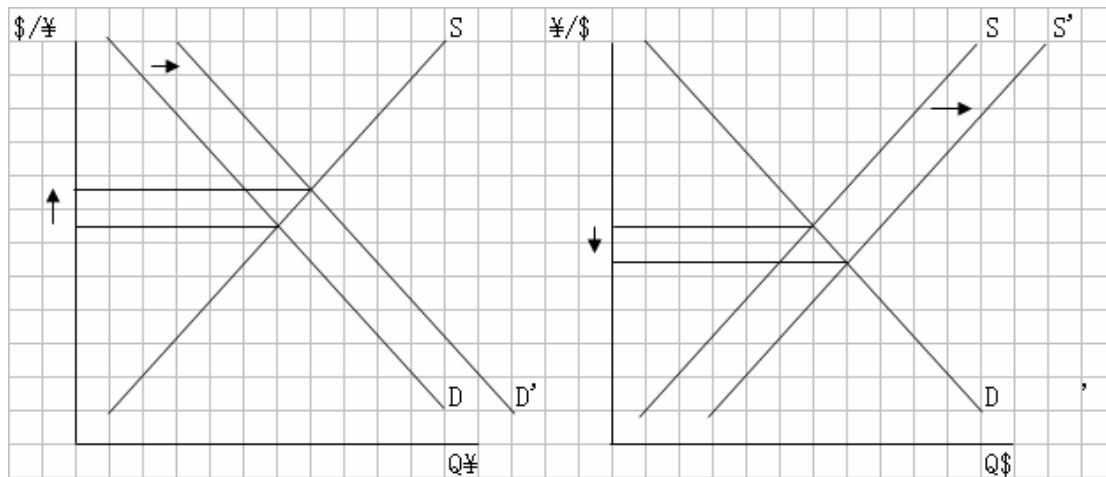
Exchange Rate Market is in Equilibrium

Figure 15



An increase in GDP in the U.S. causes demand for Yen to increase (U.S. consumers supply more dollars to the exchange rate market in order to demand more Yen)

Figure 16

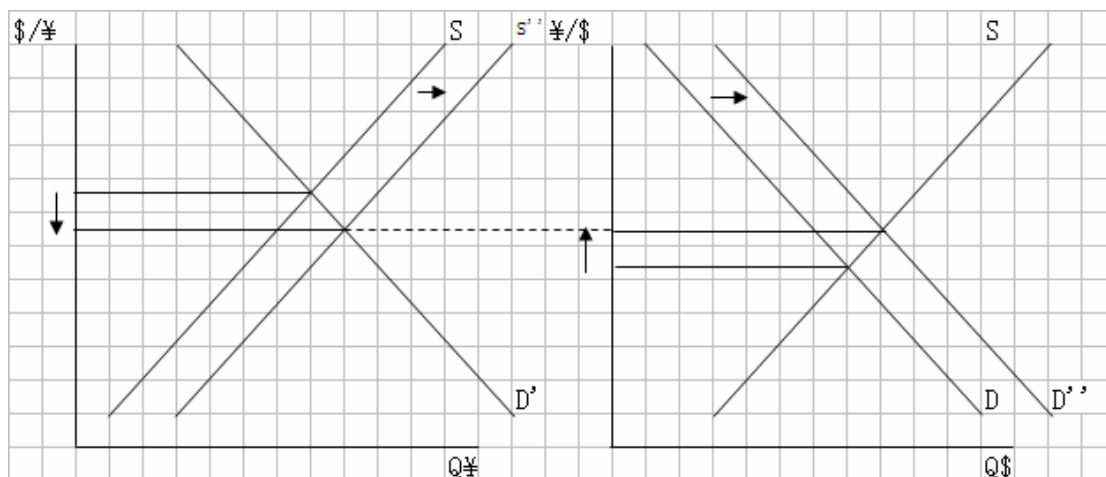


The dollar depreciates

The yen appreciates

Upon seeing the Yen appreciate, the Bank of Japan uses Yen to buy dollars

Figure 17

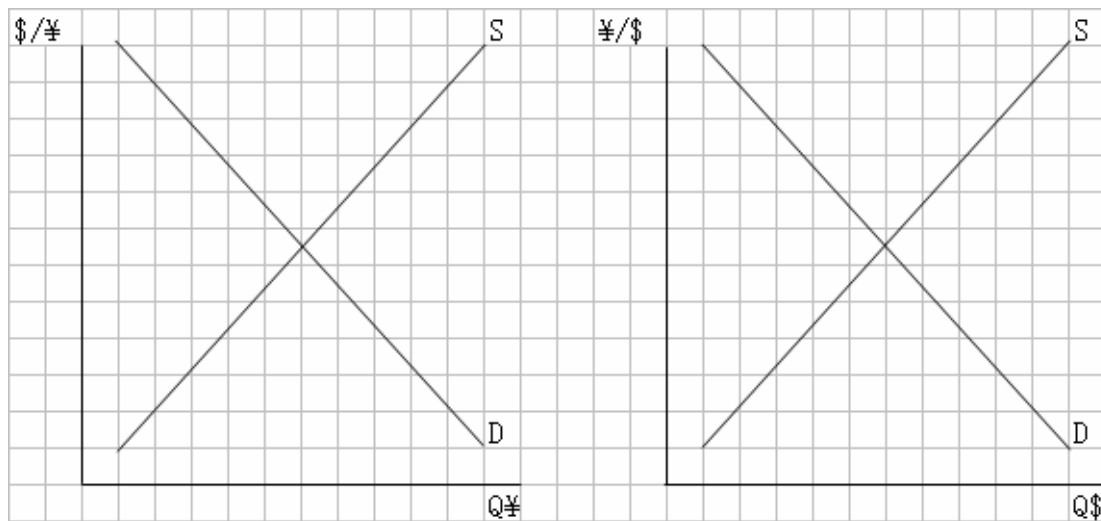


And the exchange rate returns to its old level.

The Bank of Japan accumulates dollar reserves in order to prevent the Yen from appreciating. This makes their exports more attractive to U.S. consumers, and it makes U.S. exports less attractive to their (Japanese) consumers. We end up with a current account deficit but a surplus capital account surplus, and a surplus in the official reserve transactions.

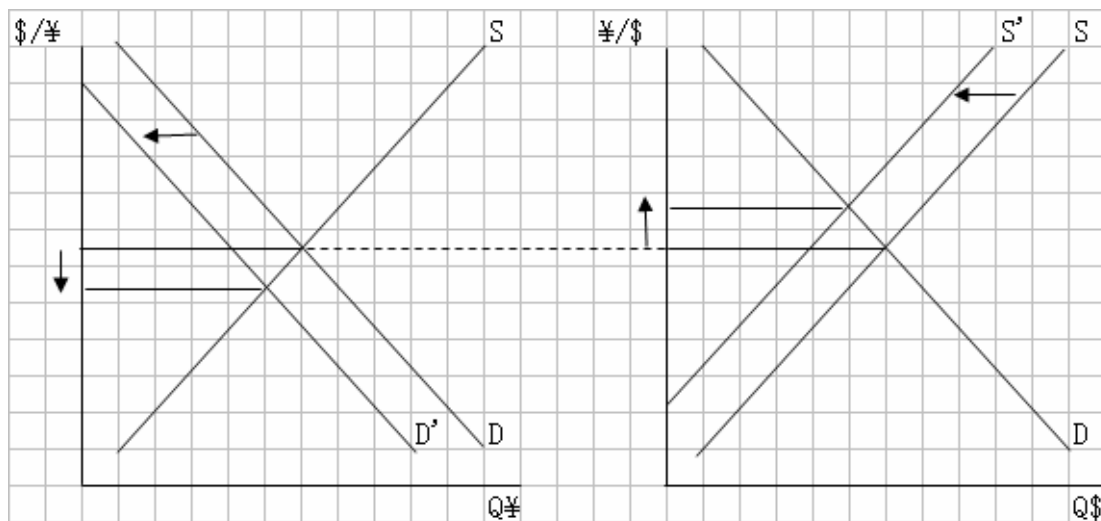
Now say there is a recession in the U.S. Starting from the same place as before (Figure 15, reproduced below)

Figure 15



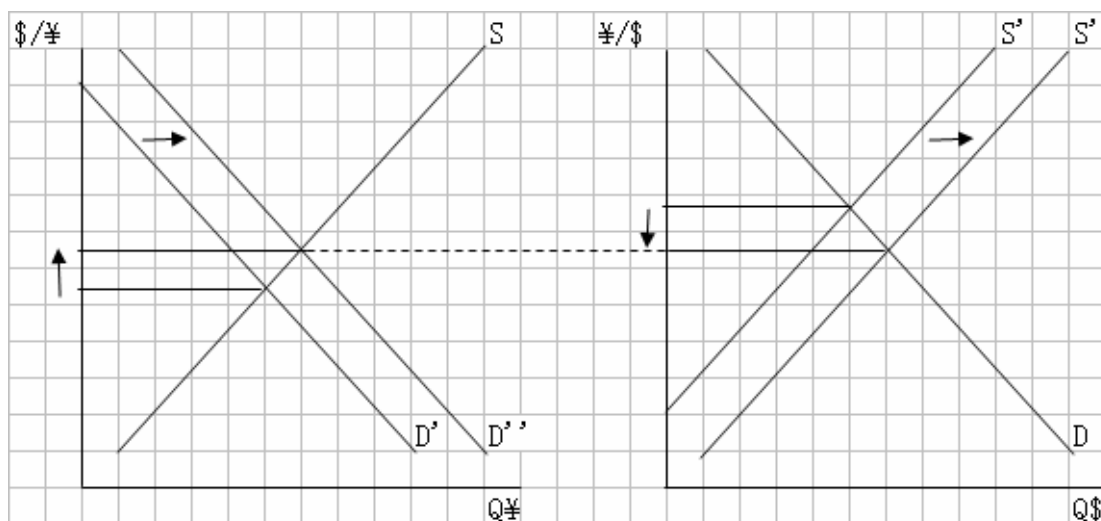
The recession in the U.S. causes U.S. demand for Japanese goods to fall as indicated in figure 18.

Figure 18



To keep the exchange rate fixed, the Bank of Japan now has to sell dollars and buy yen. This is reflected in an increased demand for yen, and a corresponding increase in the supply of dollars. This action keeps the yen from depreciating. Figure 19 below depicts this.

Figure 19



While we've said that these Asian governments (China, S. Korea, Japan) often don't want to let their currency appreciate because they want to keep the demand for their exports high, but sometimes they don't want to let it depreciate either. This could be due to the fact that businesses in their countries sometimes have loans denominated in foreign currency, i.e. dollars. This is especially true in China and other less-developed countries. If their currency (the yen) depreciates, that means it costs more yen to buy a dollar, and these businesses would have a harder time paying back the foreign-currency denominated loans. However, as the banking authorities sell dollars to buy yen, they face the following problem: they might run out of dollars! Thus maintaining a fixed-exchange rate can sometimes be impossible, and is made more difficult by the fact that fixed-exchange rate regimes open the door to speculative attacks.

Political Economy

National Welfare Arguments *for* Free Trade:

1. The conventionally measured costs of trade restrictions (tariffs, etc.) are large. In our welfare analysis of tariffs we saw that they lead to deadweight losses. Quotas and other trade restrictions also lead to deadweight loss in the conventional cost/benefit analysis.
2. Other benefits from free trade are not included in the traditional cost/benefit analysis. These include the ability to take advantage of scale economies and the high-powered incentive for firms to innovate.
3. Political failure. The political process does not operate efficiently; even if tariffs or other instruments of trade policy could be beneficial in theory, in practice trade policies are dominated by special-interest politics rather than national welfare considerations. The devices that in a perfect world would lead to increases in national welfare will in fact be captured by special interests, because politicians are as selfish of actors as anyone else in the economy.

The following three arguments are contained in the following quote (IETP, p 238)

“For a small country like the Philippines, a move to free trade would have huge advantages. It would let consumers and producers make their choices based on the real costs of goods, not artificial prices determined by government policy; it would allow escape from the confines of a narrow domestic market; it would open new horizons for entrepreneurship; and, most important, it would help to clean up domestic politics.”

National Welfare Arguments *against* Free Trade:

1. Terms of trade benefit. We saw in the large country case that the exporting country lowered its price in response to the imposition of a tariff by the importing country, (a large country). This is the terms of trade benefit.
2. Market failure. Many economists believe that the concepts of producer, consumer and total surplus do not properly measure costs and benefits. This is because perhaps some market in the domestic economy is not allocating resources efficiently.

Three additional arguments against free trade are:

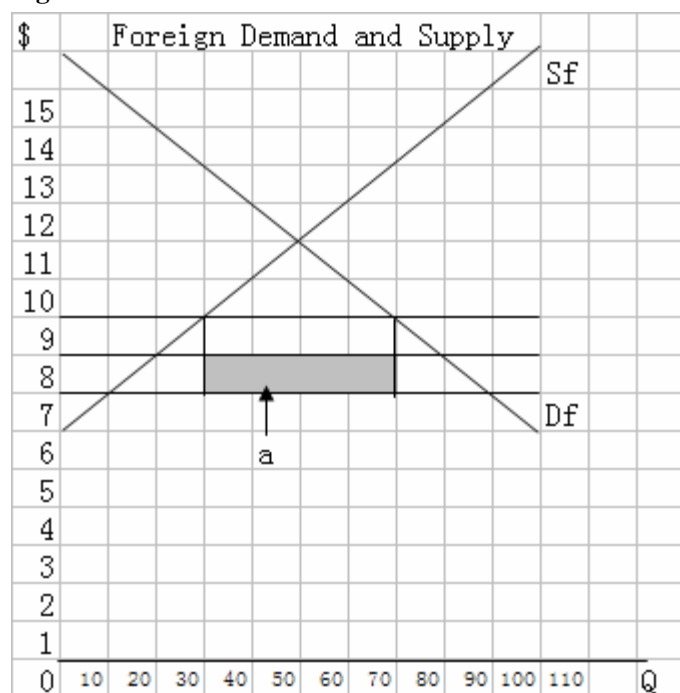
3. National Security arguments. Certain industries (e.g. aircraft, weapons) are vital for a nation's security and so should be produced by domestic producers, with inputs also coming from domestic suppliers.
4. Infant Industry argument. Some industries need to be protected until they have developed enough to meet international competition. Certain market failures are also present.

- Anti-dumping argument. Some foreign firms charge prices below their cost in order to force domestic firms out of business. After these foreign firms are successful, they will then charge the monopoly price.

Illustrating the terms of trade benefit

Figure 20 below is basically figure 13, but illustrates the case where Foreign is a large country; that is, Home lowers its price in response to Foreign imposing a tariff. The intuition for why Home exporters lower their price is as follows: after Foreign imposes a tariff, they will import less. Home sellers are not happy about this, so they lower their price to minimize the reduction of their sales. If they had other places to sell their goods to, perhaps they would not lower their price, but because Foreign represents a large market, they have fewer alternative customers.

Figure 20



The price before the tariff was \$8. With a \$2 tariff, Home lowers its price to \$7; thus the price in Foreign rises to \$9. The price only rose by \$1 in Foreign, even though the tariff was \$2, because of the lower price charged by Home. The area a in figure 20 above illustrates the terms of trade benefit: consumers receive a price that is lower by \$1 and they import $70-30=40$ units.

Market failure may result from an externality

Externality when the action of one person affects the well being of others.

examples: sound from a loud stereo, lights from Christmas decorations (these can be both positive and negative externalities)

Public Good A good that has the characteristic that one person's use does not diminish another's and people cannot be prevented from consuming it.

examples: national defense, knowledge, and radio waves

In the case of a public good, there may be under provision without government due to *free riding*.

Common Pool Good Like public goods people cannot be prevented from consuming it. However, one person's use *does* diminish another's; one person's use of this good results in another externality, as other people are left with less of the good. examples: common grazing land in medieval towns.

In the case of a common pool resource, there may be excessive consumption (the *tragedy of the commons*) without government action or assignment of property rights.

There are many types of market failures that have been identified in the literature. The discussion in IETP deals with problems associated with *appropriability*. When a domestic firm starts production of a good previously only imported, it generates know-how and skills in workers that can be transferred to other domestic firms. This is an externality. The original firm cannot prevent this transfer nor can it appropriate any of the value it generates for other domestic firms. Because the firm cannot capture the returns from generating these benefits, it will not generate enough of them, thus the need for protectionist policies.

Two other market failures mentioned in IETP are defects in the capital or labor markets that prevent resources from being allocated rapidly to high-return sectors.

Political Failure --

Even if market failures may warrant protectionist policies in theory, society may not want to implement them in practice because the political process has its own inefficiencies. Politicians are not benevolent social planners; they are susceptible to the same types of selfish behavior as private citizens.

National welfare arguments, while often put forward in support or opposition to trade policies, are often not helpful in understanding why policies are actually put forth and enacted. We must look to interest group politics for more insight.

Collective Action Problem

“It does not follow, because all of the individuals in a group would gain if they achieved their group objective, that they would act to achieve that objective, even if they were all rational and self-interested.” M. Olson (1965) p.2

“Whenever economic policy benefits narrowly defined special interest, the political incentives to influence the design of such policies are much stronger for the beneficiaries than for the majority bearing the cost. A classical example of this systematic bias is agricultural policy. Virtually all democracies provide generous support for their farmers through trade policies, direct subsidies, and various other programs. Several explanations have been suggested for this phenomenon. Many of these stress that farmers have more homogenous economic interests than other groups and therefore find it easier to get organized. Others emphasize that farmers are less ideologically biased than other groups and therefore become a natural target for politicians who vie for electoral support. Some also point out that farmers are concentrated in rural electoral districts, which are often over represented in legislatures, or that legislatures representing rural interests often hold important positions as ministers or chairmen of congressional committees.” (Persson and Tabellini, 2000, p. 159)

The problem of collective action explains deviations from the median voter theorem. The basic proposition is targeted benefits and dispersed costs:

- Lobbying is easier for the beneficiaries because they stand to gain a lot, and there are fewer costs of organizing other people in similar positions.
- Lobbying is more difficult for groups with dispersed costs because they don't stand to lose that much from the policy (or gain that much from organizing against the policy) and there are more costs to organizing.

Costs of organizing groups:

- Obvious logistical costs (printing up advertisements for group meetings, postage, etc.)
- “Free-rider problem”

Lobbying is a public good. Why? Consider our definition of a public good -- A good that has the characteristic that one person's use does not diminish another's and people cannot be prevented from consuming it. Lobbying fits this definition because if I lobby for lower tuition, all students benefit in the sense that there is a chance tuition will be lower for all. Also, I can't prevent you from receiving the benefit of lower tuition, say, because there is one tuition price for everyone.

Collective action problems are very important in interest group politics, because some groups are better organized than others, and this is one of the points mentioned in the above quote. Because lobbying for a policy that helps you will also help others in your group, lobbying is a public good, and one of the problems with public goods is under provision due to free riding.

International Negotiations and Trade Policy

International political situations are good places to look for examples of cooperation and conflict.

Both countries are better off when each has a free trade policy, compared to when each has a protectionist policy. But, when each has a free trade policy, either can gain by deviating to a protectionist policy.

For notes on how to interpret the matrix below, see my Principles of Microeconomics lecture notes, pages 88-92.

		Japan	
		Free Trade	Protection
U.S.	Free Trade	10, 10	-10, 20
	Protection	20, -10	-5, -5

Questions for review:

1. Globalization in Historical Perspective

Globalization is defined as the gradual reduction in the costs of trade. What are the costs of trade? Discuss a historical example of when each of these costs fell. Have these costs been falling faster or slower in recent years compared with previous times? Has the reduction in trade costs been a consistent rate of decline?

2. Comparative versus Competitive Advantage

Ben and Petra can both cook and wash dishes. Each has 24 hours available to work, that is $L^B = 24$, $L^P = 24$. It takes Ben three hours to cook a meal and four hours to wash dishes, and it takes Petra one hour to cook and two hours to wash dishes; that is, $a_{c}^B = 3$, $a_{w}^B = 4$, $a_{c}^P = 1$, $a_{w}^P = 2$.

- Explain who has a competitive advantage in both cooking and washing dishes.
- Explain who has a comparative advantage in both cooking and washing dishes.
- Show that if each person specializes in the activity in which they have a comparative advantage, they can gain from trade. Also, determine the range of prices at which both parties will agree to trade. Explain why this is so; that is, why are do these prices represent the range at which both exporters and importers will agree to trade?

Answer:

- Petra has a competitive advantage in both cooking and washing dishes because she can do either in less time than can Ben.
- O.C. for Petra to wash dishes is 2 meals cooked
O.C. for Petra to cook is 1/2 dishes washed
O.C. for Ben to wash dishes is 4/3 meals cooked
O.C. for Ben to cook is 3/4 dishes washed

OC

	Cook	Wash
B	3/4 wash	4/3 cook
P	1/2 wash	2 cook

Petra has a comparative advantage in cooking because her O.C. of cooking is lower ($1/2 < 3/4$). Ben has a comparative advantage is washing dishes because his O.C. of washing is lower ($4/3 < 2$)

- Petra will specialize whenever she gets at least 1/2 dishes washed for each meal she cooks. Ben will specialize whenever he has to wash less than 3/4 dishes for every meal he get cooked. Therefore, if the price of a meal cooked (in terms of dishes washed) is between 1/2 and 3/4, each will specialize.

(Alternatively, although describing only one perspective is sufficient, one could tell the story starting with Ben's point of view: Ben will specialize whenever he gets at least $4/3$ meals cooked for each one set of dishes he washes. Petra will specialize whenever she has to cook less than 2 meals for every set of dishes she has washed. Therefore, if the price of a set of dishes washed (in terms of meals cooked) is between $4/3$ and 2, each will specialize.)

Say the price of a meal cooked in terms of dishes washed is $5/8$. (This means the price of dishes washed in terms of meals cooked is $8/5$)

Then Petra and Ben can trade 8 meals for 5 dishes washed. Need to show this graphically.

3. Arbitrage and Transportation Costs

Home's demand curve for whey is $Q_d = 100 - 20P$.

Its supply curve is $Q_s = 20 + 20P$.

- a.) What would the price of whey be without trade?
- b.) Calculate and graph Home's import demand schedule.

Now add Foreign, which has a demand curve $Q_d^* = 80 - 20P$,

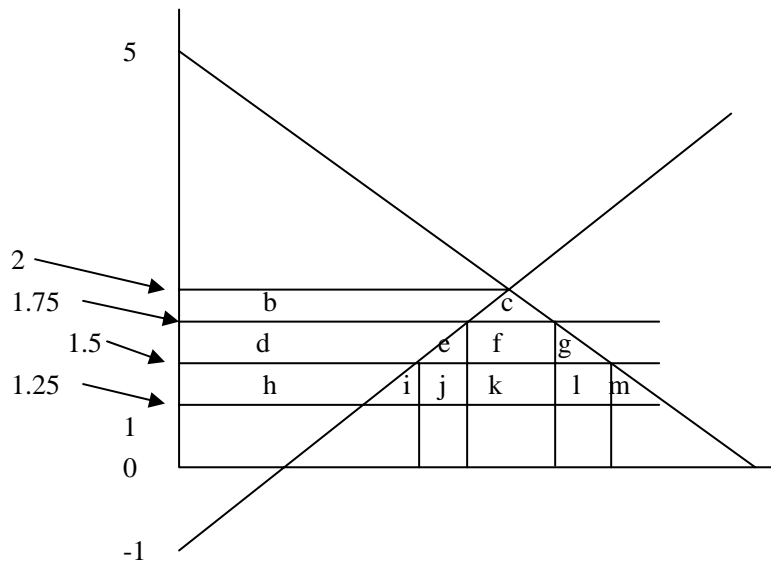
and a supply curve $Q_s^* = 40 + 20P$.

- c.) Find the price of whey that would prevail in Foreign without trade.
- d.) Calculate and graph Foreign's export supply curve
- e.) Now allow Home and Foreign to trade with each other, at zero transportation cost. Find and graph the equilibrium under free trade. What is the world price? What is the volume of trade?
- f.) Determine the effect of allowing trade on the welfare of the following groups: (1) home import competing producers (2) home consumers
- g.) How does your answer to 3f change when transportation costs are \$0.50?

Answer:

- a.) $P = 2$
- b.) $Q_m = 80 - 40P$
- c.) $P = 1$
- d.) $Q_x = 40P - 40$
- e.) $3/2$
- f.) (see graph below) Producers lost area b+d, consumers gained areas b+c+d+e+f+g, total surplus rose by c+e+f+g
- g.) Now $P_f = 1.25$, $P_h = 1.75$, so for Home, we see that producers gain area d, and areas e+f+g are the deadweight loss.

Graph of Supply (20+20P) and Demand (100-20P) in Home



4. Tariffs

Assume Home and Foreign's demand and supply curves continue to be $Q_d=100-20P$, $Q_s=20+20P$, $Q^*_d=80-20P$ and $Q^*_s=40+20P$, respectively.

- Suppose Home imposes a specific tariff of .5 on wheat imports. Determine and graph the effects of the tariff on the following: (1) the price of wheat in each country; (2) the quantity of wheat supplied and demanded in each country; (3) the volume of trade.
- Determine the effect of the tariff on the welfare of each of the following groups: (1) Home import-competing producers; (2) Home consumers; (3) the Home government
- Show graphically and calculate the terms of trade gain, the efficiency loss, and the total effect on welfare of the tariff.

Answers:

a.) $Q_s=20+20(1.75)=55$, $Q_d=100-20(1.75)=65$
 $Q^*_s=40+20(1.25)=65$, $Q^*_d=80-20(1.25)=55$

So we see the quantity traded is 10

- Home producers gain the area d, and consumers lose the area e+f+g. The government gains the area f+k.
- The terms of trade gain is area k, the efficiency loss is areas e+g. Total welfare rises if $k > e+g$, and total welfare falls is $k < e+g$.

5. Exchange Rates

The following is a quote from the 1998 book *Globaphobia: Confronting Fears about Open Trade*

“...erecting new barriers to imports also has an unseen boomerang effect in depressing exports. This is one of the most important, but least understood, propositions that we discuss in this book. While higher barriers to imports can temporarily improve the trade balance, this improvement would cause the value of the dollar on world exchange markets to rise, undercutting the competitive position of U.S. exports and curtailing job opportunities for Americans in export industries.”

Use the two-country (U.S., Japan), two-currency (dollar, yen) model from lecture to show the effect of a new U.S. barrier to Japanese imports (for example, heightened publicity of sub-standard food safety). Be sure to use graphs and written explanation to show that you understand the underlying forces at play in the argument mentioned above.

6. The International Monetary System 1870-1973

Economists have long debated whether the growth of dollar reserve holdings in the Bretton Woods years was “demand-determined” (that is, determined by central banks’ desire to add to their international reserves) or “supply determined” (that is, determined by the speed of U.S. monetary growth). What would your answer be? What are the consequences for analyzing the relationship between growth in the world stock of international reserves and worldwide inflation? (IETP, 514)

7. Political Economy

1. Discuss the difference between the free-rider problem and the tragedy of the commons. You may use examples discussed in class, or rely on definitions you may remember.
2. We discussed Nash equilibrium in two models. Reproduce both below and describe the Nash equilibrium, and also discuss in detail why what you propose is in fact a Nash equilibrium.
3. Make a market-failure argument against complete free trade. Use a graph to aid your argument.

Transaction Costs and the Theory of the Firm: FDI, Outsourcing and Transaction Costs

Technical Definitions

“In U.S. statistics, a U.S. company is considered foreign-controlled, and therefore a subsidiary of a foreign-based multinational, if 10 percent or more of the stock is held by a foreign company; the idea is that 10 percent is enough to convey effective control. A U.S.-based company is considered multinational if it has a controlling share of companies abroad....Alert readers will notice that these definitions make it possible for a company to be considered both a U.S. subsidiary of a foreign company and a U.S. multinational. And this sometimes happens: From 1981 until 1995 the chemical company DuPont was officially foreign-controlled (because the Canadian company Seagram owned a large block of its stock) but was also considered an American multinational. In practice, such strange cases are rare: Usually multinational companies have a clear national home base.” (Krugman and Obstfeld, pp 158-159)

Conceptual Definitions (taken from *Management*, Seventh Edition, by Ricky W. Griffin)

international business A business that is primarily based in a single country but acquires some meaningful share of its resources or revenues (or both) from other countries

multinational business One that has a worldwide marketplace from which it buys raw materials, borrows money, and manufactures its products and to which it subsequently sells its products

global business A business that transcends national boundaries and is not committed to a single home country

In my view, Griffin’s definition of international business is a good one, but the only thing that is required for it to be a multinational business is that it engages in production in two or more countries. Although strictly speaking all firms have a home country, it is true that the line sometimes becomes fuzzy (e.g. Tyco has its headquarters Princeton, NJ in while it is registered as a Bermuda corporation), but it is not essential to focus on these distinctions to understand the main conceptual difference I want to stress.

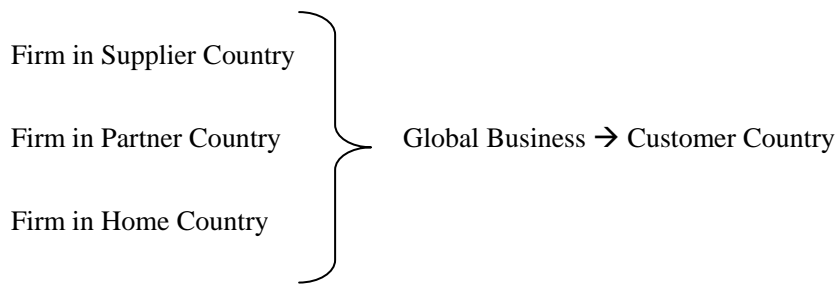
Some Facts:

For the U.S. about 1/3 of exports and over 40% of imports consist of intra firm trade between a U.S. or foreign firm and their affiliates. (Feenstra, 2004, citing 1992 data)

“...about half of U.S. imports are transactions between “related parties.” By this we mean that the buyer and the seller are to a significant extent owned and presumably controlled by the same firm.” (Krugman and Obstfeld, p. 161)

U.S. Employment by Foreign-Owned Firms . In 1997, 3.8% of manufacturing employment, whereas in 2002 14.6%. (Krugman and Obstfeld, p.161; source U.S. Commerce Department)

The Global Business (Spulber 2007, p.70)



A global business engages in cross border business transactions or operations.

If these operations include production in more than one country, the international business is a multinational corporation. If it “only” engages in transactions (outsources) in other countries, it is still an international business, but is not a multinational corporation.

	Outsource	In-house
Offshore	contracts abroad	vertical FDI
Home Country	contracts at home	Vertical integration w/o FDI

	Outsource	In-house
Offshore	Int'l Trade across firms (market transactions)	Int'l Trade within firms
Home Country	Domestic Trade across firms (market transactions)	Domestic Trade within firms

Reasons for offshore over home

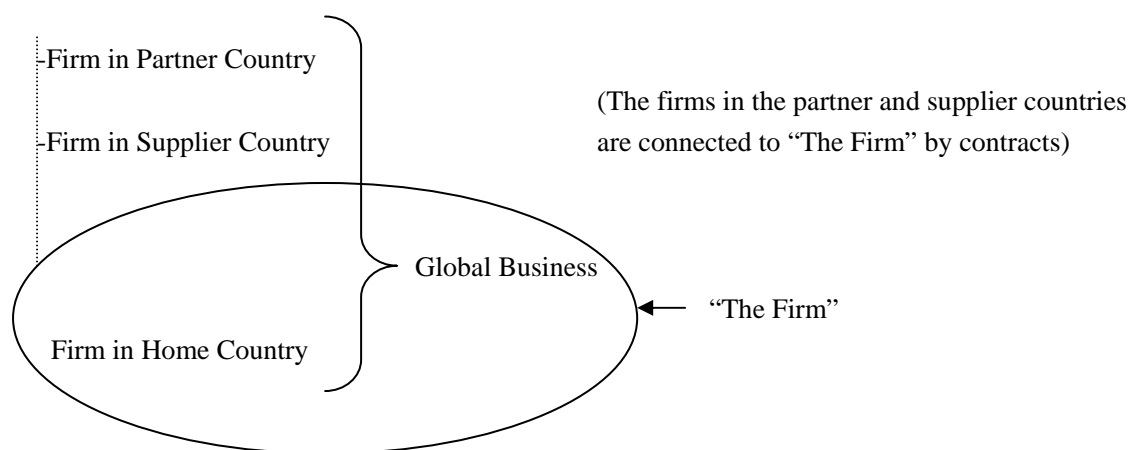
- “tariff jumping”
- inexpensive labor
- Other locational advantages include saving on transportation, time and transaction costs. (Horizontal FDI, but again mostly to do with the offshoring decision)

Reasons for “make” over “buy”

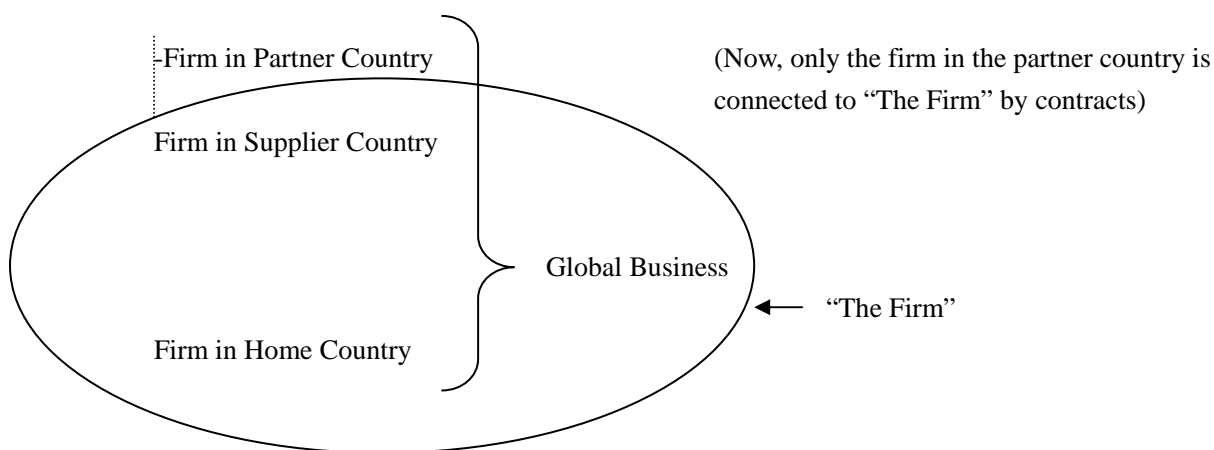
- Acquisition FDI (not establishment FDI) brings in knowledge and technology...also may want to prevent its technology from getting into wrong hands (better control)
- Transaction costs

What is a firm? (What is the boundary of the firm?)

If the global business owns facilities in the home country (say its headquarters) only, and contracts with firms in the supplier country and partner country, then the actual firm is defined by its headquarters in the home country.



However if it owns facilities in the home country (headquarters) and also a plant in the supplier country, then the firm also includes the facilities in the supplier country.



Thus the boundary of the firm is bigger in the second case. The global business *owns* both the firm in the home country (say headquarters) and the plant in the supplier country.

What determines the boundary of the firm? This is equivalent in our context to asking what determines whether firms use FDI or outsource, which we began to discuss already above. But there is more to the story.

We will begin this part of the discussion with a purely domestic example. This example illustrates how contracting costs determine the boundary of the firm.

The Story of Fisher Body and GM (taken from Klein, Crawford and Alchian, 1978, p 308-310)

The original production of automobiles was wooden. By 1919 the production process began to shift towards metal bodies. So, in that year, General Motors entered into a ten-year contract with Fisher Body for the supply of metal bodies. There was an exclusive dealing clause in this contract which required GM to only buy bodies from Fisher Body. The point was to free FB from worrying that, after it made the stamping machines necessary to produce the body, GM would “hold up” FB by offering a lower price. Even if the contract specified the price, GM could threaten to buy bodies elsewhere if FB didn’t agree to rewrite the contract. Thus the exclusive dealing component of the contract.

This exclusive dealing contracting does create opportunities for Fisher to take advantage of GM, as GM must buy bodies from them. “The price was set on a cost plus 17.6 per cent basis.” (p 309) Other aspects of price were also included but are not as important for our purposes.

Over the next few years there was a huge increase in demand for metal bodies. This increase in production at FB lead to cost reductions (economies of scale) Also, FB refused to move its plant near GM. Before the contract ran out, GM purchased the remaining stock in FB. That is, they vertically integrated.

The two main things here are asset specificity and hold-up problem, two terms introduced by Williamson (1975, 1985). Asset specificity refers to having an input that may or may not be useful to other buyers (other than the contracting party). Here, the body Fisher makes for GM are of little value to other car companies that don’t want to produce a car that looks just like a GM. Then, GM will have a lot of bargaining power, and can “hold up” FB. Anticipating this, FB may make the body less suited for GM, unless a favorable contract can be reached.

Thus the difficulty in contracting induced GM to purchase Fisher Body.

Contracting costs are one of the most important *transaction costs*

Thus, in this telling of the story, if

Price + Transaction Costs < Production Costs

GM buys bodies from Fisher Body

But if

Price + Transaction Costs > Production Costs

GM buys Fisher Body.

Transaction costs arise here in the form of contracting difficulty due to asset specific investments and the hold up problem, which is possible because of incomplete contracts.

Of course there are other costs to consider. In the case of Fisher Body, it was located (in Ohio) a great distance from GM (in Detroit) so we should also include transportation costs. But here we just assume they are zero, if a domestic relationship. This assumption, as this example illustrates, is not always appropriate.

Two international businesses

BP (International Oil Company)

Establishes a system of facilities in exploration, crude oil transportation, refining, wholesale and retail distribution. Bricks-and-mortar manufacturing and distribution.

Li & Fung

Managed a supply chain in clothing. They did not own manufacturing plants. Rather, they maintained long term relationships with suppliers, outsourcing the production to firms in a variety of other countries, including countries throughout Asia, and expanded to the Mediterranean, Eastern Europe and Central and South America. (Spulber, 2007, p69)

The boundaries of the firm are bigger with BP

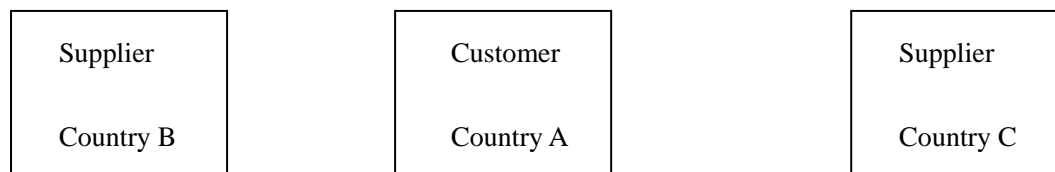
Net Gains from Trade = Gains from Trade - Costs of Trade

Gains from Trade

- 1) Comparative Advantage
- 2) Increasing Returns
- 3) Technology Transfer
- 4) Difference in Endowment of Final Goods
- 5) Difference in Factors of Production (H.O. model)

Global Value Connection

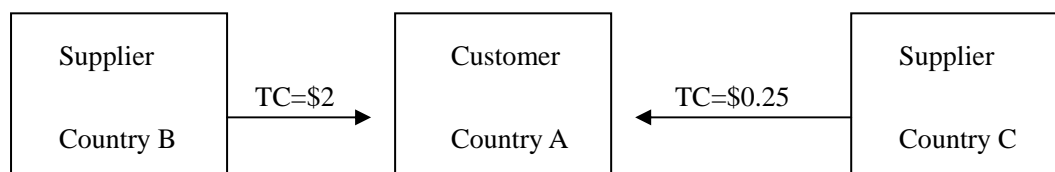
Say the global business wants to sell to a customer in country A. Assume the global business will use outsourcing.



Say the price of the good is \$0.50 in country B and \$0.75 in country C. Does this mean the global business should choose the supplier in country B? Maybe, but need more information.

Say the customer is willing to pay \$3 for the good if it comes from the supplier in country B but \$2 if it comes from the supplier in country C. Then, the consumer gets a surplus of \$2.50 if it consumes the good from the Country B supplier and \$1.25 if it consumes the good from country C supplier. So, the global business chooses to buy the good from Country B supplier, because it creates more surplus, or *value*.

But, we have left out another important component of the decision. Trade costs.



Now what is the value created? \$0.50 if choose Country B supplier, and \$1.00 if choose Country C supplier. So after considering trade costs, the global business buys the good from the supplier in country C.

How much of the surplus (value) the global business creates for the customer can capture in profits? It depends on the level of competition in the home country. If there are no other firms supplying the good, then it can capture all of it.

But if there are many firms in the market who already provide the consumer with \$0.75 in surplus, then it has to offer the consumer at least that much in order to convince her to buy it. Thus it can give it \$0.76 in surplus, and keep the \$0.24 additional value created as profit.

If there is one monopolist in the market offering the consumer \$0.75 in surplus, the entry of the global business will cause the monopolist to lower its price, creating more surplus for the consumer, and less profit for the global business (as well as incumbent monopolist.)

Criticisms of multinational corporations in developing countries (Balaam and Veseth, Chapter 16)

- Dependency school argument
- If MNCs borrow money in the host country, they may squeeze out local firms.
- MNCs repatriate part of the profits
- There is not that much transfer of technology in some cases.
- Should MNCs sell products with poor nutritional value (e.g. Coke, Marlboro) or worse (Infant formula from Nestle)?
- Sometimes countries, in an effort to attract MNCs, relax environmental and labor restrictions (or enforcement).
- Cause political tension in developing countries

“Perhaps the most flagrant example of economic interests overriding political differences was the case of the Gulf Oil Company in the socialist African country of Angola. Here was a case of Communist Cuban troops protection the oil refineries of a U.S. MNC, Gulf Oil Company, from guerrilla fighters supported by the United States and South African governments.” (Grunberg, p 358, in Balaam and Veseth, 2001)

Another example

“Sometimes, when their interests were threatened, some MNCs have pressed their home governments to intervene in the internal political affairs of other nations. Most blatant was United Fruit’s successful campaign to undermine the elected government of Guatemala in the 1950s. Angered by the expropriation of idle land it owned and what it considered inadequate compensation....the company lobbied the Eisenhower administration to orchestrate a military coup.” (ibid, p. 358)

Tax Issues

Transfer prices – MNCs set these prices to charge for products and services charged by one branch of the company to another branch. To prevent the companies from setting each price at \$.01, there are accounting laws that the companies must comply with when setting these prices; the general thrust is that they should be similar to those determined by the market.

Tax Havens – countries with very low taxes, e.g. Cayman Islands and Bermuda.

Invoices only (not goods or services) are routed through offices in tax havens and profits are “earned” there in order to avoid taxes in both the host and home country.

Responses -- The MNCs are often better for developing countries than local companies, in terms of labor standards, pollution, etc.

Gains from Trade

1. Preference for variety and economies of scale
2. Comparative advantage
3. Comparative availability of factors of production
4. Differences in preferences and endowments
5. Innovation and technology transfer

Two of these are important building blocks of *classical trade theory*

- Comparative advantage (The Ricardian Model)
- Comparative availability of factors of production (The H-O Model)

One of these is pre-classical in the sense that it is super obvious

- Differences in preferences and endowments

One of these started to become important in the 1980s

- Preference for variety and economies of scale

And one of these is starting to gain more and more attention

- Innovation and technology transfer

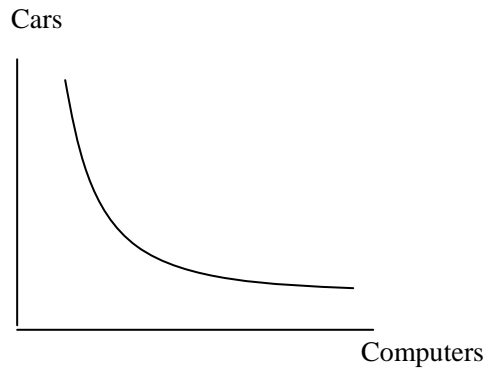
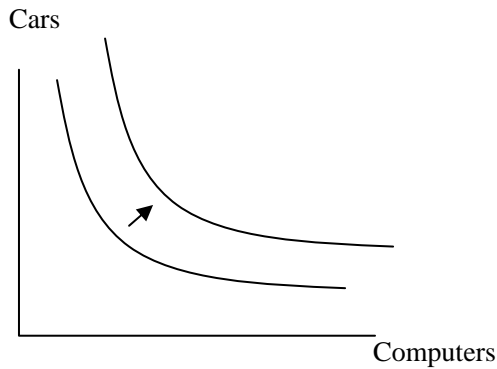
So the list can be rewritten to reflect intellectual history of international economics as:

1. Differences in preferences and endowments (Differences in endowments of final goods)
2. Comparative advantage
3. Comparative availability of factors of production
4. Preference for variety and economies of scale
5. Innovation and technology transfer

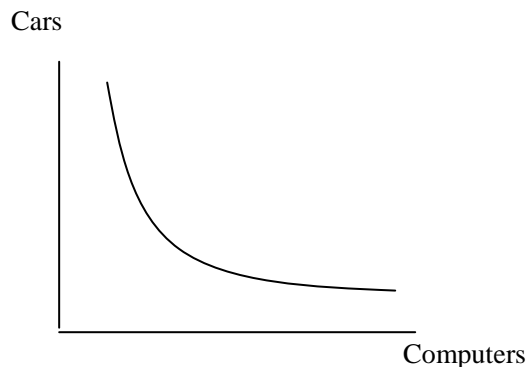
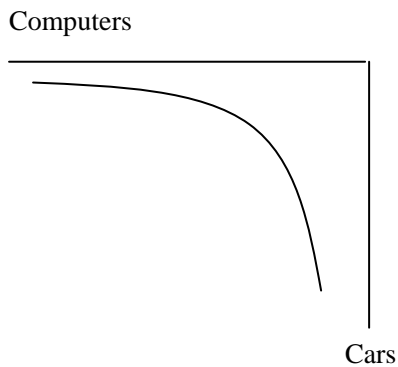
Let's explore *Different Endowments of Final Goods* Consider two countries:

Country A

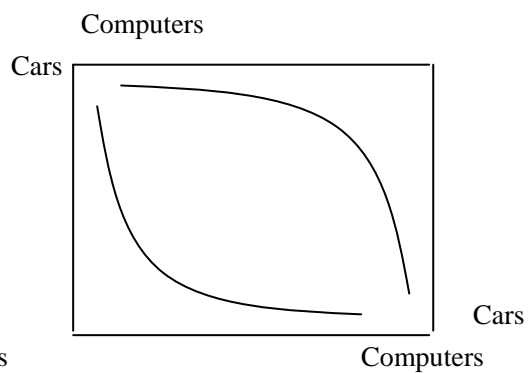
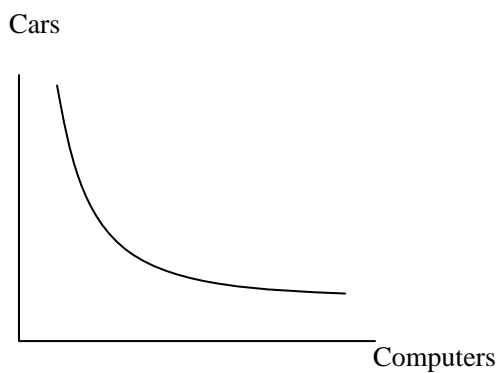
Country B



These are indifference curves. Consumers receive higher utility for being on a higher indifference curve. Now rotate the graph of Country B counter clockwise by 180 degrees.



...and put the rotated country B graph on top of the original country A graph to get Countries A and B



This graph is known as an Edgeworth Box

Outsourcing: A Force in Society

Much of what follows is taken from “Offshoring: The Next Industrial Revolution?” by Alan S. Blinder, *Foreign Affairs*, 2004

Three Industrial Revolutions

The First Industrial Revolution (1776-1850-ish)

Largely characterized by replacement of human or animal power by machine

“It has been estimated that in 1810, 84 percent of the U.S. work force was engaged in agriculture, compared to a paltry 3 percent in manufacturing...Today, agriculture’s share is under 2 percent.”

Not due to trade, but to technology.

Labor conflicts during the first Industrial Revolution

Luddite

From Wikipedia, the free encyclopedia

The **Luddites** were a social movement of English textile artisans in the early nineteenth century who protested — often by destroying textile machines — against the changes produced by the Industrial Revolution, which they felt threatened their livelihood.

This English historical movement has to be seen in its context of the harsh economic climate due to the Napoleonic Wars; but since then, the term Luddite has been used to describe anyone opposed to technological progress and technological change. For the modern movement of opposition to technology, see neo-luddism.

The **Luddite movement**, which began in 1811, was named after a mythical leader, Ned Ludd. For a short time the movement was so strong that it clashed in battles with the British Army. Measures taken by the government included a mass trial at York in 1813 that resulted in many death penalties and transportations (removal to a penal colony).

Their principal objection was to the introduction of new wide-framed looms that could be operated by cheap, relatively unskilled labour, resulting in the loss of jobs for many textile workers.

The Second Industrial Revolution (around 1950-present)

Characterized by the rise of the service economy

Four important facts characterize the rise of the service economy. First, the growing nominal share of the service sector is driven by increases in both the price and quantity of services relative to commodities. Second, this rising share is a recent phenomenon, starting only around 1950. Third, this increase in the share of services is entirely explained by the growth of skill-intensive services, and is contemporaneous with an increasing relative quantity of skilled labor and a rising skill premium. The fourth relevant fact, which we establish, is that many of the declining individual services have actually transitioned from being market-purchased to home-produced, through household purchases of specialized intermediate inputs or durables into home production. Examples of this product cycle include: laundry; dairy, ice and other refrigeration services; street cars and buses; taxis; and motion pictures.¹

(Buera and Kaboski, 2006)

Jobs again shifted, this time away from manufacturing and toward services. "...in reality, new service-sector jobs have been created far more rapidly than old manufacturing jobs have disappeared. In 1960, about 35 percent of nonagricultural workers in the United States produced goods and 65 percent produced services. By 2004, only about one-sixth of the United States' nonagricultural jobs were in goods-producing industries, while five-sixths produced services." (Blinder, 2006)

Three main forces drive the change

- Rising productivity in the manufacturing sector
- Rising incomes have caused consumers to substitute services for goods
- Trade (importing) manufactured goods

The Third Industrial Revolution (present-)

The information age

"We are now in the early stages of a third Industrial Revolution – the information age. The cheap and easy flow of information around the globe has vastly expanded the scope of tradable services, and there is much more to come...just like the previous two, the third Industrial Revolution will require vast and unsettling adjustments in the way Americans and residents of other developed countries work, live, and educate their children." (Blinder, 2006)

New technology meant more goods (i.e. even those that can't be put into a box) are tradable than were before.

"...just as with the first two industrial revolutions, massive offshoring will not lead to massive unemployment." (Blinder, 2006)

What types of goods are at risk of being offshored?

Personal services versus impersonal services

Thus, the distinction between highly skilled unskilled may be less important than in the second industrial revolution.

“The U.S. work force of the future will likely have more divorce lawyers and fewer attorneys who write routine contracts, more internists and fewer radiologists, more salespeople and fewer typists.” (Blinder, 2006; see also OECD report, p. 123)

“Contrary to what many have come to believe in recent years, people skills may become more valuable than computer skills.” (ibid)

Role for creativity?

“Thomas Freidman has rightly emphasized that it is necessary to steer youth away from tasks that are routine or prone to routinization into work that requires real imagination.” (ibid)

Are the following jobs personal or impersonal?

Personal

Impersonal

Child care, nursing, psychotherapy, lobbying, waiter, police, radiologist, accountant, reservation clerks, maid,

Why are the following likely or unlikely to be outsourced?

government employees

What is to be done about this?

Changes to educational systems

- More education probably helps make it easier for people to transition
- More education in personal services
- Need to think more about this problem; more education won't solve everything

Role for adjustment assistance?

- Unemployment insurance
- Job retraining
- Health insurance,

- Pensions
- Public assistance

U.S. has too little in Blinder's opinion, E.U. may have too much (or perhaps too inefficient)

Also, in his opinion, offshoring will not cause massive unemployment, but rather will cause a massive transition.

Review of OECD report *Offshoring and Employment: Trends and Impacts*, 2007

See pages:

27-29, 69

59

71-73

89

117

196

Outsourcing Model

$$W^B < W^M$$

Why?

High-powered incentives versus low-powered incentives

Performance contracts lead to high powered incentives and employment contracts lead to low-powered incentives

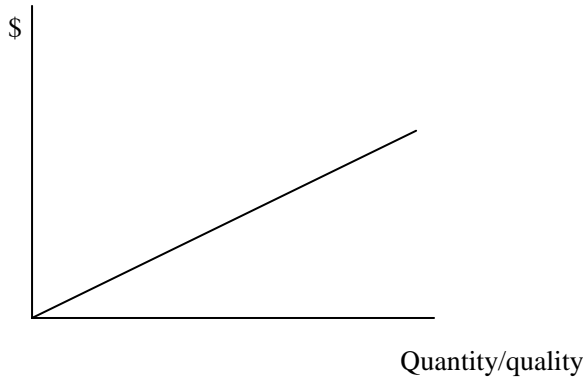
Why might a performance contract be bad?

- Pandering to the performance measures
- Measurement costs

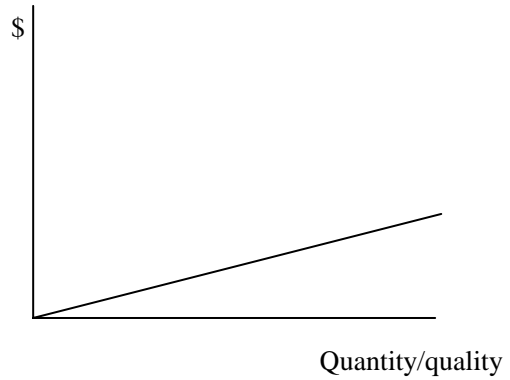
Assume we can take care of the pandering problem...then this issue becomes measurement costs.

Measurement costs are a type of transaction cost.

Wage costs under make



Wage costs under buy

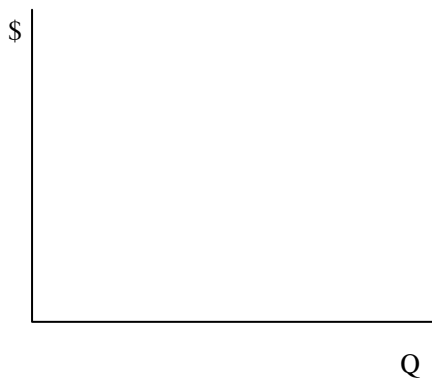


Does this imply we should always buy?

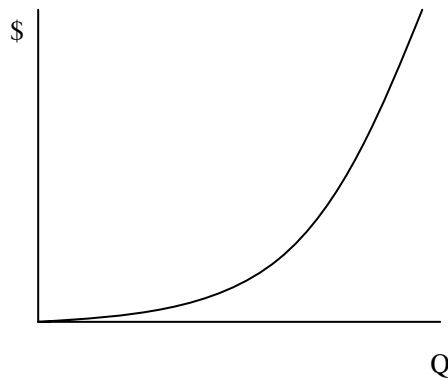
The importance of monitoring costs

(in general, there are transaction costs whenever we buy something. These include monitoring costs, as well as haggling, contracting, enforcement costs, and others.)

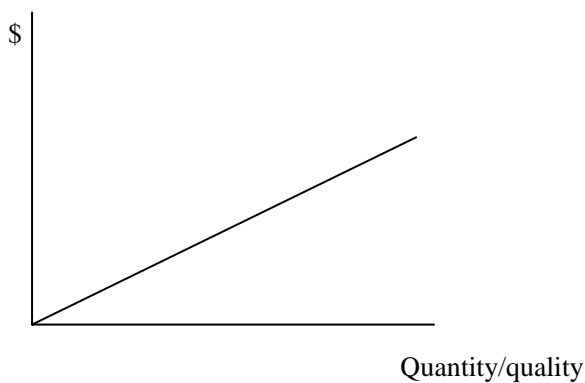
Transaction costs under make



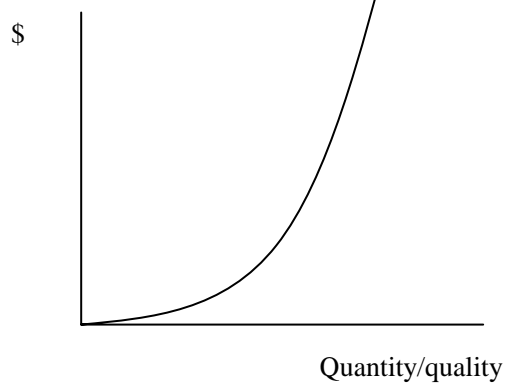
Transaction Costs under buy



Total Costs under Make

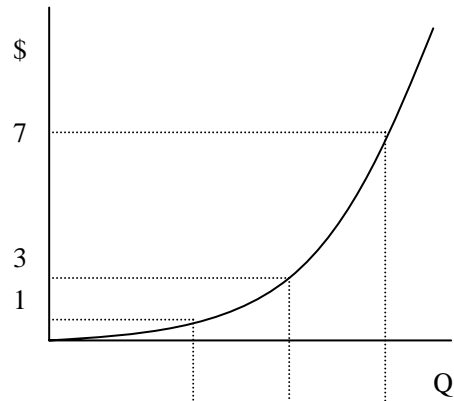


Total Costs under buy

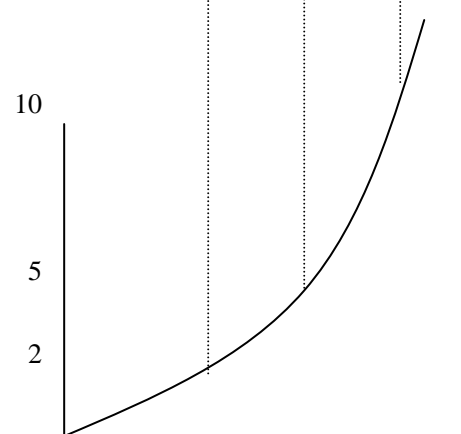
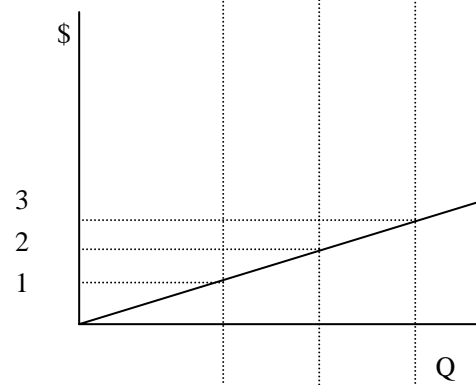


Calculating total costs under buy

Transaction Costs under buy



Total Costs under buy



Put the total cost under “buy” curve over the total cost under “make” curve. The lower envelope tells us which option – make or buy – is cheaper for any given level of quality.

How does the best option change as we desire higher and higher levels of quality?

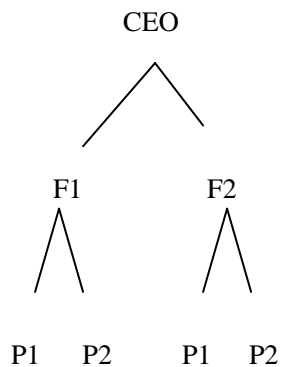
Multidivisional Firm Structure

1.) MNC versus MDC

A unitary firm is subdivided along process lines, while a multidivisional firm is subdivided along either product or geographic lines. Look at what middle managers have authority over.

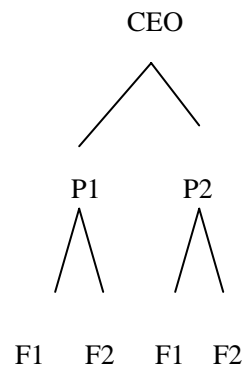
The basic U-form/M-form distinction in a multi-product firm

The Functional Firm
(a.k.a Unitary Firm)



- internalization of spillovers
- economies of scale

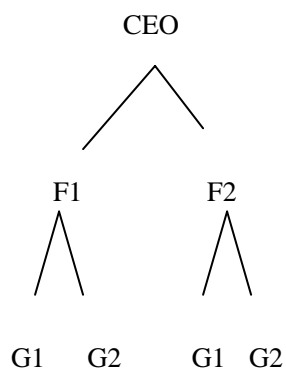
The Product-based Firm
(a.k.a the Multidivisional Firm)



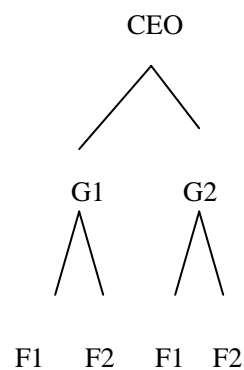
- more effective performance incentives
- local knowledge

Single product firms also can be decentralized

The Functional Firm
(a.k.a. Unitary Firm)

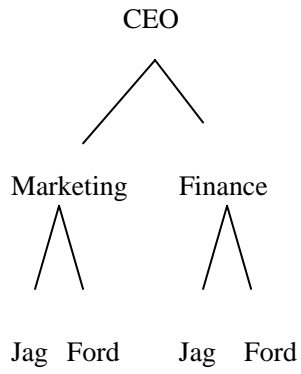


The Geographic-based Firm
(a.k.a the Multidivisional Firm)

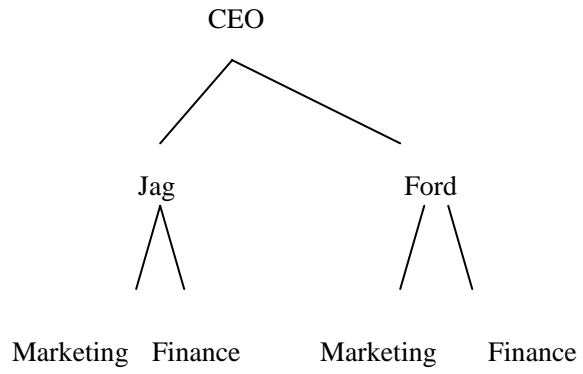


Examples:

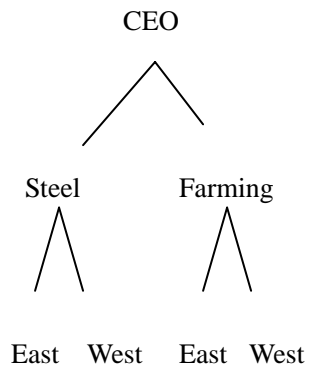
The Functional Firm
(a.k.a Unitary Firm)



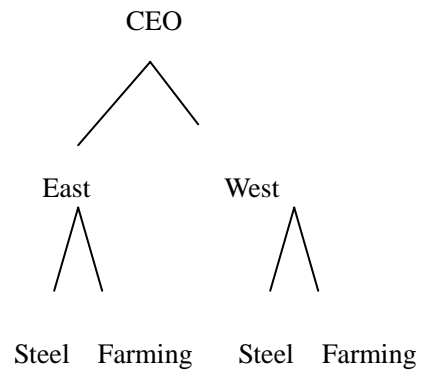
The Product-based Firm
(a.k.a the Multidivisional Firm)



The Functional Firm
(a.k.a. Unitary Firm)



The Geographic-based Firm
(a.k.a the Multidivisional Firm)

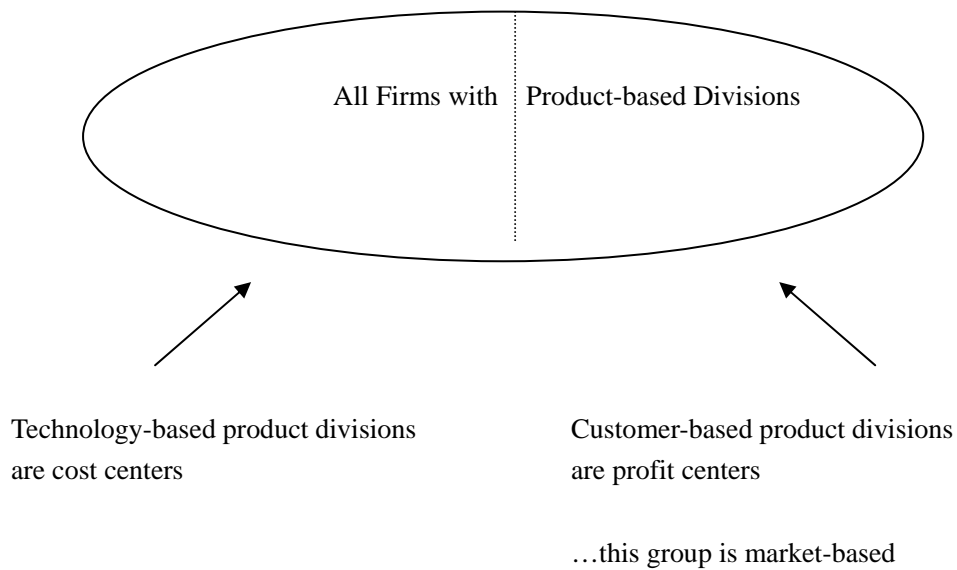


What is a market-based organization?

For a single production company geographic divisions generally correspond to the companies markets – but sometimes markets span borders

What defines a market? Classes of customers

- local versus corporate customers in office products
- geographic importance in subdivisions (local knowledge)

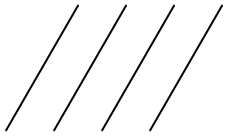


“A market-based organization is more responsive to customers and better able to observe, and even influence, market change...The market based organization improves the firm’s ability to monitor and reward performance. Because the company is divided along market lines, the company is able to obtain more accurate measures of performance.” (Spulber, p 144)

“By not fully distinguishing between home and business use of personal computers, IBM missed out on the booming home computer market, despite having been the originator of the personal computer (PC) standard” (ibid, p. 144)

Danone and Walmart (p 236-239)

Danone went from this.....to this



Walmart synergies

Appendix

Globalization and Governance Project Help

***Disclaimer: the numbers in this demonstration are intentionally incorrect. Therefore, if you choose to use Brazil and Dominican Republic for your Research Project I countries, that's fine, because they did in fact go from being partly free to free according to Freedom House. Just make sure you don't copy the numbers in this document directly, as they will be wrong.

Brazil and Dominican Republic went from being partly free in 1995 to being free in 2005. (www.freedomhouse.org)

No CPI score for Dominican Republic was available in 1995, so I used their score in 2001 instead. I also got Brazil's score for that year; if I hadn't, it would have made the table look bad. If CPI data for both of your countries is available, then you only have to provide info for the two years, 1995 and 2005.

A meaningful chart:

Table 1: Corruption Perception Index scores

	1995	2001	2005
Brazil	2.6	4.0	3.8
Dominican Republic	n.a.	3.2	3.0

Source: www.transparency.org

I made the table above using Auto shapes (go to Insert → picture → auto shapes). I simply typed in the text and numbers, and then drew a box and lines around them. (If you draw a box, you'll have to click it, right click, and then choose order, send behind text.) After you draw a line, you can right-click on it and select 'edit points' in order to make the line the exact size you want.

An alternative way to make a table is to choose 'insert table', on the Table menu (I selected four columns, three rows, and AutoFit to contents). After you type in the data, this will give you:

Table 1: Corruption Perception Index

	1995	2001	2005
Brazil	2.6	4.0	3.8
Dominican Republic	n.a.	3.2	3.0

Source: www.transparency.org

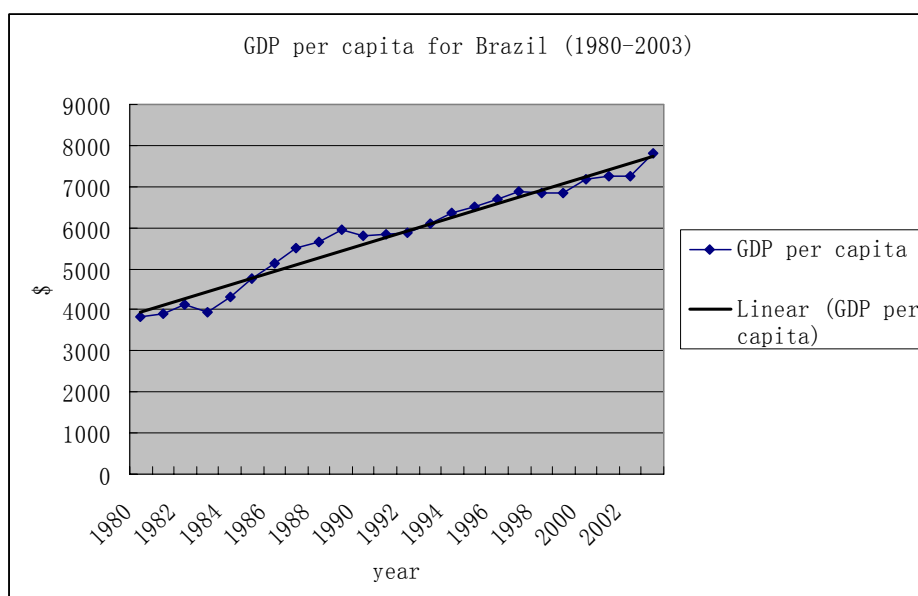
(You will have to add the title and source yourself.)

Economic Information

Once Penn World Tables returns the data, simply highlight the data, copy it and then open up Excel and paste it in. (In Excel, just put the cursor on the first cell and hit 'paste')

To make a chart, highlight the series you want (start with GDP/capita) and then under Insert menu, click chart. (note: for my countries, no data was available for 2004; thus, don't highlight the 'n.a.')

Select line graph and then whichever sub chart you want, and then click next. Click the Series tab and enter 'GDP per capita' under name. Then, under the same tab, click the symbol to the right of 'category x labels', then highlight the years 1980-2003 and hit enter. Click next. Enter in title and axis labels. Click next, and then finish. Finally, under the Chart menu, click 'Add a Trend Line' and choose the linear type, and hit OK. (make sure the table is highlighted before you click the Chart menu; if not, just left-click on it once.) Copy the table, and paste it into Word. This will give you:



Source: Alan Heston, Robert Summers and Bettina Aten, Penn World Table Version 6.2,
Center for International Comparisons of Production,
Income and Prices at the University of Pennsylvania, September 2006.

Again you have to type the source yourself after the table is pasted.

Do this for the other three series as well.

For the UNCTAD FDI data base, you do not need to include a trend line, because there are only two values for each country. So just draw the line graph, and change the x-values as above.

Review Questions

Chapter 1

- 1.) The four costs of trade. Show a model with a pre trade stage and post trade stage, where that prices equalizes after trade. Then show how with tariffs (or other trade costs) prices will not fully equalize.
- 2.) PPP. Explain why one sometimes wants to adjust the GDP per capita measure to account for differences in purchasing power. We saw in the example of pre trade and post trade that prices equalize, but that with tariffs (or other trade costs) prices will not fully equalize. Use this intuition to describe why differences in purchasing power exist, even in the face of “free trade.”

Chapter 2

- 1.) Discuss the productivity/wage tradeoff that businesses face when searching for supplier countries.
- 2.) How can global businesses use FDI as a quid pro quo to secure the political cooperation of the host countries government?
- 3.) Why is price elasticity of demand an important concept for analyzing customers in different countries?
- 4.) Describe the two basic types of partners, those on the demand side and those on the supply side. Describe how supply side partners are different from producers, and make sure to discuss the role of joint ventures.

Chapter 3

- 1.) How would Spulber define a global business? How is a multinational corporation, as defined by Spulber on page 44, distinct from other types of global businesses? Make sure you discuss the role of integration. Compared to BP, is Li and Fung more or less integrated?
- 2.) Global value connection. A global business that sells to consumers in the U.S. is considering opening up a factory in either Mexico or Brazil. The U.S. consumers prefer the good produced in Brazil. In particular, they are willing to pay \$500 if it comes from Brazil and \$400 if it comes from Mexico. The costs of production are \$300 in Brazil and \$350 in Mexico. Finally, the trade costs are \$49 when the good comes from Mexico and \$195 when the good comes from Brazil.
 - a) Which country does the global business decide to locate its plant?
 - b) How much surplus does the global business create for the consumer?
 - c) Say the current market in the U.S. for the good the global business produces is competitive, and that the incumbent firms are currently providing the consumer with a surplus of \$3. What is the highest price the global business can sell its product for, and how much profit will the global business make at this price?
 - d) Now, say the current market in the U.S. for the good the global business produces

is monopolistic, and that the incumbent firm is currently providing the consumer with a surplus of \$1. If the global business enters this market, what is the maximum amount of surplus consumers will receive?

- 3.) Five Gains from Trade. Discuss in detail the distinctions between each of the five gains from trade.
- 4.) Country A and Country B have the same technology for producing pies. Suppose that the technology for producing apple pies or blueberry pies exhibits economies of scale.

<u>Number of pies</u>	<u>Cost per unit</u>
50	80
100	60

Total consumption of pies in each country equals 100 pies. If a country produces 100 apple pies or 100 blackberry pies, the unit cost of pies will equal 60. If a country produces 50 apple pies and 50 blueberry pies, then the unit cost of pies will equal 80.

Consumers in country A or in country B have the same preferences. If country A consumes 100 apple pies, consumer value per pie equals 200. If country A consumes 100 blueberry pies, consumer value per pie equals 150. If country A consumes 50 apple pies and 50 blueberry pies, then consumer value per pie equals 300. What are the net benefits without trade on a per unit basis?

- a.) 0
- b.) 90
- c.) 140
- d.) 220
- e.) 230

Using the information provided in the preceding question, what is the net benefit with trade?

- a.) 0
- b.) 20
- c.) 100
- d.) 230
- e.) 240

What are gains from trade?

Chapter 5

- 1.) Nike and Toyota differ fundamentally in whether they use primarily outsourcing or FDI to acquire inputs. Describe this difference. Also, discuss how joint ventures and licensing

can be seen as in-between cases (in between outsourcing and FDI). Provide an example of one type of licensing. Finally, what types of risks do companies that license intellectual property face, and in which types of countries are these risks the highest?

- 2.) Describe three ways a MNC can establish facilities abroad.
- 3.) Describe an example of a technology transfers through FDI
- 4.) The advantages of vertical integration for the international business typically include all except which one of the following?
 - a.) Achieving greater internal coordination across international operations
 - b.) Avoiding market transaction costs.
 - c.) Increasing flexibility and responsiveness to changing market conditions
 - d.) Transferring technology internally to the company.
- 5.) According to Spulber, what share of FDI is in services?
- 6.) Discuss how FDI can help a country that has a deficit in the current account achieve balance of payments.
- 7.) Who was Winston Churchill? What was his connection to BP?
- 8.) Discuss the relationship between core competencies, outsourcing and comparative advantage.
- 9.) Consider the following quote

“Improvements in IT, particularly in software that allows companies to coordinate their production requirements, potentially reduces the advantages of vertical integration.” (Spulber, pxx)

How may this affect the organization of BP?

- 10.) What does the increased use of outsourcing suggest for which costs, transaction or coordination, have fallen faster in recent years? How does the fact that several recent high-profile news stories have highlighted the problems associated with outsourced Chinese goods affect your answer? What does this fact imply for the amount of offshoring to China we should expect to see in the near future (increase, decrease, stay the same.) What does it imply for the amount of offshoring/FDI ratio of dollars spent in China?
- 11.) Discuss why Staples was not able to maintain a separate division for internet sales.
- 12.) How can allocating capital within an organization at a lower cost than capital markets make vertical integration more attractive?

Chapter 6

- 1.) What is the difference between a multiple-business organization and a single business organization? Can both types have a functional, geographic and product based organization?
- 2.) What are the benefits of functionally structured organizations? What are the costs?

- 3.) What are the benefits of geographically structured organizations? What are the costs?
- 4.) What are the benefits of product-line structured organizations? What are the costs?
- 5.) What is the difference between a technology-driven versus customer-driven product based structure?
- 6.) Are product based domestic firms more likely to be market-based than product based international firms? Why?
- 7.) Starting with the diagram in Figure 6.6, explain the GM reorganization in terms of merging cells. Could you enrich figure 6.6 by adding another dimension? Which dimension would you add?
- 8.) Discuss the public goods aspects of multidivisional firms. On page 165, Spulber refers to "...free rider problems" associated with member companies drawing on common resources. Discuss this in terms of what you know about the free rider problem and the tragedy of the commons.

Chapter Chapter 9 (p 236-239)

- 1.) When did Walmart use its own brand when it entered the market, and when did it use local brands?
- 2.) When did Walmart buy an existing set of stores and change the name to Walmart, and when did they build stores from scratch (greenfield investment)?
- 3.) What are the sources of synergies and economies of scale in Walmart stores? How is decentralization beneficial in Walmart stores?

Chapter 10

- 1.) Describe examples of when Danone used contracts and when it used in-house (integrated production) when it operated in a foreign market.
- 2.) How did the divisions of Danone (after the final restructuring) reflect the markets Danone served? Describe how these divisions were further subdivided (e.g. was it along process lines – marketing, sales, logistics, production, etc. – or geographic lines – where people in each country are responsible for these functions?) Why did they choose this method of subdividing the organization?
- 3.) Danone went from having three product line divisions and one geographic division to three product line divisions after its final restructuring. Why did they choose the first structural form, and what caused them to choose the second structural form?
- 4.) While Danone decentralized its organization in some ways, it also maintained some activities centrally. Provide an example of an activity Danone did centrally.