International Trade and Finance: ( Pay special attention to the last half of this tutorial on exchange rates. The Second half is not as important)

**Markets and Trade**:

Let's start with a discussion about the term “market.”

Think of a local “farmers' market” where you can buy fresh produce. A market is an arrangement that allows buyers and sellers to exchange things. I'll give you cash if you give me a bunch of carrots.

A market system facilitates the exchange of money and products.

Markets exist because individuals are not self-sufficient, but instead consume many products produced by others. I don't grow carrots in my garden; therefore, I need to buy them at the market.

**Specialization and the Gains from Trade**:

Each of us specializes in producing just a few products and uses the market to exchange goods and services.

Why do we specialize?

Answer: Because output for society as a whole will increase if the task of producing something is assigned to the country or person who can produce greater quantities of the product more efficiently.

We can use the Principle of Opportunity Cost to explain the benefits from specialization and trade.

According to the Principle of Opportunity Cost, the opportunity cost of something is what you sacrifice to get it – what you give up.

In the case of specialization, the opportunity cost is measured by what we do not produce because we are producing the good or service that we intend to sell or trade. For example, in the time it takes someone to perform routine maintenance on their car, they could instead mow their lawn and weed their garden. If that person specializes in performing car maintenance, he or she could probably make enough money working on one car to pay for lawn and garden care several times over.

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| **Absolute Versus Comparative Advantage:** | |  |
|  | One of the main theories to explain why one country specializes in one product but not another is the Theory of Comparative Advantage. Let's explore the theory using an example.  Consider the productivity table below. Who has the absolute advantage of producing more bread and items per hour?  **Productivity Table**   |  |  |  | | --- | --- | --- | |  | **Bread per hour** | **Shirts per hour** | | Brenda | 6 | 2 | | Sam | 1 | 1 |   Although Brenda does have the absolute advantage [A country's ability to produce a good at a lower absolute cost than another country] over Sam, the decision about who should specialize in the production of one good or the other is based on comparative advantage [A country's ability to produce a good at an opportunity cost that is lower than the opportunity cost of another country], not on absolute advantage.  Specialization is beneficial if there are differences in opportunity cost that generate a comparative advantage. With this in mind, let's consider whether Brenda or Sam should specialize in the production of shirts |  |
| **Opportunity Cost and Comparative Advantage:** | |  |
|  | **Production per Hour and Opportunity Cost**   |  |  |  | | --- | --- | --- | |  | **Brenda** | **Sam** | | Bread produced per hour | 6 | 1 | | Shirts produced per hour | 2 | 1 | | Opportunity cost of one loaf of bread | 1 over 3 shirthttp://media.pearsoncmg.com/pcp/pls/course_connect/business/intro_to_economics/lesson_12/text_based/graphics/l12p7a.gif | 1 shirt | | Opportunity cost of one shirt | 3 loaves of bread | 1 load of bread |   According to this table:  Brenda sacrifices 3 loaves of bread for each shirt she produces.  Sam sacrifices 1 loaf of bread for each shirt he produces.  With both of these factors in mind, who should specialize in the production of shirts? Brenda or Sam?  Answer: Sam should specialize in the production of shirts because he faces a lower opportunity cost in that activity.  **Markets and International Trade:**  Exports are goods produced in this country and sold elsewhere.  Imports are goods produced elsewhere and sold in this country.  Trade among countries is based on the same principles of trade that function between individuals. Specialization based on comparative advantage results in gains for all participants. Smaller nations rely more on trade because they have fewer opportunities for specialization within their borders.  **Protectionist Policies:**  We have learned that countries can maximize their welfare by specializing. However, this assumes that there is free trade so they can freely sell goods in which the country specializes. In reality, many countries restrict imports through protectionist measures.  There are three common forms of protection that countries can institute when enacting a policy regarding international trade:  A quota: A quota is a limit on the amount of a good that can be imported.  A voluntary export restraint (VER): A voluntary restraint is where a nation voluntarily decreases its exports in an attempt to avoid more restrictive policies.  A tariff: A tariff is a tax on imported goods.  Additionally, there are other ways a nation can limit imports without an official trade barrier:  Strict enforcement of health and safety laws  Allowing a customs system to be inefficient and sluggish  **Effects of Trade Restrictions**:  We can illustrate the effects of trade restrictions with a simple supply and demand graph. Suppose that  we plot shirts per day along the x axis and price per shirt (in dollars) along the y axis on the graph. Then we draw the curve for domestic demand for shirts. We also draw three different supply curves on the graph as follows:  The first supply curve depicts the total supply of shirts when there is free trade. Let's assume that with free trade, the price of shirts is $12. This is the lowest supply curve on the graph.  The second supply curve depicts the effects of trade barriers (an import quota, tariff, or voluntary export restraints). In this case, there is still some trade, and let's say that the price of shirts is $20. This is the middle supply curve on the graph.  The third supply curve represents a complete ban of imported shirts. With a total ban on imports, let's say the price of shirts will be $23. This is the topmost supply curve on the graph.  Therefore, an import quota, a VER, or a tariff causes the total supply with free trade to shift to the left. The result is a lower quantity and higher price of the good in question to domestic consumers.  Domestic producers benefit from the trade restriction because they receive a higher price for their products.  **Rationales for Protectionist Policies:**  There are arguments for and against protectionist policies. The possible motivations that restrict trade include:  To shield workers from foreign competition. For example, there are individuals in the United States who want to make it harder to move jobs abroad in order to protect American jobs. They are less motivated by the impact on the price of goods than on employment. Manufacturers counter that the effect would be higher prices on goods that would not be affordable by many.  To nurture infant industries [A new industry that is protected from foreign competitors] until they mature. For example, a government may want to develop a car industry. For many years, it is likely that this new industry will make cars that are inferior to foreign alternatives as the company learns. Unless the company is protected, it will not be able to establish itself because customers will flock to the superior product. The counter to this argument is that consumers in the country are forced to fund development of the industry through the purchase of inferior products.  To help domestic firms establish monopolies in world markets.  Arguments against protectionism include:  In practice, protecting workers in industries that would be hurt by trade is difficult.  Many displaced workers don't have the skills to work in other sectors, and obtaining these skills takes time.  Keeping tariffs in place to prevent temporary unemployment results in less efficient production, higher prices, and lower consumption.  **Arguments Against Protectionism:**  Other arguments against protectionism include:  Protectionist policies are often defended on the grounds that they protect new or infant industries.  In practice, infant industries rarely become competitive with their foreign rivals. In the 1950's and 1960's, Latin American countries used tariffs and other policies to protect their young industries, but the industries never became as efficient as foreign suppliers.  Once an industry is given tariff protection, it is difficult to take that tariff protection away.  If production of a particular good has very large economies of scale, the world market will support only a few firms.  A nation might provide financial support to a firm to guarantee the firm will make a profit. A foreign firm would be reluctant to enter, so the domestic firm will capture the monopoly profit. But if two nations subsidize their domestic firms, both firms will enter the market and lose money.  A nation may pick the wrong industry to subsidize.  **International Trade Agreements:**  North American Free Trade Agreement (NAFTA): The North American Free Trade Agreement (NAFTA) [An international agreement that lowers barriers to trade between the United States, Mexico, and Canada (signed in 1994)] took effect in 1994 and is being implemented over 15 years. It will eventually eliminate all tariffs and other trade barriers among Canada, Mexico, and the United States. NAFTA may soon be extended to other nations in the western hemisphere.  Economists predicted that the decrease in trade restrictions would increase both imports from Mexico and exports to Mexico. Economists have argued that the trade deficit with Mexico following the agreement was attributed to the devaluation of the peso, not to the impact of NAFTA on trade.  World Trade Organization (WTO): The World Trade Organization (WTO) [An organization that oversees GATT and other international trade agreements] has more than 130 member nations and oversees the General Agreement on Tariffs and Trade (GATT) [An international agreement that has lowered trade barriers between the United States and other nations] and other international trade agreements.  There have been eight rounds of tariff negotiations that decreased tariffs substantially. WTO also has eliminated many import quotas, reduced agricultural subsidies, and outlawed restrictions on trade in services such as banking, insurance, and accounting. The most recent round of negotiations—the Uruguay round—was expected to increase world trade by at least 9% and as much as 24%.  European Union (EU): The European Union (EU) [An organization of European nations that has reduced trade barriers within Europe] is designed to remove all trade barriers within Europe and create a “single market”; 15 nations have joined.  Asian Pacific Economic Cooperation (APEC): The Asian Pacific Economic Cooperation (APEC) [An organization of 18 Asian nations that attempts to reduce trade barriers between their nations] consists of 18 Asian nations that signed a 1994 agreement to reduce trade barriers among their nations.  In 2001, a new round of negotiations began in Doha, Qatar, over a wide range of issues |  |

**When Trade Disputes Occur Between Countries:**

You should be aware of two very important recent trade controversies:

The World Trade Organization (WTO) rules concerning trade that could harm the environment state that a country can adopt any environmental standard it chooses, as long as it does not discriminate against foreign producers. For example, the United States cannot ban imported goods that are produced in factories that generate pollution in other countries.

Trade theory suggests a link between increased trade and increased wage inequality. For example, if the United States increases its exports of products requiring skilled labor, the demand for skilled labor and their wages will rise. If the United States imports more goods requiring less skilled labor, the wages of unskilled workers in the United States will fall.

**What Are Exchange Rates?**

Recall that the exchange rate is the rate at which we can exchange one currency for another. It is a crucial determinant of the trade in goods and assets.

An increase in the value of a currency is called appreciation, while a reduction in value is called depreciation.

We measure the exchange rate in units of foreign currency.

The exchange rate of the dollar is the price of the dollar in terms of a foreign currency.

The exchange rate enables us to convert prices in one country to values in another country.

If the dollar appreciates from 100 to 110 yen per dollar, the price of dollars has increased (because the dollar is more expensive in terms of yen).

The dollar is more expensive in terms of yen.

If the dollar appreciates against the yen, the yen must depreciate against the dollar.

**The Supply Curve and Foreign Markets:**

The exchange rate between U.S. dollars and Swiss francs is determined in the foreign exchange market, the market in which dollars trade for Swiss francs. To understand this market, we can use simple supply and demand analysis.

We plot the demand and the supply curves for dollars in exchange for Swiss francs. On the y axis, we have the exchange rate in francs per dollar. We mark the values on the y axis as 1 point 5 francs per dollar, 2 francs per dollar, and 2 point 5 francs per dollar. The exchange rate will measure how many francs trade for one dollar. If the exchange rate increases, one dollar buys more francs, and the price of dollars in terms of francs increase. If the dollar appreciates against the franc, then the franc depreciates against the dollar.

The supply curve represents the supply of dollars in exchange for Swiss francs. Supply is comprised of individuals holding dollars who want to obtain francs. The supply curve slopes upward on the assumption that as francs become cheaper, total spending on Swiss goods and assets will increase. As the value of the dollar increases, more dollars will be supplied to the currency market in exchange for francs.

The demand curve represents the demand for dollars in exchange for francs. Demand is comprised of individuals holding francs who want to obtain dollars. As the exchange rate falls, the dollar becomes cheaper in terms of francs. As U.S. goods and assets become cheaper, we assume that more Swiss residents will want to trade francs for dollars. Therefore, the demand curve slopes downwards. Total demand for dollars will increase as the price of the dollar falls, or depreciates, against the franc.

Equilibrium in the market for foreign exchange occurs where the demand curve intersects the supply curve. In our example, this will occur at an exchange rate of 2 francs per dollar. At this price, the willingness to trade dollars for francs just matches the willingness to trade francs for dollars. The foreign exchange market is in balance.

**Changes in Demand and Supply:**

Two factors will cause a rightward shift in the demand curve for dollars: Higher U.S. interest rates and lower U.S. prices.

Increased demand for dollars causes the dollar to appreciate against the franc (the depreciation of the franc).

Two factors will cause a rightward shift in the supply curve for dollars: Higher Swiss interest rates and lower Swiss prices.

Increased supply for dollars causes the dollar to depreciate against the franc (the appreciation of the franc).

**Real Exchange Rates and Net Exports:**

Exports have a positive economic effect on a country's economy. Let's explore the impact of the exchange rate [The rate at which currencies trade for one another in the market] on exports.

Changes in market exchange rates can affect the demand for a country's goods and services. As prices change, we need to adjust the exchange rate to take into account those price changes.

Economists have developed a concept that adjusts market exchange rates for changes in prices, called the real exchange rate.

This concept reflects the Reality Principle: What matters to people is the real value or purchasing power of money or income, not its face value.

The real exchange rate adjusts for price changes by expressing U.S. prices in foreign currency and comparing them to foreign prices.

Higher U.S. prices will raise the real exchange rate and the price of U.S. goods relative to foreign goods. If foreign prices fall, U.S. goods will become more expensive as well.

For instance, suppose that the prices of Country A increase by 20%, while the prices of Country B remain constant. If the exchange rate of Country A fell by 20%, the real exchange rate would not change. Higher prices by 20% are countered by currency that is 20% cheaper.

There is a negative relationship between a country's net exports and its real exchange rate. A higher real exchange rate reduces exports and increases imports.

**The Global Financial System Today:**

An increase in the value of the U.S. dollar has two effects:

Imports are less expensive for the residents of the United States.

U.S. exports are more expensive in world markets.

Because exports decrease and imports increase, net exports (exports minus imports) decline.

To avoid a reduction in net exports from an exchange rate appreciation, or a sharp increase in the cost of living from exchange rate depreciation, the U.S. government could enter the foreign exchange market to try to influence the price of foreign exchange.

These efforts are called foreign exchange market intervention [When a country's government buys or sells currency for the purpose of managing the foreign exchange rate].

**Foreign Exchange Market Intervention:**

In the United States, the Treasury Department has the official responsibility for foreign exchange intervention, although it does so in conjunction with the Federal Reserve.

To influence the price at which one currency trades for another, governments have to affect the demand or supply for that currency.

For example, by selling francs in exchange for dollars, the United States or Switzerland (or both) can cause the dollar to rise.

**Fixed Exchange Rate Systems**:

Currency systems in which governments try to keep constant the values of their currencies against one another are called fixed exchange rate systems. Government intervention is required if, at the fixed exchange rate, the private demand and supply for its currency are not equal.

An excess supply of a country's currency at the fixed exchange rate is known as a balance of payments deficit. A balance of payments deficit will occur whenever there is a deficit on the current account that is not matched by net sales of assets to foreigners.

An excess supply of a country's currency will cause that currency's value to fall in currency markets, or depreciate [Loss of value of a currency]. If the U.S. government wanted to maintain the exchange rate of the dollar as artificially high, it would have to sell francs in the foreign exchange market in order to acquire the excess quantity supplied over quantity demanded of dollars in currency markets.

**Flexible Exchange Rate Systems**:

The benefit of a fixed exchange rate system, also known as Bretton Woods, is that it makes it easier to trade, but it requires countries to maintain similar policies—especially similar inflation and interest rates.

Bretton Woods lasted until the early 1970's when a dollar “glut” put pressure on the United States to close its gold window and abandon the system. Bretton Woods was replaced by a flexible exchange rate system, or a system in which free markets primarily determine exchange rates.

The flexible exchange rate system has worked well enough since the breakdown of Bretton Woods. Many restrictions on the flow of financial capital were eliminated, and private-sector transactions in assets grew rapidly. Nonetheless, countries whose economies are closely tied together might want the advantages of fixed exchange rate systems