# Economics Unit 4 Summary

**SSEIN1 Explain why individuals, businesses, and governments trade goods and services.**

**Trade** refers to the exchange of goods, services, and/or productive resources among individuals, businesses, and/or governments. Trade refers to exchange among people within a country as well as international trade among people from many countries. Economic models suggest domestic and international trade improve a country's economy. However, some individuals, firms, and/or industries experience difficulties as trading relationships evolve over time. As with all choices, costs and benefits exist.

**a. Define and distinguish between absolute advantage and comparative advantage.**

**Absolute advantage** refers to an individual, firm, or country using the fewest inputs to produce the same amount of output or the individual, firm, or country producing the largest number of units of output given the same productive resources.

For example, imagine two countries, Jasminia and Lauraland, both producing MP3 players and Tablet Computers. In the example below, the problem presented is an INPUT problem because the numbers represent the labor hours used to produce one unit of each good. Since Jasminia only takes 10 hours to produce a unit of MP3 players while Lauraland takes 15 hours, Jasminia has the absolute advantage. In the case of the tablet computer, both countries take the same number of hours so neither has the absolute advantage.

| Countries | Number of Labor Hours to Produce One Unit of MP3 Players | Number of Labor Hours to Produce One Unit of Tablet Computers |
|---|---|---|
| Jasminia | 10 | 12 |
| Lauraland | 15 | 12 |

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Now, imagine that Matthewtopia and Damianland are both producing MP3 players and Tablet Computers. However, the problem presented below is an OUTPUT problem because the numbers represent the number of units of each good they can produce given a fixed resource, in this case one hour of time. Since Damianland produces 9 MP3 players while Matthewtopia produces only 4 MP3 players, Damianland has the absolute advantage. In fact, Damianland has the absolute advantage in both good because it produces more of both per hour.

| Countries | Number of Units of MP3 Players produced per hour | Number of Units of Tablet Computers produced per hour |
|---|---|---|
| Matthewtopia | 4 | 2 |
| Damianland | 9 | 3 |

# Economics Unit 4 Summary

While large, more technologically advanced countries will probably have an absolute advantage in production over smaller countries, both countries can still benefit each other through specialization and trade.

The economic model explaining the how two entities can benefit from trade is the law of comparative advantage. **Comparative advantage** in production of a good or service exists when one individual, firm, or country has the lowest opportunity cost for producing the good or service.

To illustrate comparative advantage, let us look again at the example using Jasminia and Lauraland. Remember, this is an INPUT problem because the numbers represent the labor hours used to produce one unit of each good. Use the labor hours to find out how many units of tablet computers each country must give up to produce MP3 players. For input problems, we have to express opportunity cost as the ratio of “what we are producing” divided by “what we are giving up”. The ratios in each box below represent the opportunity cost of producing each good.

When reading this information, say it the following way: “When Jasminia produces MP3 players, it gives up .833 of a tablet computer. When Lauraland produces MP3 players, it gives up 1.67 tablet computers.”

Since Jasminia gives up less to produce MP3 players, it has the comparative advantage in production. It should specialize in this product.

“When Jasminia produces Tablet Computer, it gives up 1.2 MP3 players. When Lauraland produces Tablet Computer, it gives up .6 of an MP3 player.”

Since Lauraland gives up less to produce Tablet Computers, it has the comparative advantage in production. It should specialize in this product. Jasminia should trade its MP3 players to Lauraland in exchange for Lauraland’s tablet computers. By specializing and trading, both countries will be able to consume more goods than they could when they produced both goods.

| Countries | Number of Labor Hours to Produce One Unit of MP3 Players | Number of Labor Hours to Produce One Unit of Tablet Computers |
|---|---|---|
| **Jasminia** | 10<br><br>Opportunity Cost<br>=<br>10/12 or 5/6 or .833 of a Tablet Computer | 12<br><br>Opportunity Cost<br>=<br>12/10 or 6/5 or 1.2 MP3 Players |
| **Lauraland** | 15<br>Opportunity Cost<br>=<br>15/12 or 5/3 or 1.67 Tablet Computers | 12<br>Opportunity Cost<br>=<br>12/15 or 3/5 or .6 of an MP3 Player |

# Economics Unit 4 Summary

To illustrate comparative advantage using the OUTPUT method, let us look again at the example using Matthewtopia and Damianland. The problem presented is an OUTPUT problem because the numbers represent the number of units of each good produced given the same amount of resources. Use the number of units to find out how much of one good each country must give up to produce the other good. For output problems, we have to express opportunity cost as the ratio of "what we are giving up" divided by "what we are producing". The ratios in each box below represent the opportunity cost of producing the other good. When reading this information, say it the following way:

"When Matthewtopia produces MP3 players, it gives up .5 of a tablet computer. When Damianland produces MP3 players, it gives up .33 of a tablet computer."

Since Damianland gives up less to produce MP3 players, it has the comparative advantage in production. It should specialize in this product.

When Matthewtopia produces Tablet Computers, it gives up 2 MP3 players. When Damianland produces Tablet Computer, it gives up 3 MP3 players. Since Matthewtopia gives up less to produce Tablet Computers, it has the comparative advantage in production. It should specialize in this product. Damianland should trade its MP3 players to Matthewtopia in exchange for Matthewtopia's tablet computers. By specializing and trading, both countries will be able to consume more goods than they could when they produced both goods.

| **Countries** | **Number of Units of MP3 Players produced per hour** | **Number of Units of Tablet Computers produced per hour** |
|---|---|---|
| **Matthewtopia** | 4<br>Opportunity Cost<br>=<br>.5 Tablet Computers | 2<br>Opportunity Cost<br>=<br>2 MP3 Players |
| **Damianland** | 9<br>Opportunity Cost<br>=<br>.3 Tablet Computers | 3<br>Opportunity Cost<br>=<br>3 MP3 Players |

**b. Explain that most trade takes place because of comparative advantage in the production of a good or service.**

Based on the examples used in SSEIN1a, the country with the lowest opportunity cost for producing a good or service should specialize in that good and then trade with another country for the other good. By producing those goods for which it has the lowest opportunity cost, countries can consume beyond the production possibilities of their own country. **Specialization** allows countries to allocate resources to their best possible use and creates greater economic efficiency.

# Economics Unit 4 Summary

**c. Define balance of trade, trade surplus, and trade deficit.**

A country's **balance of trade** refers to the value of its exports minus the value of its imports for measurable during a specific time. Remember, this is the calculation used to determine the value of the Net Exports component of GDP. If the value of a country's exports exceeds the value of its imports, the country enjoys a **trade surplus**. If the value of a country's exports fall short of the value of its imports, the country has a **trade deficit**.

**SSEIN2 Explain why countries sometimes erect trade barriers and sometimes advocate free trade.**

**Trade Barriers** limit the flow of goods, services, and productive resources between countries. **Free trade** refers to the unrestricted flow of goods, services, and productive resources between countries. While the field of economics generally regards free trade as positive for countries, specific political, ideological, and economic factors affecting a country may incentivize the erection of trade barriers.

**a. Define trade barriers such as tariffs, quotas, embargoes, standards, and subsidies.**

Trade Barriers are laws passed or actions taken by the government of a country with the intention of restricting the flow of goods and services between itself and another country or countries. Except for embargoes, the motivation for trade barriers is protection of a domestic industry or domestic jobs. The most common trade barriers are tariffs, quotas, embargoes, standards, and subsidies. A **tariff** is a tax placed on goods imported into a country. A **quota** limits the quantity of a good imported into a country. **Embargoes** completely ban trade with a country usually due to political disputes. **Standards** are requirements a good must meet before it can enter the country as an import. **Subsidies** are government payments transferred exporting companies allowing the companies to compete with other nations at the international market price without having to incur the costs associated with selling at the lower price.

**b. Identify costs and benefits of trade barriers to consumers and producers over time.**

When a country imposes trade barriers, some people benefit and others incur costs. A general concern about using any trade barrier is the possible retaliation of the other country.

If a country decides to use a <u>tariff</u>, the benefits include providing revenue to the importing country's government as it collects the tax and protecting the domestic producers of the good by effectively increasing the price of imported goods. Costs of tariffs include higher prices for consumers and inefficiently producing goods for which the country does not have a comparative advantage.

<u>Quotas</u> benefit domestic producers by limiting the number of foreign goods with which they must compete. The cost is that consumers who want the imported good cannot get it once the quota is met no matter how high a price they are willing to pay. The country's resources are allocated toward goods for which it does not have a comparative advantage.

<u>Embargoes</u> are politically motivated. An embargo could successfully influence another country to behave according to the embargoing country's wishes, benefitting the embargoing country. However, the individuals and firms in the embargoing country can no longer enjoy the goods the embargoed country produces and may encounter higher prices from less competition in the market. The individuals and firms in the embargoed country will incur significant costs without the economic activity with customers in the embargoing country.

# Economics Unit 4 Summary

By placing standards on a good, a country can exclude the goods of foreign producers who are unable to meet the importing country's requirements. When used appropriately, standards can benefit domestic consumers by protecting them from substandard or dangerous products. Some countries impose unattainable standards for foreign producers simply to force them out of the domestic market despite the products not posing any threat to domestic consumers. This hurts domestic consumers by increasing prices and hurts the foreign producer who has lost a market for the product.

Subsidies benefit domestic producers by allowing them to compete at the lower market price established by their foreign competition. This keeps prices low for domestic and foreign consumers, protects domestic jobs, and helps firms stay profitable. Subsidies damage industries and workers in other countries that would have a comparative advantage in production if the subsidy were not in place.

**c. Describe the purpose of trading blocs such as the EU, NAFTA, and ASEAN.**

Trading blocs refer to free trade agreements among countries in a region. The goals for trading blocs may include reducing or eliminating trade barriers, increasing specialization and efficiency in production, allowing free movements of workers within the bloc, establishing a common currency, and/or coordinating infrastructure projects to facilitate efficient trade among members. Three examples of trading blocs are the EU, NAFTA, and ASEAN. As of May 1, 2017, the **European Union (EU)** had 28 member countries. Of the 28, 19 use the common currency the Euro and 26 enjoy the border-free movement of goods and people from country to country. Currently, the United Kingdom intends to leave the European Union within about two years. The **North American Free Trade Agreement (NAFTA)** is an agreement among the United States, Canada, and Mexico. This agreement allows for the free trade of many goods among the countries, encourages efficiency and specialization in production, and involves coordination among countries. NAFTA countries do not share a common currency or border free movement of goods and people. The **Association of Southeast Asian Nations (ASEAN)** is a trade bloc of 10 Southeast Asian countries. Like the NAFTA countries, the ASEAN countries promote free trade, specialization, and coordination among members, but do not have a common currency or border-free travel.

**d. Evaluate arguments for and against free trade.**

The main arguments against free trade include:

1. Protecting infant industries – markets in need of time to develop before competing against foreign rivals

2. Protecting national security

3. Protecting domestic employment

4. Protecting workers in developing countries from unfair labor practices

5. Protecting the environment in developing countries

The infant industries argument supports the use of trade barriers when a new industry is in the early stages of development. Unless the industry can grow and establish economies of scale (high output with low cost per unit), it will be unlikely to survive in competition with established industries in other countries. Opponents of this argument cite the difficulty in accurately predicting which industries are likely to "grow up" and be competitive as well as the potential for retaliation by other countries.

# Economics Unit 4 Summary

The national security argument cites the importance of maintaining industries critical to the country's national security even when the industry cannot efficiently compete at the international level. National security is also the argument behind an embargo. Opponents to this argument cite the potential for abuse because at some level many industries can argue their importance to national security.

The domestic employment argument seeks to protect workers of a country from becoming unemployed due to competition from products made by workers in developing countries who usually work for much lower wages and benefits. Opponents of this argument emphasize the increased consumer prices caused by the protectionism. Free trade and efficient production usually lead to new industries and jobs within those new industries. Finally, if workers in developing countries produce goods for which they have a comparative advantage, these workers will become richer and will become consumers of international goods as well as producers.

The protecting workers in developing countries from unfair labor practices argument is the basis for limiting the purchase of those goods by people in the developed country. By developed world standards, working conditions in developing nations are often very bad relatively speaking. However, opponents of this argument emphasize that workers in developing countries would lack jobs entirely if their countries were unable to produce and sell goods abroad. In the long-run, as industries in developing countries become more established and worker's wealth increases, the workers will demand better working conditions.

The protection of the environment argument supports restrictions on trade with countries that have lax environmental standards. Opponents argue that developing nations must have the ability to produce goods without the same environmental standards as developed nations because they would be uncompetitive otherwise. Economic research shows that as a country becomes richer, the people of the country demand higher environmental standards. If countries increase growth, some economists believe a cleaner environment will follow.

**SSEIN3 Explain how changes in exchange rates can have an impact on the purchasing power of groups in the United States and in other countries.**

An **Exchange Rate** refers to the price of one country's currency express in terms of another country's currency. Anyone buying products from another country, selling products to people in other countries, traveling to other countries, or depending on travelers from other countries cares about changes in the exchange rate. For people to do business with people in other countries, they must acquire the currency accepted by people in those countries. As the price of a currency rises and falls relative to another currency, people who buy, sell, and earn in that currency will experience a change in how much of the other country's currency they can buy.

**a. Define exchange rate as the price of one nation's currency in terms of another nation's currency.**

An Exchange Rate refers to the price of one country's currency express in terms of another country's currency. For example, on April 27, 2017, the price of one dollar expressed in euros was .92 euros.

# Economics Unit 4 Summary

**b. Interpret changes in exchange rates, in regards to appreciation and depreciation of currency.**

Most exchange rates between currencies fluctuate based on supply and demand. The terms appreciation and depreciation describe changes in the value of one currency in terms of another. **Appreciation** refers to an increase in the value of a currency relative to another. **Depreciation** refers to a decrease in value of one currency relative to the other. In the table below shows the price of the U.S. dollar expressed in terms of other currencies for Year 1 and Year 2. In Year 1, a dollar cost .49 pounds. In Year 2, a dollar cost .52 pounds. Since the dollar was more expensive for people holding British pounds in Year 2 than in Year 1, the dollar appreciated against the pound. In Year 1, a dollar cost 5.17 Danish krone. In Year 2, a dollar cost 4.83 krone. Since the dollar cost less for people holding Danish krone in Year 2 than in Year 1, the dollar depreciated against the krone.

**U.S. Dollar, end of Year 1**

| | One U.S. dollar | in U.S. dollars |
|---|---|---|
| British pound | 0.49 | 2.06 |
| Danish krone | 5.17 | 0.19 |
| Euro | 0.69 | 1.44 |
| Japanese yen | 114.69 | 0.0087 |
| Mexican peso | 10.71 | 0.093 |
| Swiss franc | 1.17 | 0.86 |
| Thai baht | 31.7 | 0.03 |

**U.S. Dollar, end of Year 2**

| | One U.S. dollar | in U.S. dollars |
|---|---|---|
| British pound | 0.52 | 1.92 |
| Danish krone | 4.83 | 0.21 |
| Euro | 0.67 | 1.49 |
| Japanese yen | 121.3 | 0.0082 |
| Mexican peso | 15.02 | 0.067 |
| Swiss franc | 1.06 | 0.94 |
| Thai baht | 36.8 | 0.027 |

**c. Explain why some groups benefit and others lose when exchange rates change.**

When a country's currency appreciates against another currency, it means those who hold the appreciated currency can buy more of the other country's currency. If a country's depreciates, those who hold the depreciated currency can buy less of the other country's currency. For example, assume the United States and Japan are trading partners. Due to the popularity of Japanese Anime in the United States, people in the U.S. demand for yen because they need Japanese currency to buy Japanese goods. As the demand for yen rises, the yen appreciates in the foreign exchange market. The higher price of yen will make Japanese goods more expensive for U.S. consumers and Japanese exports to the United States will decrease. However, the higher value of the yen will allow people in Japan to import more goods, more cheaply from the United States. Therefore, while the appreciation of the yen hurts Japanese exporters, U.S. exporters to Japan benefit from the increased Japanese consumption of U.S. goods. U.S. tourists visiting Japan are harmed by the increased price of the yen, but Japanese tourists coming to the U.S. are helped because they can buy more