Economics of World Food

Trade: Coffee

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Albany Area Schools
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Introduction:

Coffee is one of the world's most traded commodities; it is grown all over the world. I chose coffee for my commodity of study because there is nothing better than waking up to a steaming mug of aromatic coffee. I learned more about the "behind-the-scenes" of the coffee production process, and about the demand and supply of the different varieties of coffee from different places around the globe.

The first part discusses the production process of coffee, and where it is produced. The top exporters and importers are displayed, and the growing process is discussed.

The second part is about the world's recent price movements of coffee and the ever-changing demand. Until 2011, the price of coffee was rising, but new weather patterns are hurting supply drastically. Coffee is essential to developing nations however, poor farmers may not always get fair compensation for their crop.

The third section discusses the amount of tariffs and duties placed on coffee by the United States and other countries around the globe. Tariffs differ from country to country, and change depending on which country the coffee was exported from.

The fourth and final section contains information about the world's largest coffee exporter—Brazil. The recent movements of Brazil's exchange rate is discussed, as well as what would, and does happen if their exchange rate changes.
Part 1:

The Advantage of Trade
ACTIVITY 1

Consider the following table, which shows the number of labor hours required in two countries, Vastland and Morway, to produce two goods, wheat and cotton. Use this information to answer the following questions.

<table>
<thead>
<tr>
<th>Labor hours per bushel of wheat</th>
<th>Labor hours per bale of cotton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vastland</td>
<td>3</td>
</tr>
<tr>
<td>Morway</td>
<td>2</td>
</tr>
</tbody>
</table>

1. Which country has an absolute advantage in producing wheat? Morway
   Which country has an absolute advantage in producing cotton? Morway

2. Which country has a comparative advantage in producing wheat? Vastland
   Which country has a comparative advantage in producing cotton? Morway

3. Which country could gain by specializing in producing wheat? Vastland
   Which country could gain by specializing in producing cotton? Morway

4. If these two countries decide to trade, which of the following terms of trade would be beneficial to both countries?
   a. one bale of cotton for one bushel of wheat.
   b. one bale of cotton for two bushels of wheat.
   c. one bale of cotton for three bushels of wheat.
   d. one bale of cotton for four bushels of wheat.

5. Suppose Morway has 12 million labor hours available each year to produce wheat and cotton. Draw its production possibilities on the graph to the right. Label it PP.

6. Now suppose it can trade with Vastland at the terms of trade you circled in question #4. Draw its consumption possibilities on the graph to the right (assuming it specializes fully). Label it CP.

7. Describe how the two lines you have drawn show what Morway can gain from trade.
   They can consume far more by trading than if they do not. CP shows their consumption would be higher than if they do not trade, which is shown by PP.
Part 1 B:

Coffee is grown year round in Colombia, but in places like Indonesia, the growing season is interrupted by the rainy season. Coffee grows best in tropical climates with temperatures between 65 and 75 degrees Fahrenheit.

Coffee seeds are usually planted in large beds and are in shaded areas, called nurseries. The seedlings, once sprouted, are planted in individual pots full of a carefully formulated soil. The seedlings stay here, carefully watered and shaded until they can be permanently planted and not wither under bright sunshine. Also, coffee’s soil is important. A soil that is a good grower of cactus is also a good grower of coffee. According to “Growing A Coffee Tree,” mixing 20% of Perlite into a cactus soil is helpful, which is a synthetic volcanic material.

Coffee needs a substantial amount of water to thrive. When watering a coffee plant, the roots can never be exposed to standing water, because the leaves will turn brown and fall off the branches. To water, the soil and roots must be soaked, but then allowed to drain. Coffee trees need about three liters of water a day, especially in hotter climates. Harvesting is usually done by done by hand, which is hard and labor-intensive because using machinery in the places coffee is usually grown could be dangerous due to the terrain.
How Coffee Grows

Coffee seeds, also known as coffee beans, can either be planted immediately or saved for up to one year and used to plant coffee. Once planted, the germination process can take up to 30 days.

Typically, coffee seedlings are grown in nursery beds, and they reach about 10 inches tall. Then, they are planted until they are ready to be planted in their final destination.

About two to four years after planting, the young coffee tree will begin to produce small white flowers with a highly fragrant aroma. These flowers will last only a few days, then they will be replaced by small green berries.

It is from these small green berries that the ripe coffee cherries are grown. During this intense "growing" period, the cherries can consume 70% of the coffee plant's nutrients, and will actually halt the growth of the plant.

Each coffee cherry contains two seeds or "beans," as they are called. Once the beans are formed, they will be growing inside an area called the "pulp." As the coffee bean develops and replaces the pulp, with the exception of a final layer that will be referred to as the "Cook Skin layer."

Around five weeks following the bean gaining its full size, the cherries will begin to change color as they ripen. Initially, they are green, then they turn yellow and finally red as they ripen. When they are ready for harvest, they will usually be a mix of all three colors.

Arabica coffee trees will usually produce fruit in about three to five years but aren’t fully mature until about seven years. If left unattended, they would grow to be about fifteen feet tall, but typically farmers keep them at six to eight feet tall for easier harvesting.

After the eighth year, the coffee tree began to produce a full crop and can yield from one to twelve pounds of coffee a year.

After harvesting, the coffee cherries must then be dried. Once dried, the outer coffee layers (pulp and parchment) are removed from the coffee seeds (beans). After processing, the beans are further inspected, cleaned, and polished to remove any layers left on the beans.
Part 1 C:

Coffee is produced all over the world—on four continents, with the growing regions generally between the Tropic of Capricorn and the Tropic of Cancer. This area that stretches around the globe is called the “Bean Belt,” according to “Coffee, National Geographic.” The Bean Belt originated in Africa and the cultivation of coffee moved east and west, until a band formed.

The top-ten list of coffee producers has not changed much in the past fifteen years. After the 1997-1998 crop year, the list included Brazil, Colombia, Indonesia, Vietnam, Mexico, Ethiopia, India, Guatemala, Cote d’Ivoire, and Uganda. In first place, Brazil produced 22.5 million 132-pound bags. Uganda, in tenth place, produced 3 million bags (Barker, n.d.). After the 2010-2011 crop season, the list was a little different. It read: Brazil, with 54.5 million bags; Vietnam; Colombia; Indonesia; India; Ethiopia; Honduras and Peru, both with 4 million bags; Guatemala; and Mexico, with 3.7 million bags. Brazil was still in first place, Honduras joined the list, and many countries remained on the top-ten list, however, with a different ranking (Doom, 2011).

It makes sense that these countries would be largest producers of coffee. These areas have tropical climates; they have plenty of water, arable land, and temperatures between 65 and 75 degrees Fahrenheit, which is the ideal temperature for growing coffee. They have the comparative advantage for growing coffee because they can be more efficient when growing the crop, as opposed to a
country outside the tropic zone, since it would be more difficult for them to have a good coffee crop.

The top ten coffee producers are shown in yellow.

http://coffeeteawarehouse.com/coffee-origins.html
Part 2:

Winners and Losers From Trade
ACTIVITY 2

1. Suppose the world price of wheat is $3 per bushel. In Morway, where the government has closed the economy to foreign trade, the price of wheat is $5 per bushel. Now suppose a new government opens Morway to trade. Answer the following questions, which ask about the consequences from doing this.

a. What will happen to the price of wheat in Morway?  Lower
b. Will more or less wheat be consumed in Morway?  More
c. Will more or less wheat be produced in Morway?  Less
d. Will Morway be an importer or exporter of wheat?  Importer
e. Which group(s) in Morway gain as a result of opening trade?  Consumers
f. Which group(s) in Morway lose as a result of opening trade?  Producers
g. Do the gains from opening trade outweigh the losses of doing so? Explain.

There are more consumers of wheat than producers, so the consumers would enjoy the cheaper prices. Jobs could be lost if more wheat is imported, but this number is still smaller than the number of consumers. The people are spending less on wheat so they can now spend it on other things.

2. The diagram to the right shows the Demand for raw sugar and the Supply of raw sugar within Vastland. Use this information in answering the following questions.

a. Without trade, what would be the price of raw sugar in Vastland?  60 cents per pound
b. Without trade, how much raw sugar would be produced and sold in Vastland? 10,000 lbs.

Now suppose the world price of raw sugar is 10¢ per pound, and that Vastland producers are allowed to sell raw sugar in the world market.

c. What would be the price of raw sugar in Vastland after trade is allowed?  10¢ per pound
d. How much raw sugar would be purchased by Vastland consumers after trade is allowed?  2,000 lbs.
e. How much raw sugar would be produced in Vastland after trade is allowed?  1,000 lbs.
f. How much raw sugar would be exported by Vastland sugar producers?  5,000 lbs.
g. Which group(s) in Vastland gain as a result of allowing this trade?  Producers, Vastland government, workers
h. Which group(s) in Vastland lose as a result of allowing this trade?  Consumers, sugar-using companies
i. Do the gains from allowing this trade outweigh the losses? Explain.  For the consumers it could be bad, but for the producers it would be good.
Part 2 B:

The world is increasingly favoring specialty coffee other beverages; the price rise of which became very noticeable in 2010, especially among Arabica Coffee beans. The premium bean’s supply is down while demand is up, creating a shortage in the commodity. Coffee suppliers have to deal with

“real estate pressures, coffee plant diseases and pests, the difficulties inherent in growing Aravica coffee vs. lower grade coffees, climate change causing farmers to move to higher elevations for the cooler weather...and inclement weather including drought as well as floods,”

according to Harrington (2011). In addition, coffee consumption is not elastic relative to coffee price increases. When the prices of coffee were rising in 2010, the demand did not diminish, making the shortage problem worse (Harrington, 2011). Harrington (2011) continues, “The inelasticity of coffee with respect to price increases means that a rise in price will likely not temper the high demand by emerging markets.”

Until 2011, coffee prices were at an all-time high. The most aromatic and widely used coffee bean is the Arabica bean, and it has suffered from unusual weather conditions all over the globe. This hurts supply drastically. On the slopes of Mount Elgon in Uganda, the Arabica bean may no longer be produced at the end of the next decade, due to sharp increases in pests, disease, and unpredictable weather (Butler, 2011).
However, since 2011, prices have dropped drastically; Arabica bean prices have fallen 55% since their high in May, 2011 (Smith, 2013). This is because America acquires most of its coffee from Colombia and Central America, where supply is plentiful. (Fottrell, 2012).
Part 2 C:

The United States imports the highest amount of coffee according to World Map – Top Coffee Importing Countries in the World (n.d.).

### Top Coffee Importing Countries in the World

<table>
<thead>
<tr>
<th>Country</th>
<th>Imports in US$'000 (2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States of America</td>
<td>4,121,228</td>
</tr>
<tr>
<td>Germany</td>
<td>3,344,098</td>
</tr>
<tr>
<td>Italy</td>
<td>1,382,895</td>
</tr>
<tr>
<td>France</td>
<td>1,381,309</td>
</tr>
<tr>
<td>Japan</td>
<td>1,272,614</td>
</tr>
<tr>
<td>Belgium</td>
<td>1,204,122</td>
</tr>
<tr>
<td>Canada</td>
<td>789,431</td>
</tr>
<tr>
<td>Spain</td>
<td>752,415</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>631,785</td>
</tr>
<tr>
<td>Austria</td>
<td>454,791</td>
</tr>
</tbody>
</table>

*Source: FAO Statistical Yearbook 2016

http://www.ico.org/prices/po.htm

<table>
<thead>
<tr>
<th>Coffee year</th>
<th>US$ billion</th>
<th>Million bags</th>
<th>US Cents/lb FOB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999/00</td>
<td>8.7</td>
<td>89.4</td>
<td>74</td>
</tr>
<tr>
<td>2000/01</td>
<td>5.8</td>
<td>90.4</td>
<td>49</td>
</tr>
<tr>
<td>2001/02</td>
<td>4.9</td>
<td>86.7</td>
<td>43</td>
</tr>
<tr>
<td>2002/03</td>
<td>5.5</td>
<td>88.2</td>
<td>47</td>
</tr>
<tr>
<td>2003/04</td>
<td>6.4</td>
<td>88.8</td>
<td>55</td>
</tr>
<tr>
<td>2004/05</td>
<td>8.9</td>
<td>89.0</td>
<td>76</td>
</tr>
<tr>
<td>2005/06</td>
<td>10.1</td>
<td>87.9</td>
<td>87</td>
</tr>
<tr>
<td>2006/07</td>
<td>12.5</td>
<td>98.4</td>
<td>96</td>
</tr>
<tr>
<td>2007/08</td>
<td>15.0</td>
<td>96.1</td>
<td>118</td>
</tr>
<tr>
<td>2008/09</td>
<td>13.5</td>
<td>97.4</td>
<td>105</td>
</tr>
<tr>
<td>2009/10</td>
<td>15.4</td>
<td>93.4</td>
<td>125</td>
</tr>
</tbody>
</table>

http://www.ico.org/trade_e.asp

However, coffee is second to oil as the most traded commodity (Carrier, n.d), it is the most widely traded tropical agricultural commodity. According to International Coffee Organization – World Coffee Trade (n.d.), coffee accounted for $15.4 billion in
exports in 2009-2010, with 93.4 million bags of coffee shipped.

Coffee is usually traded with “future contracts” through the New York Board of Trade (Carrier, n.d.). Carrier (n.d) continues, "A futures contract is a standardized contract, to buy or sell a certain underlying instrument at a certain date in the future, at a specified price." He says that coffee future contracts involve 37,5000 pounds of green coffee. "It is in these future...contracts where the global price for coffee is discovered on any given day." The contract pricing is driven by changing weather conditions, political turmoil, speculation about production levels, transportation costs, and other unexpected factors (Carrier, n.d). Carrier adds,

"That word, 'unexpected' is key. For example, news of a possible drought or freezing conditions in coffee producing areas would likely reduce global supply and thereby increase prices. Assuming demand stays the same, the decreased supply would drive up prices in order to achieve a market-clearing price."

Carrier (n.d.) adds, "Truly, the price of coffee is a daily, even minute-by minute discovery process."

Brazil is the top exporter of coffee, with 43,484 bags, as shown in the table below.
<table>
<thead>
<tr>
<th>RANK</th>
<th>COUNTRY</th>
<th>TOTAL PRODUCTION (000 Bags)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brazil</td>
<td>43,484</td>
</tr>
<tr>
<td>2</td>
<td>Vietnam</td>
<td>20,000</td>
</tr>
<tr>
<td>3</td>
<td>Indonesia</td>
<td>8,250</td>
</tr>
<tr>
<td>4</td>
<td>Colombia</td>
<td>7,800</td>
</tr>
<tr>
<td>5</td>
<td>Ethiopia</td>
<td>6,500</td>
</tr>
<tr>
<td>6</td>
<td>Peru</td>
<td>5,443</td>
</tr>
<tr>
<td>7</td>
<td>India</td>
<td>5,333</td>
</tr>
<tr>
<td>8</td>
<td>Honduras</td>
<td>4,500</td>
</tr>
<tr>
<td>9</td>
<td>Mexico</td>
<td>4,300</td>
</tr>
<tr>
<td>10</td>
<td>Guatemala</td>
<td>3,750</td>
</tr>
</tbody>
</table>

Year: 2011  
Source: International Coffee Organization

However, when the share of coffee exports per country in relation to their overall export earnings, Burundi has the highest percentage—59%. Coffee is also extremely valuable to some developing nations, like Burundi (Fairtrade International, 2011). They add “most of the coffee-dependent workers worldwide are in developing countries” (Fairtrade International, 2011).

**Average share of coffee exports in total export earnings**

![Graph showing average share of coffee exports in total export earnings](www.ico.org/trade_e.asp)
Some people are concerned about the small farm coffee producers. A recent study from Germany’s University of Hohenheim says that many farmers producing for the fair-trade market “are more often found below the absolute poverty line than conventional producers” (Soloman, 2013). Fairtrade International (2011) mentions, “for many of the world’s 25 million coffee farmers, coffee is a labor intensive crop that frequently yields very little financial return.” However, as mentioned above, coffee is vitally important to developing nations as a whole.
Part 3:

Trade Barriers and Policy
ACTIVITY 3

1. Consider the diagram to the right in answering the following questions. It shows the Demand and Supply of bort within Morway. Assume that the world price of bort is $2 per bushel.

a. Without trade:
   - What would be the price of bort? $4
   - How much bort would be produced by Morway producers? 5 million bushels
   - How much bort would be consumed by Morway consumers? 5 million bushels

b. With free trade:
   - What would be the price of bort? $2
   - How much bort would be produced by Morway producers? 1 million bushels
   - How much bort would be consumed by Morway consumers? 7 million bushels

c. With a 50% tariff on each bushel of bort:
   - What would be the price of bort? $3.00
   - How much bort would be produced by Morway producers? 3 million
   - How much bort would be consumed by Morway consumers? 5 million
   - How much revenue would the government of Morway earn? $3 million

d. In terms of gains from trade, rank the three situations described above (a-c) from the most beneficial to the least beneficial for Morway as a whole: b, c, a

2. The United States has trade barriers on the importation of sugar.

a. What is the likely impact of these barriers on the price, consumption, and production of sugar in the United States? Price will go up. Consumption will go down, and production will increase.

b. Whom do these barriers help? Whom do they harm? They help the producers. They hurt the consumers.

c. How do they affect the United States as a whole? It will protect the sugar industry.
Part 3 B:

The United States of America does not place tariffs or quotas on coffee, tea, or spices; there is no limit to how much you can bring into the country. Some products that contain these materials may have some restrictions or special duties, like sauces, syrups, or soups (Importing Tea, Coffee, and Spices for Commercial Purposes, 2012).

Although there are no restrictions on the importation of coffee, it may be subject to, according to “Importing Tea, Coffee, and Spices for Personal Use” (2012), “Animal and Plant Health Inspection Services” (APHIS) and inspections by the Food and Drug Administration (FDA) if a Customs and Border Protection (CBP) Officer suspects contamination or insect infestation of the product.”

The United States does place a number of quotas and tariffs on commodities, but coffee is not among them.

**Tariff-Rate Quotas - General Agreement on Tariffs and Trade** Presidential Proclamation 6763 implemented the General Agreement on Tariffs and Trade (GATT) Uruguay Round Agreements, including tariff-rate quota limits for the following commodities (see HTSUS provisions cited in italics for detailed information):

- Animal Feed (Chapter 23, Additional U.S. Note 2)
- Articles Containing Over 10 Percent By Dry Weight of Sugar Described in Chapter 17, Additional U.S. Note 2 (Chapter 17, Additional U.S. Note 8)
- Articles Containing Over 65 Percent By Dry Weight of Sugar Described in Chapter 17, Additional U.S. Note 2 (Chapter 17, Additional U.S. Note 7)
- Beef (Chapter 2, Additional U.S. Note 3)
- Blended Syrups (Chapter 17, Additional U.S. Note 9)
- Canadian Cheddar Cheese (Chapter 4, Additional U.S. Note 18)
- Card Strips Made from Cotton (Chapter 52, Additional U.S. Note 9)
- Chocolate (Chapter 18, Additional U.S. Note 2)
- Chocolate and Low Fat Chocolate Crumb (Chapter 18, Additional U.S. Note 3)
- Cocoa Powder (Chapter 18, Additional U.S. Note 1)
- Cotton [Staple length > 28.575mm but < 34.925mm] (Chapter 52, Additional U.S. Note 7)
- Cotton [Staple length 34.925mm or more] (Chapter 52, Additional U.S. Note 8)
- Dairy Products (Chapter 4, Additional U.S. Note 10)
- Dried Milk and Dried Cream (Chapter 4, Additional U.S. Note 9)
• Dried Milk, Dried Cream, Dried Whey (in excess of 224,961 kilograms) (Chapter 4, Additional U.S. Note 12)
• Fibers of Cotton (Chapter 52, Additional U.S. Note 10)
• Harsh or Rough Cotton (Chapter 52, Additional U.S. Note 6)
• Ice Cream (Chapter 21, Additional U.S. Note 5)
• Infant Formula (Chapter 19, Additional U.S. Note 2)
• Milk and Cream (Chapter 4, Additional U.S. Note 5)
• Milk and Cream (Condensed or Evaporated) (Chapter 4, Additional U.S. Note 11)
• Mixed Condiments and Mixed Seasonings (Chapter 21, Additional U.S. Note 4)
• Mixes and Doughs (Chapter 19, Additional U.S. Note 3)
• Peanut Butter and Paste (Chapter 20, Additional U.S. Note 5)
• Peanuts (Chapter 12, Additional U.S. Note 2)
• Raw Cotton [Staple length < 28.575mm] (Chapter 52, Additional U.S. Note 5)
• Sugars (Raw, Refined, Specialty, Including Sugar Cane) (Chapter 17, Additional U.S. Note 5)
• Tobacco (Chapter 24, Additional U.S. Note 5)

Tariff-Rate Quotas - Harmonized Tariff Schedule of the United States

• Brooms (9603)
• Whiskbrooms (9603.10.05)
• Other Brooms (9603.10.40)
• Ethyl Alcohol (9901.00.50)
• Milk and Cream (0404.20.20)
• Olives (Chapter 20)
• Satsumas (Mandarins) (2008.30.42)
• Tuna (1604.14.22)
• Upland Cotton (9903.52)
• Worsted Wool Fabric
• Cotton Shirting Fabric


According to Arabica coffee manual for Lao PDR (n.d.), exporting members shall not export coffee that:

a) “for Arabica, has in excess of 86 defects per 300 g sample” and, “for Robusta, has in excess of 150 defects per 300 g (Vietnam, Indonesia, or equivalent)”

b) “for both Arabica and Robusta, has a moisture content below 8 percent or in excess of 12.5 percent”

They also state, “Exceptions to the 12.5 percent maximum moisture content shall be permitted for specialty coffees that traditionally have a high moisture content, e.g
Indian Monsooned coffees. Such coffees shall be clearly identified by a specific grade nomenclature.”
Part 3 C:

The United States, Canada, European Union, and Japan, some of the world’s leading importers of coffee, do not levy any duties on green coffee imports, according to The Coffee Guide – Tariff barriers (n.d). The Coffee Guide – Tariff barriers (n.d) continues, “The US and Canada also do not levy import duties on processes coffee (roasted, soluble.)” The Russian Federation does levy a tariff on roasted coffee imports at a rate of 10% with a minimum of 0.20 Euros per kilogram (The Coffee Guide – Tariff barriers, n.d). Spain also imposes tariffs on coffee.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Spain’s present tariff treatment for unroasted non-decaffeinated coffee beans (Royal Decree 1764/79 - Tariff No. 09.01. A.1a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product description</td>
<td>Duty rate</td>
</tr>
<tr>
<td>1. Columbian mild</td>
<td>Free</td>
</tr>
<tr>
<td>2. Other mild</td>
<td>Free</td>
</tr>
<tr>
<td>3. Unwashed Arabic</td>
<td>7 per cent ad. val.</td>
</tr>
<tr>
<td>4. Robusta</td>
<td>7 per cent ad. val.</td>
</tr>
<tr>
<td>5. Other</td>
<td>7 per cent ad. val.</td>
</tr>
</tbody>
</table>


The United Kingdom also places tariffs on coffee. As indicated by the table below, it has varied depending on the year (Nishijima & Saes, 2007).

| Table 2: Tariffs applicable to Brazilian soluble coffee in the EU |
| YEAR | Tariff |
| 1991 to 31.12.96 | 9,0% |
| 01.01.97 to 30.06.97 | 10,1% |
| 01.07.97 to 31.12.97 | 9,1% |
| 01.01.98 to 30.06.98 | 9,1% |
| 01.07.98 to 31.12.98 | 8,0% |
| 01.01.99 to 31.12.99 | 10,5% |
| 01.01.2000 onwards | 9,0% |

Part 4:

Trading Currencies
ACTIVITY 4

1. Consider the diagram to the right in answering the following questions. The diagram shows the Demand and Supply for vots, the currency of Morway.

   a. What is the equilibrium exchange rate of dollars ($) for vots (V)? \(1 \text{ V} = \$ \, \frac{1}{2}\)

   b. What is the equilibrium exchange rate of vots for dollars? \(1 \text{ dollar} = \frac{1}{2} \text{ V}\)

   c. At a price of $3.00 per vot, is there a surplus or shortage of vots? **Surplus**

   d. Assuming flexible exchange rates, would a vot likely appreciate or depreciate if its current price were $3.00 per vot? **Depreciate**

2. Listed below are several events. For each, circle whether the Demand or Supply of vots has changed, in which direction it has changed (Increase or Decrease), and whether this would lead to an Appreciation or Depreciation in the value of a vot.

   a. Interest rates in Morway rise relative to that in other countries (including the U.S.).

      Circuit: Demand or Supply

      Increase or Decrease

      Appreciation or Depreciation

   b. A recession hits Morway.

      Circuit: Demand or Supply

      Decrease

      Appreciation or Depreciation

   c. Morway-produced products become recognized as being of very high quality.

      Circuit: Demand or Supply

      Increase

      Appreciation or Depreciation

   d. Inflation rates in the U.S. fall relative to those in Morway.

      Circuit: Demand or Supply

      Decrease

      Appreciation or Depreciation

   e. Speculators begin selling vots.

      Circuit: Demand or Supply

      Decrease

      Appreciation or Depreciation

   f. There is decreased investment in Morway due to political unrest there.

      Circuit: Demand or Supply

      Decrease

      Appreciation or Depreciation

3. Suppose Morway is an exporter of cocoa. Select any one of the events above and describe the likely effect of the exchange rate change on both Morway's cocoa exports and its net exports. **If a recession hits Morway, the demand for vots will decrease, so the demand for cocoa from Morway will drop, as well as its other exports.**
Part 4 B:

As the world's top coffee producer, Brazil closely regulates its economy and exchange rate (Leahy, 2012). Leahy (2012) adds that Brazil is operating a “dirty float,” allowing its currency to move within a very small margin at about R$2-R2.10 to the dollar. This is similar to Colombia or China and their monetary polices (Leahy, 2012). “This tight control over its exchange rate marks a new phase in what Brazil has called the currency war, in which it has accused its trading partners of deliberately weakening their currencies to make their exports more competitive” (Leahy, 2012). These new currency controls are intended to “curb foreign inflows,” because there was concern the strong currency was hurting Brazil’s industrial ability to “compete on export markets and with imports” (Leahy, 2012).

Source: http://www.libertytradinggroup.com
Part 4 C:

If Brazil's currency gained strength, its products would become more expensive for its buyers, according to "How does exchange rate changes affect imports and exports" (n.d.). Inversely, if the currency loses strength, any imports become relatively more expensive (How does exchange rate changes affect imports and exports, n.d.).

In addition, according to "Exchange rate policy," (n.d.), "Whenever the exchange rate changes, there will be a double effect, on both import and export prices." These changes also affect the volumes of imports and exports, which cause changes in "import spending and export revenue" (Exchange rate policy, n.d.).

According to Auboin and Ruta (2011), "As indicated by the OECD [Organization for Economic Cooperation and Development], the economic crisis has had a 'differentiated impact on the world economies and on their trade, thereby changing trade patterns in some cases.'" If the currency were to gain strength in Brazil, its products would be more expensive; therefore, the coffee producers would charge and earn more per bag, but buyers may be reluctant to pay the higher prices. However, if the demand for the coffee was still high, then the consumers of the coffee would be hurt by the higher prices, because they would have to pay those prices in order to purchase the coffee.
Conclusion:

At the beginning of this project, I never imagined there was so much to learn about coffee. I learned statistics, like what countries are the top exporters and importers. I learned about the strength of a currency, and how that affects a product’s price. I did not know that the stronger a currency becomes, the more expensive its exports will be. Before this product, I always assumed that a strong currency was a good thing, but now I know that a currency can be too strong, as demonstrated by the Brazilian monetary policy.

Now, as I drink my morning cup of coffee, I will always think about the small farmers, who labored over these beans, often picking the coffee cherries by hand; the future contract that had to be drawn up for the coffee to become obtainable to me; the politics involved with keeping goods competitive, as well as exchange rates; and finally, the demand and supply of coffee, and how my demand for this cup of coffee affected the world economy on a small scale. But no matter how small a difference I may make, I am a coffee drinker in the largest importer of coffee in the world! And together, we pack quite a punch on coffee demand, just like our strong, Minnesotan, caffeinated coffee.
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commercial-purposes


Where the Coffee is Grown - Mocha, Colombian, Java, Hawaiian Kona, Costa Rican Tarrazu. (n.d.). Coffee Beans - Buy top quality coffee online in Ireland and