
Comparative Advantage



Definitions



❖ Absolute advantage

- ✓ This is enjoyed by a country when it is able to **produce more of a good** with the same amount of resources.

❖ Comparative advantage

- ✓ This is enjoyed by a country when it is able to **produce a good at a lower opportunity cost** than other countries (it is relatively **cheaper to produce** that good in that country than elsewhere)

Definitions

❖ Opportunity Cost

✓ The best alternative foregone.



Discussion



❖ **Imagine:**

✓ **You are all members of 1 big family.**

❖ **Task:**

✓ **Today is your mother's birthday. To give her a surprise, you want to:**

- 1. Clean up the whole house;**
- 2. Decorate the house; &**
- 3. Prepare a birthday cake.**



Discussion



❖ Limitation:

❖ You don't have much time, so you need to be very quick & efficient in doing these 3 jobs.

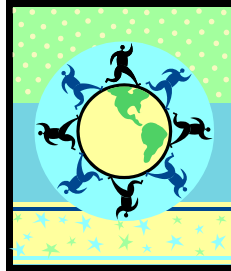


❖ How would you accomplish the tasks?

❖ What criteria would you use to divide up the work?

•Ask students to give some of the reasons why people trade with each other, write answers on the board. Do not comment at this point.

Game for International Trade!



Game Rules

❖ **Divide into 4 groups.**

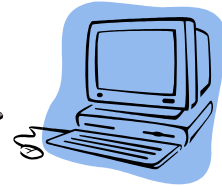
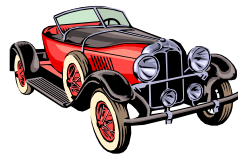
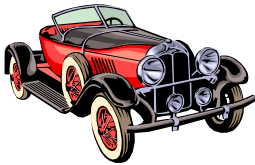
❖ **Each group of you will represent the following producer groups within the economy:**

❖ **Group 1: Korean car manufacturers**

❖ **Group 2: Korean computer manufacturers**

❖ **Group 3: Taiwan car manufacturers**

❖ **Group 4: Taiwan computer manufacturers**



- Now, I will divide you into 4 groups (with equal number of students in each group, if possible). Each group of you will represent the following producer groups within the economy (you can ask them to wear badges/stick labels to differentiate):
 - Group 1: Korean car manufacturers
 - Group 2: Korean computer manufacturers
 - Group 3: Taiwan car manufacturers
 - Group 4: Taiwan computer manufacturers

Game Rules

❖ **You are producers in an economy where produces only 2 goods :**

❖ **Cars**

❖ **Computers**



❖ **Each productive resource (PR) required is a composite of land, labor, and capital.**

❖ **You will try to produce as many cars and computers as you can.**

- You are going to be producers in an economy where there are only two goods: cars and computers. One productive resource (refer to Appendix I) is a composite of land, labor, and capital. You will try to produce as many cars and computers as you can.

Productivity Pattern

	Korea	Taiwan
100 cars	2 PRs	4 PRs
1000 computers	3 PRs	4 PRs

- But please note that:
 - producing 100 cars requires 2 units of the productive resources (PR) in Korea and 4 units in Taiwan
 - producing 1000 computers requires three units of PR in Korea and four in Taiwan.

PR Cards & Product Cards



2 PRs



100 Cars



3 PRs



1000 Computers



4 PRs

•Provide the 4 groups of producers with the following number of resource cards (which they can divide among themselves within their group equally).

•Group 1: Korea car manufacturers: 26 2-unit-PR cards (total number of PR: 52)

•Group 2: Korea computer manufacturers: 12 3-unit-PR cards (total number of PR: 36)

•Group 3: Taiwan car manufacturers: 13 4-unit-PR cards (total number of PR: 52)

•Group 4: Taiwan computer manufacturers: 9 4-unit-PR cards (total number of PR: 36)

Game Rules

❖ Set up 4 tables representing:

❖ Korea Car Factory

❖ Taiwan Car Factory

❖ Korea Computer Factory

❖ Taiwan Computer Factory



❖ Assign 1 student from each group to staff its own table representing its own factory.

❖ These 4 staffs will be responsible for exchanging the PR cards receive from producers during the game for product cards.

❖ Follow the productivity pattern outlined above.

•Provide each of the factories with the following set of product cards (refer to Appendix I):

•26 “100 CARS” cards for each of the car factories.

•12 “1000 COMPUTERS” cards for each of the computer factories.

Round 1

❖ **Each nation should be self-sufficient -- international trade is prohibited.**

❖ **Manufacturing groups can produce goods by going to their factories and turning in some of their resource cards (be sure to follow the productivity pattern!).**

To give up 100 Korean Cars



➔ More resources to produce 1000 Korean Computer

- Let students exchange their resource cards for the product cards until all the resource cards are turned in at the factories.

Total production

	Korea	Taiwan	Total
Cars			
Computer			
Total			

- Ask students also to calculate
 - the total production of cars and computers within their countries and
 - the total production of cars and computers by the countries. (That is adding up the total number of cars produced in the two countries as well as the total number of computers.)

Discussion

❖ **Why were Koreans able to produce more cars and more computers during this round?**

- ✓ **Absolute Advantages.**
- ✓ **Koreans have an absolute advantage in producing both cars and computers.**
- ✓ **Koreans can produce more cars and more computers with the same resources than Taiwanese.**

•Why were Koreans able to produce more cars and more computers during this round? (Write down students' answers on board.)

•Teacher explains *absolute advantages* here: according to this example Koreans have an absolute advantage in producing both cars and computers. That is, they can produce more cars and more computers with the same resources than Taiwanese.

Discussion

❖ **Could Koreans gain by trading with the Taiwanese as Koreans are more efficient in the production of 2 goods?**

- ✓ **Comparative Advantages**
- ✓ **The concept of comparative advantage relates to the opportunity cost involved in producing more of one good and less of another.**
- ✓ **The cost of producing computers is the cars that could have been produced but were not.**

•Teacher introduces comparative advantages here.

•The concept of comparative advantage relates to the opportunity cost involved in producing more of one good and less of another. The cost of producing computers is the cars that could have been produced but were not.

•Using the 3 units of PR required to produce 1000 computers in the Koreans require sacrificing the production of 150 cars.

•Using the 4 units of PR required to produce 1000 computers in Taiwan requires sacrificing only 100 cars.

•So even though Koreans have an absolute advantage in producing computers, Taiwanese have a comparative advantage. Put another way, Taiwanese produce computers for only two-thirds as much as it costs in Korea. The Koreans, on the other hand, have a comparative advantage over Taiwanese in the production of cars. Producing 100 cars here costs 666 computers, while producing 100 cars in Taiwanese costs 1000 computers.

Free Trade

- ❖ Both nations should **specialize in the production and export** of that good in which it has a **comparative advantage**, and **import** the other one from the other nation in which its **advantage is less**.



Discussion

❖ Why producers have different opportunity costs?

- ✓ **Different producers work in different environments with different endowments of productive resources.**



- Ask students why they think producers have different opportunity costs?
 - They work in different environments with different endowments of productive resources – warmer climates and longer growing seasons; more plentiful natural resources such as oil, iron ore and water; more highly educated and skilled workers; and larger quantities of more sophisticated machinery.

Round 2

❖ **If you 2 countries can trade your products, each country need not produce both goods yourself.**

❖ **You can specialize in producing one good according to your comparative advantages.**



❖ **So, what should Korean specialize in producing and what should Taiwanese specialize in?**

- Now if you two countries can trade your products, each country need not produce both goods yourself. You can specialize in producing one good according to your comparative advantages (discussed and calculated above). So in this round, what should Korean specialize in producing and what should Taiwanese specialize in?
 - For those workers in the industry which doesn't have comparative advantage, please go and work in the industry which has comparative advantage in your country. (The Korean computer makers and Taiwanese car manufacturers should join in car industry and computer industry respectively in their countries.)
- Provide them with the following set of resource cards (which they can divide among themselves within their group equally):
 - Group 1: Korean car manufacturers: 26 2-unit-PR & 12 3-unit-PR cards (total number of PR: 88)
 - Group 2: Taiwanese computer manufacturers: 9 4-unit-PR cards & 13 4-unit-PR (total number of PR: 88)

Total Production

	Round 1 Total	Round 2 Total	Total net gain through specialization & free international trade
Cars			
Computers			

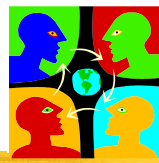
- Ask students to calculate the total production of cars and computers in their economy in round two with specialization.

Discussion



- ❖ **Compare the results of round 1 & 2. Why are both countries better off in Round 2?**
 - ✓ **Free trade allows specialization which can generate more output of both products.**
 - ✓ **It allows manufacturers in both countries to specialize in the production of that good in which they had a comparative advantage, and import the other good from the other country.**

Discussion



- ❖ **For students as the original group of Korean computer manufacturers & Taiwanese car manufacturers, what was your feeling during when you lost your original job and had to move to another industry?**

- ❖ **What do you think it would happen to those kinds of manufacturers in **real life**?**

- ❖ **Since manufacturers in the **declining industry will lose money**, isn't it better to move jobs and resources **to where they have more productive uses under free trade**?**

- They might close down, causing a temporary increase in unemployment, known as structural unemployment, as workers in the declining industry move to jobs in the expanding industry.

Discussion

- ❖ **What would the employment situation be without free trade?**
 - ✓ **Without free trade**, the Koreans & Taiwanese would each employ workers in the car and computer industries.
 - ✓ Many workers in each country would be doing jobs for which they have **no comparative advantage**, and in which they are **less productive** than they could be.
 - ✓ **When trade is free**, these workers are re-directed into jobs where they are **more productive & receive higher pay**, since the compensation workers received ultimately depends on how productive they are.

Conclusion

❖ **Why are people specialize in production & trade?**

❖ **Why are people free to trade with whomever they wish?**



•It might be effective to close this lesson by returning to students' suggestions about why it is that people specialize and trade.

•Ask them once again, why is it that people should be free to trade with whomever they wish? You should emphasize that the real world is much more complex than the two-country, two-product simulation they engaged in here. However, the lesson learned here applies even more when the number of possible trading partners increases.

