

## HW 2

Sunday, September 5, 2021 2:17 AM

CASON  
KONZER



## ECN 360 Homework #2, Fall 2021

ECN 360, Homework #2  
Due 9/23/2021

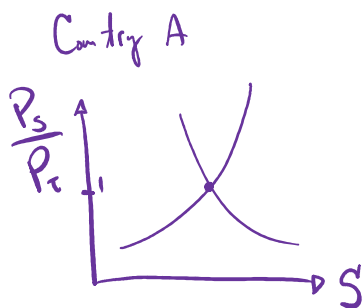
**Directions:** Answer the questions on a separate piece of paper. Please be neat! Submit your homework assignment to me via email at: [ccdougla@umich.edu](mailto:ccdougla@umich.edu) A .pdf is preferred, though any file works in practice.

1. Suppose that in world markets, the relative price of S is lower than Country A's autarky price. Would A be a net exporter or importer of S? What would be the case for good T in Country A in this situation?
2. Suppose that Country A produces two goods under conditions of constant opportunity costs. Given its resources, the maximum S that it can make is 500 units and the opportunity cost of making one unit of T is 2 units of S. What is the maximum amount of T that Country A can produce? Draw a graph and explain, and be clear about what the slope of the graph you draw represents.
3. Recall the discussion in class about general equilibrium for an economy characterized by a **bowed out** production possibilities frontier.
  - a. Draw this production possibilities frontier with S on the x-axis and T on the y-axis. Using the production possibilities frontier, price line, and community indifference curve, draw the economy in general equilibrium.
  - b. In general equilibrium, what is the intuition for community indifference curve being tangent to the production possibilities frontier?
  - c. In general equilibrium, what is the intuition for the price line being tangent to the production possibilities frontier?
  - d. Now, suppose consumer preferences for T increase relative to S (this is the exact opposite of the case we discussed in class).
    - (i) How do the indifference curves change as a result? What is the intuition for this?
    - (ii) Draw this new indifference curve on the graph. Your new general equilibrium point should consist of more T and less S than the general equilibrium point in part (a). Clearly state the intuition on how the economy moves from the general equilibrium point in part (a) to this new general equilibrium point.
4. Suppose an economy is characterized by constant opportunity costs so that  $P_S/P_T$  equals 1.5. Use this to derive the economy's national supply curve for S. How does it differ from the national supply curve in Figure 2.8 in Chapter 2? Explain.

4. Suppose an economy is characterized by constant opportunity costs so that  $P_S/P_T$  equals 1.5. Use this to derive the economy's national supply curve for S. How does it differ from the national supply curve in Figure 2.8 in Chapter 2? Explain.

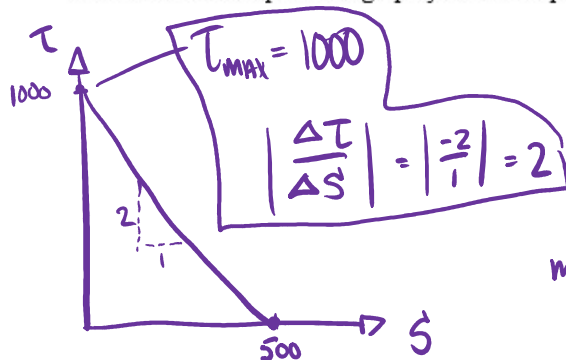
## HW #2

1. Suppose that in world markets, the relative price of S is lower than Country A's autarky price. Would A be a net exporter or importer of S? What would be the case for good T in Country A in this situation?



Country would be a net importer of good S & a net exporter of good T.

2. Suppose that Country A produces two goods under conditions of constant opportunity costs. Given its resources, the maximum S that it can make is 500 units and the opportunity cost of making one unit of T is 2 units of S. What is the maximum amount of T that Country A can produce? Draw a graph and explain, and be clear about what the slope of the graph you draw represents.



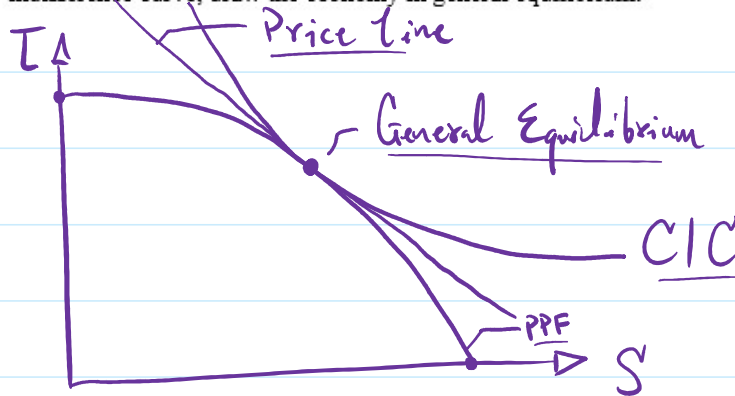
$$2S = T$$

$$2[500] = 1000$$

The slope represents how much of good T one must give up a single good S.

3. Recall the discussion in class about general equilibrium for an economy characterized by a bowed out production possibilities frontier.
- a. Draw this production possibilities frontier with S on the x-axis and T on the y-axis. Using the production possibilities frontier, price line, and community indifference curve, draw the economy in general equilibrium.

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- b. In general equilibrium, what is the intuition for community indifference curve being tangent to the production possibilities frontier?

\* Consumers have the maximum amount of possible utility.

- c. In general equilibrium, what is the intuition for the price line being tangent to the production possibilities frontier?

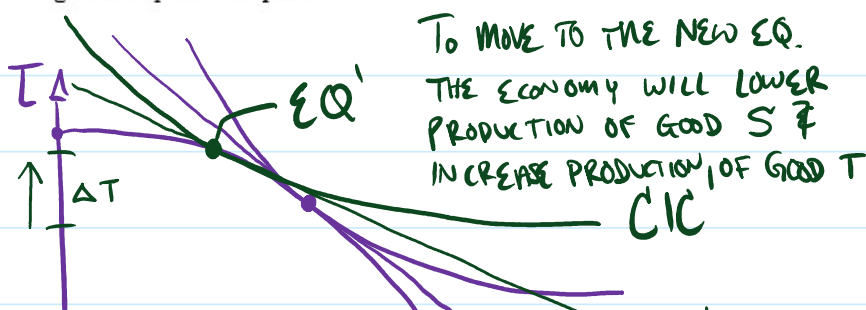
\* The amount a consumer will give up of one good for another is relative to the price of the 2 goods.

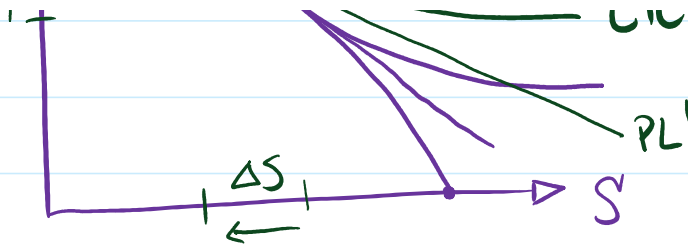
- d. Now, suppose consumer preferences for T increase relative to S (this is the exact opposite of the case we discussed in class).

- (i) How do the indifference curves change as a result? What is the intuition for this?

\* Indifference curves will rotate as the utility provided by T has increased

- (ii) Draw this new indifference curve on the graph. Your new general equilibrium point should consist of more T and less S than the general equilibrium point in part (a). Clearly state the intuition on how the economy moves from the general equilibrium point in part (a) to this new general equilibrium point.





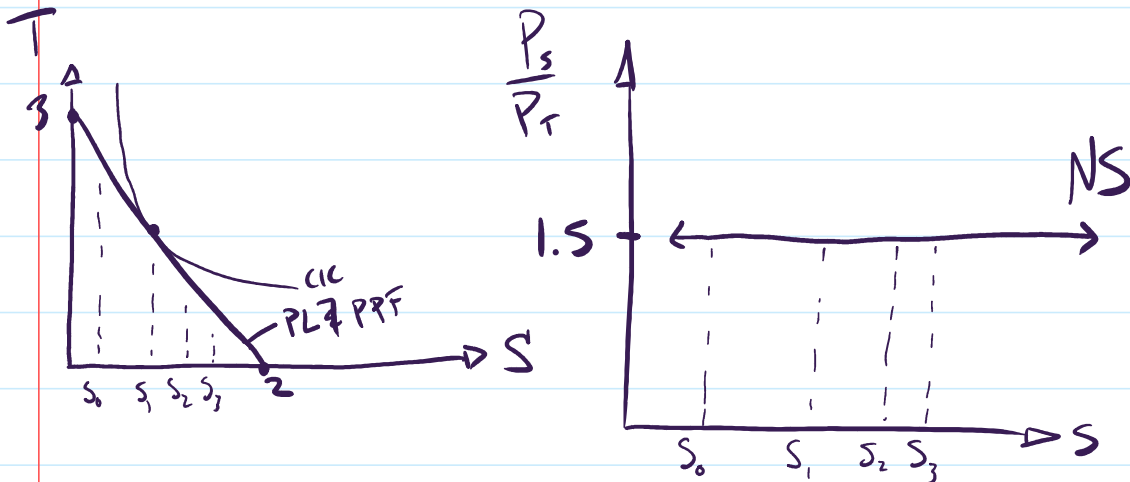
AS DEMAND HAS INCREASED FOR T & FELL FOR S; THE PRICES WILL FOLLOW.

THUS  $P_S/P_T$  WILL DECREASE TO  $PL'$

$$\star \frac{P_S - |\Delta P_S|}{P_T + |\Delta P_T|} = \frac{P'_S}{P'_T} \star$$

4. Suppose an economy is characterized by constant opportunity costs so that  $P_S/P_T$  equals 1.5. Use this to derive the economy's national supply curve for S. How does it differ from the national supply curve in Figure 2.8 in Chapter 2? Explain.

ex.  $\frac{P_S}{P_T} = 1.5$  let  $P_S = \$1.5$  &  $P_T = \$1$   
w/ \$3, 2S:3T



BECAUSE THE RELATIVE PRICE IS CONSTANT;

THE SUPPLY OF S IS CONSTANT. THIS

DIFFERS FROM 2.8 AS IN 2.8 THERE IS A VARIABLE OPPORTUNITY COST BASED ON VARIOUS BUNDLES.  $\therefore$  THE PRICE LINE &

is its variable opportunity cost based on various bundles.  $\therefore$  The price line & relative price changes for various amounts of S produced.