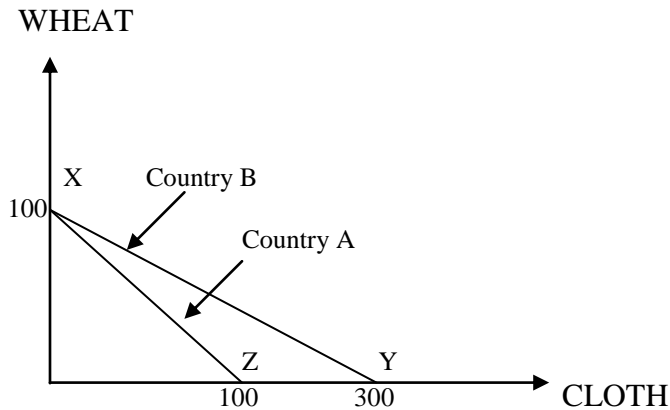


Opportunity Cost, Specialization and Gains from Trade

Problem (APT'99, P2)



Assume that Countries A and B have equal amounts of resources and identical technologies. Country A can produce 100 bushels of wheat or 100 yards of cloth or any combination, as shown by the line XZ in the figure above. Country B can produce 100 bushels of wheat or 300 yards of cloth or any combination, as shown by the line XY in the figure above.

- Which country has an absolute advantage in the production of wheat and which has an absolute advantage in the production of cloth? Explain how you determined your answer.
- Which country has a comparative advantage in the production of wheat and which has a comparative advantage in the production of cloth? Explain how you determined your answer.
- With specialization and trade, which country will import wheat? Explain why.
- Assume that the two countries trade, and that one bushel of wheat is exchanged for two yards of cloth. Explain why the country that imports wheat will gain from trade.

Sample answer:

- a) Since with equal amounts of resources and identical technologies both countries can produce the same quantity of wheat, neither of them has an absolute advantage in wheat production. However, country B is better at (has an absolute advantage in) the production of cloth in so far as using the same amount of inputs it can make more cloth than country A (300 yards compared to 100 yards)
- b) To produce a bushel of wheat country A has to sacrifice 1 yard of cloth, as the slope of its PPF shows. At the same time, in country B the production of one additional bushel of wheat would require some 3 yards of cloth to be given up. Thus, the opportunity cost of wheat in country A is 1 yard of cloth per bushel, whereas in country B it is 3 yards of cloth per bushel, which means that country A indisputably has a comparative advantage in wheat production. Alternatively, country B has a lower opportunity cost of cloth ($1/3$ bushels of wheat per yard compared to 1 bushel per yard in country A) which gives it a comparative advantage in its production.
- c) If trade between the two countries is possible then each of them will specialize in the production of the good which it has a comparative advantage in and import the good which it produces less efficiently. Thus, country B will make cloth, exporting it to country A and importing wheat.
- d) In the absence of trade the only way for country B to increase its consumption of wheat by 1 bushel would be to give up 3 yards of cloth (this is the opportunity cost of wheat for country B). On the other hand, it can buy the same bushel of wheat from country A in exchange for only 2 yards of cloth, which is obviously a fair deal for country B. Thus, by specializing exclusively in the production of cloth and exchanging it with country A for wheat, people in B can enjoy more of both goods.