
HOMEWORK 1

KEY

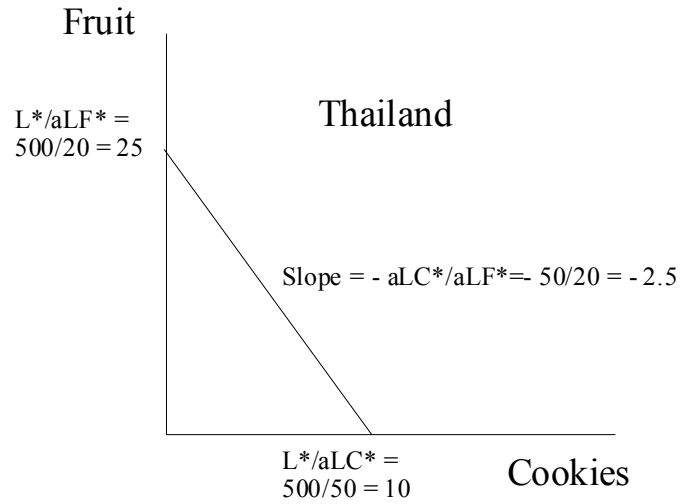
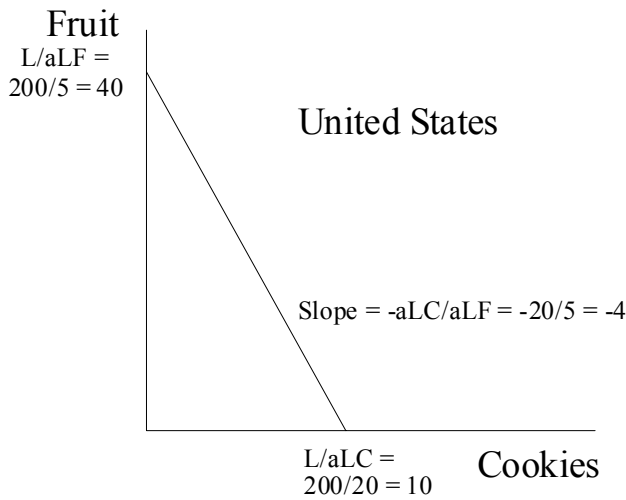
ECN 481/581

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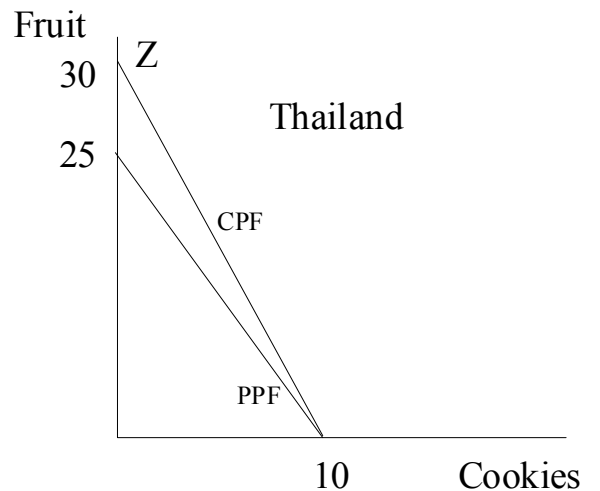
Due Date: Wed., January 25

1a) U.S. has comparative advantage in fruit, since each F costs $1/4$ C in the U.S., while each F costs $2/5$ C in Thailand. Therefore, the U.S. has a lower price of fruit and will export fruit. Thailand has comparative advantage in cookies, since each C costs $5/2$ F in Thailand, while each C costs $4F$ in the U.S.. Therefore, Thailand has a lower price of cookies and will export cookies.

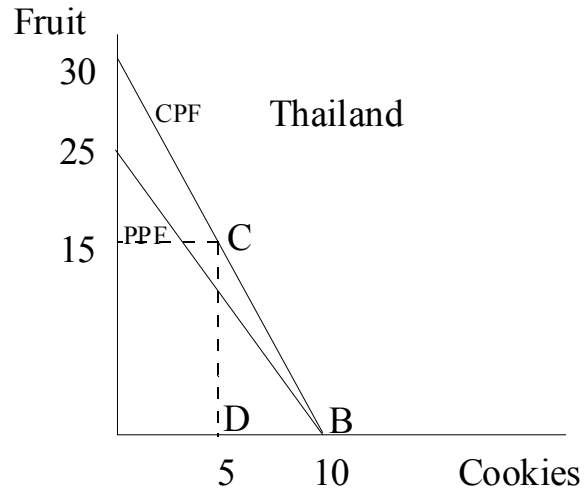
1b) Graphs below.



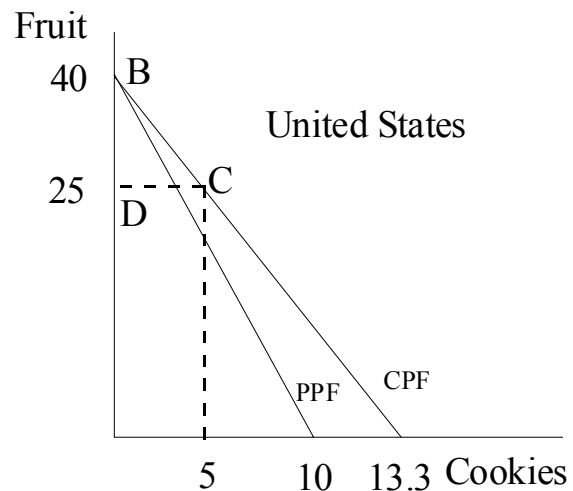
1c) If Thailand produced only cookies, they could produce 10 as we can see in 1b) above. If they sold all these cookies at the price of 3, they could get 30 fruit, which corresponds to point Z in the graph to the right.



1d) Given the information, Thailand would produce at point B and consume at point C in the graph to the right. The trade triangle would be triangle BDC. Thus, Thailand would be exporting 5 cookies to get 15 fruit.



Analogously, a graph of the U.S.'s PPF, CPF and trade triangle BDF is to the right and below. U.S. would therefore export 15 fruit to get 5 cookies. Remember, trade has to be balanced so the trade triangles should be identical in shape.



1e) Note: $e=1$, $w=3$, $w^*=1$.

For US: Price of Fruit (PF) in baht = $(w) \times (e) \times (a_{LF}) = 15$ baht

Price of Cookies (PC) in baht = $(w) \times (e) \times (a_{LC}) = 60$ baht

For Thailand: PF^* in baht = $(w^*) \times (a_{LF}^*) = 20$ baht

PC^* in baht = $(w^*) \times (a_{LC}^*) = 50$ baht

Thus, since $PF < PF^*$ in baht, the U.S. exports fruit and since $PC^* < PC$, Thailand will export cookies and this is a plausible trade equilibrium.

Now, if Thailand devalues the currency so that $e=2$, the following occurs: $PF = 30$ baht, $PC = 120$ baht, $PF^* = 20$ baht, $PC^* = 50$ baht

Now, Thailand has cheaper prices in both goods, suggesting it should export both goods. But trade cannot occur in a two country/ two good model unless each country is exporting one of the goods and importing the other good. Thus, a trade equilibrium is not possible in this example for the new exchange rate and given the wages stay the same!

1f) Note in 1e) above, as the baht was devalued, Thailand's goods prices got much cheaper relative to the U.S. prices and made Thailand's goods much more likely to be exported. The converse is that the U.S. goods prices became much more expensive relative to Thailand's prices. Thus, if Thailand is importing from the U.S., imports become much more expensive. Thus, we would expect a devaluation to be favored by exporters because it makes their prices less expensive to the rest of the world. However, importing firms and consumers will have to pay higher prices for imported goods and they will be unhappy with a devaluation of the currency.

2) HERE'S HOW I WOULD ANSWER IT. The theory of comparative advantage suggests that any trading country will gain from trade, regardless of their level of development. Trade with a developed country that has better technology affords the less-developed country the opportunity to purchase goods at a much cheaper price than it would cost to produce in their own country – some of these may be goods that help improve technology in the less-developed country! Importantly, the developed country would be willing to trade these goods with the less-developed country, since the law of comparative advantage says there will be goods for which production in the less-developed country is relatively cheaper and which they could then offer to the developed country in exchange. To the extent that labor can switch into the production of the good for which there is comparative advantage, there will be no unemployment from trading. In these ways the country should gain from trade.