

Sample Final Answers:

Problems

1. Suppose demand and supply for DVDs in Lalawood (a small country) are given by: $D=100-2P$, $S=3P$ and the world price for DVDs is \$10. How much will imports decline? What happens to welfare if Lalawood imposes a \$5 specific tariff on DVD imports? (Give specific values). **Imports fall from 50 to 25. Prod dist. = \$25; Cons dist = \$12.5.**

2a. Suppose that Airbus and Boeing are the only two commercial airplane producers in the world. The table below gives the profits for each firm depending on whether each firm enters the market. Suppose Boeing enters the market first, will Airbus enter the market (explain)? **(4 points)**

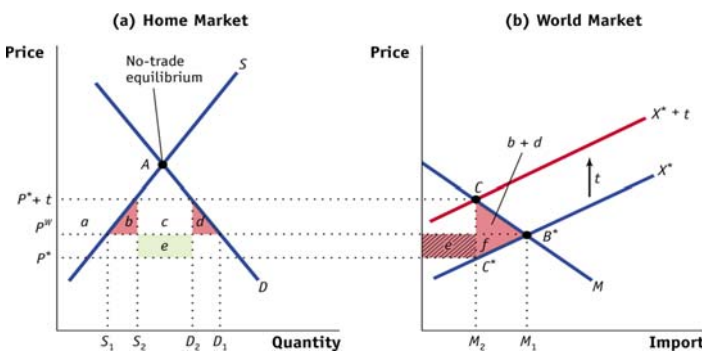
		Airbus	
		Produce	Don't produce
Boeing	Produce	-5	0
	Don't produce	0	0

No, because Airbus' dominant strategy in this case is not to produce.

2b. How can the EU get Airbus to enter the market? Is your solution justifiable from a welfare perspective (for the EU)? What are the practical difficulties with your proposed solution? **(6 points)**

A subsidy of 6 or greater causes Airbus to enter the market regardless of Boeing's decision. In this case, Boeing will stay out of the market, generating profits of 100+subsidy for Airbus. The government can then tax Airbus' profits, recoup the subsidy and more. From a practical standpoint, retaliation by the US government and imperfect information are potential problems.

3. Using the following graphs, which illustrate the effects of a large country imposing an import tariff, develop an argument for the logic behind multilateral trade agreements.



A large country can increase welfare by imposing a small tariff. This increase is seen as the difference between the terms of trade gains (e) and the domestic efficiency loss (b+d). This gain however, comes at the expense of the trading partner who loses (e+f), therefore world welfare declines by b+d+f. The same logic hold true for the trading partner, so that if each imposes a small tariff, overall welfare declines. Multilateral trade agreements prevent this prisoner's dilemma type equilibrium, forcing both countries to refrain from enacting these tariffs.

4. What is the uncovered interest parity condition (show the equation)? Given a 7% rate of return on dollar deposits, a 5% rate of return on euro deposits, if the expected future exchange rate rises from $E_{\$/\text{€}} = 1.20$ to $E_{\$/\text{€}} = 1.40$, by how much will the exchange rate appreciate or depreciate? (Round to the nearest penny)

Uncovered Interest Parity Condition: $R_{\$} = R_{\text{€}} + (Exp(E_{\$/\text{€}}) - E_{\$/\text{€}}) / E_{\$/\text{€}}$ According to the equation, the spot exchange rate will initially be $Exp(E_{\$/\text{€}}) = (R_{\$} - R_{\text{€}})E_{\$/\text{€}} + E_{\$/\text{€}} \rightarrow (7\% - 5\%)1.2 + 1.2 = 1.22$ while the new exchange rate will be $(7\% - 5\%)*1.4 + 1.4 = 1.43$.

5. Using a figure describing both the U.S. money market and the foreign exchange market, analyze the short and long-run effects of an increase in U.S. money supply on the dollar/euro exchange rate. (8 points)

Interest rates rise in the short run, and the expected euro return curve shifts outward as the dollar is expected to depreciate in the future due to rising prices in the US. E jumps from E1 to E2.

As prices rise to restore initial money market equilibrium and interest rates, E falls to E3.

Exchange rate overshoots in short run, but is still higher in the long run than the initial level.

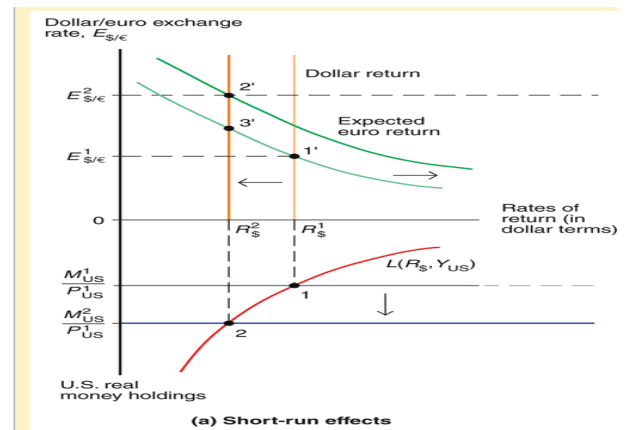


Figure 14-12
Short-Run and Long-Run Effects of an Increase in the U.S. Money Supply (Given Real Output, Y)
(a) Short-run adjustment of the asset markets. (b) How the interest rate, price level, and exchange rate move over time as the economy approaches its long-run equilibrium.

6. According to the exchange rate model based on purchasing power parity, how does each of the following affect the dollar/euro exchange rate, explain: (3 pts each)

i) an exogenous increase in European interest rates: **Lowens money demand and higher EU prices; E falls (\$ apprec.)**

ii) a decrease in the US money supply: **Leads to lower US prices and an appreciation of the dollar (E falls).**

iii) a higher growth rate of European relative to US GDP: **Money demand and therefore prices in Europe fall faster. Exchange rate rises.**

Part II: Short Essay

1. Compare the welfare effects of an export subsidy for a small versus a large country. (Describe these effects).

Both create a DWL equal to the production and consumption distortions. However, with a large country, the increased supply of exports pushes the export price down, leading to deterioration in the terms of trade. Thus, we have an additional welfare loss which we call the terms of trade effect.

2. Discuss the concepts of trade creation and trade diversion and how they relate to the formation of free trade areas. **When countries form a regional trade agreement that results in one country importing from another member rather than producing the product on its own, there are welfare gains analogous to the opening of trade. Countries outside the pact are unharmed by this trade creation because the good was previously not traded. By contrast, trade diversion has a negative impact on nonmember countries because the tariff reduction via the regional agreement leads one member to import from another instead of outside exporters. Although producers of the exporting member gain from this new pattern of trade, the importing country may be worse off by switching away from the lowest cost producers (i.e., nonmember exporters)**

3. Define purchasing power parity (PPP). What conditions are required for PPP to hold?

Purchasing power parity says that a basket of goods in two countries must have the same price when denoted in a common currency: $EP^*=P$. In order for this to hold, trade costs and barriers must be negligible and markets integrated. PPP is built from LOOP holding for individual goods, so conditions for LOOP must hold.

4. What is the real exchange rate? How do we interpret a real exchange rate (dollar/euro) equal to 1.2?

Defined as: EP^*/P (the exchange rate multiplied by foreign prices, divided by domestic prices). While the nominal exchange rate measures how much of a foreign currency one can buy with a unit of domestic currency, the *real* exchange rate measures how many *goods and services* one could buy. A real exchange rate equal to 1.2 means that the same basket of goods costs 20% more in the foreign country.