

Brigham Young University Department of Economics
Economics 257 – Introduction to International Economics
Dr. Phillips (section 1) Winter Semester 2006
Final Exam key

This exam is closed book and closed notes, though you may use a calculator. Read all questions carefully before answering. Write your answers legibly in the space provided. Keep your answers concise and correct. You may use a calculator to help with the math, if you wish.

Section I (multiple choice, 2 points each, 30 points total)

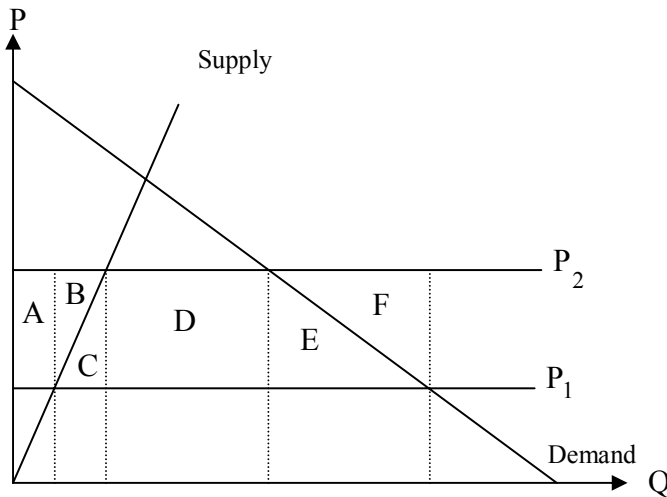
Use a specific factors model with labor as a mobile factor, and land & capital as specific factors for food & electronics respectively, to answer questions 1 - 3. Assume North & South America have the same amount of labor, but that North America has more capital and South America has more arable land.

1. What are the trade patterns with free trade?
 - a) North America imports both food & electronics.
 - b) North America imports food & exports electronics.**
 - c) North America exports food & imports electronics.
 - d) North America exports both food & electronics.
 - e) none of the above.

2. Suppose there is a proposal to restrict trade via import tariffs in South America. Who will clearly favor this new policy?
 - a) owners of labor in South America.
 - b) owners of land in South America.
 - c) owners of capital in South America.**
 - d) all of the above.
 - e) none of the above.

3. If South American proponents of import tariffs are looking for natural allies in North America, to whom should they turn?
 - a) owners of labor in North America.
 - b) owners of capital in North America.
 - c) owners of land in North America .**
 - d) all of the above.
 - e) none of the above.

Use the following graph for questions 4 - 7. Assume the home country is small and the world price is P_1 .



- a) increase of A
- b) increase of A+B
- c) decrease of A+B+C
- d) decrease of A+B+C+D+E
- e) none of the above

Suppose the home country imposes an import tariff.

4. The change in producer surplus is: **B**
5. The change in consumer surplus is: **D**
6. The change in government revenue is: **E**
7. The deadweight welfare loss is: **E**
8. As presently constituted, the European Union is best characterized as:
 - a) A Preferential Trading Area
 - b) a Free-Trade Area
 - c) a Common Market
 - d) an Economic Union**
 - e) none of the above
9. The best example of a Free-Trade Agreement (FTA) below is:
 - a) US & Japan
 - b) China & Japan
 - c) The US, Canada & Mexico**
 - d) The European Union
 - e) none of the above are good examples.

Use the following answers for questions 10 –13:

- a) A Bimetallic Standard
 - b) A Gold Standard
 - c) Freely Floating Exchange Rates
 - d) A Fixed Exchange Rate with no link to Gold or Silver
 - e) none of the above
10. The best description of the international financial system prior to 1869 is: **A**
 11. The Bretton Woods system is best described as: **B**
 12. The period between World War I and World War II was characterized by: **C**

13. The period since 1971 is best described as: **C**
14. A speculative attack on a currency is most likely if:
- Exchange rates are flexible
 - The country uses a currency board, instead of a central bank
 - The exchange rate is fixed and people think the central bank is low on foreign currency reserves**
 - The exchange rate is fixed and the central bank has consistently been buying foreign currencies on the currency markets in the recent past.
 - None of the above are likely to lead to a speculative attack
15. The Bretton-Woods Agreement in 1945 created which of the following?
- The International Monetary Fund (IMF)
 - The World Bank
 - The General Agreement on Tariffs and Trade (GATT)
 - all of the above**
 - none of the above

Section II (short answer, 5 points each, 40 points total) Where appropriate show your work as this may help in assigning partial credit if you get the answer wrong.

16. State the Heckscher-Ohlin Theorem

A country will tend to export the good which intensively uses its abundant factor of production

17. State a theorem similar to the Stolper-Samuelson Theorem, only applying to the Specific Factors Model. **An increase in the price of a good (all else equal) will cause a more than proportional increase in the specific factor used to produce that good and a decrease in the price of the specific factor used to produce the other good. The price of the mobile factor will rise less than proportionally.**

For questions 18 - 20 explain the effects of the following transactions on the U.S. balance of payments. Explain how they effect both the current account and its sub accounts, and how they effect the capital account.

18. A U.S. oil refinery purchases \$100 million worth of crude oil from Saudi Arabia and pays with a dollar transfer from a Swiss bank.

Imports rise by \$100 million, so the merchandise trade account and the current account both move \$100 million in negative direction. US ownership of foreign assets falls by \$100 million, causing the capital account to improve by \$100 million.

19. A BYU student traveling abroad exchanges \$500 worth of traveler's checks for Japanese Yen banknotes. **US ownership of foreign assets rises by \$500 and foreign ownership of US assets also rises by \$500. The net effect is no change in the capital account (or current account either).**

20. A naturalized US citizen who was born in Mexico, sends \$1000 cash home to his aged mother in Mexico City.

Unilateral transfers rise by \$1000, causing the current account to deteriorate by \$1000. Foreign ownership of US assets rises by \$1000, causing the capital account to improve by \$1000.

21. Suppose the annualized interest rate (APR) on six-month U.S. T-bills is 3.0%. Further suppose the spot exchange rate between British pounds and U.S. dollars is \$.71 / £ and the 6-month forward rate is \$.70 / £. What is the APR on a 6-month British government bond?

$$(1+i)=(1+i^*)(f/s)^2 \text{ or } (1.030)=(1+i^*)(.70/.71)^2$$

$$1.030 = (1+i^*)(0.972) \text{ or } 1+i^*=1.030/0.972=1.0596 \text{ so } \underline{i^*=5.96\%}$$

22. Suppose a basket of commodities cost \$150 in the U.S. and €170 in Germany. If the exchange rate is \$1.25/€, what is the value of the real exchange rate?

$$q = eP^*/P = 1.25(170)/150 = 1.4167$$

23. Given the answer to 22, is the U.S. dollar overvalued or undervalued vis-à-vis the Euro?

The Euro is overvalued vis-à-vis the dollar, so the dollar is undervalued vis-à-vis the Euro.

Section III (longer analysis, 15 points each, 30 points total)

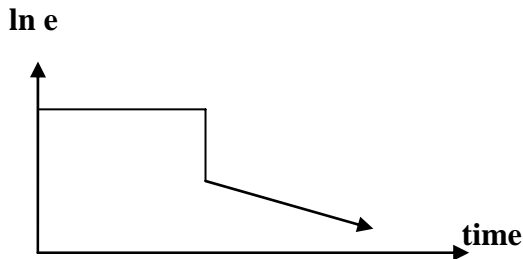
24. Suppose that money supply growth in the U.S. is 10% per year and output grows 3% per year. In Mexico, output and money are growing at the same rates as they are in the U.S. What is the time path for the dollar-peso exchange rate? Now suppose that the U.S. cuts the growth rate of the money supply to 5%, while Mexico does not. What is the long-run path of the dollar-peso exchange rate when this change in policy occurs?

We will use the monetary approach to exchange rates which can be expressed using the following equation:

$$e = \frac{M}{M^*} \Lambda \left\{ \frac{Y^*}{Y}, g_M - g_Y - (g_M^* - g_Y^*) \right\}$$

Initially $g_M = g_M^*$ and $g_Y = g_Y^*$, so the ratios M/M^* and Y^*/Y are constant. The second term in the Λ function is zero. Hence, the exchange rate is constant over time.

When g_M falls, the ratio M/M^* shrinks over time. The second term in the Λ function drops to -5%, causing Λ to drop immediately, but Y^*/Y remains constant. This gives the following path for the exchange rate over time.



25. Briefly explain what a speculative attack on a currency is. Include a discussion of why this is associated with either fixed or flexible exchange rates.

A speculative attack occurs when international investors lose confidence in a central bank or monetary authority's ability to defend a particular value of the exchange rate. Most commonly this occurs when investors believe the monetary authority is losing foreign reserves (such as dollars) at such a rate that it will soon have none left to supply to the market as the seller of last resort. If this were to happen, the monetary authority would be unable to maintain the fixed exchange rate and value would jump to the market-clearing rate, which would be a lower value of the country's currency. Should this occur the value of investments held in that currency would lose value. Risk averse investors will rapidly convert the country's currency into more stable currencies, such as dollars, if they view this as likely. As a result, the monetary authority will be forced to supply even more dollars and reserves will fall even faster. Hence a speculative attack can become self-fulfilling.

When a central bank lets the value of the currency float, it does not intervene to support the value of its currency. Hence it never needs worry about running out of foreign reserves. Indeed, it needs no foreign reserves if it never buys or sells them. Hence the sudden and severe devaluation associated with a speculative attack will never occur under floating exchange rates.