

## Tutorial 10: Open Economy Macroeconomics

1) Suppose an economy is represented by the following equations.

Consumption function	$C = 200 + 0.6Y_d$
Planned investment	$I = 250$
Government spending	$G = 600$
Exports	$EX = 200$
Imports	$IM = 0.1Y_d$
Disposable income	$Y_d = Y - T$
Taxes	$T = 500$

- (a) Calculate the equilibrium level of income for this economy.
- (b) Based on your answer in Part (a), is the country experiencing a trade surplus or deficit? If so, what is the size of the deficit or surplus?
- (c) Suppose government spending increases by 100. Calculate what happens to the size of the trade deficit or surplus. Briefly explain any changes in the size of any surplus or deficit.
- (d) What is the government spending multiplier?

2) You are given the following information about an economy:  $C = 200 + 0.75Y_d$ ;  $I = 50$ ;  $G = 100$ ;  $EX = 25$ ;  $IM = 0.15Y_d$ ; and  $T = 60$ .

- (a) What is the equilibrium level of income?
- (b) At the equilibrium level of income is the economy running a trade deficit or trade surplus? What is the amount of the trade deficit or surplus?
- (c) What is the open-economy multiplier?
- (d) If government spending increases by 100, what will be the change in income? What is the new equilibrium level of income?
- (e) At the new equilibrium level of income, what is the level of imports and exports?

3) Using the below table, calculate the balance on current account.

CURRENT ACCOUNT	
Goods exports	\$700
Goods imports	1000
Exports of services	300
Imports of services	200
Income received on investments	250
Income payments on investments	300
Net transfer payments	50

- 4) Using the below table, calculate the balance on capital account.

CAPITAL ACCOUNT	
Change in private U.S. assets abroad (increase is -)	- 400
Change in foreign private assets in the United States	700
Change in U.S. government assets abroad (increase is -)	10
Change in foreign government assets in the United States	50

All figures are in billions of dollars

- 5) Calculate the open-economy multiplier where the  $MPC = .9$  and the  $MPM = .1$
- 6) The following table represents a list of private buyers and sellers in international exchange markets in the United States and Mexico. Identify each as either "demanding pesos" or "supplying pesos."

U.S. citizens traveling to Mexico
Mexican citizens traveling to the U.S.
Holders of dollars who want to buy Mexican stocks
U.S. companies that want to invest in Mexico
Speculators who anticipate a rise in the value of the dollar relative to the peso

- 7) According to purchasing power parity theory, in the long run what would happen to the exchange rate if the price of a computer in the United States = \$1,000, the price of a computer in Japan = 200,000 yen, and the current exchange rate was \$1.00 = 100 Yen?