B.E. International Program

Faculty of Economics, Thammasat University

Semester: 1/2012
EE 312 Macroeconomic Theory
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Homework # 2

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1. (40 points) Given the following closed-economy model:

$C = C_0 + bY^d = 25 + 0.8Y^d$
Y = GDP and Y^d = disposable income
$I = I_0 = 100$
$G = G_0 = 100$
$T = T_0 = 100$

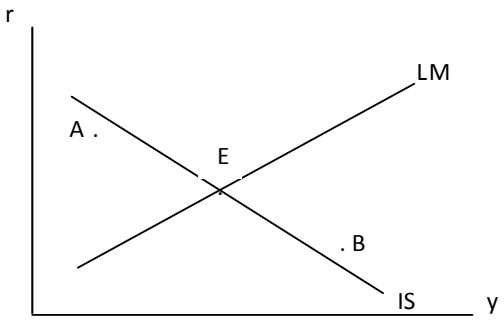
a) Find the equilibrium level of income from the equality of injections and leakages (I + G = S + T) and from the equilibrium condition Y= C+I+G. Why do you get the same result?

b) If T = tY where t is the tax rate = 0.2, find the new equilibrium level of income and the government expenditure multiplier? Is the government expenditure multiplier larger or smaller than the case of the lump-sum tax ($T = T_0$)? Why?

c) Compare the equilibrium level of income when T = 100 and T = 0.2Y. In which case is the equilibrium level of income smaller and why?

d) Explain the meaning of "automatic stabilizer." Why is proportional income tax considered to have the feature of an automatic stabilizer?

2. (30 points) Given the following IS-LM diagram, determine the status of each labeled point and provide an analysis of adjustment toward the equilibrium point E.



a) Point A
b) Point B
c) Suppose there is a decline in autonomous investment, draw a graph representing the effect of this decline and explain how the economy will adjust to the new equilibrium.

3. (30 points) Given the following money market

Money supply $M^s = 100$

Money demand (3.1) $M^d = 40 + 0.1Y - 10r$

(3.2) $M^d = 40 + 0.1Y - 20r$

a) What is the meaning of an LM equation? Find LM equations and draw LM curves for (3.1) and (3.2).

b) Explain the economic reasons for the different slopes of LM in (3.1) and (3.2).

c) If the interest elasticity of money demand is zero, what will the LM curve looks like and why? Explain and draw the LM curve.

4. (30 points) Given the following two closed economies A and B

	A	B
Consumption	C = 60 + 0.8 (Y-T)	C = 60 + 0.8 (Y-T)
Investment	I = 150 – 10r	I = 150
Gov. expenditure	G = 250	G = 250
Taxes	T = 200	T = 200
Money supply	M^s = 100	M^s = 100
Money demand	M^d = 40+0.1Y – 10r	M^d = 40+0.1Y – 10r

a) Find the equations representing equilibrium in the product market (IS) and the money market (LM) for both A and B. Determine the equilibrium level of income (Y) and interest rate (r).

b) Suppose both A and B use an expansionary monetary policy by increasing money supply to 130. Show the effect of this policy on Y and r in both economies. What causes income to change?

c) Explain the economic reasons for the effectiveness or ineffectiveness of monetary policy in each case. In the case of ineffectiveness, offer your policy to expand income and provide your economic reasoning.

5. Find Thailand's data on money supply (M^s) and GDP in current prices (PY) during 1990–2011. Use the narrow money definition (currency in circulation + demand deposits).

(a) Plot the data with GDP on the horizontal axis and M^s on the vertical axis.

(b) Calculate the velocity of money from the quantity equation MV = PY

where M = quantity of money

V = velocity of money

PV = value of output in current prices.

Plot V against time and offer your observation of its trend.

Note : useful website : www.bot.or.th