Macro Theory
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Problem Set #5

1. Use the following version of Model 2 to answer parts a - f.

   (1) C = 200 + .8*Yd
   (2) Im = 25 + .2*Yd
   (3) Yd = Y - T
   (4) T = 50 + .1*Y
   (5) AD = C + Ip + G + eX - Im
   (6) Y = AD

   a. Find the reduced form statement for Yd. What is the equilibrium value of Yd given that Ip = 400, G = 350, and eX = 65?
   b. What is the equilibrium level of savings?
   c. What is the equilibrium level of taxes and of the governmental deficit?
   d. If governmental expenditures increased by 100, how much would output increase? What is the value of the multiplier of governmental expenditures on output?
   e. If the tax rate were increased from 10% (t1=.1) to 20% (t1=.2), how much would output change? The governmental deficit?

2. Consider an Eastern European community characterized by a Model 2 world. Assume that the relevant behavioral equations such an economy were as follows:

Consumption Demand:	C = 5000 + .9*Yd
Taxation	T = -1000 + .33*Y
Import Demand	Im = 500 + .15*Yd

   a. Indicate the remaining equations needed to complete this model under the assumption that the economy can be described as a depressed economy with GDP well below its potential.
   b. Derive the reduced form equation for GDP.
   c. Derive the reduced form equation for Import Demand.
   d. If import demand were to rise by 500, how much would Governmental expenditure have to rise to keep GDP at the pre-rise level?

3. Consider the following variant of Model 3

		Exogenous	Endogenous
(1)	C = a + .8*Yd	G, a,e,P	C,Yd,Y, T
(2)	Yd = Y - T	r or M	Ip, Md,AD
(3)	T = .25*Y		r or M
(4)	Ip=e - 10*r		
(5)	AD = C + Ip + G		
(6)	Y = AD		
(7)	Md = (.25*Y - 5*r)*P		
(8)	Md = M		

a. Derive the IS and LM curve equations assuming M is endogenous and r exogenous.
b. Same as a) with r endogenous and M exogenous.
c. Analyze the impact of monetary policy in a) and b).
d. Analyze the impact of fiscal policy in a) and b).
e. Use the results in part b) and the following data to determine the monetary policy that will bring Y up to Y*.

a= 100, e = 200, M = 300, P = 2, G = 300, Y* = 1200

f. Answer question e in terms of fiscal policy.

4. Use the following behavioral equations or policy rules along with whatever else you need (based on Model 3 – IS – LM) to answer parts a - f.

Consumption	(1)	C = 700 + .9*Yd
Imports	(2)	Im = 200 + .15 Yd
Taxes	(3)	T = .33*Y
Investment	(4)	I = 500 - 40*r
Money Demand	(5)	Md = (.25*Y - 10*r)*P

a. Derive the IS Curve. Indicate the slope.
b. Derive the LM Curve. Indicate the slope.
c. Derive the reduced form equation for income.
d. Assume exogenous M and P = 2. Determine the multiplier of money on output.
e. Determine the fiscal policy multiplier on output.
f. In this model which policy - monetary or fiscal - is more potent? Why?