ECON 2030: STUDY PROBLEM: KEYNESIAN MACROECONOMICS

You should have at least 3 equations firmly in mind—equations that pertain to any macroeconomy:

I. $Y = C + I + G$ — The equality between Y, which represents income, and $C + I + G$, which represents total expenditures (or aggregate demand), is the (Keynesian) equilibrium condition.

II. $C = a + bY$ — This is the general form of the consumption equation. It describes consumer behavior. $a > 0; 0 < b < 1$.

III.. $Y = C + S$ — If there is no taxation (i.e., $T = 0$), this equation is an identity which defines savings. That is S is defined as $Y - C$. With taxation, we would write $Y = C + S + T$.

Consider the following data, which are expressed in billions of dollars:

i. $C = 100 + 0.8Y$ — This is a specific consumption equation that describes some particular economy during some particular period of time.

ii. $I = 50$ — This is the current level of investment, which is based on the prevailing state of business confidence.

iii. $G = 60; T = 0$ — These are the current levels of government spending and taxation. (Query: How is the government financing G if T is 0?)

iv. $Y_{fe} = 1300$ — This is the full-employment level of income—the level of income that reflects an absence of (cyclical) unemployment and corresponds to a wage rate that clears the labor market.

Answer the following questions using the Keynesian framework and specific data given.

1. What is the MPC?, the MPS?. What is the significance of the "100" in the equation $C = 100 + 0.8Y$?

2. Calculate the investment multiplier?, the government-spending multiplier?

3. Write the specific saving equation that corresponds to the consumption equation.

4. At what level of income does savings equal zero?

5. How much is aggregate demand when income is 1100? Is the economy in equilibrium at this level of income?

6. Sketch aggregate demand and the 45º line; locate Y=1100 and Y_{fe}=1300 (relative to equilibrium income).

7. What is the equilibrium level of income? (What is the process that brings about this Keynesian equilibrium?)

8. Suppose that government spending in raised by 30. What happens to the equilibrium level of income?

9. How much *more* government spending is required to achieve full employment?

10. What assumptions about wage rates and prices do your calculations presuppose?