

**Economics 614: Macroeconomics II**

Spring 2006

Cornell University

**Problem Set #5**

Due: Monday, February 20

## 1 Deep Depression:

Consumption function  $C(Y)$  with  $\frac{\partial C}{\partial Y^d} > 0$ , where  $Y^d$  is disposable income.  $T$  is total tax.  $G$  is government expenditure.

(a) Calculate the tax-cut multiplier and relate it to the marginal propensity to save.

(b) Calculate the government expenditure multiplier and relate it to the marginal propensity to save. How does it compare to the tax-cut multiplier? Why?

(c) Calculate the balanced-budget (no change in-the-deficit) government expenditure multiplier. Explain your answer.

## 2 Commercial banks.

The Fed requires that each bank meet a reserve requirement of 17%. The Fed sells \$20B of treasury bonds on the open market. Can you estimate the effect of this operation on the money supply? What are the caveats and limitations to your answer?

Professor and Mrs. Baumol spend \$100,000 evenly over the year. Their cost of going to the bank is \$45 per trip. The nominal interest rate is 9% per year. The inflation rate is 5% per year. What is the average money balance for the Baumols?

Joe Smith spends \$22,000 evenly over the year. It costs him only \$10 to go to the bank. The real interest rate is 1% per year. The inflation rate is 10%. How much does Joe withdraw on each trip.

The Baumol/Tobin model predicts smaller cash balances than are observed. What explanations can you offer?