14.02: Principles of Macroeconomics, Fall 1999

2 pages

ANSWERS TO PROBLEM SET 2

1. True and False questions. (10 pt each)

   - False. This will increase GDP but probably will have no effect on 'true output'. The reason is that frozen food will be substituting household work (preparing food) that was done before anyway.

   - False. These jobs were done before by people in the firm and the value of this work was incorporated in the price of the final product.

   - False. In the model seen in class, investment is exogenous. Therefore a higher propensity to save (lower c_1) will imply a lower GDP in equilibrium, to the point where savings equal investment.

   - False. An important characteristics in most emerging markets is instability with high growth rates that are unfortunatelly followed by deep crises.

2. Question 2 (30 pt.)

   - Using 1999 prices, the 1998 basket would cost $4000 * 1.2 + 6000 * 0.9 = 10200$. This would imply an inflation of 2%. (8 pt)

   - Using 1998 prices, the 1999 basket would cost

   $$\frac{2000}{1.2} + \frac{8000}{0.9} = 10555.556$$

   This would imply an inflation equal to $\frac{-555.556}{10555.556} = -5.3\%$ (i.e. deflation). (8 pt)

   - The problem with inflation is that prices increase in different proportions within the 'consumer basket'. Therefore the answer will depend on how much weight we give to the diffferent components of the bundle.(8 pt)

   - One can not tell with this information which basket retirees prefer (if the 1998 or the 1999 consumption basket) given that none of them was afordable in the other year. (6 pt)

3. Question 3 (30 pt)

- (10 pt) equilibrium GDP is

$$GDP = \frac{1}{1 - 0.7} * (50 - 70 + 100 + 100) = 600$$

- (15 pt) In the year of war production will be $Y = 600$. Therefore demand will be

$$Z = 50 + 0.7 * (600 - 500) + 100 + 500 = 720.$$

The first year after the war, production will be 720 and demand will be

$$Z = 50 + 0.7 * (720 - 100) + 100 + 100 = 684.$$

During the second year production will be 684 and demand will be

$$Z = 50 + 0.7 * (684 - 100) + 100 + 100 = 658.8.$$

During the third year production will be 658.8 and demand will be

$$Z = 50 + 0.7 * (658.8 - 100) + 100 + 100 = 641.16.$$

During the fourth year production will be 641.16 and demand will be

$$Z = 50 + 0.7 * (641.16 - 100) + 100 + 100 = 628.812.$$

- (5 pt) In the long run one would expect (and it is true) that the country will restore its old equilibrium.