

Problem Set #8

due Monday November 25, 2019

PART I. *True, False, or Uncertain?* Give a detailed explanation of your answer. Use diagrams when useful.

1. (15 points) Suppose the People's Bank of China, which is the central bank of China, is worried about rapidly rising housing prices and mortgages. Nevertheless, PBC does not need to raise interest rates but it could focus on other measures, such as increasing the borrowing margin or the mortgage down payment.
2. (15 points) A temporary reduction in money demand is more expansionary (in terms of output) than a permanent one.

PART II.

1. **Export subsidy.** Consider an economy that starts at full employment $Y = Y^f$ with the current account in balance $CA = 0$. The exchange rate is fully flexible. The equilibrium in the goods market is given by $Y = C + G + I + CA$. Private consumption is $C = c(Y - T)$, $0 < c < 1$, and the current account is:

$$CA = \alpha \frac{EP^*}{P} - m c(Y - T), \quad 0 < m < 1, \alpha > 0.$$

For simplicity, let $P^*/P = 1$. The domestic government implements an export subsidy $\tau > 0$. This is a proportional subsidy per unit of export so that exporters can sell at a lower price and increase sales. With the subsidy and using $P^*/P = 1$, the current account that is equal to

$$CA = \alpha(1 + \tau)E - m c(Y - T), \quad 0 < m < 1, \alpha > 0.$$

- (a) (15 points) Suppose the government finances the export subsidy by issuing debt. For simplicity, let's assume that additional debt does not affect the equilibrium. Suppose the export subsidy is permanent. In the AA-DD-XX diagram illustrate the short-run equilibrium, the long-run equilibrium, and the adjustment process, if any. State briefly but clearly which curve shifts, in which direction and for what reason.
- (b) (15 points) Suppose the export subsidy is permanent and it is financed by raising taxes. More precisely $\Delta T = \alpha E \tau$. In the AA-DD-XX diagram illustrate the short-run equilibrium, the long-run equilibrium, and the adjustment process, if any. State briefly but clearly which curve shifts, in which direction and for what reason. Please compare the equilibria here with those you found in (a).
- (c) (20 points) Suppose the export subsidy is permanent and it is financed by cutting government spending. More precisely $\Delta G = -\alpha E \tau$. In the AA-DD-XX diagram illustrate the short-run equilibrium, the long-run equilibrium, and the adjustment process, if any. State briefly but clearly which curve shifts, in which direction and for what reason. Please compare the equilibria here with those you found in (a) and (b).

- (d) (*20 points*) Suppose the export subsidy is temporary. The government can choose to finance the temporary export subsidy either by cutting government spending or raising taxes. What policy should the government choose if it wants to raise output as much as possible in the short run? Illustrate the short-run equilibrium with your choice of policy in the AA-DD-XX diagram.