Economics 6130-2
Macroeconomics I, Part2
Fall 2016
Problem Set 1
Due Wendesday before class, October 26, 2016

1   Money Taxation

Consider an economy with a single commodity, $\ell = 1$, chocolate. There are 5 consumers, so $n = 5$. The endowments are defined as

$$\omega = (\omega_1, \omega_2, \omega_3, \omega_4, \omega_5)$$

$$= (50, 40, 30, 20, 10)$$

1.1   A Single Currency

There is one money. The chocolate price of money is $P^m \geq 0$. In each of the following cases, solve for the set $\mathscr{P}^m$ of equilibrium prices P^m, given the following tax policies τ. Provide the units in which the variables are measured.

a) $\tau = (\tau_1, \tau_2, \tau_3, \tau_4, \tau_5) = (1, 1, 0, 0, -2)$

b) $\tau = (10, 5, 0, -8, -7)$

c) $\tau = (20, 2, 1, -2, -20)$

1.2   Two Monies

Consider a scenario where there are 2 monies, red dollars R and blue dollars B, with respective chocolate prices of money, $P^R \geq 0$ and $P^B \geq 0$.

In each of the following cases, solve for the equilibrium exchange rate between B and R. Do these depend on the endowments ω? Give the economic explanation for your answer.

a) $\tau^R = (1, 1, 1, 0, -2)$ and $\tau^B = (1, 0, 0, 0, -2)$

b) $\tau^R = (1, 1, 0, -1, -2)$ and $\tau^B = (1, 1, 1, 0, -2)$

c) $\tau^R = (3, 2, 1, 0, -6)$ and $\tau^B = (4, 0, -1, -1, -2)$

1.3   The Absence of Money Illusion

Explain the difference between the "absence of money illusion" and the "quantity theory of money". Be precise (with symbols).