Economics 6130
Cornell University
Fall 2015
Macroeconomics I - Part 2

Problem Set #1
Due in class Wednesday, 10/28/2015

Question 1. Assume $\omega = (\omega_1, \omega_2, \omega_3, \omega_4, \omega_5) = (150, 80, 75, 25, 10)$. For each of the following, calculate the set of equilibrium money prices, P^m:

a) $\tau = (50, 25, 15, -15, -30)$
b) $\tau = (50, 10, 0, -20, -40)$
c) $\tau = (30, 20, -5, -10, -35)$
d) $\tau = (3, 0, 0, -1, -2)$
e) $\tau = (2, 2, 1, 1, -1)$

Question 2. There are two monies, Red(R), and Blue(B). The units are R\$ and B\$. Calculate the exchange rate between R\$ and B\$ for each of the following tax and transfer systems (giving units in your answers):

a) $\tau^R = (2, 1, 0)$, $\tau^B = (5, 3, -12)$
b) $\tau^R = (5, 4, -2)$, $\tau^B = (1, 0, 0)$
c) $\tau^R = (8, -2, -6)$, $\tau^B = (4, 1, -5)$
d) $\tau^R = (7, 2, -12)$, $\tau^B = (6, 5, -2)$
e) In (a) - (d), are your answers independent of endowments? Why?

Question 3. Let there be two consumers, Mr. 1 and Mr. 2.

a) In (τ_1, τ_2) space, graph the set of balanced taxes F_{bal}.
b) Graph the set of bonafide taxes, F_{bon}.

c) Let $\omega = (3, 7)$. Graph the set of normalized bonafide taxes, F^n_{bon}, i.e. the set of taxes consistent with $P^m = 2$.

d) Let $\omega = (3, 7)$. Use the diagram in (c) to calculate the set of equilibrium money prices.
Hint: Use absence of money illusion.