Macroeconomic Policy
Exercise set 3

1. Suppose the price level is fixed at P_0 because of large menu costs. The IS and LM curves are given by

$$Y = \bar{C} + c(Y - T) + \bar{I} - br + \overline{G} \qquad (1)$$
$$M/P = kY - hr. \qquad (2)$$

   Taxes are given by $T = \bar{T} + tY$.

   - Define the economic equilibrium.

   - Write the expression for equilibrium output as a function of exogenous variables. What is the general equilibrium multiplier for government expenditure $(\Delta Y/\Delta G)$ and for the discretionary component of taxes $\bar{T}$ $(\Delta Y/\Delta \bar{T})$:

     - when $t = 0$?
     - when $t > 0$?

2. In the exercise above assume the central bank sets the interest rate to $\bar{r}$. Suppose $t = 0.3$ and $c = 0.5$. Assume that because of a booming stock market consumer confidence increases by $\Delta \bar{C}$ for two years and then reverts to its original value. Derive the amount of automatic stabilization associated with proportional taxation; i.e. the difference between the change in output when $t = 0$ and when $t = 0.3$ (Hint: notice that the shock is temporary not permanent as usually implicitly assumed in the standard IS-LM analysis). Can Blanchard's result in your lecture notes (the marginal propensity to consume out of current income is small) be just a consequence of the fact that automatic stabilizers can only smooth income fluctuations in the face of temporary shocks?