Macroeconomic Policy
Exercise set 4

1. Use the simple version of Fischer's theory of consumption in the lecture notes. In each period there are two generations alive: the young that will live for two periods and the old that will die at the end of the current period. The size of each generation is the same. Assume taxes are initially zero in both periods and that young people have positive saving before the introduction of the tax. Determine the effect of the following changes in taxes on the current consumption of the young, the current consumption of the old and aggregate consumption. The changes in taxes are:

   - The introduction of a temporary (for the current period only) proportional tax on endowments (i.e. $T = tY$)
   - The introduction of a temporary (for the current period only) proportional tax on capital income that reduces the after tax real interest rate to $(1 - t)r$.

2. Irving Fischer was the first to argue that an income tax amounts to taxing saving twice and thus distorts saving decisions. Confront a permanent proportional tax on income with a permanent proportional tax on consumption and discuss whether he was right or not. For simplicity assume that the endowment when old $Y_2 = 0$ and that it is $(1 - t_y) = 1/(1 + t_c)$ where t_y is the proportional income tax rate and t_c is the proportional consumption tax rate (Hint: this condition implies that the intersection of the budget constraint with the horizontal axis is the same under either tax regime). What would be the response of young people's saving to a movement from an income-based to a consumption-based tax?