

ECO 735 Homework #7

Assigned February 2, 2012

Due February 7, 2012

1. Consider a married couple, Fanny and Manny. Suppose that Fanny and Manny each have unitary Cobb-Douglas preferences defined over their (joint) consumption, C , and their own non-market time, L_F and L_M , such that

$$U(C, L_F, L_M) = (1 - \beta_F - \beta_M) \ln C + \beta_F \ln L_F + \beta_M \ln L_M$$

where $0 < \beta_F < 1$, $0 < \beta_M < 1$, and $0 < \beta_F + \beta_M < 1$. Suppose also that each of them can receive a market wage of W_F and W_M , respectively, that each of them has unearned of N_F and N_M , respectively, and that each of them divides her/his time between market labor and non-market activities.

- a. Derive the optimal labor supply functions for Fanny and Manny.
- b. Derive the compensated own and cross-wage substitution effects for Fanny's and Manny's labor supply functions.