Discussion Handout #13 | **TA: John Stromme**
Econ 302 | UW Madison, Fall 2017
Prof. Eudey | Date: 12/08/17

Goals for this session

- Discuss market failure as it relates to education
- Become comfortable with 2-period, limited commitment & collateral model

Problems

1. For government involvement in education to be efficient, government must be correcting a market failure. For each of the following cases you should use theory and data to:
   - Explain the Market Failure
   - Explain how it relates to education
   - Present your argument for the role government might take to move the economy to a better equilibrium

   (a) Human capital externalities
   (b) Default premia and imperfect information
   (c) Limited commitment and collateralized borrowing.

2. In the case when there's limited commitment, households need to pledge the house, H, as collateral to borrow from banks. Suppose P_{t+1} is the price of the house next period, and all households borrow $-s$ (amount of loan), and pay at the interest rate r.

   (a) Write down the borrower's default/repay strategy at time $t+1$
   (b) What's the maximum amount that the household can borrow, if banks don't want them to default?
   (c) Is the borrowing rate higher than the risk-free rate in this economy?

3. Continued from 2: Now assume households have borrowed up to the credit limit: $-s = \frac{P_{t+1}H}{1+r}$. Suppose at time $t+1$ the price of the house suddenly drops from P_{t+1} to P'_{t+1}

   (a) Will households default?
   (b) What's the bank's revenue? Do banks incur losses?
   (c) What policies might Freddie Mac and/or Fannie Mae use in this case to boost housing prices? (Note this policy has no effect on the number of defaults). Who gains and who loses from these policies?

Good luck on the final exam!!