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14.771 Development Economics: Microeconomic Issues and Policy Models  
Fall 2008

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**Development Economics**  
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**Questions on Required Reading #7: Foster and Rosenzweig (1995)**

Read in details the Foster and Rosenzweig (1995). The following questions will help you make sure you are following the authors' argument and the econometric methods that were used in it.

- 1) Let's assume for a moment that you cannot learn in any way from your neighbors (for example, a high fence hides whatever your neighbors do on their farm). The rest of the model is as described in the paper
  - a. How does the precision of the information the farmer gets about his plot depend on the number of plots he cultivates?
  - b. Will the farmer choose to plant more or less plots with the new technology than if he had perfect information regarding input uses?
  - c. Assume now that the returns to the technology are uncertain (rather than the optimal input use). What would be your answer to a and b?
  
- 2) Let's now assume that you can learn from your neighbor.
  - a. How will your investment in HYV compare to the situation in 1)?
  - b. If you could arrange for a contract between you and your neighbor, what sort of contract would you set up and what would be the consequence of this contract?
  - c. If it was possible, would you rather hide your field/input use from your neighbors?
  
- 3) We try to estimate how much a farmer learns from his neighbors by looking at the effect of the neighbors' experience on both HYV use and profits.
  - a. What would be the bias in the equation of HYV use if my neighbors and I are hit by similar shocks? What about in the profit equation?
  - b. What would be the bias in the equation of HYV use if my neighbors and I are selling our output in a closed and small market? What about in the profit equation?
  - c. Are the instruments used in the paper likely to control for these sources of biases? What other sources of biases might not be appropriately corrected for by the use of the instrument.
  
- 4) Assume that we are actually measuring the learning effect through our estimation.
  - a. What should we conclude if we see that the effect on neighbors' use of HYV on own use is zero? Would we be able to say more if the coefficient in the profit equation is also positive?

- b. What should we conclude if it is positive? What if the coefficient in the profit equation is not positive?
  - c. What should we conclude if it is negative? What sign would we expect the coefficient in the profit equation?
- 5) The paper finds that there is a lack of internalization of the information externality.
- a. What type of mechanism/market should arise if this is the case? Why might this not be possible?