14.771 Development Economics: Microeconomic Issues and Policy Models
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14.771, Development Economics
Problem Set #10 - Karlan and Zinman (2008)

Read the paper by "Observing Unobservables: Identifying Information asymmetries with a Consumer Credit Field Experiment" by Dean Karlan and Jonathan Zinman. You should also study the tables in the web appendix, available at http://www.dartmouth.edu/~jzinman/Papers/Karlan&Zinman_OU_ecma_ca_WebAppend.pdf. The following questions will make sure that you follow the paper's arguments.

Question 1

Draw a simple diagram that illustrates the structure of the experiment. List the different comparisons that the authors make and explain what types of asymmetric information problems they can illuminate.

Question 2

1. Consider the model presented in the paper. We define $\underline{\theta}(r^o)$ as the θ_i at which individuals are indifferent between accepting and rejecting the loan when offered interest rate r^o. What is the indifference condition that defines $\underline{\theta}$?

2. For the time being, set $B(r) = 0$ (we shall assume that there is still no strategic default due to, say, legal enforcement of contracts). Differentiate implicitly to calculate $\frac{d\underline{\theta}}{dr^o}$. In which direction does selection operate with respect to a marginal increase in the offer interest rate?

3. Should we expect the same result for a discrete change in r^o? Why or why not? What additional impacts do we need to take account of? (Math might be helpful here...) Explain why this impact is ambiguous without further assumptions, and give a verbal example for each possible direction that conveys the appropriate intuition. In what direction would you expect this second effect to work in practice?

Question 3

The model in the paper shows how two different selection effects complicate labeling a comparison of individuals who accepted the offer at different interest rates but ended up with the same contract rate a pure "adverse selection effect". Consider the other two comparisons the paper makes. Are there any potential confounding effects you can think of that might complicate calling these comparisons pure moral hazard effects? Explain and give the direction of bias that you foresee. Given the results, do you think that these biases may be important?

Question 4

Review the results presented in Table 1. What do you make of these results? Consider whether or not the coefficients are statstically significant and economically significant. Now review the results in the web appendix. Do these results have any interesting patterns? Why do you think these results are relegated to an appendix rather than being featured as a main part of the paper?

Question 5

A key innovation of this paper is the experimental design itself. At least two papers have used the Karlan and Zinman methodolody in non-credit contexts - see Cohen and Dupas (2007) on demand for malaria bednets and Ashraf, Berry, and Shapiro (2008) on water purification. Try and think of an experiment that uses the Karlan-Zinman methodology to separate out different effects due to pricing. Outline your experiment and explain how different comparisons across offer groups and takeup groups can isolate different economic effects of prices.