

FINAL EXAM; SECOND HALF OF FALL 2007

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Questions marked **(T,F,U)** should be answered “True,” “False,” or “Uncertain,” and your answer should be briefly justified. Note that points will be awarded based only on your reasoning, not on the answer itself, even if correct.

- (1) **(T,F,U)** If a village has a Pareto optimal allocation of resources, a policymaker can only hope to improve the equity of distribution, since she can't hope to increase efficiency.
- (2) **(T,F,U)** Consumption allocations in village economies are seldom Pareto optimal, because according to the first welfare theorem, only competitive equilibria are Pareto optimal.
- (3) **(T,F,U)** Credit markets may not be that important in developing countries since people may be able to fully insure themselves without credit.
- (4) **(T,F,U)** If there is insurance, then allocations will be Pareto optimal, so that all agents' consumptions will be equal.
- (5) **Distribution, Risk, and Welfare**

Consider a village of n people, each belonging to one of $m < n$ households; the number of people in the i th household is given by n_i . You have data on basic demographic characteristics of all of these n people, and a single cross-section of data on income and expenditures collected at the level of the m households.

A donor who is familiar with the United Nations' Millenium Project goals asks you to propose a transfer scheme to reduce the total number of households with income per household member below one dollar a day in the village. Transfers must be non-negative, and the total budget for the project is B dollars.

- a) Summarize your proposal very concisely. In particular, specify a rule that will indicate how many dollars should be given to each household in the village, based on data regarding household size and income.
- b) After reading your report, the donor plans to run their plan and your proposal by a board of expert reviewers. The board includes Anthony Atkinson, Duncan Thomas, Amartya Sen, and Robert Townsend. You anticipate that each of these people may have some objections to the donor's plan. For each expert reviewer, give a short paragraph summarizing what you think their principal objection is likely to be.
- c) For each of the four objections you've outlined above, suggest a modification to the plan and proposal which you think would satisfy the reviewers.
- d) The donor *may* be willing to provide additional funds in order to evaluate outcomes from the project. Propose two options for collecting and evaluating data which would (a) allow you measure the success or failure of the project; and (b) see whether or not your modified plan actually succeeded in addressing the concerns of the reviewers. The first option should be the 'full service', more expensive option; the second option should assume a much smaller budget.