

American University  
*Department of Economics*

Comprehensive Exam  
Development Economics

June 2005  
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DIRECTIONS: There are two parts to this exam. Be sure you follow the directions for each part.

**PART 1. Development Microeconomics**

**Answer ONE question from Section A and ONE question from Section B. You must show all relevant formulas and calculations along with relevant explanations to receive credit.**

**Section A: Answer one question**

**1. Agricultural Household Models**

- a. Explain the distinction between an agricultural household model in which production and consumption decisions are separable and a model in which these decisions are non-separable. Give one example of how you might empirically test for separability in agricultural household decision-making.
- b. Explain how the presence of transaction costs create a situation in which some staple producers buy, some sell and others remain self-sufficient. In the presence of such transaction costs, how should supply response be estimated? If transaction costs influence staple production in the manner described, what are the implications for policies (such as trade policies) that affect the price of staple goods?

**2. Intrahousehold allocation**

- a. In much of the development microeconomics literature a unitary household model is used to understand household behavior. Explain the underlying assumptions of this model and its implication for intrahousehold allocation. Describe some of the policy implications of the model.
- b. Concerns over the assumptions of the unitary model of the household have led to the development of alternative models of intrahousehold allocation such as collective models. Explain how collective models differ from the unitary model. Describe how empirical tests of the unitary versus collective model have been conducted. What conclusions can be drawn from these tests and what are the policy implications?

## **Section B: Answer one question**

### **3. Migration**

- a. Explain the following three perspectives on migration: 1) the neoclassical model; 2) the new economics of migration; and 3) network or social capital theory of migration.
- b. Describe how you might empirically test the relative importance of these theories in explaining Mexico-US migration.
- c. Discuss some of the reasons why female and male migration patterns might differ. Explain how you would empirically test whether these differences exist.

### **4. Fertility and Population**

- a. Explain the theory of household fertility decision making. What factors does the theory indicate are important in determining the fertility rate?
- b. Suppose a country had a significant decline in fertility rates over a 20 year period and that during this period the government promoted contraceptive use through public health clinics were set up around the country. Discuss how you might empirically test the factors that influenced fertility decline including the role of the government program that promoted contraceptives.
- c. According to Partha Dasgupta, what does the theory and evidence suggest about the existence of a “population problem”?

## **PART 2. Development macroeconomics**

Answer *one* question from Section A and *one* question from Section B. Read the questions carefully, and make sure to answer what is asked. Answers are judged on clarity of exposition and intuition, command of the relevant literature, and accuracy and depth of technical detail.

### **Section A: Answer one question**

1. **Growth models.** The basic neoclassical growth model frames growth of output in terms of stocks of productive inputs and productivity growth.
  - a. Explain the model's basic assumptions and key behavioral questions.
  - b. Write the expression for output per capita in the steady-state and explain its intuition.
  - c. Explain how empirical work has attempted to gauge the validity of the neoclassical model as a framework for explaining growth. To what extent are results of econometric studies consistent with predictions of the Solow model? Cite specific findings, making sure to discuss problems in interpreting regression results.
  - d. Explain how endogenous growth models differ from neoclassical models in how they represent the causes of growth. What empirical evidence is there in favor of the core ideas of endogenous growth models?
  
2. **Growth and inequality.** Recent years have seen efforts to theorize relationships between growth and inequality by incorporating political-economy considerations into growth models.
  - a. Explain the model developed by Persson and Tabellini in this regard. Does their model yield a positive or negative relationship between the degree of income inequality in a country and its rate of growth? Outline the mechanisms involved.
  - b. What empirical evidence do Persson and Tabellini offer in favor of their model? To what extent is this evidence compelling?
  - c. Explain Forbes' objections to the Persson-Tabellini model: What specific econometric problems does she identify, and how does she attempt to fix them? Do their results withstand her careful reassessment? Explain.
  - d. What do we know about recent trends in income inequality across the globe: what are the sources of evidence and to what extent should we trust them? Explain the findings of Xavier Sala-i-Martin and Branco Milanovic, indicating strengths and weaknesses of their methods.

## Section B: Answer one question

3. **Measuring development.** Real GDP per capita is typically used as a measure of economic development.
- Define real GDP per capita, and indicate in what units it should be measured to yield meaningful comparisons across countries. What are the advantages and disadvantages of using real GDP per capita as a measure of development?
  - Explain the rationale and calculation of the human development index (HDI). If we assess countries' development accomplishments using the HDI instead of GDP per capita, do we get an entirely different picture? Explain.
  - According to data from the International Monetary Fund, the value of output produced by developing countries rose 150% between 1990 and 2005 (expressed in U.S. dollars adjusted for purchasing-power parity). To what extent has this phenomenal growth led to reductions global poverty? Discuss available evidence, making sure to cover: definitions of poverty, methodological issues in constructing poverty estimates, and econometric studies of the relationship between poverty and growth.

## 4. Development and finance

- It was expected that financial liberalization would accelerate flows of capital from parts of the world where it is abundant to parts in which it is scarce, and that this would permit substantial increases in investment and growth in the developing world. To what extent have these expectations been realized? Provide theoretical, empirical and policy-related insights.
- When capital suddenly flows out of a country or region, as in the Asian financial crisis, can we assume that the outflow was necessarily caused by poor national economic policies and/or deteriorating economic fundamentals? Explain why or why not. What does the empirical evidence say about the relative importance of internal versus external causes of macro/financial crises?
- Foreign aid is intended to provide low-income countries with additional resources for promoting economic growth and development. Explain the contrasting opinions on whether aid has indeed been beneficial for promoting economic growth. On which side does the balance of the evidence fall?