



Stockholm  
University

Department of Economics

Course name: Intermediate Development Economics  
Course code: EC2303  
Type of exam: Main Exam  
Examiner: Konrad Burchardi  
Number of credits: 7.5  
Date of exam: 26th of October 2020  
Examination time: 13:00-16:00  
Aids: No aids are allowed.

---

Write your identification number on each answer sheet.

Start each new question on a new answer sheet.

---

Explain notions/concepts and symbols. If you think that a question is vaguely formulated, specify the conditions used for solving it. *Only legible exams will be marked.*

---

This exam contains TWO sections: **Section A** and **Section B**.

**Section A** contains four questions, each worth 10 points. You have to answer ALL of those four questions.

**Section B** contains three questions, of which you have to answer ONLY TWO. You can choose which TWO of the three questions in Section B you answer. Each of those questions is worth 20 points. (Do not answer three questions in Section B. If you do so, only the first two questions answered will be marked.)

---

You can earn a maximum of 80 points on this exam. Your grade for this course is based on the sum of your points in this exam and the points you received for your presentation. For the grade E 45 points are required, for D 50 points, C 60 points, B 75 points and A 90 points.

---

Your results will be made available on your Ladok account ([www.student.ladok.se](http://www.student.ladok.se)) within 15 working days from the date of the examination.

---

**Good luck!**

## Section A

Question A.1: *Explain what a poverty trap is. Then provide a brief discussion on the empirical evidence demonstrating (or not) the existence of psychological poverty traps.*

Question A.2: *Why might a reduction in risk-exposure lead households to take up profitable but risky investment opportunities? Explain all evidence demonstrating (or not) such an effect.*

Question A.3: Imagine an NGO which operates in post-conflict regions around the world. The NGO's modus operandi is to conduct intensive training programs for local entrepreneurs just after a violent conflict ended. The NGO is now applying for further funding to SIDA, and presents evidence for the effectiveness of their program. In particular, they present data which demonstrates that – in regions where they operate – average household incomes increased by 13 percent over the 5 years after they started their operations. The manager in charge at SIDA concludes: "That's convincing evidence that this NGO is highly effective."

*Do you agree with him? If yes, please explain why. If not, please explain why and what alternative evidence you would like the NGO to present.*

Question A.4: Esther Duflo estimates the returns to a large school construction program in her paper "Schooling and Labor Market Consequences of School Construction in Indonesia: Evidence from an Unusual Policy Experiment" (AER, 2001).

*Explain her methodology to estimate the returns to the school construction program, and state her findings.*

## Section B

Question B.1: Mankiw, Romer and Weil derive in their paper “A Contribution to the Empirics of Economic Growth” (QJE, 1992) the following regression equation explaining long run per capita output  $Y(t)/L(t)$  as a function of the initial technology stock  $A(0)$ , the growth rate of technology  $g$ , the population growth rate  $n$ , the depreciation rate of physical capital  $\delta$ , the saving rate in physical capital  $s_k$  and the saving rate in human capital  $s_h$ . Time is denoted as  $t$ .

$$\ln \left[ \frac{Y(t)}{L(t)} \right] = \ln A(0) + gt - \frac{\alpha + \beta}{1 - \alpha - \beta} \ln(n + g + \delta) + \frac{\alpha}{1 - \alpha - \beta} \ln(s_k) + \frac{\beta}{1 - \alpha - \beta} \ln(s_h)$$

(a) Explain for each of those variables whether and why it has a positive or negative effect on long-run output per capita. [5 points]

They then obtain data on all variables in the above equation, including data on school enrolment, which they use as a proxy for  $s_h$ . They find that the results from running the regression corresponding to the above equation are consistent with what the Solow Model would predict. Adding  $s_h$  to an otherwise standard Solow Model results in a positive coefficient on  $s_h$  and a substantially higher  $R^2$ .

(b) Discuss whether data on school enrolment is a good measure of the savings rate in human capital. [3 points]

(c) ‘This is strong evidence for the idea that the accumulation of human capital is a main driver of economic growth.’ Do you agree with this statement? No points will be awarded without explanation. [5 points]

Hall and Jones (QJE, 1999) present an alternative way to quantify the contribution of human capital to economic growth.

(d) Describe their approach, how it differs from the Mankiw, Romer, Weil approach, and their key finding. [7 points]

- Question B.2: (a) In “The Digital Divide: Information (Technology), Market Performance and Welfare in the South Indian Fisheries Sector” (QJE, 2007), Robert Jensen presents the below figure. It depicts the daily average price for fish on local markets, markets are grouped into three regions, and the solid vertical line depicts when cell phone towers started operating in the regions.

*Explain how we can understand the striking pattern in the figure. [10 points]*

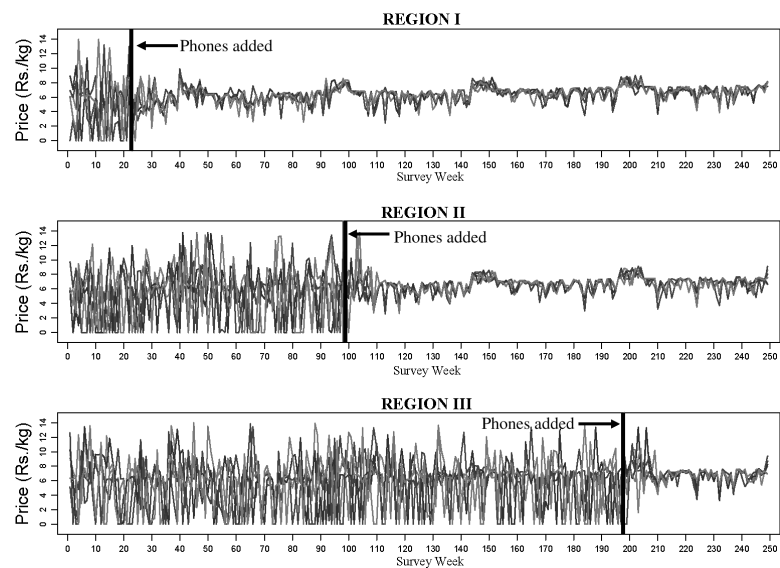


FIGURE IV  
Prices and Mobile Phone Service in Kerala

- (b) In “Information, Demand and the Growth of Firms” (AER, 2018) the authors follow up on the earlier findings, and study the effects of the cell phone tower roll-out on productivity in the boat building sector.

*Explain why, according to them, productivity in the boat building sector changed after cell phone towers became operational, and what data they present to substantiate that claim. [10 points]*

- Question B.3:
- (a) Suresh de Mel, David McKenzie and Christopher Woodruff present in “Returns to Capital in Microenterprises: Evidence from a Field Experiment” (QJE, 2008) estimates of the returns to capital in microenterprises in Sri Lanka.  
*Explain how they estimate the returns to capital. Do their results make you think that microenterprises in Sri Lanka are capital constrained? [8 points]*
  - (b) *Explain whether and how adverse selection might explain the findings of de Mel, McKenzie and Woodruff. [6 points]*
  - (c) *Explain whether and how moral hazard might explain the findings of de Mel, McKenzie and Woodruff. [6 points]*