

DEVELOPMENT FIELD EXAM

This exam has two parts: A section of six short questions, and of three longer questions. You should attempt to answer *all* six short questions. However, please choose attempt only two of the three longer questions.

1. SHORT QUESTIONS

Please answer these questions in no more than one or two paragraphs.

- (1) In "Quantifying Quality Growth" (AER 2001), Bils and Klenow use the slope of the quality Engel curve as an instrument for quality change over time. Why might this procedure be an improvement over the standard approach (e.g., Nordhaus' measure of the price of light) to measuring quality change? What are the limitations of the Bils and Klenow approach?
- (2) In "Relative Prices and Relative Prosperity," Hsieh and Klenow argue that capital goods are more expensive than consumption goods in poor countries. Why is this fact important in explaining low real investment rates in poor countries? What does this point fact to as the underlying reason why poor countries are capital scarce? If capital goods are made only by a handful of countries, how can a poor country lower the relative price of capital?
- (3) What are two theoretical reasons why high levels of ethnic diversity in a society could lead to slower aggregate income growth? Briefly discuss the recent empirical evidence on ethnic diversity and economic outcomes.
- (4) What is the impact of greater educational attainment (years of schooling) on per capita income levels in less developed countries?
- (5) You're hired as a consultant to the United Nations to help achieve the Millenium Development Goals, and tasked with designing a program to minimize the number of people in a developing country below the (consumption) poverty line.
The total budget for poverty reduction is B , which is less than the poverty gap. A requirement of the program is that it must be Pareto-improving; thus, you can't e.g., appropriate the wealth of the people above the poverty line. Describe a simple system of transfers which will best achieve this task.
- (6) Suppose we observe that in households in which women consistently contribute a larger share of household income, a greater share of household expenditures is spent on educational expenses for children, *ceteris paribus*. Accordingly, legislation is proposed to transfer some fixed amount of income from husbands to wives. Let us further suppose that some of these households are likely to break up in the near future, while others are more stable. In which sort of household would you expect the proposed legislation to be more likely to be effective in increasing children's education? Why?

2. LONGER QUESTIONS

Complete two of these longer questions. These may require a more sustained argument than the short questions, but clarity and concision are still very desirable.

(1) Democracy and Economic Development

- a) Discuss why political democracy could be important in the process of economic growth and development. What are some specific situations in which democracy is likely to be most important for development, and why?
- b) Describe the methodology, data, and main findings of two recent empirical papers that study how greater local political competition affects public policy outcomes in a developing country context.
- c) Few Sub-Saharan African countries were functioning democracies in 1990. Today, the majority have had competitive multiparty elections. What are the implications of this change for economic development in Africa?

(2) Inequality and aggregate productivity

Suppose that preferences were given by

$$U = \left[\int Y_i^{\frac{\sigma-1}{\sigma}} di \right]^{\frac{\sigma}{\sigma-1}},$$

where i indexes goods. With these preferences, we know that the utility maximizing demand for each good is given by:

$$Y_i = Q \left(\frac{p_i}{P} \right)^{-\sigma}$$

where p_i is the price of good i , $Q = U$ is the aggregate consumption bundle, and $P = \left(\int Y_i^{1-\sigma} di \right)^{\frac{1}{1-\sigma}}$ is the price associated with the aggregate consumption bundle Q .

- a) Suppose that each good was produced by one firm and that the production function of each firm is given by:

$$Y_i = A_i L_i$$

Assuming that all firms pay the same price (w) for labor, derive the profit maximizing price (p), employment (L), and output (Y) of each firm as a function of A_i and σ . Explain the intuition behind these three equations.

- b) Using your results from a), show that *revenue* per worker is the same for all firms. Explain this result.
- c) Now suppose that the cost of firm i is given by $(1+\tau_i)wL_i$. What is the profit maximizing price, employment, and output of each firm? Explain your new equations.
- d) Using your results from c), show that revenue per worker will now depend on τ_i . Why does inequality in revenue per worker mean that labor is allocated inefficiently?

(3) Risk and inequality

Suppose that you observe two poor, closed economies which seem initially identical: they have similar levels and distributions of consumption across their populations, and there are no systematic differences in individual preferences across the two economies.

Over time, there are no changes in the aggregate GDP of the two economies, yet consumption inequality in the first economy remains constant, while consumption inequality falls in the second economy.

- a) Explain why (give an example) ex ante welfare may be higher in the first economy.
- b) Explain why (give an example) ex ante welfare may be higher in the second economy.
- c) What additional evidence is needed to evaluate relative ex ante welfare in the two economies? What data and empirical methods would be necessary to decide the question? Be as specific as possible.