

Education and Health Supplemental Materials

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Reading List

- Banerjee, A. and E. Duflo (2011), *Poor Economics, A Radical Rethinking of the Way to Fight Global Poverty*, Public Affairs. Chapter 4: “Top of the Class.”
- Lucas, R.E. (1990) “Why Doesn’t Capital Flow from Rich to Poor Countries?” *American Economic Review Papers and Proceedings* 80(2): 92-96.
- Banerjee, A. and E. Duflo (2011), *Poor Economics, A Radical Rethinking of the Way to Fight Global Poverty*, Public Affairs. Chapter 3: “Low-hanging fruit for better (global) health.”
- Dao, T.H., H. Waters, and Q.V. Le (2008) “User Fees and Health Service Utilization in Vietnam: How to Protect the Poor?” *Public Health* 122(10): 1068-1078.

Chapter 4: Top of the Class

Banerjee and Duflo (2011)

- Story in Turkey
- The Supply of Education
 - No schools in remote villages
 - Bad roads and transportation is difficult
 - Shortage of well trained teachers
 - Large class size
- The demand for education

Would parents send their kids to school without compulsory education? What constrains them?

 - The need for child labor
 - “no economic resources”
 - “need to get married”
 - Is it useful? Do parents know it? What do they expect of education
 - What worries them about schools?

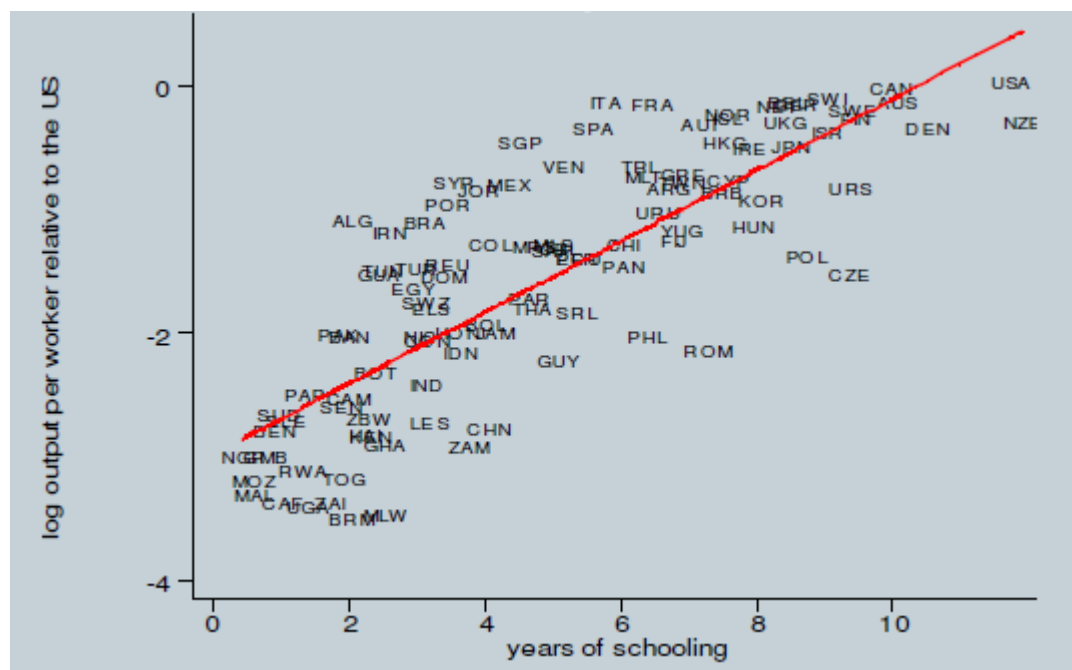
Education for What

- What are the benefits of education?
 - To get a job, higher wage: What do they hope the girl will become? Will everyone become that?
 - To improve your life in non-monetary dimensions (“girls will become more socialized”, “knowing how to behave when you go somewhere”, “family planning”)
 - Learn things that you can teach others

Supply Driven

- Supply driven policy
 - Free education in many African Countries
 - Right to education in India
- Success of the supply drive
 - Between 1999 and 2006: Enrollment rates in primary school increased from 54 percent to 70 percent in SSA; from 75 to 88 percent in East and South Asia
 - Worldwide, the number of children of school age who were out of school fell from 103 million in 1999 to 73 million in 2006

Education and Income Per Capita



The “Returns” to Education

- Schools caused an increase in education
- Schools caused an increase in wages
- It has to be that the increase in wages is due to the increase in education:

This allows us to infer the effect of education on wages: Roughly 8% increase in wages for each extra year spent in school: Schools are indeed beneficial!

Why Doesn't Capital Flow from Rich to Poor Countries?"

Lucas, R.E. (1990)

- Consider two countries producing the same good with the same constant returns to scale production function, relating output to homogeneous capital and labor input.
 - If production per worker differs between these two countries, it must be because they have different levels of capital per worker, holding everything else constant.
- Law of Diminishing Returns implies that the marginal product of capital is higher in the less productive (i.e., in the poorer) economy.
 - If so, then if trade in capital good is free and competitive, new investment will occur only in the poorer economy, and this will continue to be true until capital-labor ratios, and hence wages and capital returns, are equalized.

Capital Flow from Rich to Poor Countries: United States and India

- According to Robert Summers and Alan Heston (1988, Table 3, pp. 18-21), production per person in the United States is about fifteen times what it is in India.
- Suppose production in both these countries obeys a Cobb-Douglas-type constant returns technology with a common intercept:

$$y = Ax^{\beta},$$

Model with only Physical Capital

Production function:

$$y = Ax^{\beta},$$

where y is income per worker and x is capital per worker. Then the marginal product of capital is:

$$r = A\beta x^{\beta-1},$$

In terms of capital per worker:

$$r = \beta A^{1/\beta} y^{(\beta-1)/\beta}$$

Model with only Physical Capital (cont.)

- Let $\beta = 0.4$ (an average of U.S. and Indian capital shares), for both countries. Then the marginal product of capital in India must be about $(15)^{1.5} = 58$ times the marginal product of capital in the United States.
- If this model were anywhere close to being accurate, and if world capital markets were anywhere close to being free and complete, it is clear that, in the face of return differentials of this magnitude, investment goods would flow rapidly from the United States and other wealthy countries to India and other poor countries.
- Indeed, one would expect no investment to occur in the wealthy countries in the face of return differentials of this magnitude.

Model with Differences in Human Capital

External benefits of human capital

The production function takes the form:

$$y = Ax^{\beta}h^{\gamma},$$

where y is income per effective worker, x is capital per effective worker, and h is human capital per worker. The term h^{γ} as an external effect

Model with Differences in Human Capital (cont.)

The marginal productivity of capital formula is:

$$r = \beta A^{1/\beta} y^{(\beta-1)/\beta} h^{\gamma/\beta}.$$

with a capital's share, $\beta=0.25$, these numbers imply $\gamma=0.36$

The argument of this section and the preceding one suggests that correcting for human capital differentials reduces the predicted return ratios between very rich and very poor countries from about 58 at least to about 5.

Conclusions

- The central idea of virtually all postwar development policies is to stimulate transfers of capital goods from rich to poor countries.
- In a world of largely immobile labor, policies focused on affecting the accumulation of human capital surely have a much larger potential.

Chapter 3: “Low-hanging fruit for better (global) health.”

Banerjee and Duflo (2011)

- Preventive care: the Low Hanging Fruit
- There are some technologies that are known to be effective and cheap ways to promote good health:
 - Bed nets for malaria
 - Immunization
 - Breast feeding
 - ORS
 - Bleach

High Returns?

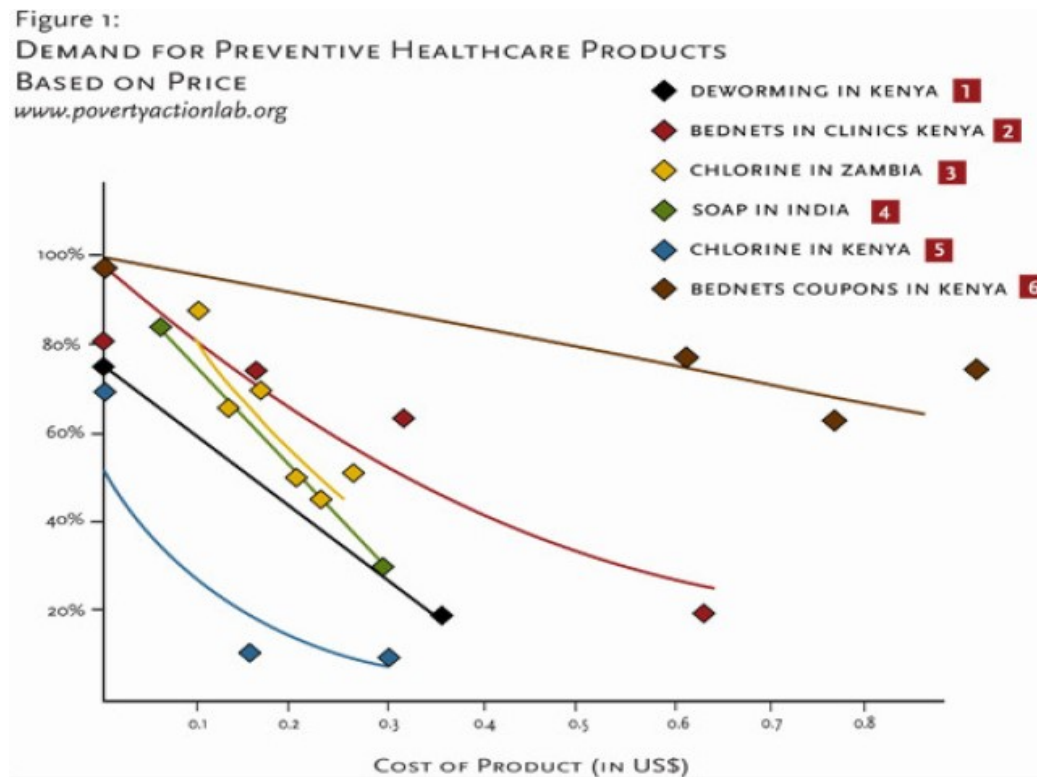
- These health interventions have high financial returns:
 - High financial returns to deworming
 - Jeff Sachs: countries which have lots of malaria are poor.
 - Controlling for other factors, malarial countries GDP is 30% lower than nonmalarial countries

Does Malaria Cause Poverty or the Other Way Around?

- Jeffrey Sachs conclude that malaria cause poverty
- A child not exposed to malaria in Childhood would have an income 50% higher for all their life-time than a child exposed to malaria
- Investments in malaria control measures seem highly cost effective:
 - Why are countries not doing it?
 - Why are people not doing it?

Low Demand for Preventive Care

- Low level of demand
- High sensitivity to prices, either positive... or negative (small incentives)



Do People Care About Their Health?

- Yes, they do:
 - Large amount of money spent on health care (up to 7% per month in the Udaipur survey)
- But most of these is spent on curative care.
 - Large expenses
 - Often for care that is very invasive and of poor quality: too much treatment.

Are Governments to Blame?

- In a certain measure, yes:
 - Nurses are often absent: 35% on average in a survey conducted by the world bank.
 - Even when they are there, governments doctors and nurses do not treat patient very well
 - 3 minutes, 3 questions, 3 medicines!
- But even when services are good, people do not always get them: for example in the immunization camps, only 12% of people got all the shots: there is something about demand, not only about supply!

Why the Low Demand

- Two difficulties with preventive care:
 - It is difficult to learn what works
 - Benefits are in the future, and the cost is now
- Learning about Health Care
 - Most diseases are self-limiting: they get better after being worst
- Preventive care is worst
 - You take an action that prevents something from happening.... A long time after the fact. Drawing the link is difficult
 - You need to trust what you are told, and this trust is fragile

Why the Low Demand (cont.)

- Now or later
 - Preventive health care costs are incurred today, but benefits are in the future
- Human beings tend to put too much weight on the present, relative to the entire future
- Same problem with preventive care: parents may feel every month that they will get the immunization next month.... But something else comes up, and they don't end up doing it

What This Means for Policy

- Large benefits from making things easy/automatic for people
 - Charging a small amount may be counter-productive
 - Giving people small incentives may save you money
- The role of learning and trust is key
- There can be further benefit to early subsidies, if this leads to learning about benefits.
 - For example bednets (Dupas, 2010)
 - People who got them were more likely to pay for a second one in the future
 - Neighbors of people who got one for free were more likely to pay for one if they had to pay.
- Because preventive care is hard to teach, need to maintain trust: important for governments to choose their battles. India lost credibility by lying to people about sterilization, and recovering from this is very difficult.

User Fees and Health Service Utilization in Vietnam: How to Protect the Poor?"

Dao, T.H., H. Waters, and Q.V. Le (2008)

- Policies on user fees
 - Both in-patient and out-patient care
 - Include all medicines, lab tests, technical services and hospital beds
 - 70% revenues used for supplementary share of drugs and equipment cost and 30% for health worker bonus
 - The financial sources for health care: taxes 58%, compulsory health insurance 16%, hospital fees 13% and donors 13%

Comparison of Health Performance

Countries	MMR per 100,000	Life expectancy for women	GDP per capital PPP	Public Health spending as % of GDP	Public health spending as % of total
Vietnam	100	70	2,240	1.75	22
Philippine	170	69	3,840	1.5	45.5
Thailand	40	68	6,788	2.1	65.4

User Fees and Obstacles in Public Hospitals

- Increase of incomes for health workers
- No evidence of quality improvement in health care
- Unofficial payment: a burden to patients
- Other payment in addition to user fees

Private Practices

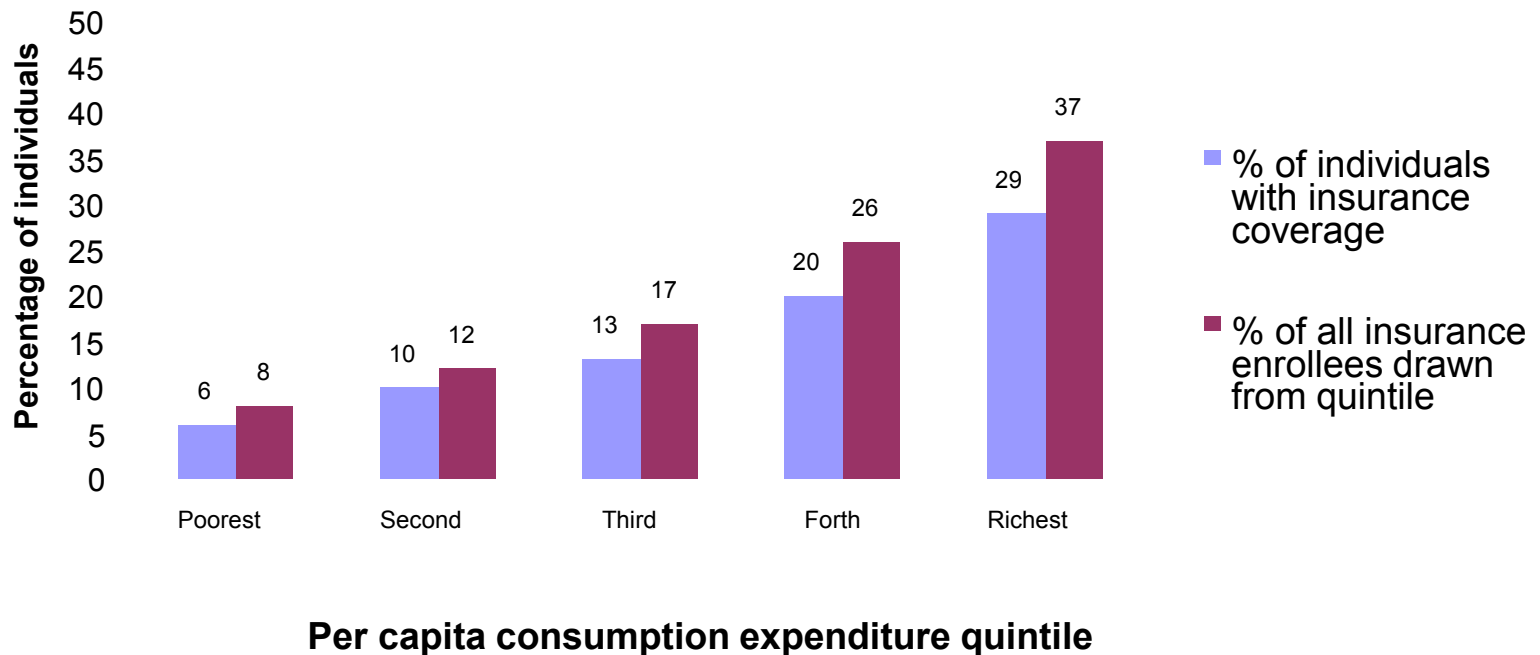
- From providers' perspectives: Private practices are considered primary choices, paying for private clinics is different from paying to public practices
- Most private physicians work full time in public health services and part time for private clinics
- Private clinics poorly equipped, no supervision and no record keeping system

Health Insurance

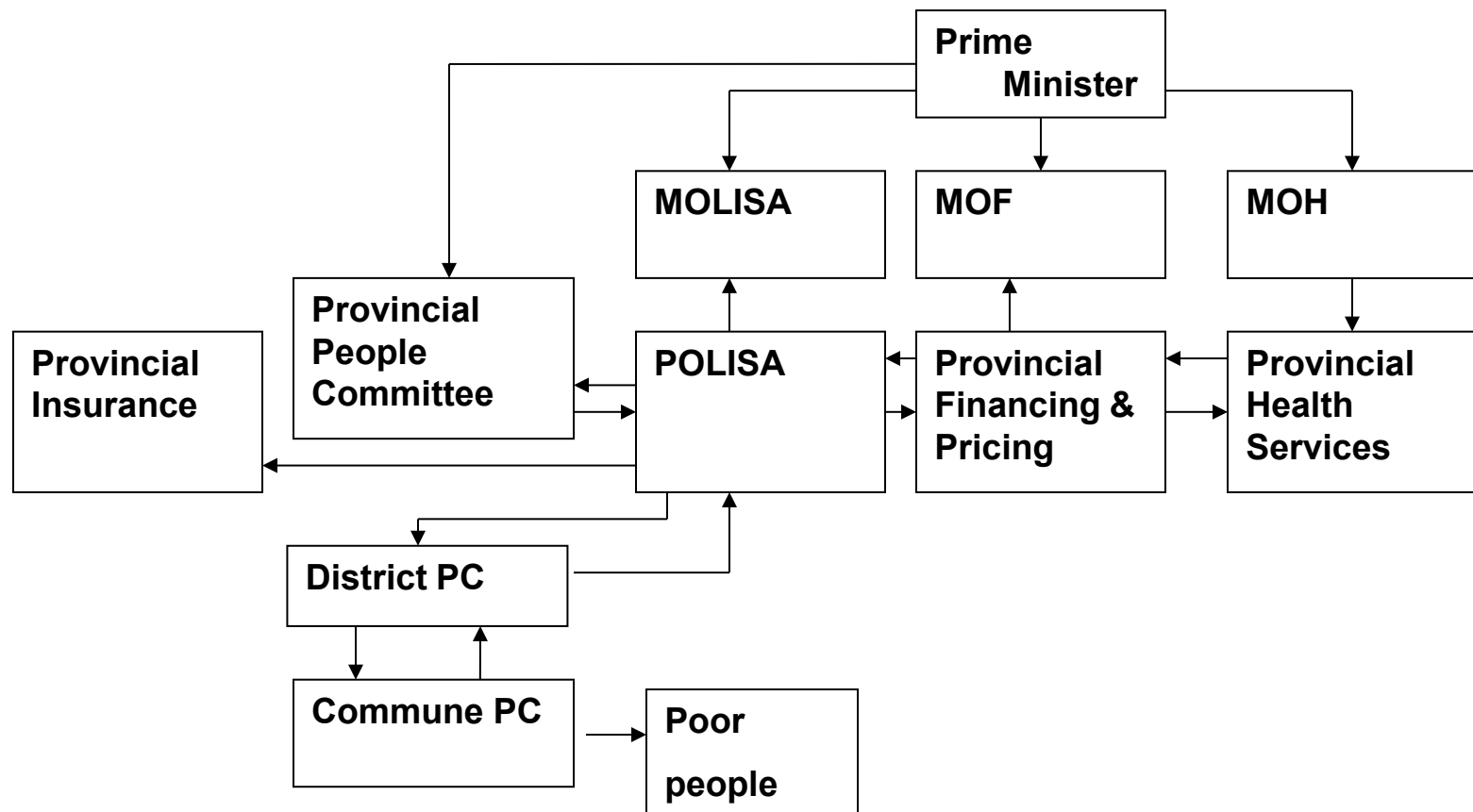
- Coverage of 12% population
- Include involuntary (health insurance and social insurance) for paid employees and voluntary insurances (mostly school children)
- Inequality in coverage
- Targeting and insurance
 - 9.5% poor people receive poor household certificates and 9.9% receive health care card
 - Obstacles: administrative process, inconsistent targeting criteria and lack of information to claim benefits

Health Insurance

**Health insurance coverage
by per capita expenditure quintile, 1998**

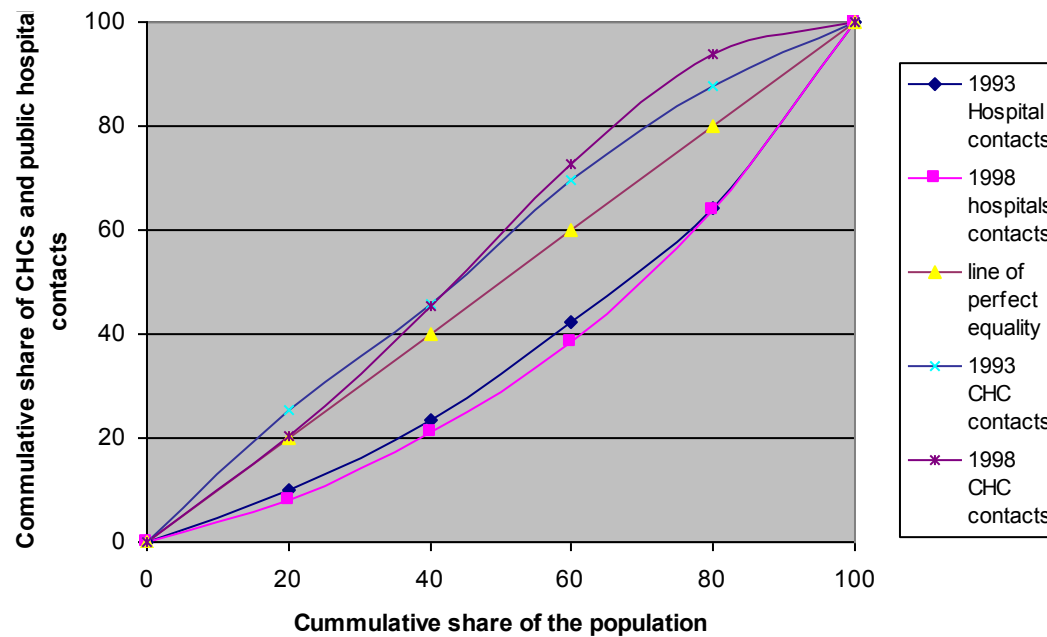


Targeting System: How the Poor Get Health Insurance Card?



Utilization Patterns After Health Reform

Concentration curve of service contacts with CHCs and public hospitals, 1993 and 1998



Impact of User Fees on Impoverishment and Health Outcomes

- Many poor people cannot afford to pay for services
 - 5% to 10% vulnerable to fall into poverty due to health care payment
 - Increasing inequalities in malnutrition in children and illnesses between the poor and the better-off
- Policy options: criteria
 - How to protect the poor from catastrophe?
 - How to expand coverage to the whole population and ensure equity and effectiveness?
 - How to improve the quality of care?
 - How to avoid under-the-table payment in the public health care system?

Recommendations

- Improving the insurance system
- Moving to universal coverage with effective targeting system
- Improve information system and quality of care
- Increase government funding for health expenditure
- Increase external assistance through a well-managed insurance system from the government