

DUE IN CLASS TUESDAY 06 MARCH 2018

Open book, two hours total, 30 minutes for each question.

Think! – I am **not** giving time to write a long essay on each. If you have only a paragraph per (sub)topic, what is your main point? What is subsidiary and can be left to a second paragraph?

While this will vary with the course – it will be less true in one that focuses on writing, or that has low enrollments – there are likely to be a few key words or phrases for which the prof will be looking. Now I in fact read your entire answer, and comment here and there, so I give you credit for saying things sensible and closely tied to the question.

A good answer won't necessarily touch on each point. But you should hit most!

1. Schooling. NPV.

As Minister of Education, you hire a economic consulting firm to craft help you make a case for a larger budget.

A. How can they generate an estimate of the benefits of (enhanced) education? What empirical challenges will they face - data, issues they can/can't address? Given that their consulting fee will come from Education Ministry, what might they overlook?

- **Net Present Value: up-front costs vs higher wages**
- **data indirect / poor:**
examples include:
 - **cross-section income data** poor guide to future incomes in a rapidly changing economy.
 - **data likely not representative:** much of population not in formal employment
- **causation (in econometrics, "identification"):** ability leads to both more education and higher income.
- **externalities:** social vs private returns.

== add-on

- **polit econ:** Min of Educ may focus narrowly on test performance, may not care about public health or indirect benefits, may already have a list of intended projects.

*in the real world the Min Educ compares your firm to other consultants, and checks whether your typical report is what they want – there's a selection bias, some consultants churn out the same report time after time, because the clients want those results, not a competent, objective outside evaluation. **Beware!** – I've seen this in management consulting, the Big Boss wants a study to support his/her pet project.*

B. You can't study everything. *A priori* on what should you focus your education budget? Would that be popular among the friends of your Endlessly Re-elected President?

- **dimin returns:** Literacy first, primary education next!
- **attendance:**
may need to subsidize: transport books snacks. lots of creative policies!
teachers, too: need to pay enough that they show up!

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2. Health. To be or not to be? – malaria, that is.

You are a member of a WHO team working with an African Ministry of Health. You hold what many would view as a devil's advocate position, that the country for whom you're preparing a report should to control NOT eliminate malaria.

A. Craft your argument for focusing on malaria control, and not malaria elimination.

- **dimin returns:** controlling much less costly than elimination, and saves a lot of lives (but not all).

- **what to do:**

- prevention:**

- subsidies for ITNs and programs to make available even in remote villages;

- indoors spraying, targeted mosquito breeding ground elimination, antimalarial medication for target groups (pregnant women, local outbreaks)

- treatment:** screening / early diagnosis efforts → earlier start to malaria specific treatment. can lower transmission so helps prevention.

- education:** helpful for both of above.

- long-run:** hope that “high tech” R&D (Gates Foundation, others) leads to more effective treatments, better ways to kill mosquitos.

B. Since you don't advocate that the government engage in a “war against malaria,” where do you advocate Sierra Leone spend more of their limited resources?

- opportunity cost:** less on malaria → more for other things

- priorities:** water, targeted nutrition issues [vitamins, deworming], HIV/AIDS

3. Population.

“A large population makes for a strong country. Go forth and multiply.” Or at least that was the philosophy of Mao Zedong, China's leader during 1949-1976.

A. Would you as a poor farmer likely cooperate with this policy?

- costs / benefits children:**

- = **labor on farm**

- = **old age support**

- = but calculation shifts if urban and formal sector where education valuable.

- that's where a developing country wants to be, not where China was.

- China's population 550 mil in 1950 → 930 mil in 1976 so 70% ↑ under Mao

B. Would you as Mao's successor (Deng Xiaoping) agree that this policy will bring dividends to your rule? Or do you foresee benefits in changing it?

- demographic dividends:**

- = **drop in dependency:** ratio of working age population to total population, plus enable more women to participate, plus put more of the population in peak saving age brackets

- negative externalities:**

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= lessens pressure on natural resources.

4. Agriculture.

- A. Why was the Green Revolution a “revolution”? How did it transform economies? What new institutions did it require? Or it illusory – to quote The Who, the new boss is the same as the old boss.

MVs (modern varieties or HY high yield cultivars).

food output ↑ ↑

= **less hunger**

= **requires complementary inputs:**

water/irrigation, fertilizer, and even better with herbicides [weeds grow better, too] and pesticides

distribution systems: higher output valuable only if you can get it to market!

finance: inputs such as fertilizer must be purchased

= **can transfer land / labor out of agriculture**

indirect variation: use land for non-food or low priority crops: vegetables, cotton, fish farming instead of grain production

- B. Why might the Green Revolution lag in an equatorial country such as Nigeria? (Cf. a more northerly country such as China?) Why might peasants be uncooperative?

geo-ecological challenge:

farmers grow multiple crops, huge microclimate variation and some MVs not tropical (especially wheat)

current work on an array of “minor” crops – initial MVs were wheat, wet-field rice and corn. then potatoes. not much wheat, corn, potatoes in full tropics. need casava, teff, and on and on, not just 2-3 “big” crops.

complementary inputs:

farmers may not have access to fertilizer, much less financing to allow them to purchase

know-how: agricultural extension / localized R&D reflecting and wide array of rainfall patterns, crops, soils, diseases, insects.