Globalization, Sustainability and Inequality

E. Maskin

Institute for Advanced Study, Princeton

- Enormous increase in globalization last 20 years
  - more *trade* of goods/services between countries
  - more *production* of goods/services across national boundaries
- caused by
  - decline in transport costs
  - decline in communication costs
  - removal of trade barriers

Globalization has promised

- prosperity to developing countries
  - has often delivered: China and India
- to reduce gap between haves and have nots (inequality) in developing countries
  - has not delivered
- In fact, in many developing countries, especially in Africa, inequality has *increased*

Why does reducing inequality matter?

- egalitarian argument
- eradication of poverty
- political and economic sustainability

- Is increased inequality in developing countries surprising?
- Yes - - contradicts *theory of comparative advantage*
  - – goes back 200 years (David Ricardo)
  - – has been impressively successful in explaining international trade patterns
  - – predicts free trade should *reduce* inequality in developing countries

- Theory of comparative advantage asserts:

  important difference between countries is in their relative endowments of “factors of production”

  i.e., the inputs to production

- Assume 2 factors: high-skill labor and low-skill labor

Compare rich country with developing country

- *ratio* of high-skill to low-skill workers higher in rich country
- so, rich country has *comparative* advantage producing goods requiring high proportion of high-skill workers - - e.g., computer software
- developing country has comparative advantage producing goods where skill doesn't matter so much - - e.g., corn

To see effect of globalization on production:

- look at production patterns *before* globalization (no trade)
- look at production *after* globalization
- compare the two

Before globalization (before trade)

- companies in rich country produce *both* software and corn

  (both demanded by rich country consumers)
- companies in developing country also produce both goods
- developing country's software production "inefficient"
  - developing country's labor force better suited to corn

- low-skill workers in developing country *hurt* by developing country's software production
  - not needed much for software
  - greatly needed for corn
  - if production diverted from corn to software, demand for low-skill labor *reduced*
  - downward pressure on low-skill wages
- similarly high-skill workers in devloping country *benefit* from software production
  - puts them in higher demand

Suppose door for trade between rich country and developing country opens

- rich country will shift production from corn to software – – will import corn from developing country

- developing country will shift production from software to corn – – will import software from rich country

So, developing country now produces *more* corn and *less* software than before

- raises demand for low-skill workers
  - corn uses low-skill workers more intensively than does software
- reduces demand for high-skill workers
- so, low-skill wages *rise* and high-skill wages *fall*
- inequality *reduced*

Theory of comparative advantage remarkably successful historically

- in second half of 19th century
  - Europe - - relative abundance of low-skill labor
  - U.S. - - relative abundance of high-skill labor
- trade between U.S. and Europe increased dramatically
- inequality fell in Europe (and rose in U.S.)

But theory less successful for recent globalization

(1) predicts that *greater* differences in skill ratios between countries imply *more* trade between them

- but, relatively little trade between rich industrialized nations and very poorest countries (e.g., Chad)

(2) predicts decrease in inequality in developing countries

this has not happened

Alternative theory (in collaboration with M. Kremer)

- globalization = international *production*
  - computers

    designed in U.S.

    programmed in Europe

    assembled in China
- *many* skill levels (not just 2)
  - today: 4 levels
- production process consists of different *tasks*
  - “managerial” task - - sensitive to skill level
  - “subordinate” task - - less sensitive to skill

Two countries - - rich and poor

- rich country
  – workers of skill levels A and B
- poor country
  – developing of skill levels C and D

- $A > B > C > D$

(conclusions still hold if $C > B$)

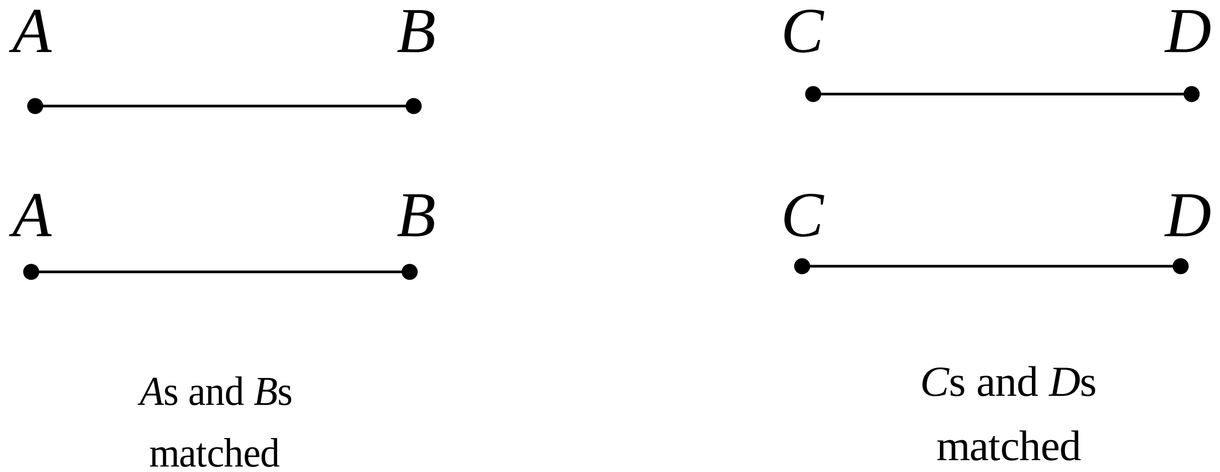
- output produced by “matching” managers and subordinates
- amount of output depends on skill levels of those occupying managerial and subordinate roles.

- output more sensitive to skill of manager than skill of subordinate

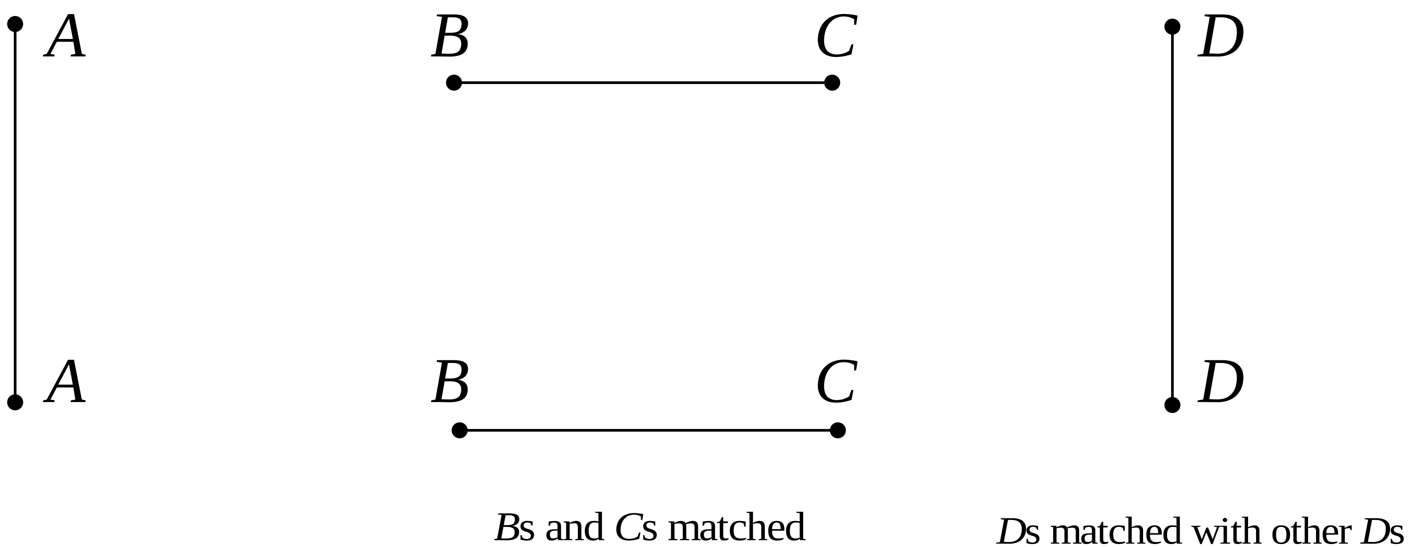
Suppose:

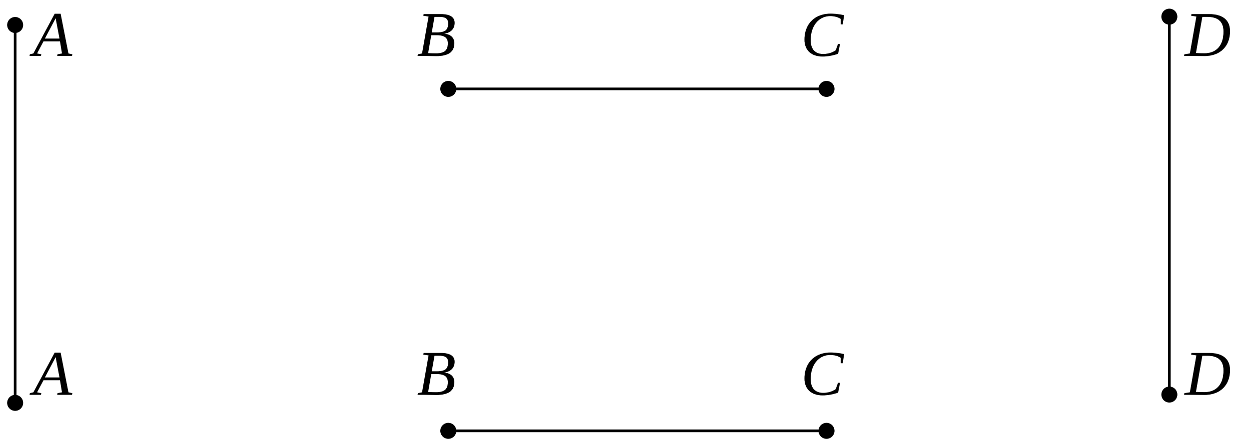
$$\underbrace{A > B}_{\text{rich country}} > \underbrace{C > D}_{\text{developing country}}$$

Pre-globalization (no international production)



Post-globalization (international production possible)





- What is effect of globalization on wages?
  - Competition implies workers paid according to productivity
  - Before globalization, *D*-workers benefited from being matched with higher-skill *C*-workers (this enhanced their productivity)
  - After globalization, *D*-workers left to match with other *D*s

    So *D*-worker wages *fall*
  - By contrast, *C*-worker wages *rise*

    (because of new international matching opportunity with *B*s)
- So inequality in developing country is made *worse*

Strong policy implication:

Raise skill level (through education) of *D*-workers, so have international matching opportunities too

Who's going to pay?

- not producers
  - education raises workers' productivity
  - but then have to pay higher wages
- not workers themselves
  - probably can't afford to
- role for investment by *third parties*
  - domestic government
  - international agencies, NGOs
  - foreign aid
  - private foundations

Thus, if theory correct, right course of action:

- *not* to stop globalization

- allow low-skill workers share benefits by investing in their training