

# Human capital: Population and Gender

Lecture 4.3 & 4.4 - EE461 2/2017

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# Part I: Economic approaches to population growth

- ▶ Health and education on giving birth decision
- ▶ Female education, labor force participation, and wages
- ▶ Child schooling (the 'quality' of children)
- ▶ Family income and income distribution
- ▶ Infant mortality and fertility

## Health and education on giving birth decision

- ▶ Large family  $\gg$  children have lower educational attainment and low levels of health
  - ▶ Greater effect in poor countries or poor families with lower income and higher family size
- ▶ Family might actually decide simultaneously on number of children and investment per child.
  - ▶ If this is the case, an exogenous shock (unexpected death) which reduced the number of children would not raise investments in the health and education of the remaining children.
- ▶ This leads to the question whether parents trade off more children against higher inputs per child, or whether they invest in children taking the number as given.

## Health and education on giving birth decision

- ▶ If it's a quantity-quality trade off and parents are not altruistic toward their children (not incorporate their children into their utility),
  - ▶ then choosing quantity, parents may not invest in health and education enough for their children (negative intertemporal externality).
  - ▶ But, this justifies public intervention to discourage high fertility.
  - ▶ It is reasonable to assume, except in the case of '*unwanted*' children, that parents have another child only when they feel that the benefits of an additional child exceed the costs.
- ▶ Government generally assume that parents are altruistic. The decision on family size should be left to parents, not by order of the government.
  - ▶ Birth control or family planning programs are just a means to assist parents avoid unwanted children for whom the private costs would add to any social costs of additional births.

## Female education, labor force participation, and wages

- ▶ At low levels of education (0-4 years) of female, education's effect on fertility is positive.
  - ▶ Higher education at these levels is also associated with higher income, having a positive effect on fertility (by increasing fecundity or demand for children)
- ▶ At higher levels of education, education has a negative relationship to fertility. Its negative effect is consistent with the price of time effect (taste effect of education) and efficiency effect (efficiency in the use of contraception).
- ▶ Female with higher education tends to marry at a higher age (prefer non-familial activities).
- ▶ Rosenzweig and Wolpin (1982) find that households in villages with a school have lower fertility than households in villages without school.

## Female education, labor force participation, and wages

- ▶ Participation in the labor market is negatively associated with fertility only for women in relatively high-wage modern sector jobs.
- ▶ Jobs outside modern sector (those in agricultural sector) do not take women far from household and allow flexible hours. These jobs do not increase the time cost of raising children and are not associated with low fertility.
- ▶ Rosenzweig (1982) also finds that farm households with more exposed to new agricultural technology have lower fertility and higher child schooling.

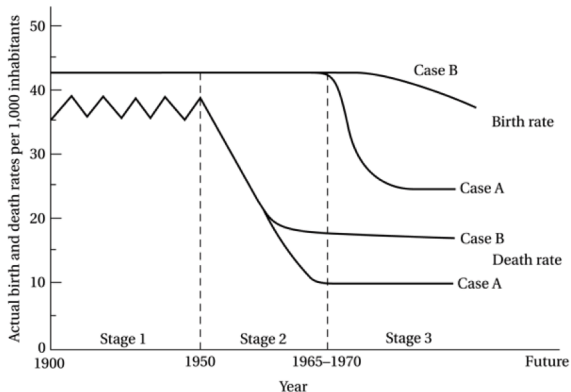
## Family income and income distribution

- ▶ Controlling for parents' education in IV estimation on income, income has a positive effect on fertility.
- ▶ Within the same socioeconomic group, e.g. among small farmers, higher income parents tend to have more children.
- ▶ In industrial countries, income growth in the short run is associated with higher fertility.
- ▶ In the long run, income growth tends to be offset by social changes that reduce fertility, such as rising education, so that people with more income want and have fewer children.
- ▶ Below some minimum income, increases in income are associated with higher fertility. Above some threshold, further increases in income are associated with lower fertility

## Infant mortality and fertility

- ▶ A decline in infant mortality brings about a compensating decline in fertility.
- ▶ At the aggregate level, declines in fertility have tended to lag behind declines in mortality. Therefore, we have rapid rates of population growth during the 1950s through the early 1970s.
- ▶ However, there are several problems complicate empirical analyses of the effect of infant mortality on fertility behavior.
- ▶ First, high mortality and high fertility may be jointly determined >> OLS estimates will be biased
  - ▶ We need to isolate the family-specific exogenous component of life expectancy
  - ▶ High fertility may cause high mortality (reverse causal)

# Infant mortality and fertility



Source: Adapted from National Academy of Sciences, *The Growth of World Population* (Washington, D.C.: National Academy of Sciences, 1963), p. 15.

## Part II: Gender inequality at the start of the 21st century

- ▶ Employment and earnings
- ▶ Households reproduce gender roles
- ▶ Resource control and bargaining power affect household allocation

# Employment and earnings

- ▶ Men historically have higher rates of participation in the labor force than women.
- ▶ There is persistent occupational segregation by gender in both developed and developing countries, with women underrepresented in better-paying formal sector jobs and overrepresented in the unpaid and informal sectors.
- ▶ Measurement: the ratio of the proportion of all working women employed in a particular occupation to the proportion of all working men employed in that occupation
  - ▶ Women: service, clerical and sales jobs
  - ▶ Men: production jobs, higher-paying administrative and managerial positions

# Employment and earnings

- ▶ Women continue to earn less than men.
- ▶ On average in developed countries, women earn 77% as much as men, and in developing countries, 73% as much.
- ▶ Female earnings tend to be rising relative to male earnings.
- ▶ We need to adjust ratio of earnings for women and men for characteristics of workers, types of occupations, and using hourly wages.

## Employment and earnings

- ▶ Adjusted for the characteristics of workers (education, work experience, skills training) to be able to compare earnings across similar types of workers
- ▶ Women and men tend to be concentrated in different types of occupations
- ▶ More men than women work full-time
- ▶ Differences in measured human capital characteristics account for 10-30 percent of earnings gap.
- ▶ Controlling for/adjusting for job attributes will reduce the proportion of the earnings gap that remains unexplained.

## Households reproduce gender roles

- ▶ One of the roles of the household is it transmits gender roles to the next generations.
- ▶ Children acquire a gender identity that shapes the set of socially acceptable activities for women and men and the relations between them.
- ▶ Allocating resources is another household shaping gender roles. Differences in gender responsibility in household resource allocation affect family decisions about investing in boys' and girls' education.
  - ▶ If parents consider it unlikely that their daughters will join the labor force and earn income as adults, they may see less justification for sending their daughters to school.

## Households reproduce gender roles

- ▶ Women generally work longer hours than men (spending more time for household activities), have less experience in the labor force, and earn less income.
- ▶ Lower education and labor force participation generally mean lower incomes for women, and thus limited power to influence resource allocation and investments in the home.
- ▶ Policy makers need to consider gender divisions of time and task allocations within households. Policies that increase demand for female labor may not elicit the expected supply response if women cannot reduce their time on household maintenance or care activities.

# Resource control and bargaining power affect household allocation

- ▶ Women's and men's relative control of resources has significant and different impacts on household consumption and expenditure.
- ▶ If women control more resources, women will translate into a larger share for family welfare and expenditures on children, as well as outcomes that strengthen women's well-being and status in the household.
  - ▶ greater share of household budget devoted to education, health, and food (nutrition-related expenditures)
  - ▶ These are expenditure allocations toward the next generation
  - ▶ greater positive impact on child survival

# Resource control and bargaining power affect household allocation

- ▶ Recent studies in microfinance initiatives in Bangladesh show that
  - ▶ impact of female borrowing on per capita household expenditure (income) is about twice as large as the impact of male borrowing (more impact for female to smooth consumption over time)
  - ▶ Female borrowing has a greater positive impact on children's school enrollment and children's nutritional well-being (invest more in human capital)
  - ▶ Male borrowing has a greater impact on household net worth (invest more in physical capital)