

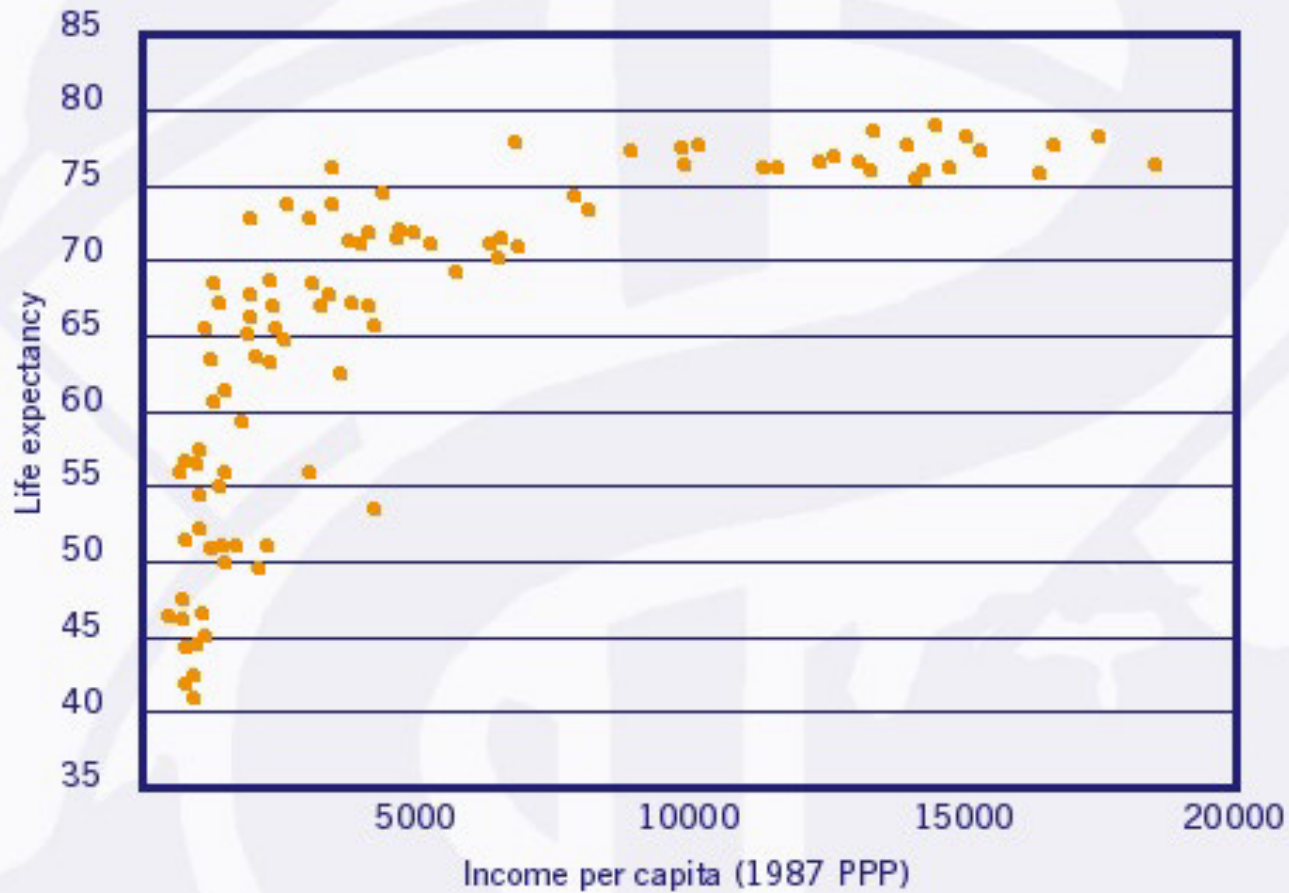
Health, Wealth and Welfare

David Canning

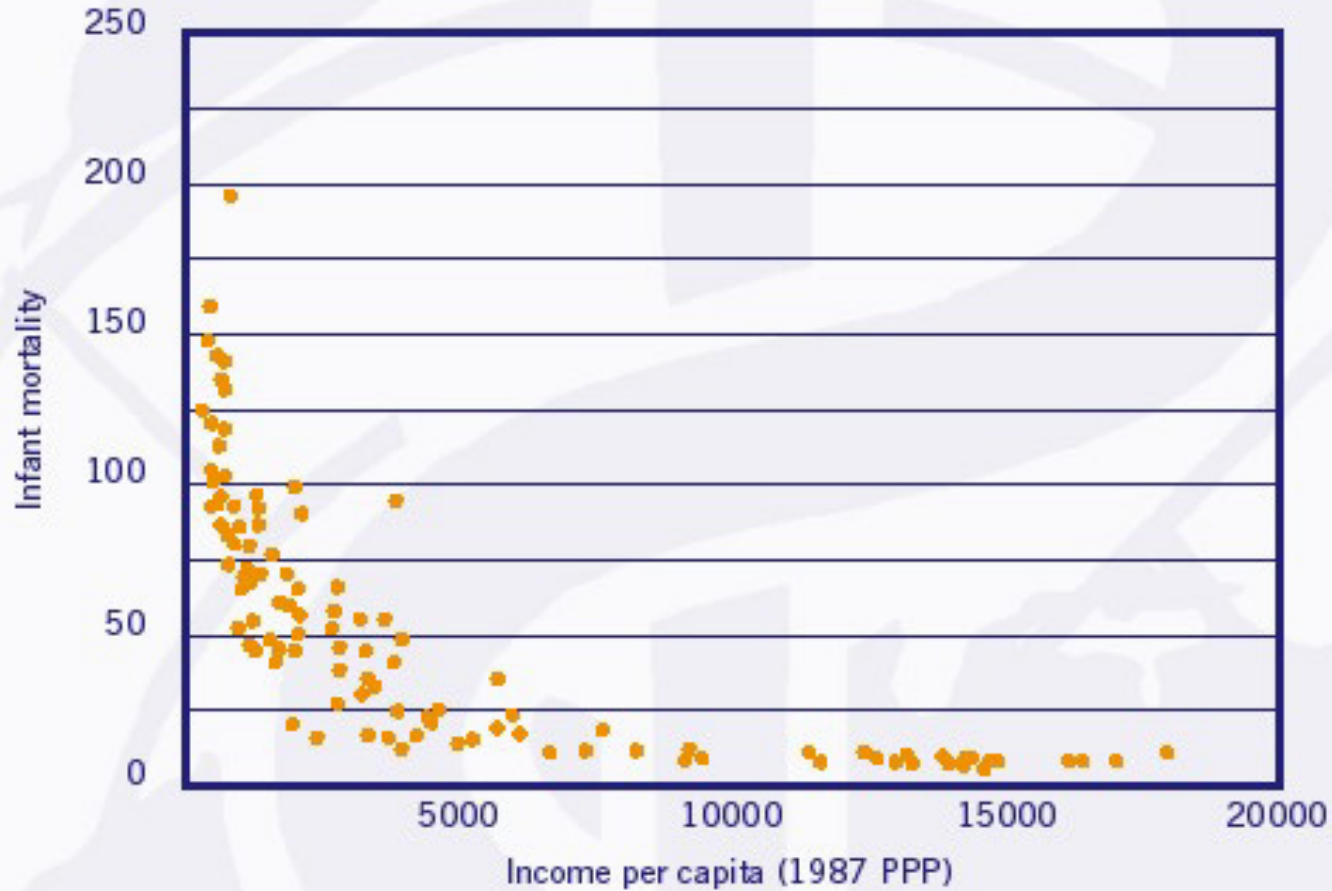
Harvard School of Public Health

IMF Economic Forum: April 15, 2004

Life expectancy & income



Infant mortality & income

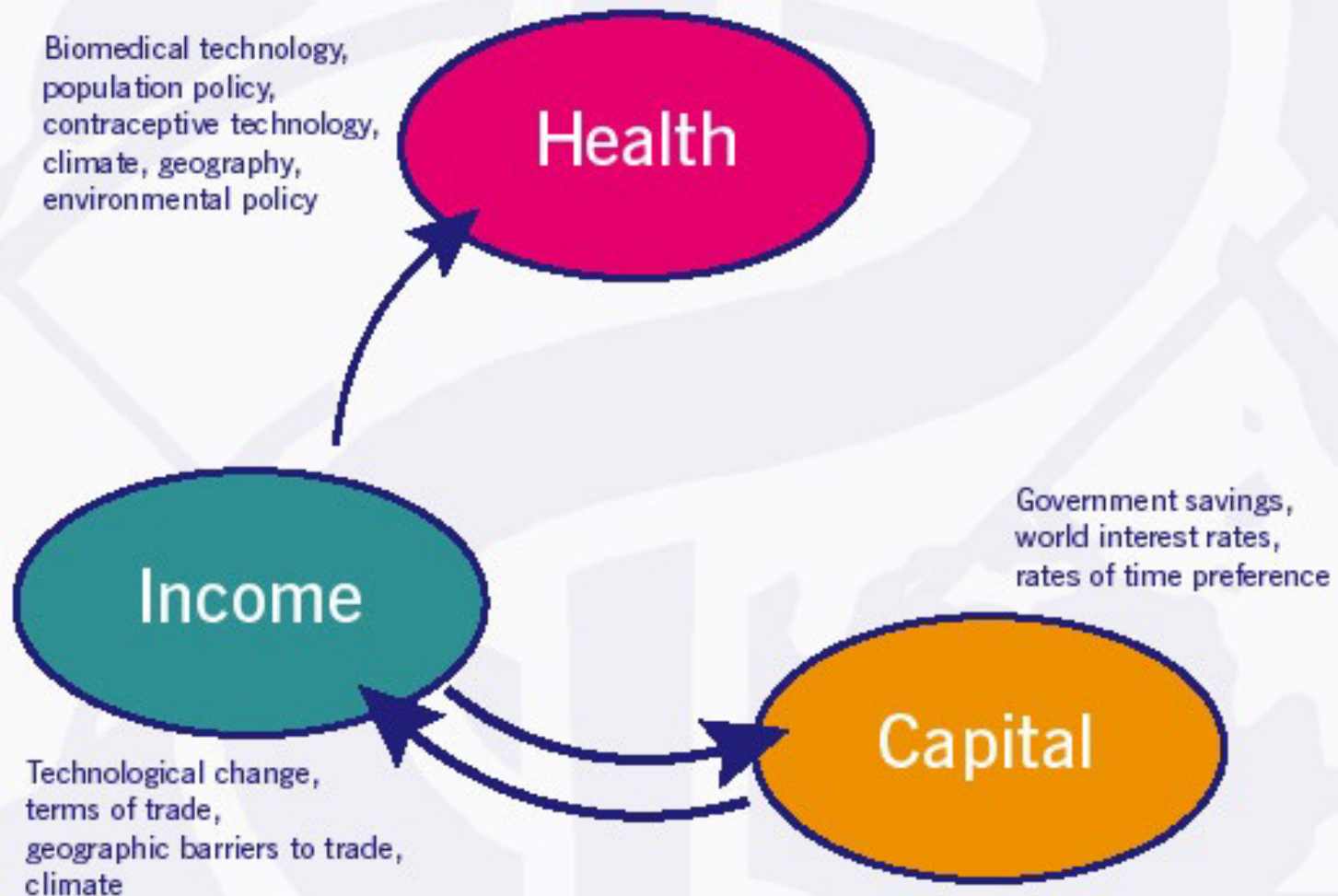


Health and income

Clear *correlation* between health and income

What is the direction of *causality*?

Health and income: the traditional view



Challenge: Healthier is Wealthier

New Evidence that:

- Healthier individuals do better economically
- Countries with healthier populations have higher rates of economic growth

Healthier is Wealthier

Mechanisms:

Healthy Adults:

are more likely to be in the workforce

are more productive

live longer and save more for retirement

Healthy Children

have better schooling outcomes and cognition

lead to lower child mortality and reduced fertility

generate a demographic dividend

Estimates of health effect on wages

To estimate the health effect, studies use height variations due to health and nutrition in childhood. Effect of 1cm health induced height increase on wages:

Country	Males	Females
Brazil	4%	6%
Ghana	6%	8%
Columbia	8%	7%

Health as Human Capital

These effects are very large.

1cm height has about the same effect on wages as an extra year of education (a year of education adds about 9% to wages).

Estimates of the height effect in developed countries are much smaller (1-2% extra wages per cm).

Estimates of health effect on GDP

Life expectancy has a positive effect of subsequent GDP growth even after we control for other inputs.

Effect is large - one extra year of life expectancy raises steady state GDP by about 4%.

Savings

Increases in Longevity increase the need for retirement income

The young save more for retirement

Effect lasts until population age structure reaches equilibrium when the dis-saving of the old offsets the saving of the young.

Increases in longevity raise national savings rates for a time.

The demographic gift

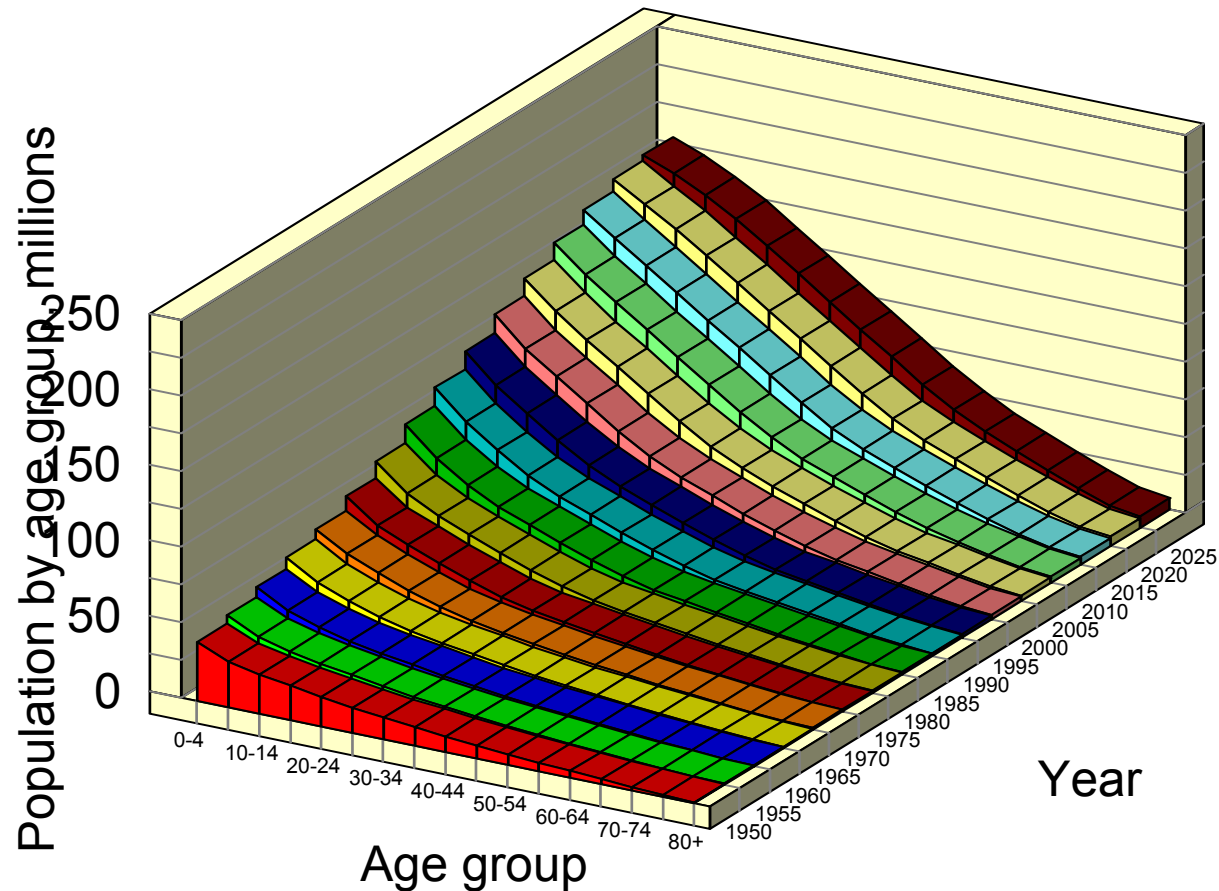
Declining infant mortality rates result in

- large cohorts of young people
- a high level of youth dependency initially

This Leads to a reduction in fertility due to increased child survival

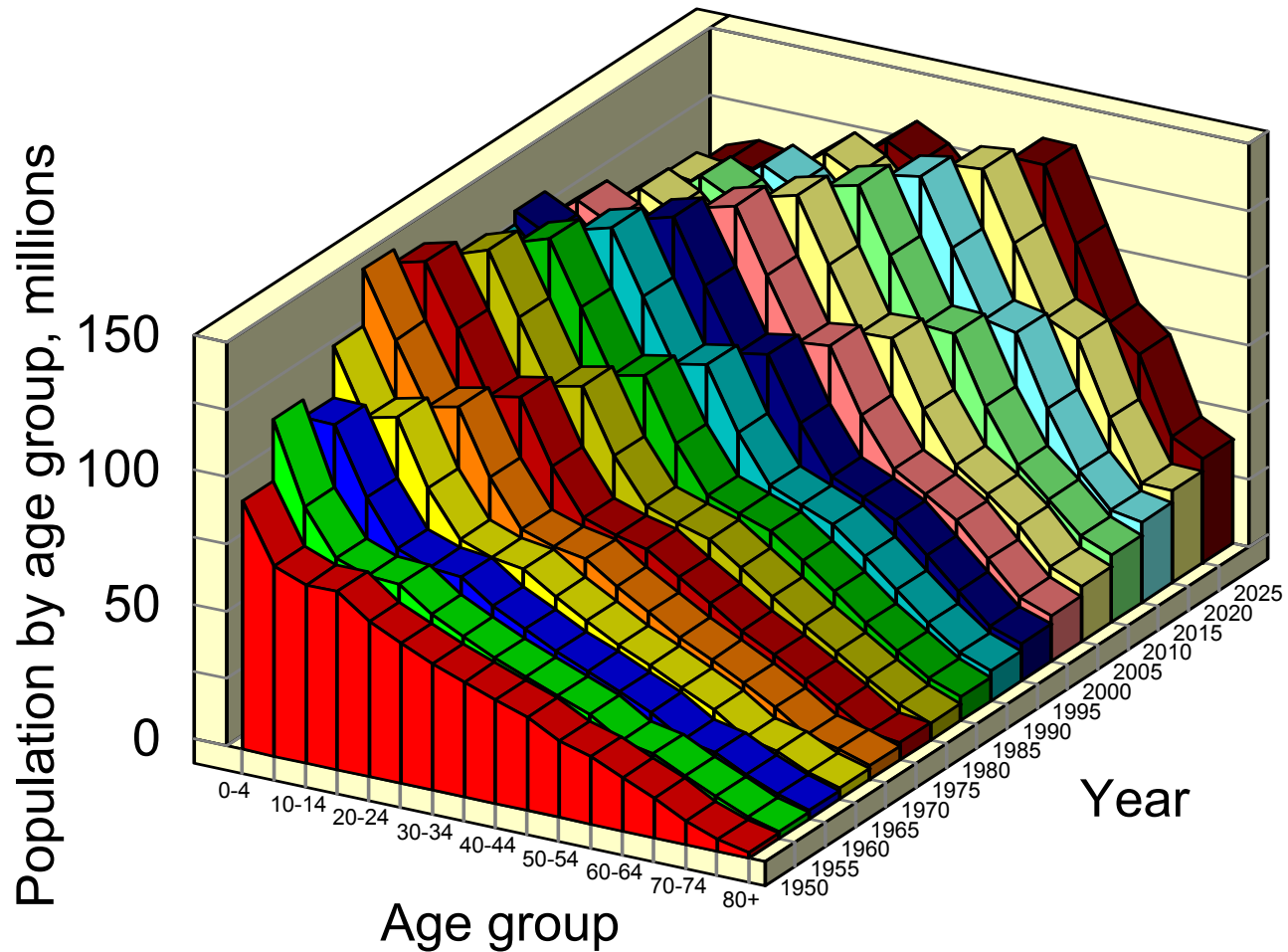
- falling fertility leads to a high proportion of working-age people
- eventually high old age dependency
- **The demographic transition**
- a significant boost to economic growth while it lasts

Changing Age Distribution Africa



Source: The Sex and Age Distributions of Population. The 1996 Revision of the United Nations' Global Population Estimates and Projections

Changing Age Distribution East Asia



Source: The Sex and Age Distributions of Population. The 1992 Revision of the United Nations' Global Population Estimates and Projections

Mutual reinforcement...

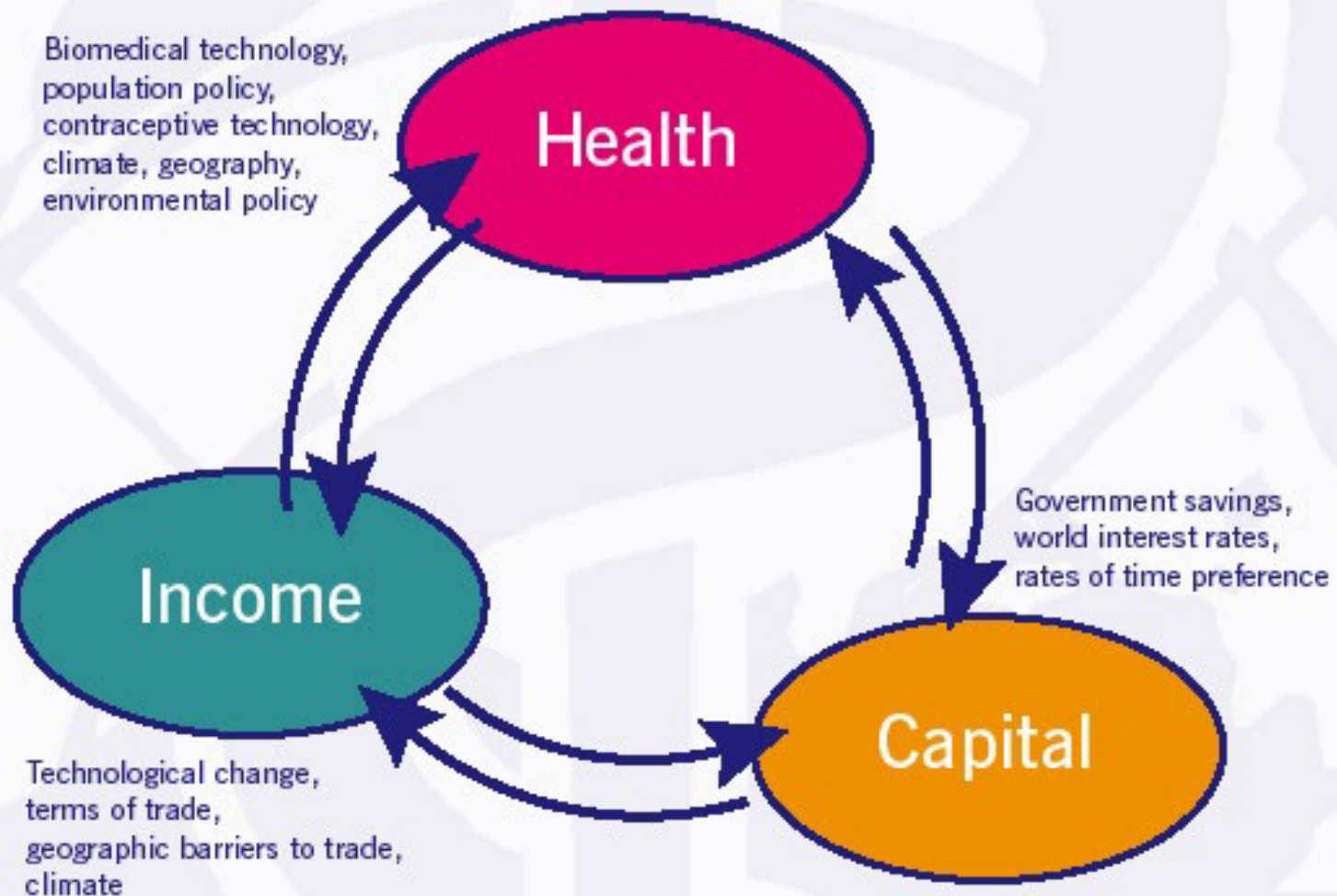
Virtuous Circles

- health improvements promote growth
- growth promotes health improvements
- compelling East Asian experience

Vicious spirals

- health declines *currently* having dramatic effects on economic growth
- AIDS having massive impact on countries, especially in sub-Saharan Africa

Health and income: a new paradigm



Health-led development

Health, like education, is a form of human capital and is a fundamental requirement for economic development.

In addition to the direct welfare benefits of improved health there are economic benefits that from from health.

Cost effective interventions that improve child and adult health can be effective investments in economic development.