Unhealthy People are Poor People… and Vice Versa

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Life, Liberty and the Pursuit of Happiness
Poverty → Health

- Poor cannot afford medical care
- Poverty does not induce R&D
- Poor people are malnourished (immunodeficiency)
- Poor have less access to water and sanitation (diarrhea, colera, typhoid fever)
- Poor live away from doctors and hospitals
- Poor are less likely to be educated
- Poor girls are less likely to be able to refuse sex with powerful rich men
- AIDS is mainly in (Southern) Africa
AIDS IN SOUTHERN AFRICA

• Percent Infected / Percent Pregnant Women:
  – Botswana 35% and 43%
  – Swaziland 25% and 30%
  – Lesotho 24% and 30%
  – South Africa 20% and 19%
  – Namibia 20% and 26%
Poverty ↔ Health

• We, in the growth literature, are increasingly interested in how health factors affect the growth rate of an economy
Growth Regressions:

- **BACE Method**: Robust Variables include
  - Life Expectancy
  - Malaria Incidence

- **HOW?**
- \( Y = AF(K, h^*L) \)
  - \( h^*L \) = Human Capital
  - \( K \) = Physical Capital
  - \( A \) = Aggregate Efficiency
Effects on Human Capital

- $Y = AF(K, hL)$
  - $h$ is the productivity of the human body
  - Health has a Direct Effect: Sick kids weigh less, are shorter and have lower brain capacity
  - Effect through Education
Effect Through Education

• Sick kids miss school (Miguel and Kremer 2002 on hookworm, roundworm, whipworm, and schistosomiasis in Kenyan schools)

• Beckerian quantity/quality of children tradeoff

• Incentives: low life expectancy reduces rate of return to schooling

• Complementarities across diseases (Dow, Phillipson and Sala-i-Martin 1999)

• Orphans and Parental guidance (14 million orphans in Africa)
Effects on Physical Capital

\[ Y = AF(K, hL) \]

- Low life expectancy, low incentives to save for lifecycle reasons.
- Complementarity between K and H
  - Low education, low investment
  - High training costs
  - Funeral Absenteeism
- Public Investments (government budget constraint)
- Financial Traps caused by illness
Effects on Aggregate Efficiency:

\[ Y = AF(K, hL) \]

- Choice of the production function
  - Imagine two functions
    - \( Y = AF(K, hL) \)
    - \( Y = BK - PL \)
Effective Production Function
Solow-Swan

• $\text{Growth} = s f(k)/k - (\ast + n)$
Growth and Traps

\[
\frac{\delta + n}{k} + \frac{sf(k)}{k}
\]
Institutions

- Choice of production function
- Choice of Institutions (Acemoglu, Johnson and Robinson 2002)
Solutions?

• Tackle health and growth simultaneously!!
  – good education system does not pay if kids have no incentives due to health
  – good health system does not pay if people remain poor, and subject to other diseases
  – Need to get them both at the same time
To Promote Health…

• **Micro Actions:**
  – Vaccination Programs
  – Doctors
  – Hospitals
  – etc.

• **Macro Actions:**
  – R&D
R&D...

• Need to solve the time inconsistency problem
  – We want to keep PATENTS so that R&D is induced: profits need to be guaranteed
  – We want to supply drugs and vaccines at or below cost: profits need to be killed

• Need to make two goals compatible
  – Expropriation is NOT the solution
  – Dual Pricing is NOT the solution
  – Research Fund (Kremer Vaccines)
To Promote Growth...

- Institutions: property rights, free society, justice, peace.
- Right environment for business.
- Macroeconomic Stability
- Investment in Education
- Investment in Infrastructure
- Openness: on both sides (including less European and American Protectionism)
- Always keep an eye on Poverty Reduction: Political Instability
How

• Some must be international help:
  – Money
  – Vaccines
  – Protectionist Policies

• Some must be them...and here is a problem
Income Distribution in Nigeria

Figure 2i. Income Distribution: Nigeria
It’s like quitting smoking …
New Partnership for African Development (NEPAD)

• Good idea because it comes from African Leaders
• But they need to WANT to do it!!!