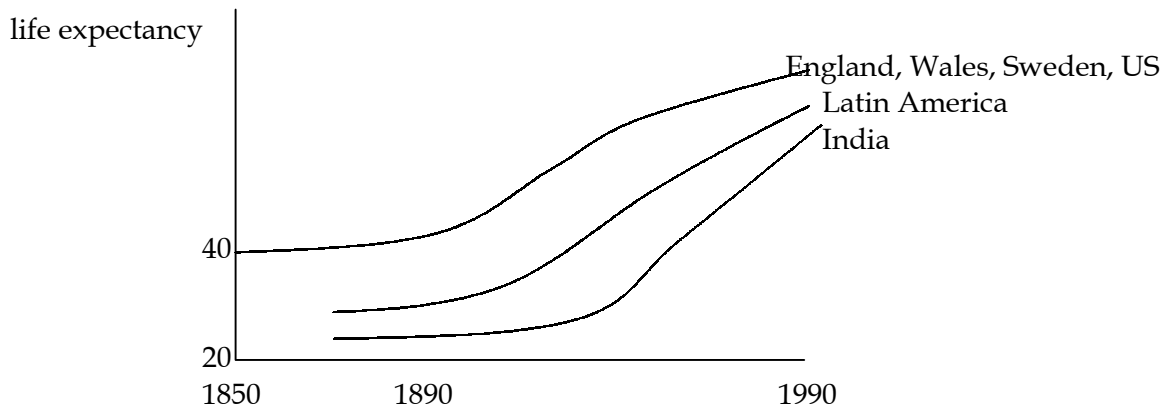


## Chapter 10 – Health and Nutrition, page 1 of 5

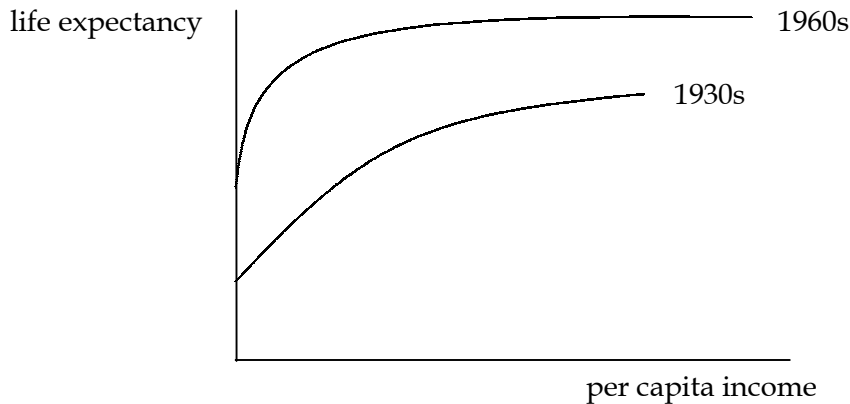
- health and economic growth:
  - life expectancy, a measure of health human capital, is strongly correlated with economic growth; this could be because healthy workers are more productive (for example, they are able to stay in the labor force for more years and the return to their education is higher) and because a higher growth rate enables people to spend more on health – there is a reciprocal relationship between health and development
  - although health and productivity are correlated on a cross-country level, it is difficult to establish a correlation on an individual level; health economists have tried to measure the change in productivity of farmers after curing them of certain diseases or improving their nutrition but have not been able to clearly establish a correlation between health/nutrition and productivity; there are complications to these studies, such as measuring nutrition, etc.
  - health is not only of interest because it can aid growth and development, but because it is a good in its own right and because it is a measure of well-being
  - from about 1950 to 1970 in China the life expectancy increased by about 20 years without an increase in per capita income, but people did not feel they were better off because most were living longer in poverty – this brings up the question of how to measure life quality (which is only partially a function of health)
- nutrition and the household:
  - studies have found that food programs for children do not improve their nutrition because parents feed them less at home; if there is insufficient food in a household, it is rationed first to the primary breadwinners, usually males (it is common to find households with adequately fed males and chronically malnourished females and children); thus, if a child is fed more, the household decision maker, seeing that more food is available to the household, will reduce the child's food consumption at home; studies have looked at children's test scores to determine if being fed at school improves academic performance (although academic performance might not be related to nutrition)
  - economists have done detailed studies to measure household nutrition and have developed models of intrahousehold bargaining power (addressing what determines which household members get the limited food that's available)
- life expectancy:
  - life expectancy is the mean expected age an individual can expect to live to based on the current age distribution and death rates at different ages; life expectancy can increase throughout a person's lifetime if healthcare improves
  - page 347, figure 10-1 – life expectancy over time for several countries:



from 1850 to 1990, the life expectancy in all developing countries increased and the gap between developing and developed countries narrowed; in contrast, the income gap between developing and developed countries has grown over time

the improvement in life expectancy (also a measure of healthcare) is one of the successes of economic development

• page 352, figure 10-2 - life expectancy and per capita income:



this figure shows that life expectancy increases as per capita income of a country increases

as income per capita grows at low levels of per capita income, life expectancy increases sharply; at higher levels of per capita income, life expectancy increases with per capita income less rapidly

in the 1960s, changes in medical technology "flattened" the curve and shifted it up at all levels of per capita income; at given per capita incomes, countries were able to achieve better health outcomes in the 1960s than they could in the 1930s which suggests that health outcomes are more responsive to general development than income

## Chapter 10 – Health and Nutrition, page 3 of 5

curative care is expensive, but has little impact on average life expectancy because it is most commonly used for diseases that occur late in life, which adds few years to the recipient's life; preventative medicine can prolong life for many people at low cost, and there is little difference in affordability of preventative medicine between middle- and high-income countries (although it can be expensive for poor countries)

this could explain why per capita income does not impact life expectancy significantly beyond a certain per capita income; convergence can be expected as countries move right on the curve, because the biggest gains are in poor countries

- life expectancy at different ages:

page 348, table 10-2 – comparison of remaining life expectancies at different ages in a developed (good healthcare) and developing (poor healthcare) country:

	Newborn	Age 1	Age 5	Age 15	Age 65
Sweden	72.1	71.8	67.9	58.1	13.9
Bangladesh	45.8	53.5	54.5	46.3	11.6
Difference	26.3	18.3	13.5	11.8	2.3

the years listed in the table are the expected remaining life expectancies of a male in the respective country at the respective age; for instance, a male aged 1 in Bangladesh will live an additional 53.5 years on average to age 54.5

a striking feature of the data is that a 5 year old in Bangladesh actually had more years ahead of them (on average) than a newborn; this is due to very high infant and child mortality (those who survive are those likely to live much longer than the average of all those born)

a newborn in Sweden can expect to live to age 72.1 but a male aged 65 can expect to live an additional 13.9 years to age 78.9; this difference is not because medical technology improves over the lifetime of the individuals, since this data considers life-expectancy at a fixed point in time; the difference between the overall life expectancy of the newborn and 65 year old is because those who survive to age 65 are a healthier subset of the population and have a lower chance of dying from illness and/or malnutrition

the gap in remaining life expectancy between Sweden and Bangladesh narrows with age – for example, it is 11.8 at age 15 but 2.3 at age 65; the difference in remaining life expectancy decreases because most mortality in poor countries occurs at young ages, so those who survive to older ages in Bangladesh are about as healthy as those in Sweden

- preventative versus curative healthcare and urban bias:
  - countries have adopted different policies with respect to the distribution of the benefits of public health measures; some developing countries spend much of their healthcare funds on healthcare for upper-income urban groups (such as expensive hospitals), while others spend their funds on more basic healthcare (clinics, basic medicines, antibiotics, oral rehydration therapy, dissemination of information about health)

## Chapter 10 – Health and Nutrition, page 4 of 5

- the term “urban bias” (coined by Michael Lipton) refers to the biased expenditure by LDC governments in favor of urban people over rural people; the expenditure of some developing country governments on curative care demonstrates urban bias in healthcare
- why might developing country governments show urban bias?
  - 1) people who work for the government live in cities and want the best facilities for themselves and their families and are able to direct expenditure towards these facilities
  - 2) the government feels more political pressure from urban people because they live nearby; in contrast, rural people are more dispersed and it is less likely they can effectively organize to create political unrest
- the textbook suggests that developing countries should reduce urban bias in healthcare by reducing expenditure on expensive curative medicine and increasing expenditure on inexpensive preventative measures
- differences in health outcomes across countries with similar levels of income:  
page 347, table 10-1 – life expectancies for several countries:

several countries with similar levels of per capita income had different life expectancies in 1970:

	life expectancy
India	49
Indonesia	48
Pakistan	47
China	62
Sri Lanka	65

the difference in life expectancy among these countries is attributed to:

- 1) the distributions of income and food
- 2) the nature of the healthcare systems

for example, in China, the government’s coercive policy led to a high degree of equality in income and access to food (food in communes was distributed regardless of the work done by a family, and areas struck by famine received food); China also focused on preventative healthcare (such as sanitation) and basic care (such as by training barefoot doctors to make healthcare available to a large proportion of the population)

in contrast, in India during the same period there was greater inequality; for example, there was a minority of landless people who earned less than the subsistence wage, but there were also well-off farmers; differences in income were related to unequal land ownership and education; in contrast to China, there was greater malnutrition and a higher death rate in India

thus, in 1970 China had a higher life expectancy than India, Brazil, and others because of an egalitarian distribution of income and preventative healthcare measures

- Amartya Sen – famines and a free press:

## Chapter 10 – Health and Nutrition, page 5 of 5

- the largest famine occurred in China between 1959-1961 during “The Great Leap Forward” political campaign; people were forced to live in communes to produce goods like steel while agriculture was neglected; the resulting famine caused an estimated 20-30 million deaths
- India, post-independence, also faced famine due to natural disasters in some areas, but the government redistributed food to these areas; it is possible that a free press and a democracy force an elected government with the resources to provide aid to areas hurt by famine
- in contrast to India, China did not have a free press and suppressed information; local leaders were pressured to indicate food production was good; only 20 years later did information emerge indicating a famine, which was not known about by the population at the time of the Great Leap Forward; it is possible that if the population had known about the famine and had the political means, it could have pressured the government to intervene; this contrast between India and China suggests the importance of political institutions and a free press
- however, the total number of excess deaths due to income inequality and less effective preventative care in India than in China, over a period of 30 years, probably exceeds the number of deaths due to the famines in China during the abnormal 3 years of the Great Leap Forward in China
- government interventions to get food to the needy:
  - the government could use work for food programs instead of giving food away; the government could have people work on costly projects, such as roads, etc.
  - food subsidies have been problematic for developing country governments; governments that cannot sustain subsidies on foodstuffs because of budgetary reasons or demands by international institutions (such as the IMF requiring governments to balance their budget) must drop them; eliminating subsidies has led to riots, overthrown governments, etc.
  - successful food subsidy programs are highly targeted; for example, they use inexpensive food grain that is not desirable, giving it to the needy at low prices or even for free, so only those who are truly needy and are willing to eat this less desired food will receive it; this is sustainable because there is low abuse (only those who need food will want it) and it is cheap (within the government’s budget)