

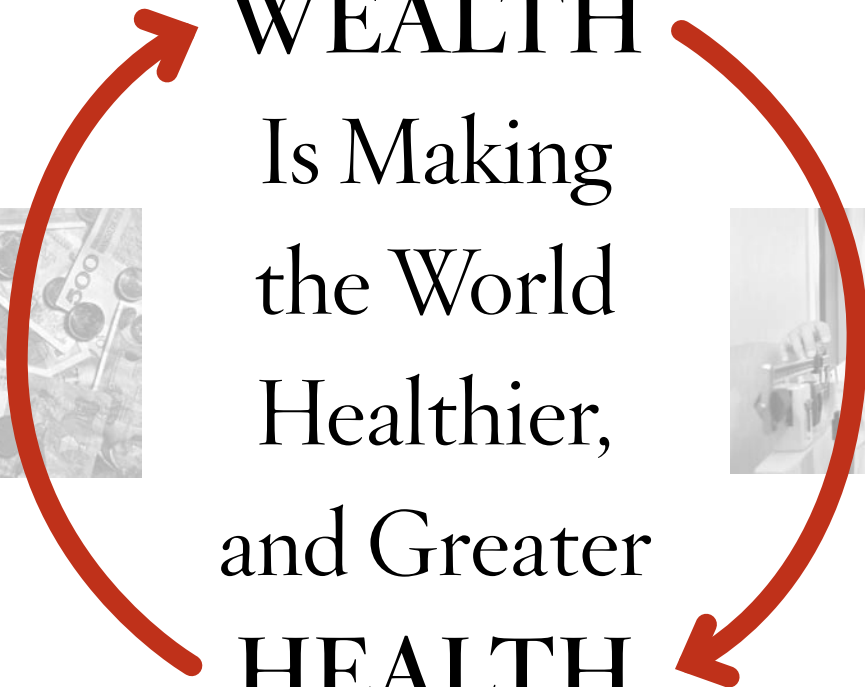
# A Virtuous Cycle

How Greater

**WEALTH**

Is Making  
the World  
Healthier,  
and Greater  
**HEALTH**

Is Making the World  
Wealthier



By Indur Goklany

Greater wealth can advance human welfare in a myriad of direct and indirect ways. First, it means increased resources for advancing literacy and education, which itself is one of the more important indicators of well being. Hence, the proportion of the population enrolled in post-secondary educational institutions increases with wealth. Second, greater wealth also reduces the incentives for parents to put children to work to supplement family income. Those two factors act together to help reduce child labor rates.

Moreover, increased education helps provide populations with the knowledge and information necessary to live a healthier life through wider understanding of the importance of better food and nutritional habits, proper hygiene, safe water, immunization and pasteurization, and other things. It also enables populations to better and more easily assimilate and keep track of new information relevant to these matters as such knowledge is created and becomes available. Equally important, wealthier societies, not surprisingly, can better afford welfare-enhancing technologies. For instance, they spend proportionately more on health care than poorer ones. That, combined with the fact that their GDPs per capita are higher, translates into significantly more spending on health care per capita by or on their behalf. Thus, they have better access to improved health technologies. Such technologies include not only “old” technologies (such as water treatment to produce safe water, sanitation, basic hygiene, vaccinations, antibiotics, and pasteurization, which are still underutilized in the poorer countries, precisely because they are too poor to afford them), but also newer science-based technologies (such as

AIDS and oral re-hydration therapies, organ transplants, mammograms, and other diagnostic tests, some of which are quite expensive at present).

Health can also be advanced indirectly through technologies that increase food availability. Wealthier countries can better afford yield-enhancing agricultural technologies, such as special seeds; inputs, such as fertilizers for nutrient-poor soils or lime for acidic soils; and methods to reduce spoilage and wastage on and off the farm. Although many of those technologies are pretty mundane and far from “high tech,” not everyone can afford their costs. For instance, while farmers in richer countries

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*Greater wealth leads to greater education; to lower rates of child labor; to higher food production; to greater access to food supplies and safe water; and, eventually, to better health, to lower mortality, and to higher life expectancies.*

have sometimes overused fertilizers, especially in the past, the problem in poorer countries is that their farmers are unable to afford sufficient fertilizers to realize the productive potential of their land. This problem, as well as the inability to afford other yield-enhancing technologies, are the reasons that the richer the country, the higher its crop yield. Higher crop yields translate into more food. And if, despite that, supply can't meet demand and additional food is needed, then if one is wealthy, one can buy what one cannot produce locally. Trade facilitates that by moving agricultural crops and products voluntarily from surplus to deficit areas. Global trade has, in fact, globalized food security. Trade allows not only richer states, such as Hong Kong, Japan, Saudi Arabia, and Singapore, but also developing countries in sub-Saharan Africa to make up their food shortfalls. In 1998–2000, net cereal imports by countries of sub-Saharan Africa were equivalent to 20.4 percent of their production. Thus, United States wheat goes to China, while produce from Chile, for instance,





comes to the United States. Moreover, the transportation systems and associated infrastructure that trade depends on—hardware such as ships, refrigerated trucks, roads, and rails, as well as software such as mechanisms and techniques to transfer money, hedge risks, and so forth—are themselves products of technology, capital, and human resources. Not surprisingly, richer countries have more food supplies per capita. Greater wealth also makes it more likely that a society will establish and sustain food programs for those on the lower rungs of the economic ladder. Therefore, although “you can’t eat GDP,” if GDP is larger you are less likely to go hungry or be undernourished (except by choice).

But more food not only means fewer hungry stomachs, it also means healthier people who then are less likely to succumb to infectious and parasitic diseases. Historically, reductions in hunger and undernourishment have been among the first practical steps nations have taken to improve public health, to reduce infant mortality, and to increase life expectancy. Analysis by the Food and Agricul-

ture Organization (FAO) indicates that malnutrition can increase the child mortality rate from common childhood diseases. Compared to children who have adequate nourishment, FAO’s analysis shows that the risk of death is 2.5 times higher for children with mild malnutrition, 4.6 times higher for children suffering from moderate malnutrition, and 8.4 times higher for the severely malnourished. Moreover, wealthier societies are more able to target capital and human resources on public health measures and technologies in order to increase the availability of sanitation, water supplies, immunization, and antibiotics, which further reduces infant mortality and increases life expectancies.

Thus greater wealth—through a multiplicity of sometimes overlapping pathways—leads to greater education; to lower rates of child labor; to higher food production; to greater access to food supplies and safe water; and, eventually, to better health, to lower mortality, and to higher life expectancies.

Wealthier is more educated, less hungry, and healthier. But the converse is also true: more

educated, less hungry, and healthier is generally also wealthier. Less hungry and healthier people are more energetic, less prone to absenteeism, and, therefore, more productive in whatever economic activity they undertake. Robert W. Fogel, the Nobel Prize-winning economist, estimates that the levels of food supplies in 18th-century France were such that the bottom 10 percent of the labor force did not have sufficient food to generate the energy needed for regular work, and the next 10 percent had enough energy for about half an hour of heavy work (or less than 3 hours of light work). Economic historian Richard A. Easterlin notes that, on the basis of a United Nations study, when malaria was eradicated in Mymensingh (now in Bangladesh), crop yields increased 15 percent because farmers could spend more time and effort on cultivation. In other areas, elimination of seasonal malaria enabled farmers to plant a second crop. Similarly, according to the World Bank, the near-eradication of malaria in Sri Lanka between 1947 and 1977 is estimated to have raised its national income by 9 percent.

Moreover, healthier people can also devote more time and energy to their own education and the development of their human capital. Good health is particularly important

during children's formative years. Similarly, improved food supplies and nutrition by themselves might help increase a population's educability, which is one of the premises behind school meals programs. A healthier and longer-lived population is also more likely to more fully develop its human capital, which then aids in the creation and diffusion of technology. The benefits to individuals, families, and societies of investing in higher education, post-doctoral research fellowships, and medical residencies increases significantly if individual beneficiaries live to 70 rather than a mere 30 to 35, as was the case, for instance, before the advent of modern economic growth. Thus, it is not surprising that levels of education have gone up as life expectancy has advanced or that more and more aspiring doctors and researchers today spend what literally used to be a lifetime to acquire the skill and expertise necessary to pursue careers in medicine, research, and institutes of higher learning. And once having acquired this expertise, those researchers are poised to contribute to technological innovation and diffusion in their chosen fields and to guide yet others along the same path. Thus human capital breeds additional human capital. Hence, better health helps raise human capital, which aids the creation and diffusion of technology, further advancing health and accelerating economic growth.

*Mr. Goklany is an expert on globalization and environmental issues, including sustainable development, technological change, food, and health. He is the author of The Precautionary Principle and Clearing the Air: The Real Story of the War on Air Pollution. This article is excerpted from his book The Improving State of the World: Why We're Living Longer, Healthier, More Comfortable Lives on a Cleaner Planet, © 2007 by the Cato Institute.*

