

BRIEF ANALYSIS

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Does the Distribution of Income Affect Life Expectancy?

By Gerald Scully

In the history of social thought, advocates of a more equal distribution of income have made many arguments to support their cause. Egalitarians are now advancing a new argument: inequality of income leads to poorer health.

“There is a considerable body of research linking income inequality to poor health outcomes,” say the Center on Budget and Policy Priorities and the Economic Policy Institute in a recent study. The International Health Program of the University of Washington and the Health Alliance International have established a Web site “devoted to providing the background scientific evidence” that “the greater the income differences within populations ... the worse their health.”

Do these claims have merit?

International Comparisons. According to protagonists, one effect of unequal income distribution is reduced life expectancy. They point to selected examples in which people in countries with a more equal income distribution have longer average life expectancies than do those in countries with a wider income gap between rich and poor. However, a casual look at life expectancy statistics reveals no obvious pattern [see Figure I]:

- On the one hand, Sweden, the Netherlands and Belgium all have very high life expectancies and are also considered very egalitarian.
- By comparison, Japan is less egalitarian but has a higher life expectancy.

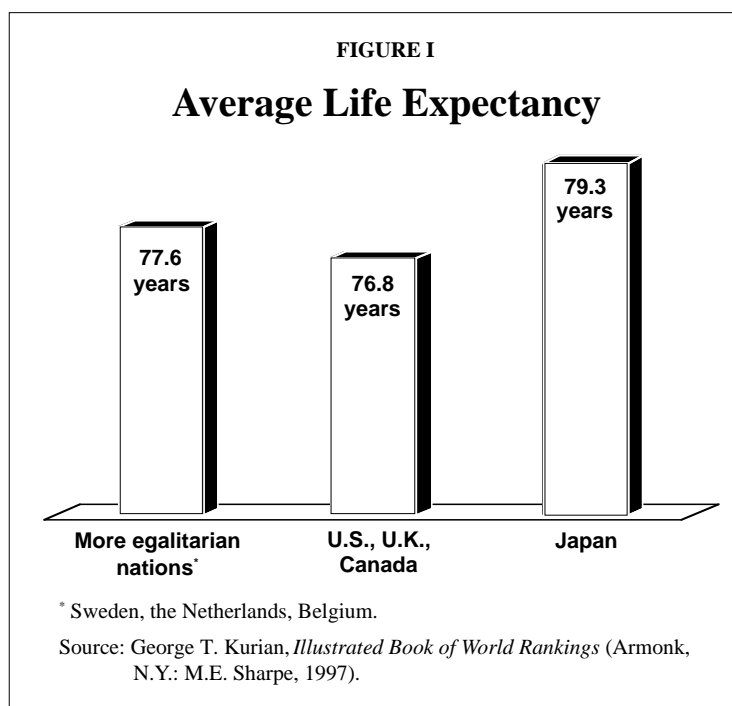
- The United States, United Kingdom and Canada have far more income inequality than the above countries, as well as lower life expectancies.
- However, life expectancies in the U.S., U.K. and Canada are about the same, even though the U.K. and Canada have national health insurance dedicated to equal care for all and the U.S. does not.

Anecdotal evidence such as comparisons of life expectancy in the United States with that in Sweden can be misleading, since there are an abundance of lifestyle choices available that may affect longevity. For example, in a society where consumers are free to choose, some will prefer a monthly subscription to cable television to an annual medical checkup. In the United States, where health insurance often must cover costly government-mandated medical benefits, many conclude they will receive more benefit from the purchase of something other than health insurance.

Income Distribution vs. Standard of Living. One measure of a country’s standard of living is per capita gross domestic product (GDP), and studies consistently show it is related to life expectancy. Poorer countries obviously have less to spend on preventive medicine and health

care than wealthier countries. That may explain why average longevity is much shorter in poor countries. Is there also a statistically meaningful relationship between income distribution and life expectancy?

To analyze this question, I examined the relationship between average life expectancy and income distribution in 1995, using a statistical technique called regression analysis. I also examined the relationship between average life expectancy and per capita GDP. To focus on the distribution of income without the confounding effect of living in an impoverished society, I limited my



data collection to 24 advanced countries having a per capita GDP of \$7,500 or more. Among the results:

- There is a positive relationship between life expectancy and a more equal income distribution that is statistically significant but not particularly strong, leading to a predicted 7.1-year difference in life expectancy between the most- and least-egalitarian countries in the sample, based on inequality alone.
- However, there is also a positive, statistically significant relationship between life expectancy and per capita income, leading to a predicted 6.3-year difference between the highest and lowest per capita GDP countries in the sample, based on income alone.

Which variable matters more? When the two affects are considered simultaneously, differences among countries in life expectancy are fully explained by differences in standards of living. Inequality of income is statistically insignificant. [See Figure II.]

Does Welfare Matter? Absent government intervention, the market distribution of income would be an accurate measure of income inequality, at least in high-income, more-advanced economies. However, government affects the distribution of income through taxation, which is often progressive, and through government expenditures, which may also favor lower-income individuals over those with higher incomes. A proper measure of income distribution would subtract all taxes from market income and add back direct and indirect government spending. No such data exist, but we can estimate the effect of government intervention on life expectancy through statistical analysis by relating life expectancy to trans-

fers and subsidies as a share of GDP and to total government expenditures as a share of GDP.

Presumably, one of the functions of government is to improve the quality of its citizens' lives, and the length of one's life would seem to be paramount. However, statistical analysis involving average life expectancy and its relationship to a combination of factors — per capita GDP, an index of government transfers and subsidies as a share of GDP and an index of total government expenditures as a share of GDP — reveals that the fiscal

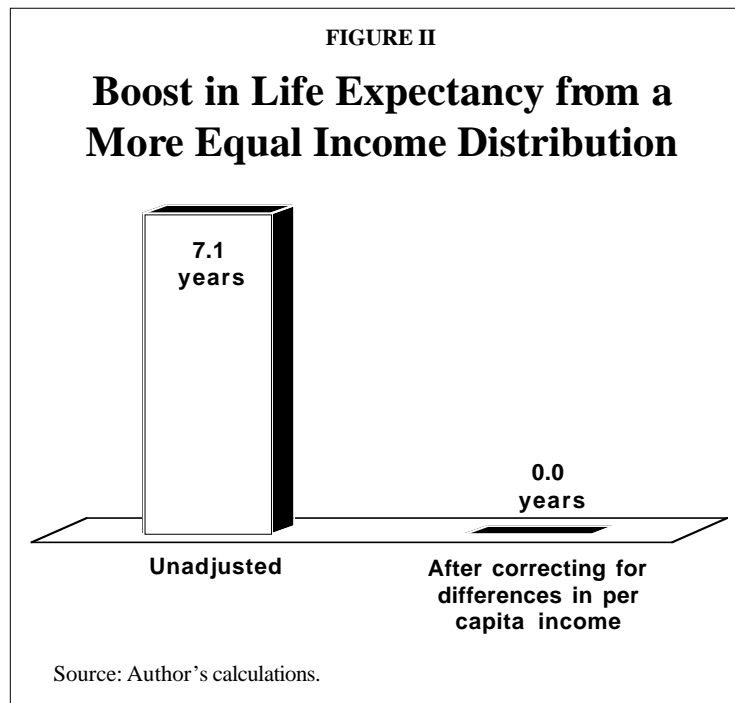
activity of government does not add a day to the length of our lives.

Conclusion. The evidence suggests that the level of national income is important to longevity but that how it is distributed among the population does not matter, at least in high-income countries. Government, no matter how large it gets or how much it engages in income redistribution, does not appear to contribute to longevity in developed countries.

These findings may shock those who believe government intervention is beneficial. The find-

ings go against conventional wisdom but on closer examination are quite reasonable. In a democracy, to get elected and stay in office, one must get a majority of the votes and that majority is the middle class. Thus in any democratic nation, most taxes are paid by and most government expenditures are directed to the middle class.

Gerald Scully is a Senior Fellow with the NCPA and a professor of economics at the University of Texas at Dallas.



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