

## The 1970s slowdown revisited

The productivity slowdown of the 1970s has been an object of study by economists for decades. This *Review*, in fact, has published various articles over the years analyzing possible causes of the slowdown—see, for example, “Multifactor productivity: a new BLS measure,” in the December 1983 *Review*.

In “Retrospective on the 1970s Productivity Slowdown” (NBER Working Paper 10950), William Nordhaus of Yale University takes a look at the slowdown that, in his words, “has survived three decades of scrutiny, conceptual refinements, and data revisions.” He analyzes the slowdown using a new set of industry data for 1947 to 2001, which he developed with Alexandra Miltner. Although the data set is newly developed, it is of necessity based on the old Standard Industrial Classification (SIC) system.

One challenging aspect of studying the 1970s slowdown is pinpointing when it started and stopped. The starting year is often pegged at 1973, but it’s possible to consider slowdown periods that start as late as 1977 or 1978 and then last for 5 or more years. Nordhaus uses the new industry data to analyze a slowdown period that lasts from 1973 to 1995. The labor productivity measures that Nordhaus examines show an aggregate slowdown of about 1 percentage point in 1973–95 compared with 1959–73, and a rebound of about 1 percentage point in 1995–2001.

Nordhaus’ industry analysis leads him to conclude that the 1970s slowdown was “primarily centered in those sectors that were most energy-intensive, were hardest hit by the energy shocks of the 1970s, and therefore had large output declines.” He

also observes that, “As the economy has made the transition from the oil age to the electronic age, the aftershocks of the energy crises have died off and productivity growth has attained a rate close to its historical norm.”

## Health, longevity, and retirement

Among the principal achievements of the 20th century were an overall improvement in human health and a related increase in life expectancy. While such changes are generally viewed as desirable, they are not without costs. Most notably, as life expectancy increases, more resources are needed to care for the elderly, especially after they retire from working. These increased demands must be met by a combination of public welfare systems such as social security, public and private pension funds, and personal retirement savings. With the resulting financial stress on these systems, workers may be asked to contribute more to them, benefit levels may be reduced, and the retirement age may have to be raised.

In a recent National Bureau of Economic Research (NBER) working paper, authors David E. Bloom, David Canning, and Michael Moore develop a life-cycle model to test the effects of improvements in health and longevity on the age of retirement and on retirement savings behavior. According to the authors, “the major innovation in this paper is to model health during the agent’s lifetime and its effect on the decision to retire.” Rather than assuming that every worker wants to retire as soon as possible due to the “disutility of working,” this study assumes that a worker’s health status has a considerable effect on his or her decision to retire. The authors cite

evidence linking retirement to poor health, and they attempt to build into their model the “assumption that rising life expectancy goes hand-in-hand with improved health status at each age.”

The results of this study show that increased health and life expectancy tend to increase the optimal retirement age. At the same time, personal consumption may increase and the savings rate may decline. Other things equal, an aging population may produce large stocks of capital as its members save for retirement, and that in turn may lower the return to capital by driving down interest rates. As a result, this model predicts longer working lives but lower overall savings rates. The authors cite three long-term influences on the optimal retirement age and on savings behavior: (1) at relatively higher levels of lifetime income, workers tend to retire earlier and have a higher savings rate; (2) as workers move away from manual labor jobs, the disutility of working diminishes, which leads to longer working lives and less need for retirement savings; and (3) increased life expectancy and improvements in health lead to longer working lives or older retirement ages, although the effects of compound interest on workers’ savings tend to reduce both the proportion of their lives spent working and the savings rate. □

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