Have the Limits to Economic Growth Really Been Reached?

By Desmond Lachman
Saturday, April 26, 2014

Filed under: Economic Policy, World Watch

Robert Gordon has painted a dark picture of the world’s long-run economic growth prospects. But if the past is any guide, he will likely prove to be far too pessimistic about the human capacity to innovate.

Dennis Robertson, the renowned Cambridge economist and a contemporary of John Maynard Keynes, famously remarked that economic fashion was like going to the greyhound races. If one stood still long enough, the dogs would come around one more time. This certainly seems to be the case with fashions in economic pessimism about the long-term economic growth prospects of the world’s advanced industrial economies.

Each time these economies stumble, there is no shortage of economists who come out of the woodwork to advance plausible reasons as to why the limits of economic growth might have been reached. Yet each time, events seem to have proved these pessimists wrong — it has turned out that they consistently have tended to underestimate the ability of the human mind to come up with new ideas that might underpin renewed long-term economic growth.

Long-run economic pessimists have a notable lineage, yet a poor forecasting track record. Among the more notorious of these was Robert Malthus, the 19th-century English economist, who wrongly predicted that famines would be the order of the day even in advanced economies. He did so by buying into the plausible yet mistaken notion that populations tend to grow at geometric rates, while agricultural production tends to grow only at an arithmetic rate. He also failed to anticipate the tremendous benefits from advanced
agricultural production techniques that would allow increases in farm production that more than kept pace with population growth.

More recent cases of long-run economic pessimists have included Alvin Hansen, who, after World War II, like Larry Summers today, mistakenly predicted that advanced economies would suffer from a secular shortage of aggregate demand. He was only to find that his prediction coincided with the very start of the golden world economic expansion of the next two decades, which was largely powered by an increasingly globalized economy.

And then more recently there were the “peak oil” economists, who not too long ago predicted that the world would suffer from ever rising oil prices as traditional oil fields were depleted. These latter economists eventually found that they too totally underestimated the power of technical advances like hydraulic fracturing, horizontal and deep-water drilling, and three-dimensional imaging of oil fields to substantially push out the energy production frontier. It was beyond their imagination to consider that the United States, the world’s largest energy consumer, would be set to become a net energy exporter by as early as 2020.

The new high priest of long-term economic pessimism seems to be Robert Gordon, a renowned U.S. economics professor at Northwestern University. In a recent influential paper, he has forcefully argued that the rapid economic progress made over the past 250 years could very well be a unique episode in human history rather than a guarantee of endless future advance at the same rate. This thought, together with his assessment of the major structural headwinds presently confronting the U.S. economy in the form of bad demographics, declining education standards, and high debt levels, leads him to the most dismal of conclusions. He gloomily predicts that for the bottom 99 percent of the U.S. population, living standards will barely increase over the next 100 years.

At the core of Gordon’s prognosis is the idea that since 1750 there have been three fundamental technology waves that have powered the world’s industrialized economies. The first was associated with the English industrial revolution between 1750 and 1830, which produced the steam engine, cotton spinning machines, and the railroads. The second and most important wave was between 1870 and 1900, with its three central inventions of electricity, the combustion engine, and running water with indoor plumbing. And the third wave, which began around 1960, involves the invention of computers and the internet.

Central to Gordon’s pessimism is his fear that the latest wave of technological progress might already be running out of steam. Unlike the first two waves of technological progress, which took around 100 years for their effects to fully percolate their way through the industrialized economies, Gordon argues that there are clear signs that we are already entering the phase of diminishing returns with respect to the latest technology wave.

In his view, most of the benefits from the high-tech revolution that allowed tedious and repetitive clerical work to be replaced by computers occurred in the 1970s and 1980s. By contrast, the inventions since 2000, which have been associated with the internet, have centered mainly on entertainment and communication devices. While these devices might have become smaller and smarter, they have done little to improve long-run labor productivity.

In 1998, Nobel laureate Paul Krugman famously made a similar observation, predicting that by 2005 or so it would become clear that the internet’s impact on the economy would have
been no greater than that of the fax machine. This raises the question as to whether Gordon might not now be underestimating the likely impact of a whole host of promising new technologies on future labor productivity developments, as Krugman and others did before him.

Fortunately there are good grounds to question Gordon’s grim view. Over the past few years, there appear to have been a number of major technological breakthroughs that could be of a transformative nature. Indeed, we would only seem to be at the very start of the development of robotics and artificial intelligence, three-dimensional imaging, the fuller exploitation of the human genome, and much more. It would seem to be presumptuous to dismiss such breakthroughs as holding little prospect for drastically improving our living standards and for fundamentally changing the way that the workplace will operate.

It would also seem presumptuous to say that in the future the human quest for knowledge will not produce major technological breakthroughs in much the same way as it did over the past 250 years. Never before in human history have so many people been devoted to pure scientific research and engineering endeavors as there are today. And the United States would now seem to be far from the only country from which pathbreaking technological discoveries might be expected.

We may also be on the very cusp of another prolonged period of cheap energy supply, which could do much to advance productivity growth. Not only is the United States on the path to become an important energy exporter, but major increases in natural gas and oil production are to be expected from places like Brazil, Cyprus, and Qatar. And this is occurring at the same time that non-conventional energy development might finally start to bear fruit.

In short, Robert Gordon is hardly the first member of the dismal science to have painted a dark picture of the world’s long-run economic growth prospects. And if the past is any guide, he will all too likely join the band of earlier distinguished economists, who proved to be far too pessimistic about the human capacity to innovate and progress.

Desmond Lachman is a resident fellow at the American Enterprise Institute.

FURTHER READING: Lachman also writes "Yellen’s Wishful Thinking" and "Europe’s Outlook in 2014." Alan D. Viard cautions "When Setting Tax Policy, Don’t Forget About Long-Run Growth." Bret Swanson analyzes "Technology and the Growth Imperative."

Image by Dianna Ingram / Bergman Group