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Monthly condensed analyses of crucial real estate and economic issues offered by the UCLA Anderson Forecast and UCLA Ziman Center for Real Estate. Here, UCLA Ziman senior fellow and UCLA Anderson senior economist Stephen D. Oliner discusses new research on the growth potential for the U.S. economy.

How Fast Can the Economy Grow?

That Depends on Information Technology and Sensible Policy Actions

By Stephen D. Oliner, Senior Research Fellow, UCLA Ziman Center for Real Estate, Senior Economist, UCLA Anderson Forecast, and Resident Scholar, American Enterprise Institute

Discussions about the economy tend to focus much more on the Fed’s latest program to stimulate spending and the drama on Capitol Hill than on the potential for the economy to generate higher income over the long haul. Yet, the growth in potential output is really what matters for the standard of living. And increases in labor productivity are a key determinant of the rise in potential output. Between 1889 and 2012 — the longest span of time with reasonably consistent data — real output per hour worked in the United States rose about 2¼ percent per year on average. At this annual rate, output per hour doubles every 31 years, which implies roughly a 15-fold increase since 1889.

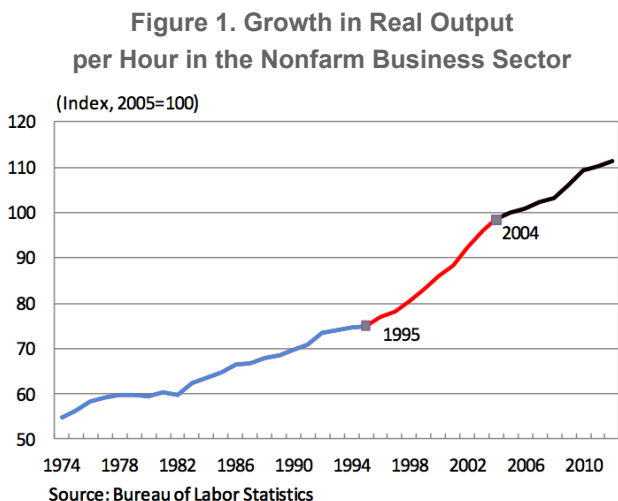
“The future will be brighter with improvements in education, immigration reform that increases the pool of talent, expanded investment in infrastructure, and additional government support for basic scientific research.”

Productivity Growth: A Look Backward and Forward

Viewed against this long historical record, the recent performance of productivity has been lackluster. **Figure 1** plots output per hour worked in the nonfarm business sector over the past 40 years. From 1974 to 1995, output per hour grew

at an average annual rate of about 1½ percent, well below the long-term average pace of 2¼ percent. Productivity growth strengthened from 1995 to 2004, rising about 3 percent per year. But since 2004, the trend increase in output per hour has returned to the slow 1974-95 pace. Notably, this slowdown pre-dated the onset of the financial crisis. Thus, while the dislocations produced by the crisis likely have damped the gains in productivity, they are not the root cause of the slowdown.

Recent research I conducted with two co-authors ties much of this variation in productivity growth to developments



in information technology (IT).¹ The second half of the 1990s witnessed extraordinary advances in semiconductor technology. The resulting rapid drop in the cost of computing power, combined with the build-out of the Internet, spurred far-reaching changes in the way business was done. The efficiency gains resulting from online retailing, for example, and other innovations contributed to a large rise in productivity throughout the economy.

IT-related factors also explain much of the slowdown in productivity growth since 2004. The price declines for IT capital goods have moderated, reducing the incentive to invest in this equipment. In addition, domestic production of semiconductors and IT capital goods has shrunk as firms have moved production abroad; this offshoring has damped productivity growth by shifting highly innovative parts of our economy to other countries. Finally, the most productive uses of the Internet may have been adopted early on, giving way to smaller innovations in recent years.

Will the anemic performance since 2004 persist, or might the future look brighter? Our paper presents forecasts of growth in output per hour from a variety of analysts. The average of the forecasts, at about 1.9 percent annually, is faster than the recent pace, but it remains below the long-run historical rate of increase. It is possible, however, to imagine a more favorable outcome, one driven by a new IT revolution that boosts productivity by combining the diffusion of mobile devices with access to “big data.” Nothing dictates that IT will induce only one period of rapid growth. But at this point, a second wave for IT is too uncertain to be built into best-guess projections for the economy.

From Productivity to Potential GDP

The growth of potential GDP measures how fast an economy that has reached full employment can grow without igniting inflation pressures. It is determined by the rate of increase in output per hour and the expansion of the labor force. Of course, with the U.S. economy currently well below full employment, real GDP can — and hopefully will — grow faster than the potential rate for a while.

The Congressional Budget Office (CBO) estimates that potential GDP growth in the United States has slowed over time, falling from roughly 4 percent in the 1950s and 1960s, to 3 percent in the 1980s and 1990s, and to less than 2½ percent over 2000-12. Potential GDP growth over 2000-12 was restrained mainly by a sharp slowdown in the growth of the labor force, which reflected the front wave of retirements by baby boomers and the end of the earlier increase in labor force participation by women. Over the coming decade, the CBO anticipates that labor force growth will remain slow and that productivity growth will be a bit below the long-term historical average, implying potential GDP growth of about 2¼ percent per year on average. Any analysis that involves longer-term economic projections should recognize that, in all likelihood, the United States will be a slow-growth economy for some time to come.

Nonetheless, the growth outlook for the United States is not set in stone. The future will be brighter if we proceed with sensible policy actions on several fronts. These include improvements in education, immigration reform that increases the pool of talent in the U.S., expanded investment in infrastructure, and additional government support for basic scientific research. Nothing fancy here — just taking care of the basics.

1 The research paper is available at <http://www.anderson.ucla.edu/Documents/areas/ctr/ziman/2013-05WP.pdf>.