

Current Economic Conditions

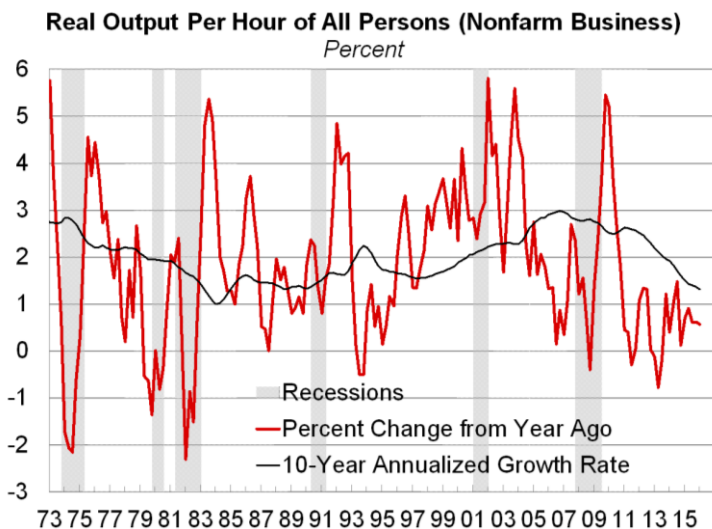
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SLOW PRODUCTIVITY GROWTH

U.S. labor productivity, as measured by real output per hour worked by all persons in the nonfarm business sector, fell 0.3% in the first quarter and was up just 0.6% from a year earlier. Since the fourth quarter of 2007, productivity has grown at a 1.0% annual rate, but most of that growth occurred in the last two quarters of the 2008-2009 recession, when employment and hours were slashed, and the first six quarters of the ensuing recovery, when output rebounded. Since the fourth quarter of 2010, productivity has grown at just a 0.4% annual rate, far below the 1.9% rate that prevailed over the 1973-2007 period.

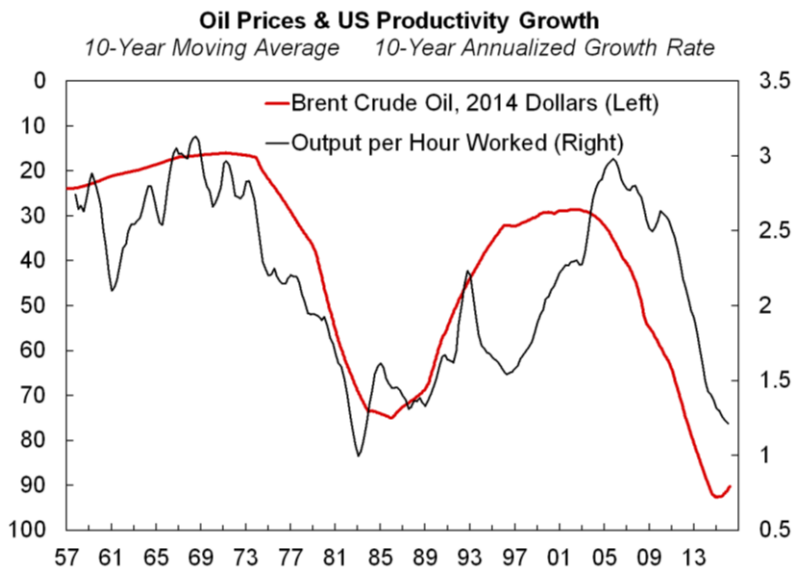
It is tempting to view slow productivity growth as a positive when you're trying to put people back to work, as it means that hours worked are growing rapidly relative to output. As hours worked have increased, payroll employment has grown by an average of 192,000 per month since February 2010, and the unemployment rate has fallen from 10% to 5%. However, when you consider that productivity growth is the only source of sustainable increases in per capita income and living standards, the slowdown is clearly bad news. Without productivity growth, we're in a zero-sum economy where one person's gain is another person's loss; we're just fighting over how to slice the economic pie. In particular, higher wages and salaries for workers mean lower profits for businesses and/or higher prices for consumers. Slow productivity growth helps explain why real wages and salaries have, until recently, grown so anemically during this recovery.



One possible explanation for the slowdown in productivity growth is that the data are bad. It's hard to believe that employment growth has been as strong as it has been over the last few years while output growth has been so weak. If employment growth has been overstated or output growth has been understated (or some of each), productivity growth has actually been stronger than the statistics show. Some have argued that output has been understated because government statistical agencies have a hard time measuring the value of new services like the (free) apps on your smartphone, but a paper by David Byrne, John Fernald, and Marshall Reinsdorf did not find a significant measurement problem.

A second possible explanation is that all of the low-hanging technological fruit has been picked and the rate of technological progress, which accounts for much of the growth in productivity, has slowed sharply. This viewpoint has been advanced by Robert J. Gordon of Northwestern University in his recent book, *The Rise and Fall of American Growth*. Gordon argues that future technological breakthroughs will have far less impact than past innovations like running water, electricity, and the internal combustion engine. Gordon's critics counter that technological breakthroughs and their impact on productivity aren't predictable and that we shouldn't get too pessimistic because growth has slowed over a relatively short period after accelerating over most of the last 240 years.

A third possible explanation for slow productivity growth is weakness in business investment in plant and equipment. Workers are generally more productive when they have more (and newer and better) equipment to work with. A slowdown in investment spending should thus be expected to cause a slowdown in productivity growth. Real (inflation-adjusted) business fixed investment in equipment grew at a 5.8% annual rate from 1973 to 2000. Growth slowed to a 3.0% rate over the 2000-2007 period. Since the fourth quarter of 2007, investment in equipment has grown at just a 1.7% rate. This slowdown could reflect the slowdown in technological progress described by Gordon, the shift of manufacturing to other countries, most notably China, a short-term focus on the part of investors and managers that discourages investment for the long term, or the regulatory and tax issues discussed below. The slowdown in investment spending has occurred despite record-low interest rates. Investment spending is driven by output growth, capacity utilization, and technological breakthroughs that create new business opportunities. Contrary to what many economists and central bankers believe, interest rates have little impact on business investment.



Two other possible explanations, which get less attention, are the price of energy and the retirement of baby boomers. Since the industrial revolution, few things have contributed more to the productivity of workers than cheaper and more abundant sources of energy. The oil price shocks of the 1970s led to a slowdown in productivity growth that was reversed after oil prices collapsed in 1986. The high level of inflation-adjusted oil prices from late 2003 to mid-2014 likely accounts for much of the recent slowdown in productivity growth. To the extent high energy prices explain the slowdown in productivity growth, productivity growth should accelerate in response to the decline in oil prices since mid-2014.

The retirement of baby boomers, voluntary or involuntary as the result of corporate restructurings, also helps explain the slowdown in productivity growth. As boomers retire, the average age and level of experience of the remaining workforce declines. To the extent experience increases productivity, productivity declines as well. A similar decline in the average age of the labor force when the baby boomers entered the labor force helps explain the slowdown in productivity growth in the 1970s. The retirement of high-productivity/high-income baby boomers helps explain both the slowdown in productivity growth and the slow growth of wages and salaries during the current economic expansion.

Finally, the slowdown in productivity growth may reflect the costs of complying with the growing complexity of the U.S. tax and regulatory systems. When a company hires more accountants, lawyers, and other workers to deal with new regulatory requirements or the growing complexity of the tax system, hours worked (the denominator in the calculation of productivity) goes up, but output (the numerator) doesn't. When a doctor's office or hospital hires more people to do paperwork rather than more doctors and nurses to provide medical care, productivity goes down. The regulatory complexity imposed by the Affordable Care Act and Dodd-Frank could account for some of the slowdown in productivity growth.

To the extent the slowdown in productivity (and growth more generally) is due to demographics or running out of technological breakthroughs, there isn't much that can be done to reverse it; the downshift is permanent. But to the extent oil prices explain the slowdown, productivity growth is likely to rebound in coming years. Policies that boost business investment (territorial tax system), improve the productivity of that investment (infrastructure), or improve the quality of the labor force (better schools) would help, but the biggest bang for the policy buck is likely to come from the simplification of tax and regulatory systems.