

Productivity And Employment

Everything begins with employment. If that sounds like an overstatement, consider two-thirds of the American economy is driven by consumer spending and that without personal income to tax the government would grind to a halt. A society burdened with persistently high or structural levels of unemployment, such as various Western European social welfare states, loses its ability to lead on the world stage. As financial markets are driven by individuals' investable funds, either directly or indirectly through work-related pension plans and retirement accounts, everything we trade can be linked back to employment.

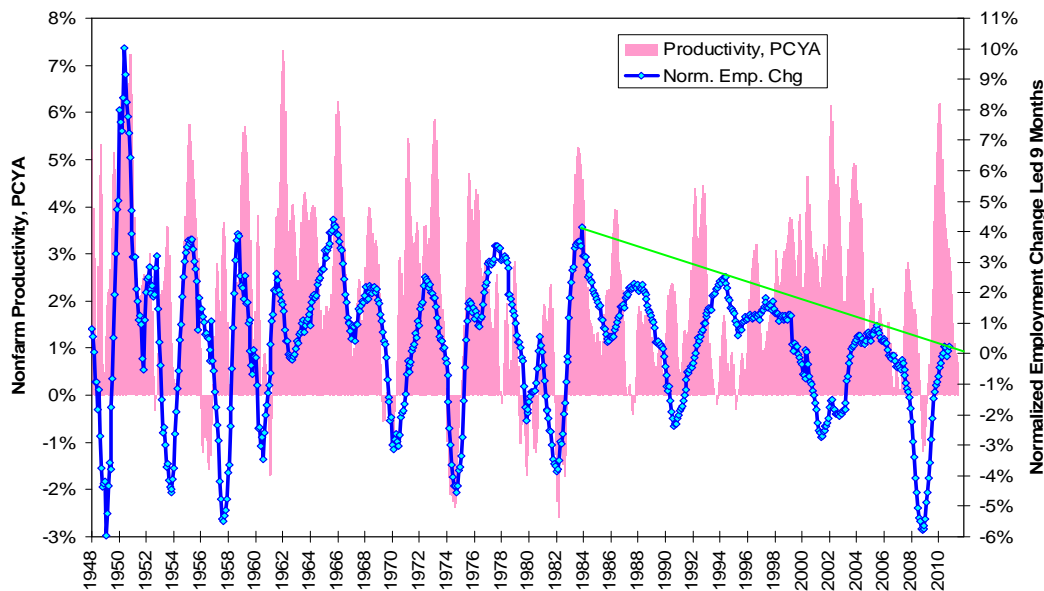
Yet so many policies designed to stimulate the economy have the rather odd unintended consequence of discouraging employment. A long-ago U.S. senator from Illinois, Paul Douglas, had been a professor of economics at the University of Chicago and developed what are known as the Cobb-Douglas production functions. In its two-factor representation between labor and capital, it looks like:

$$\text{Output} = \text{Capital}^{\hat{u}} * \text{Labor}^{(1-\hat{u})}$$

This simple little equation suggests if the cost of capital is lowered, capital will be substituted for labor. If we add other factors of production, such as technology, to the mix we can see how cheaper and better technology, something we have been living with forever, encourages the substitution of technology for labor. Finally, the concept of labor has to be expanded across international borders to include low-cost labor sources.

Employment in the U.S. has been facing these multiple headwinds for a long time, and it shows in the data. If we map year-over-year changes in total employment normalized to changes in the civilian labor force, we see it has been making a series of lower highs since the early 1980s. Changes in nonfarm productivity used to lead this change in employment very strongly by nine months as greater output per worker encourages hiring, but this pattern began to deteriorate in the early 1980s as well.

Productivity And Normalized Employment Change



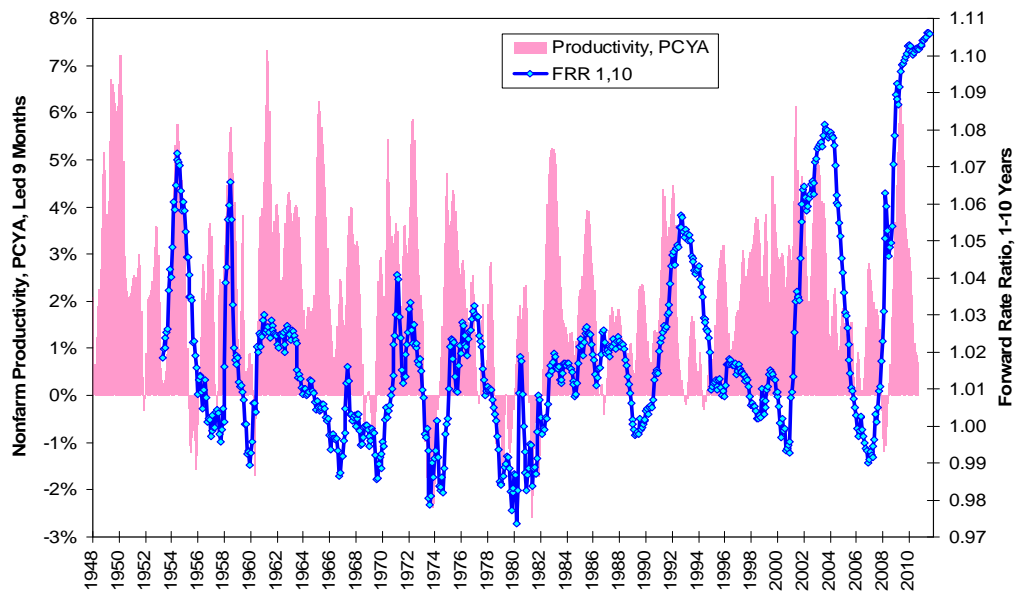
What Changed?

Whenever we see a trend starting at a date and a cyclical relationship change, we should ask what produced those changes. Here the answer appears to be the broad and very long-term decline in the cost of capital beginning with the peak in bond yields in 1981 and coinciding with the adoption of more investment-friendly business policies such as investment tax credits and more generous depreciation under the Reagan administration. In addition, the willingness of then-Federal Reserve chairman Paul Volcker to allow short-term interest rates to fall during the 1982 Mexican devaluation was followed by Alan Greenspan's willingness to address all problems in the financial system with lower short-term interest rates. By the time we got to Ben Bernanke, interest rates had been driven toward 0% and the Federal Reserve was printing money faster than anyone could lose it...for a while, at least.

In short, a combination of policies along with the information technology revolution and the integration of large labor pools in Asia into the world economy made American labor too expensive. Websites, robots and former Chinese peasants replaced American labor in case you have not noticed.

The use of manic monetary policy has had the effect on employment of increasing productivity, which once encouraged employment growth with regularity but now seems to encourage the substitutions for labor noted above. If we look at the shape of the yield curve as measured by the forward rate ratio between one and ten years, the rate at which we can lock in borrowing for nine years starting one year from now divided by the ten-year rate itself, we see how the three successively record steepenings after 1990 all were accompanied by large gains in productivity.

Monetary Policy And Productivity

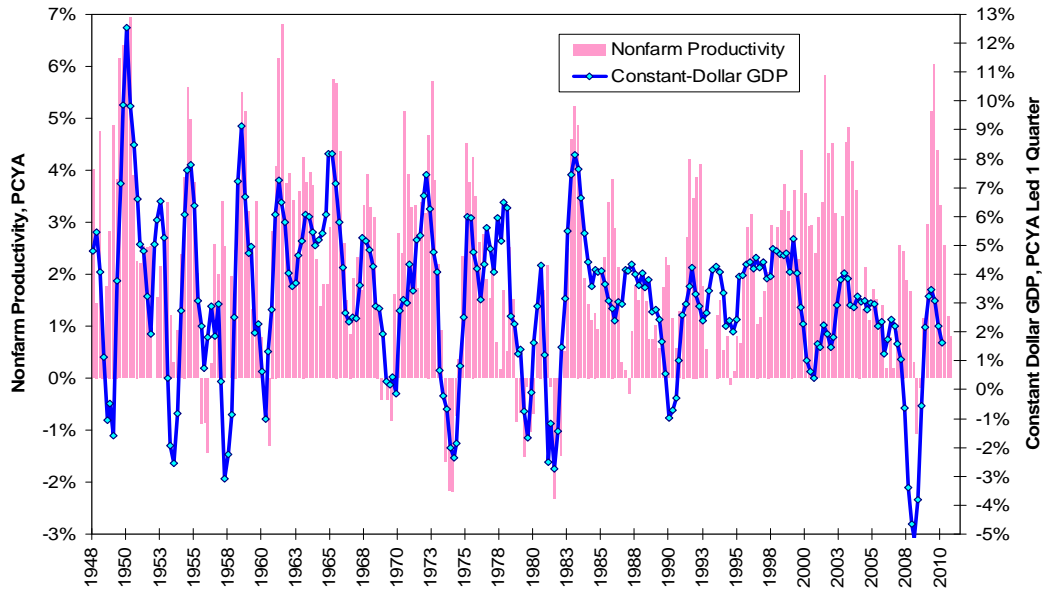


Macro Effects

At one point it was simply taken as a given higher productivity both increased GDP and kept a lid on inflation. This seemingly innocuous conclusion was based on the notion a fixed or growing labor force churning out more per hour would raise GDP and an increased supply of goods and services being chased by an under-control money supply would result in lower price increases.

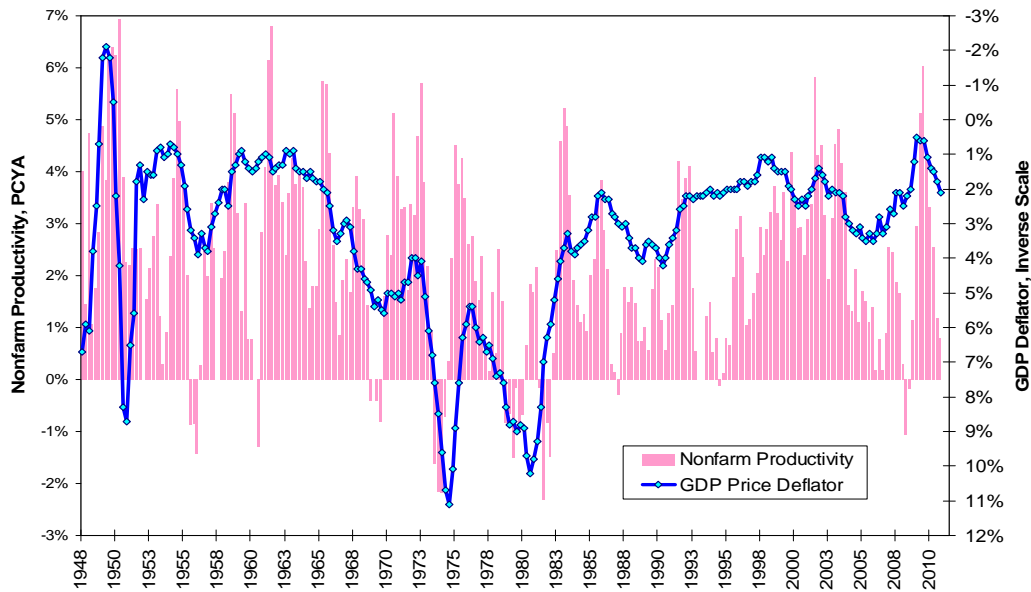
These suppositions also started to come apart once the Greenspan Federal Reserve started to flood money into the markets in response to every economic hiccup. The same mechanism noted above, the substitution of capital for labor, allowed for large increases in productivity to occur during periods of slow growth or outright recession, such as 2001-2002 and again in 2008-2011. As U.S. employers shed workers and shifted workloads onto the employed remainder, these workers were equipped with cheaper capital goods and improved technology. In other words, the money-printing and rate-cutting extravaganzas of the Greenspan-Bernanke era contributed to a structural shift toward lower use of labor in the American economy.

GDP And Productivity Not Strongly Linked After 1990



Finally, let's look at the relationship between productivity and changes in inflation as measured by the GDP deflator, here plotted inversely. The experience before the early 1980s was declines in productivity did in fact lead to higher inflation as fewer goods and services were produced. After the shift to a higher-capitalized workforce, the previously strong link between productivity and inflation broke. If an economist from Mars were shown only the post-1982 data, he would have to conclude the two concepts were linked only very weakly, if at all.

Inflation And Productivity



Implications

Nothing noted above should be construed as a Luddite argument against increased productivity; far from it: Without productivity gains the world would soon be unable to feed, clothe and shelter itself in the manner to which too many still are unaccustomed. Worse, as the development of higher levels of culture and learning depend on the liberation of large segments of society from basic production tasks such as farming and mining, civilization soon would turn drearier.

What we should note from above is how policies always have consequences. Cheaper capital and improved technology reduce the attractiveness of global labor in general and American labor in particular. As rewards flow

increasingly to the owners of that capital – and yes, this does have a bit of a Marxist sound to it – the concentration of wealth and income in what had been an egalitarian and middle class-oriented society would lead to a more feudal or Third World social structure in the absence of redistributionist policies. As we move forward out of the wealth shocks of 2001-2002 and 2008-2009 and remain mired in a world of low interest rates, we have to keep in mind those productivity numbers you see flashing across the screen are more than just a “harrumph” moment for financial markets. They will permeate all aspects of your life and in ways no one understood when a three decade-long bull market in bonds began in 1982.