

# افغانستان آزاد – آزاد افغانستان

AA-AA

چو کشور نباشد تن من مباد بدین بوم و بر زنده یک تن مباد  
همه سر به سر تن به کشتن دهیم از آن به که کشور به دشمن دهیم

[www.afgazad.com](http://www.afgazad.com)

[afgazad@gmail.com](mailto:afgazad@gmail.com)

*European Languages*

زبانهای اروپایی

FEBRUARY 11, 2019

by DEAN BAKER

13.02.2019

## *The Robots Taking the Jobs Industry*

There is an old saying that the economy is too simple for economists to understand. There is plenty of evidence of this all around. After all, almost no economists could see the \$8 trillion housing bubble, the collapse of which gave us the great recession. Back in the stock bubble days of the late 1990s, leading economists in both political parties wanted to put Social Security money in the stock market based on assumptions of returns which were at the least incredibly implausible, if not altogether impossible.

The endless scare stories of robots taking all the jobs, or the threat of automation, fit this mode. While this is a recurring theme in major media outlets, it basically makes zero sense.

Replacing human labor with technology is a very old story. It's called "productivity growth." We've been seeing it pretty much as long as we have had a capitalist economy. In fact, this is what allows for sustained improvements in living standards. If we had not seen massive productivity growth in agriculture, then the bulk of the country would still be working on farms, otherwise we would be going hungry.

However, thanks to massive improvement in technology, less than 2 percent of our workforce is now employed in agriculture. And, we can still export large amounts of food. If the robots taking our jobs industry were around a hundred years ago, it would be warning about gas powered tractors eliminating the need for farm labor. We would be hearing serious sounding discussion on our radio shows (we will steal radios from the 1919 future) with leading experts warning about how pretty soon there would be no work for

anyone. They would tell us we have to prepare for this dark future by fundamentally reorganizing society.

Okay, that story is about as wrong as could possibly be the case, but if anyone buys the robots taking our jobs line, then they better try to figure out why this time is different. After all, what difference does it make if a worker loses their job to a big tractor or they lose their job to a robot?

### **Getting Serious About Robots and Productivity Growth**

The basic story of robots taking our jobs is one of a massive increase in productivity growth. Instead of people driving taxis and trucks, stocking store shelves, and working checkout counters, all this work and more will be dealt with by robots. There are three problems with this story:

- 1) It has not been happening;
- 2) No one involved in designing policy expects to happen;
- 3) It would likely mean more rapid wage growth and improved living standards if it did happen.

On the first point, instead of accelerating to new highs, the rate of productivity growth has actually been very slow in recent years. We did have a period of strong productivity growth from 1995 to 2005, when the average annual rate was just under 3.0 percent. However, this period of strong growth ended abruptly in 2006 for reasons that are not well understood.

Since 2006, productivity growth has fallen to less than a 1.3 percent annual rate. While some (including me) had hoped that a tighter labor market would lead to a pickup in productivity growth, to date we are still not seeing it. Over the last two years productivity growth has averaged less than 1.2 percent.<sup>[1]</sup> Long and short, there is absolutely zero evidence that we are seeing any mass displacement by robots, automation, or anything else.

The second point is that we do have projections about future rates of productivity growth from folks like the Congressional Budget Office (CBO), the Social Security Administration (SSA), and other forecasters. None of these organizations see any sort of massive acceleration in productivity growth.

In its most recent projections (Table 2-5), CBO put the rate of potential productivity growth at 1.8 percent annually over the next decade. This is somewhat better than we have seen over the last 13 years, but hardly a story of massive labor displacement. The 2018 Social Security Trustees Report puts the long-term economy-wide rate of annual

productivity growth at 1.68 percent. Since the economy-wide rate tends to be approximately 0.2 percentage points lower than the rate in the non-farm business sector, this would translate into a rate of productivity growth of just under 1.9 percent in the non-farm business sector. Again, this is somewhat of a pick-up from current levels, but not very different from the CBO story.

We could look at other projections from places like the OECD and I.M.F. and other organizations, but they all show pretty much the same story. None of them show the massive uptick in productivity growth that would be associated with the robots taking all the jobs.

This doesn't mean such an upturn is impossible, after all these organizations all missed the slowdown that began in 2006 and for that matter the upturn that began in 1995. So their track record in projecting trends in productivity has not been great, but anyone arguing the robots taking all the jobs story should realize that they are going against the consensus in the economics profession.

The last point is that if the robots did start taking more jobs, so what? We had almost 3.0 percent productivity growth from 1995 to 2005 and in the much longer post World War II Golden age from 1947 to 1973. These were periods of relatively low unemployment and strong wage growth.

Suppose robots did start taking more jobs, how fast would the pace of productivity growth be? A 3.0 percent rate would be very impressive, but why would the story be different than it was in the past when we saw productivity growth at this rate? Would it be 4.0 percent annual growth, 5.0 percent? If so, is there any reason this would not just mean even more rapid wage growth and/or shorter workweeks and work years?

Just to focus people on where we are right now, the Federal Reserve Board has been raising interest rates over the last two years in order to deliberately slow the economy. It is ostensibly concerned that we are creating too many jobs. The issue is that rapid job growth would lead to a further tightening of the labor market and therefore more rapid wage growth. A more rapid rate of wage growth could then lead to an acceleration in the inflation rate.

If the pace of productivity growth were to suddenly accelerate, the Fed could be more restrained with interest rate hikes, and possibly even lower rates. There would little reason to be concerned about inflation in an environment of more rapid productivity growth.

So, long and short, we do not now see any evidence of massive job loss due robots, automation, artificial intelligence, or anything else. That could change in the future, but there is little reason to believe it would lead to massive job loss.

### **Robots Taking the Jobs of the Less-Skilled**

There is a slightly different story of job-killing robots that many people seem to have in their minds. This is not one of massive job displacement, but rather a loss of less-skilled jobs. The idea is that even if robots don't lead to a huge increase in productivity growth, they will lead to the loss of a large share of the jobs now held by less-educated workers.

This is an old story in economics that originally appeared as “skills-biased technical change (SBTC).” It was used to explain the large increase in the gap in wages between college educated workers and non-college educated workers that opened up in the 1980s. My friends Jared Bernstein and Larry Mishel showed there was no correlation between any measures of technology and increased demand for more college-educated labor by industry.

The story of skills biased technical change got even weaker as there was little change in the college-non-college wage gap in the 1990s and the last decade, even as there was a surge in productivity growth from 1995 to 2005 due to information technology. Clearly this simple story did not work.

There was a revised version of the SBTC hypothesis in the last decade pushed most prominently by David Autor. This was the “hollowing out of the middle” story, which argued middle paying jobs were rapidly disappearing, leading to a rise in inequality as middle class jobs were lost to technology. This was counted by a paper by Larry Mishel, Heidi Shierholz, and John Schmitt, that showed the hollowing out story did not fit the decade of the 00s at all.

In spite of great efforts by economists to link rising inequality to technology, the data just doesn't fit the story. That doesn't mean that we won't see technology leading to a rise inequality in the future, just that we have not seen it to date. It is worth noting in this context, that while the unemployment rate for workers with less than a high school degree, just a high school degree, and some college, are all below their pre-recession lows, the unemployment rate for workers with just a college degree is still somewhat higher. Workers with just a college degree have also been seeing the weakest wage growth over the last four years, as I pointed out in my post last week.

**So What If Robots Aren't Taking Jobs Now or Depressing Wages of Less-Educated Workers, What About the Future?**

If we look at the data, it's very hard to blame robots or technology more generally for the problems of inequality we have seen to date, but that doesn't mean we won't have this problem in the future. This is true in the sense that none of us know the future, but let's think about this one a bit further.

People don't get rich from technology, they get rich because we give certain people ownership of the technology with patent and copyright monopolies. This is not really an arguable point. Bill Gates has a \$100 billion because we will arrest anyone that starts to mass produce computers with Windows software without paying Microsoft for the privilege.

The argument is that we want to give people like Gates incentive to innovate or do creative work. But if we are concerned about inequality then we can just give these people less incentive. If the argument is that this will lead to less rapid productivity growth, this is fine. After all, the issue was that we are supposed to be seeing massive rates of productivity growth, so who cares if the rate is a little less massive but we have less inequality? (I argue in Rigged, chapter 5, that there is good reason to believe that we could actually have more rapid productivity growth with weaker protections and more public funding.)

In short, nothing about the robots taking our jobs story makes sense. It hasn't been happening, no major governmental agency or international organization expects it to happen any time soon, and if it did, it should be a good story for workers. If the robots turn out to be generating inequality it will be because of our robot policy, not the robots.

Yes, I write about this one a great deal. This is because the robots taking the jobs story is constantly appearing in places like the New York Times, Washington Post, and National Public Radio. They shouldn't be taking the argument seriously, but they do. Which means those of us who care about reality have to do what we can to counter it.

Note: The piece originally said that the economy-wide rate of productivity growth tends to be 0.2 percentage points higher than for the non-farm business sector. Thanks to dumdedumdum for pointing this out in their comment.

#### **Notes.**

[1] Productivity data can be found at the Bureau of Labor Statistics data portal <https://www.bls.gov/data/#productivity>.

This article originally appeared on [Dean Baker's blog](#).