The robot paradox, continued

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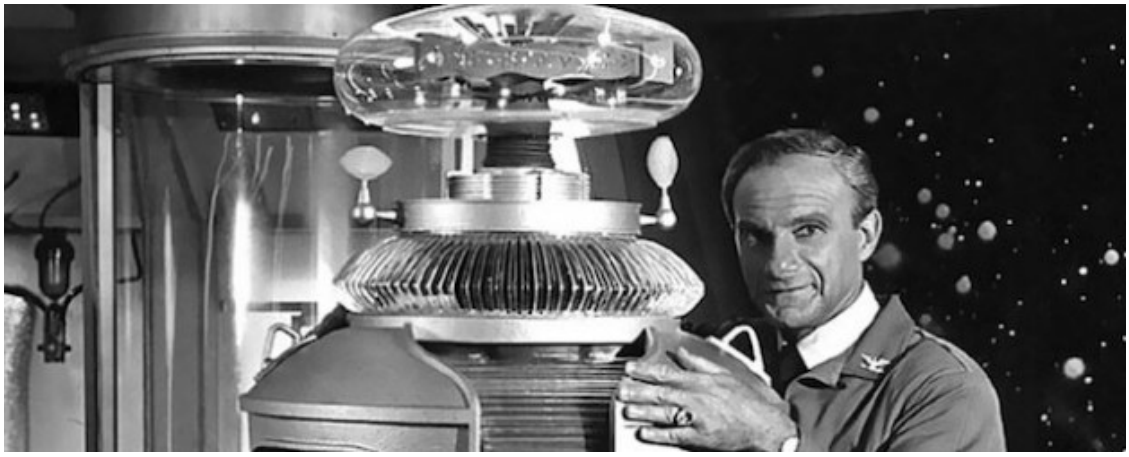
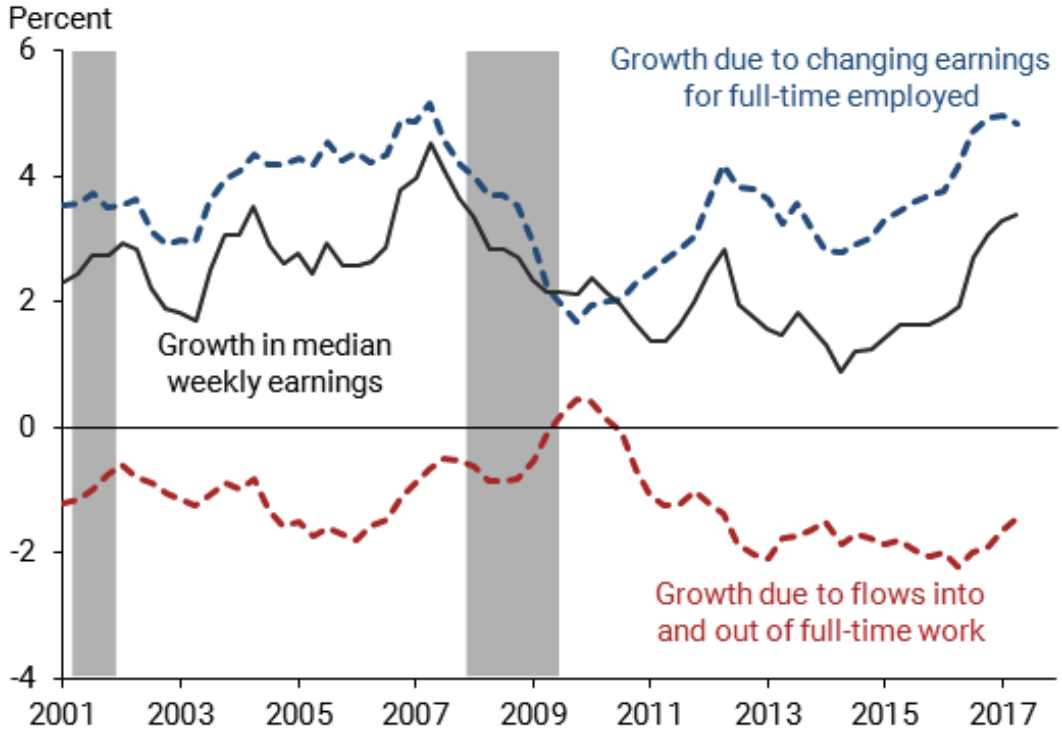


You can see the robot age everywhere but in the labor statistics, I wrote a few months ago, channeling Robert Solow. The popular and often alarming predictions of a looming unemployment crisis, one that would stem from rapid advances in robotics, artificial intelligence, and other computer automation technologies, have become increasingly hard to square with the economy's rebound to near full employment. If computers were going to devastate jobs on a broad scale, one would think there'd be signs of it by now. We have, after all, been seeing remarkable gains in computing and software for many decades, while the broadband internet has been working its putative magic for more than twenty years. And it's not like a shortage of corporate cash is curtailing investment in technology. Profits have been robust and capital cheap.

Still, even as jobs rebounded from the depths of the Great Recession, overall wage growth has appeared sluggish, at times stagnant. It has seemed possible that the weakness in wages might be the canary in the automated coal mine, an early indication of a coming surge in technological unemployment. If humans are increasingly competing for jobs against automatons, of both the hardware and software variety, that might explain workers' inability to reap wage gains from a tightening labor market — and it might presage a broad shift of work from people to machines. At some point, if automation continued to put downward pressure on pay, workers would simply give up trying to compete with technology. The robots would win.

But even here, there's growing reason to doubt the conventional wisdom. For one thing, earnings growth has been picking up, hitting an annualized 4.2 percent in July, its highest mark in a decade. Second, and more telling, the wage statistics may not have been giving us an accurate picture. The sluggishness in earnings growth may have been something of an illusion all along, a distortion resulting from a combination of demographic changes in the American work force and post-recession labor market dynamics. That's the implication of a new study of wage growth in this century from the Federal Reserve Bank of San Francisco. The researchers found that average wages have been depressed by two unusual trends: (1) Baby boomers are retiring at a high rate, and they're being replaced by younger and less experienced workers. The inexperienced workers are naturally being paid less than the veteran workers they're replacing, which in the labor statistics appears as a drop in pay for those jobs. (2) A lot of the workers getting full-time jobs have either been unemployed for a while or are moving from part-time to full-time posts. These workers, too, will tend to earn below-average wages in their new positions, which also serves to pull down average wages. As the researchers explain: "Counterintuitively, this means that strong job growth can pull average wages in the economy down and slow the pace of wage growth."

When you adjust the numbers for these factors, the wage picture improves considerably. "Overall," the researchers report, "these factors have combined to hold down growth in the median weekly earnings measure by a little under 2 percentage points, a sizable effect relative to the normal expected gains." Here's the money graph from the Fed report:



The black line in the middle tracks wage growth as reported in the labor statistics. The dotted red line shows the effect on the numbers of recent changes in the makeup of the workforce. The dotted blue line shows what wage growth looks like when you account for those demographic shifts — when you isolate, in other words, the actual changes in the wages of employed, full-time workers. What you're left with, clearly, is a much brighter and much more typical picture. As the Fed's economic research director Mary Daly told Bloomberg, "Wage growth, when cleaned up, looks consistent with other measures seen in the labor market."

I'm sure this research won't be the final word on the complex issue of jobs, wages, and technological unemployment. But the findings do provide further reason for skepticism when examining claims that a robot horde is about to eat the job market.

Postscript: In a new article in *Wired*, Andrew McAfee, coauthor with Erik Brynjolfsson of the influential book *The Second Machine Age,* says he now regrets the stress he placed on automation's impact on overall employment: "If I had to do it over again, I would put more emphasis on the way technology leads to structural changes in the economy, and less on jobs, jobs, jobs. The central phenomenon is not net job loss. It's the shift in the kinds of jobs that are available." I think that's right, but I'd add another concern that will become more pressing: the impact of automation on the structure of jobs themselves. Human beings and computers are going to be working together, more closely than ever, and we need to get the division of labor right. The "robots are taking over" rhetoric is a distraction from what's most important about the second machine age.

Image: still from Lost in Space.