

USA: The Truth About Unemployment -- And Why It May Get Worse

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The official unemployment rate remains at 10%, and economists are projecting that the job market will take years to recover. Is it possible that, beyond the obvious impact of the financial crisis, there is another largely unacknowledged factor contributing significantly to the dismal unemployment situation?

I believe that there is, and I argue that case in my new book, *The Lights in the Tunnel: Automation, Accelerating Technology and the Economy of the Future*. In the past two decades, information technology has advanced dramatically and is increasingly being employed to eliminate jobs of all types. Job automation technology, together with globalization, has been the primary force behind the stagnant wages and diminished opportunities for less educated workers we've seen in recent years.

Because information technology accelerates (roughly doubling every two years), rather than increasing at a constant rate, we can expect that the coming years and decades will see even more dramatic progress. In the future, automation is no longer going to be something that primarily impacts low wage, uneducated workers. Technologies such as artificial intelligence, machine learning and software automation applications will increasingly enable computers to do jobs that require significant training and education. College graduates who take "knowledge worker" jobs will find themselves threatened not only by low-wage offshore competitors but also by machines and software algorithms that can perform sophisticated analysis and decision making.

At the same time, continuing progress in manufacturing automation and the introduction of advanced commercial robots will continue to diminish opportunities for lower skill workers. Technological progress is relentless, and machines and computers will eventually approach the point where they will match or exceed the average worker's ability to perform most routine work tasks. The result is likely to be structural unemployment that ultimately impacts the workforce at virtually all levels -- from workers without high school diplomas to those who hold graduate degrees.

Most mainstream economists dismiss this scenario. They continue to believe that the economy will restructure and create adequate numbers of jobs in the long run. Historically this has, in fact, been the case. Millions of jobs were eliminated in agriculture when mechanized farm equipment was introduced. That resulted in a migration to the manufacturing sector. Likewise, manufacturing automation and globalization has resulted in the transition to a largely service-based economy in the United States and other developed countries.

In the past, technology has typically impacted one employment sector at a time, leaving or creating other areas for workers to transition into. That's unlikely to be the case this time around. Accelerating information technology will offer a completely unprecedented level of work capability -- and it can be applied virtually everywhere. As technology providers compete and innovate, automation will certainly become more affordable and more accessible to even the smallest businesses. If a business can save money through automation, competitive pressures will leave it no choice but to do so. While there will certainly continue to be jobs that cannot be automated, the reality is that a very large percentage of the 140 million or so workers in the United States are employed in jobs that are fundamentally routine and repetitive in nature. Enormous numbers of these jobs are going to be vaporized by technology in the coming decades, and because that technology will be available across the board, there is really very little reason to believe that entirely new employment sectors capable of absorbing massive numbers of workers will be created.

The problem is not just one of unemployment. In my book, I use a thought experiment or mental simulation based on "lights in a tunnel" to illustrate the overall economic impact of relentlessly advancing job automation technology. As unemployment increases and wages fall, discretionary consumer spending and confidence will likewise plummet. The result will be a downward economic spiral that will be very difficult to arrest. Beyond some threshold, the business models of mass market industries would be threatened as there would simply be too few viable consumers to purchase their products. We would also likely see unprecedented levels of debt defaults, plunging asset values and financial system disruptions that might easily exceed what has so far occurred in the current crisis.

I believe that the impact of accelerating automation technology is likely to present an enormous economic, social and political challenge over the next ten to twenty years and beyond. Yet, the issue is simply not on the radar. In *The Lights in the Tunnel*, I suggest some possible reforms that might address the issue, but the reality is that the problem is potentially so disruptive that even progressive thinkers would probably find some of my ideas extreme. Conservatives will likely view my proposals as unthinkable. Nonetheless, if we are ultimately destined to progress into a world where traditional jobs are simply unavailable and where a huge percentage of the population has little in the way of marketable skills or opportunity to earn an income, there will be few if any viable solutions that would not be perceived as radical.

Martin Ford is the author of [The Lights in the Tunnel: Automation, Accelerating Technology and the Economy of the Future](#) and has a blog at [econfuture.wordpress.com](#)

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