Mitch on the Markets

Can Too Much Innovation Kill the Economy?

By Mitch Zacks
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The robots are coming to take your jobs. The robots are coming to take your jobs. The robots are coming to...

OK, you get the point. Technological change is happening at a rapid pace, and it is affecting the way we communicate and the way businesses operate. We've known this for years. But what has been happening recently that has many worried is the rise of robotics—virtual reality, self-driving cars, robots working assembly lines and so on. This is the type of technology that in every sense of the word *replaces* the need for human labor. If replacing human labor means killing jobs, does it imply that too much innovation and automation could cripple the economy?

Innovation Goes Back a Long Way

There's a decent amount of paranoia about innovation going too far, about living in a world where robots build houses and serve meals at restaurants. But imagining a world where there is a one-for-one trade-off between machines and humans is short-sighted. Think about lessons we have from history.

During the industrial revolution, one of the big "job killing" innovations was the power loom. First built in 1785, the power loom removed the need for humans to individually weave cloth, and at its introduction was able to weave twice the amount of cloth as a human. Over the next century, it was able to weave 50 times as much as a human laborer. So that must have meant the end of the weaving profession, right? Wrong! The number of employed weavers actually grew over that time, because new technology often creates cheaper goods, more demand, and different types of needs. Not only were more weavers needed to keep up with demand, but tons of new jobs were created out of the need for new organization, more mill managers, mechanics to fix the power looms, and so on.

More recently you might think back to the introduction of the ATM machine. The ATM eliminated the need for people to walk into the bank and have an interaction with a bank teller. So the bank teller profession must have shrunk considerably then? Wrong again! More bank tellers came into the economy as a result, as banks could now use them in a "client relationship" role and have them sell higher margin products to customers, like mortgages and credit cards. This involved some retraining of the workforce but ultimately grew the workforce in the financial sector.

You can look at the economy in a lot of different ways and find numerous examples of the same principle. Innovation looks on the surface like it will kill jobs by replacing them outright, but implementing new technology is a very difficult process, and often involves a lot of manpower to do so. But once in place, the new technology can allow human labor to manage, market, sell, serve, and do a multitude of other jobs that arise in response to new demand, as well as the need to manage new technology.

Bottom Line for Investors

Economies evolve. The U.S. was once an economy where 80% of the jobs were in agriculture. From an agricultural economy to an industrial and manufacturing based one, to a services and consumption based economy, to whatever is next. A software and consumption based economy possibly? One can't say for sure. But, history tells us that innovation and technological changes have brought wealth and jobs over time, and I would not bet against that changing. Just because we can't see it or understand it, does not mean it won't happen.

-Mitch

About Mitch Zacks

Mitch is a Senior Portfolio Manager at Zacks Investment Management. Mitch has been featured in various business media including the Chicago Tribune and CNBC. He wrote a weekly column for the Chicago Sun-Times and has published two books on quantitative investment strategies. He has a B.A. in Economics from Yale University and an M.B.A in Analytic Finance from the University of Chicago.