

As We See It

When one door closes another door opens; but we so often look so long and so regretfully upon the closed door, that we do not see the ones which open for us.

Alexander Graham Bell

In recent months, much has been written about the rise of the robots. A recent study from Oxford University argues that almost half of American jobs are at risk of being automated in the years ahead. A tech startup named Otto recently sent a driverless truck from Fort Collins to Colorado Springs carrying 50,000 cans of beer. Amazon just opened a grocery store called Amazon Go which employs no cashiers and requires no checkout line. Predictions that machines will make humans obsolete in the workforce have been made since the Industrial Revolution. In the 1800s, textile workers—most famously the Luddites—protested that machines and steam engines would destroy their livelihoods. In 1928 an article in *The New York Times* declared “March of the Machine Makes Idle Hands.” In the 1930s, John Maynard Keynes coined the term *technological unemployment*.

History also shows that the increased productivity generated by innovation and automation leads to greater wealth, cheaper goods, increased consumer spending, and—ultimately—more jobs. Rather than destroying jobs, automation redefines them in ways that reduces cost and boosts demand. During the 19th century technology changed the nature of the weaver’s job. The amount of cloth a single weaver produced in an hour increased by a factor of 50, while the amount of labor required per yard fell by 98%. This lowered the cost of cloth and increased demand which, in turn, created more jobs for weavers and their numbers quadrupled between 1830 and 1900. Technology had changed the nature and skill of the weaver’s job rather than replacing it altogether.

In the 1980s ATMs were expected to spell doom for bank tellers. By taking over routine tasks, the number of tellers *per branch* fell from 20 to 13 from 1988 to 2014. However, the reduced cost of running a branch allowed banks to open *more branches*. The number of branches rose by 43% over the same period causing an increase in the total number of tellers. Instead of destroying jobs, ATMs changed bank employees’ work mix from routine tasks to sales and customer service—tasks that machines could not do.

Similarly, just as people today worry about the potential impact of self-driving vehicles, a century ago there was much concern about the impact of the switch from horses to cars. Horse-related jobs declined, but entirely new jobs were created in the motel and fast-food industries that arose to serve motorists and truck drivers. As old industries decline, new ones will emerge. Imagine trying to tell someone a century ago that their great-grandchildren would be video-game designers, cybersecurity specialists, or social media directors.

This issue is too complex to address in one short memo and—without a doubt—innovation causes grief to those whose jobs are affected. In investing, technological change offers potential rewards to those who are prepared for it—but also risks for those who are not. When constructing our clients’ portfolios, we look for investment opportunities that could benefit from these instances of innovation while being mindful of the impact to our existing holdings from such disruption.

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