

Daniel Weinert

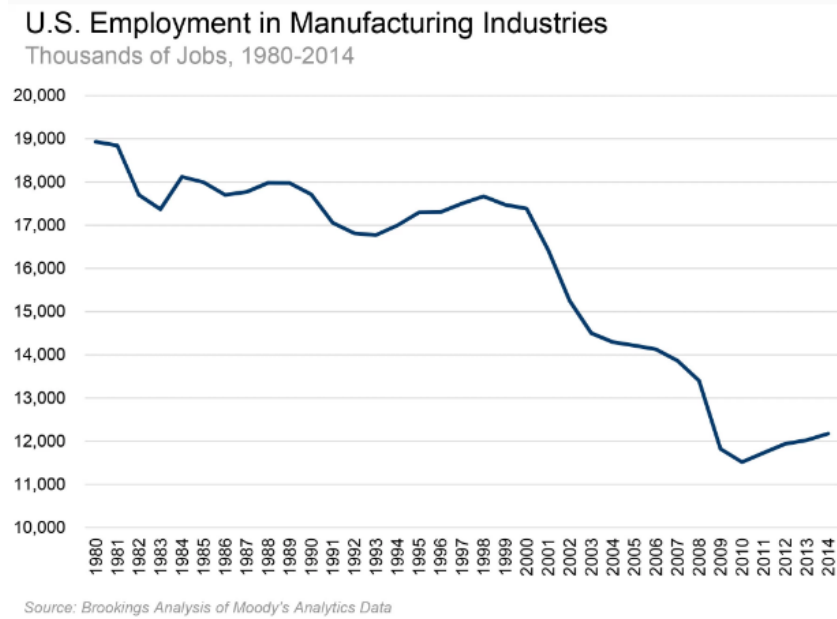
Dr. Jeffrey Ogle

PHI-3370-001

The Future of Work

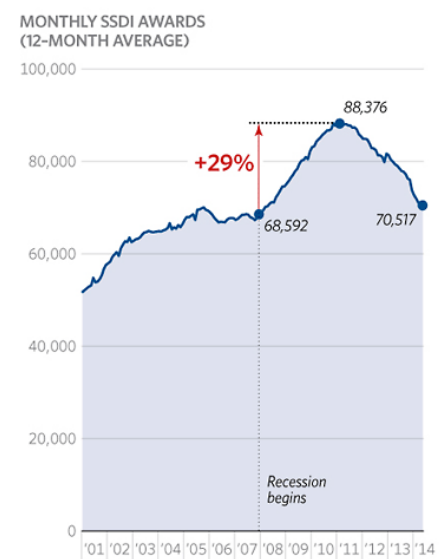
Today in society we place a great deal of importance on the work we do. Almost always one of the first questions we ask when meeting someone is: “What do you do?”. This is because a job determines how much money you make, and on some occasions the status you have in your community. Depending on someone’s job and/or title they get granted higher social status than others, especially because of money. Some even use their job to identify themselves with, usually teachers, police officers, and others see their job way more as just a job for them, it is their life. It also gives people meaning, making them feel like they are a contributing part in society. The problem that our current capitalistic system creates with this way of life is that if someone’s skill becomes irrelevant or isn’t valued in the first place by the economy it almost becomes meaningless as there is not opportunity to earn money with that skill. There are currently many occupations that are valued useless by the economy but are very valued by humans for example child care, volunteering, creating art, etc. On top of that we are in the process of automating away the most common jobs leaving more and more people jobless and with a feeling meaningless. The United States is already experiencing the bad side effects of people being left behind by the economy. If society doesn’t start soon changing how the economy works and implementing systems like Universal Basic Income and Medicare For All, capitalism will collapse on itself and crush us all.

Since the 2000s the manufacturing industry has seen the biggest wave of automation and worker layoffs due to their labor no longer needed. In 2000 there were still 17.5 million manufacturing workers in the United States, today that



number is around 12 million. More than 4 million manufacturing workers lost their jobs due to automation. Men make up 73 percent of the manufacturing workers, this is a major attributing cause of more and more working men leaving the workforce. About one in six working age men in America is now out of the work force, one of the highest rates among developed nations. Now let's take a look at what happened to these 4 million workers to better understand the effects of

such vast worker displacement. According to Department of Labor study 41 percent of the displaced manufacturing workers between 2009 and 2011 were still either unemployed or dropped out of the labor market within three years of losing their job. Another study from the Indiana University found that 44 percent of 200,000 displaced manufacturing workers in Indiana between 2003 and 2014 had no payroll record at all by 2014. Many of these manufacturing workers that lost their jobs became destitute



Source: Social Security Administration, Social Security Beneficiary Data, <http://www.ssa.gov/OACT/ProgData/benefits.html> (accessed August 18, 2014).

and applied for disability benefits. Disability rolls shot up starting in the 2000, especially in states that lost manufacturing workers like Ohio, Michigan, Pennsylvania, etc. In 2015, economic researchers Anne Case and Angus Deaton found that mortality rates had increased dramatically for middle-aged white Americans after 1999, going up 0.5 percent per year. They linked this to an increased in suicides and drug overdoses, that were especially high in states that lost manufacturing workers. According to Deaton the data seems to show that the loss of jobs is to blame. He explains in their report: “Jobs have slowly crumbled away, and many more men are finding themselves in a much more hostile labor market with lower wages, lower quality and less permanent jobs. That made

it harder for them to get married. They don’t get to know their own kids.

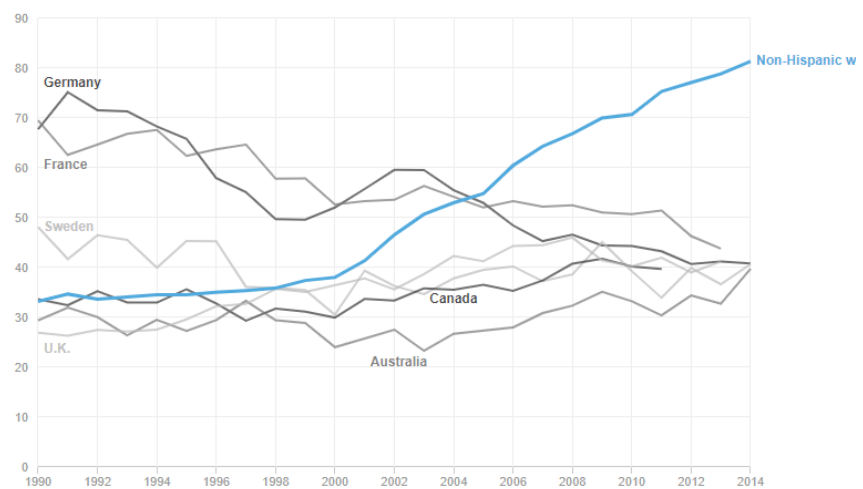
There’s a sense that these people have lost this sense of status and belonging...

these are classic

preconditions for suicide.” This had such an impact on general America that now drug overdoses and suicides are the leading causes of death and Americas life expectancy has decline 3 years in a row. The last time Americas life expectancy declined this drastically was during the Spanish flu pandemic of 1918. This data is proving that automating away millions of jobs without any kind of plan for the workers will end up in very bad ways and this is only the beginning. Experts suspect that this will become even worse if the government lets companies continue to automate away jobs without any type of safety net for the working class.

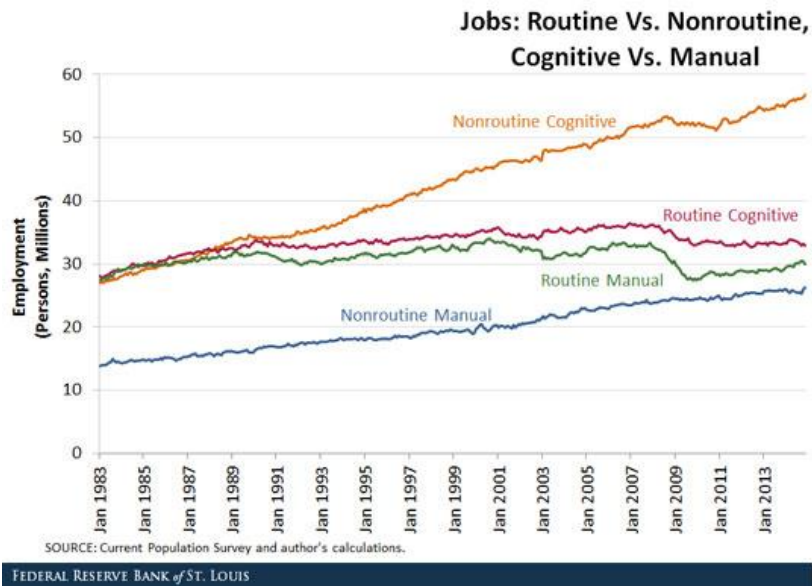
‘Deaths of Despair’ Rates Across Countries

Deaths per 100,000 by drugs, alcohol and suicide among men and women ages 50-54



Source: Anne Case and Angus Deaton, *Brookings Papers on Economic Activity*

The Manufacturing workers were only the beginning of what experts call the 4th Industrial Revolution. Next up is the trucking and transportation industry and what happened to the manufactory workers is a good indicator of what will happen to the truck drivers once they lose their job because automating away trucking is estimated to save over \$160 billion a year. There are an estimated 3.5 Million truck drivers working in the United



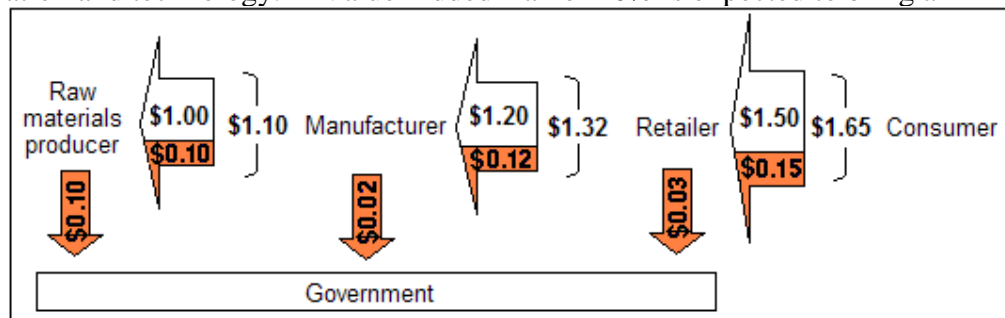
States today, and many thousand other jobs that rely on the trucking industry. Many of the most common job can be automated away, the jobs that have the most routine work have the highest risk of being automated away in the coming years and you can see on the graph above that routine labor is already on the decline. According to a report by McKinsey Global Institute as many as 73 Million United States jobs could be automated away by 2030, that is only 11 years from now.

The first issue to tackle is that in a future without jobs, people will need to be able to provide for themselves and their basic needs. This will require the government to intervene in order to prevent widespread chaos, disaster and violence. The first major change that would need to be implemented is universal basic income. The United States should provide a monthly

income of \$1,000 for every American citizen over the age of 18. Universal basic income is a type of social security where all citizens receive a set amount of money independent of their work status or income. If someone is working a low wage job making \$18,000 a year for example, they would essentially be making \$30,000 a year. This system would eliminate the disincentive to work that most people find to be a big problem of current welfare systems. With the growing threat of automation, the concept of universal basic income has gained renewed attention, with trials being run in Oakland, Canada, Finland as well as other developed nations. An analysis by the Roosevelt Institute of this \$1,000 a month proposal found that adopting it would permanently grow the economy by 12.56 to 13.10 percent or about \$2.5 trillion by 2025 and it would increase the labor force by 4.5 to 4.7 million people.

In addition to a universal basic income system the United States should also implement a Value-Added-Tax of 10%. This tax system will ensure that every American will actual benefit from rise in automation and technology. A Value-Added-Tax of 10% is expected to bring an

income of \$800 billion a year currently in the United States.



This money would be used to pay for part of the universal basic income as that is the most direct way for people to gain the value of technology. Right now, only the companies benefit from that massive saved revenue they receive through automating away jobs. In 2018, Amazon, Netflix and many other massive tech companies in the United States payed \$0 in federal taxes, this is because our current tax system is not etiquette to be effective in the 21st century. A Value-

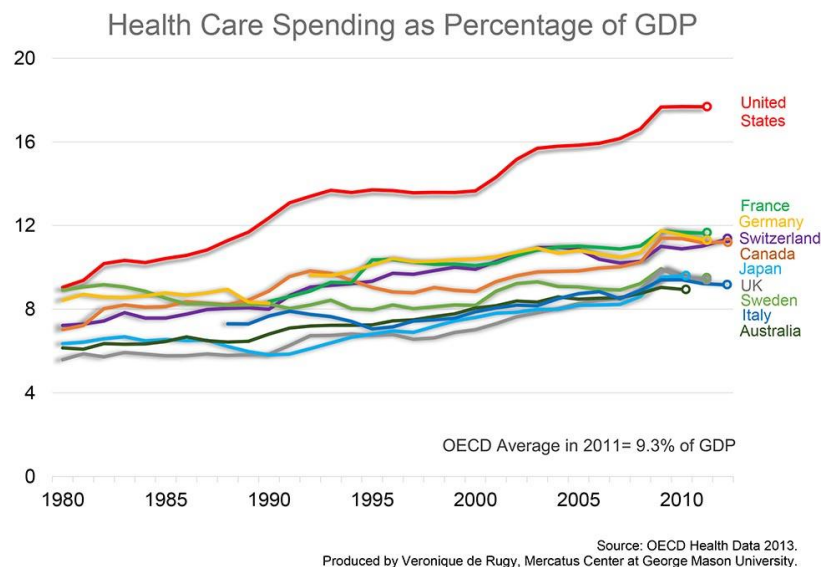
Added-Tax would mean that every American would get a tiny slice from every robot truck mile for example.

Secondly, the United States should increase funding and give more power to the Department of Labor or create a new department to act as an oversight to the coming surge in automation and job loss due to that. This department would be in charge of helping companies and people in this transition period. It would make sure that workers are fairly compensated then they are let go due to automation and that companies are following regulations in situations where you deal with another set of dangers due to automation like you would have with self-driving trucks for example. If a company wanted to automate away a certain type of job, the Department of Labor can then assist that company and help make a transition plan that will benefit everyone and not just the company. The department can also help in tracking the global sight of automation and comparing how we are doing to other developed nations that are going through a similar transition.

The next major step is boosting job markets that are hard to automate away and provide a fulfilling meaningful occupation. As seen on the “Routine vs Non-routine” chart on page 4, that non routine work is on the incline which includes many trade school type jobs. Everything from A/C repair to home renovation. These jobs require precise work on almost always different layouts and work environments of houses and customers. Which makes them very unrealistic targets for automation. Also, these types of jobs pay on average pretty well and many people doing these types of jobs say they really enjoy them. This intuitive has to start on a high school level as we need more young people entering the workforce to go into these field instead of the

most common types which will not be available in the coming years. School districts like Colorado's Adams12 District have already implement great solutions, they constructed a hybrid trade type school which allows any high school student in the district to take classes at that school that range anywhere from nursing, to repair main, mechanic, etc. It is actually already so popular that Adams12 announced they will be building a second campus of this type as more and more students are wanting to take classes that teach these trade type skills. This can be achieved in other places by offering funding from the federal government and also giving some pressure on implementing these types of schools or classes.

Next the United States government needs to implement access to a universal healthcare system which provides healthcare to all Americans. Access to good healthcare is one of the most important factors in overall well-being, yet America is one of the few developed nations that does not provide healthcare for all its citizens. As you can see in the chart below even though the United States is paying by far the most on healthcare, all the other countries on that list have public healthcare with spending less. Being physical and mentally well and having access to healthcare is a major part in helping people deal with job loss as healthcare is very deeply tied into work in the United States. Most people get their healthcare



coverage through their workplace so with automation that will go away. That's why the United States needs to move towards a public option where people are still insured even if their jobs get automated away. This will also help people financially especially during the transition period as that is more money to spend for the families and less bills to worry about.

Lastly for all of these solutions to be even more effective we need to rethink our capitalistic economy. Right now, capitalism as an economic idea has led to unparalleled innovation and improvements to human life. Very recently though we switch to more of an institutional capitalism and corporatism type of economic system. Right now, the biggest emphasis for corporations is profits. This type of thinking is already hurting Americans and is only going to get worse with the rise of automation and artificial intelligence. The main focus of our economy should be to maximize human welfare. To start the United States needs to first implement new ways of measuring the economy as Gross-Domestic-Product or GDP and the stock market aren't great indicators of how the actual people are doing in this country. Even the inventor of GDP said that it is a terrible measurement to use to figure out a country's well being. Without having the right measurements, it is impossible to measure any kind of progress or even sometimes detect a problem in the first place. The United States needs to put more emphasis on statistics like Median Income and Standard of Living, Health-adjusted Life Expectancy, Mental Health, Childhood Success Rates, Social and Economic Mobility, Absence of Substance Abuse and others. Having these



measurements will allow to track actual progress and change solutions or policies if we see that there are working against, we are actually trying to achieve. On top of that we need to switch to a more human approach of capitalism. We need to switch the incentives and value away from shareholder profit making and make the economy more workable for people by making its core tenants: Humanity is more important than money, the unit of an economy is each person, not each dollar and markets exist to serve our common goals and values. This will ensure that people can still do meaningful work once they lose their main jobs, this should help in making volunteering, starting a company, exploring the artistic sector, etc more valuable as they currently are.

In order to spur development, the government should issue a new crypto currency the “Digital Social Credit” which can be converted into dollars and used to reward people and organizations who drive significant social value and strive to do things that are seen as good by the community. This new currency would allow people to measure the amount of good that they have done through various programs and actions. The government’s goal should be to drive individuals and organizations to find new ways to improve the standards of living of individuals and families on these dimensions. This system would allow people to do good things for others and their community while still earning credit but not putting a financial incentive behind it.

To finish of this paper, I want to say that I believe the solutions mentioned above to be the most humane, ethical and fair solutions out there for the rise of automation and the future of jobs. The goal is to make this transition work for everybody. No one should gain an unfair advantage, and no one should be left behind because of automation. We also shouldn’t see automation as a bad thing even though it carries harsh consequences if not done in a correct way

because if we do it in a correct way with the measures described above when we can all massively gain from the rise of technology and automation. Also, many of the policies proposed and already in place need to be reevaluated on an active basis during this transition period as this is the biggest ever industrial revolution. We don't really know a 100% how this is going to play out and how effective some of these system can be, that's why we need to be look at these policies while also looking at the new measurements of well being in order to determine if we need to change some things or if things are improving with a new implemented policies for example.

Work Cited

- “Bureau of Labor Statistics Data.” *U.S. Bureau of Labor Statistics*, U.S. Bureau of Labor Statistics, data.bls.gov/timeseries/LNU01300060.
- Case, Anne, and Angus Deaton. “Rising Morbidity and Mortality in Midlife among White Non-Hispanic Americans in the 21st Century.” *Proceedings of the National Academy of Sciences*, vol. 112, no. 49, 2015, pp. 15078–15083., doi:10.1073/pnas.1518393112.
- CERULLO, Megan. “60 Of America's Biggest Companies Paid No Federal Income Tax in 2018.” *CBS News*, CBS Interactive, 12 Apr. 2019, www.cbsnews.com/news/2018-taxes-some-of-americas-biggest-companies-paid-little-to-no-federal-income-tax-last-year/.
- Davidson, Paul. “Automation Could Kill 73 Million U.S. Jobs by 2030.” *USA Today*, Gannett Satellite Information Network, 29 Nov. 2017, www.usatoday.com/story/money/2017/11/29/automation-could-kill-73-million-u-s-jobs-2030/899878001/.
- DiChristopher, Tom. “One-Third of American Malls Are Doomed: Jan Kniffen.” *CNBC*, CNBC, 12 May 2016, www.cnbc.com/2016/05/12/1-in-3-american-malls-are-doomed-retail-consultant-jan-kniffen.html.
- Harris, Karen, et al. “Labor 2030: The Collision of Demographics, Automation and Inequality.” *Bain*, 28 Mar. 2019, www.bain.com/insights/labor-2030-the-collision-of-demographics-automation-and-inequality/.
- Mitchell, Megan. “Adams 12 to Build Second Technical Education Campus to Accommodate More than 1,000 Students.” *The Denver Post*, 28 Feb. 2017, www.denverpost.com/2017/02/28/adams-12-technical-education-campus-students/.
- Nikiforos, Michalis, et al. *Modeling the Macroeconomic Effects of a Universal Basic Income Report by Michalis Nikiforos, Marshall Steinbaum, and Gennaro Zezza* AUGUST 2017. Roosevelt Institute, 2017, *Modeling the Macroeconomic Effects of a Universal Basic Income Report by Michalis Nikiforos, Marshall Steinbaum, and Gennaro Zezza* AUGUST 2017.
- Yang, Andrew. “Andrew Yang: We're Undergoing the Greatest Economic Transformation in Our History.” *CNN*, Cable News Network, 19 Apr. 2019, www.cnn.com/2019/04/14/opinions/greatest-economic-transformation-andrew-yang/index.html.