

"What is happening to our Workforce?"
Tech is Splitting the US Work Force in Two"
February 11, 2019

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- Next DFW Business Training, March 2nd from 9 AM – 12 PM CT at Mannatech Corp offices and www.allaboutmannatech.com

Article in New York Times, Feb. 4, 2019
Eduardo Porter

1. Understanding our current dichotomy in our Economic Trends
 - a. Take for instance Arizona:
 - 1) Intel's \$7 billion seven-nanometer chip plant going up in Chandler
 - 2) Axon, the maker of Taser, in Scottsdale is snatching up talent from Silicon Valley as automation skyrockets
 - 3) Start-ups in fields as varied as autonomous drones and blockchain are flocking there
 - 4) Ariz. State Univ. is churning out engineers
 - b. Despite a above, the majority of new jobs in Phoenix are in "workaday service industries" like health care, hospitality, retail...where pay is mediocre.
2. Forecast of an America where robots do all the work and humans live off of a yet-to-be-invented welfare program.
 - a. Automations flips people without college education out of manufacturing jobs into tasks with meager wages and no chance at advancement.
 - b. This splits the America workforce into "two worlds."
High tech making 100's of thousands of dollars, others less educated in hotels, restaurants, nursing homes...where there is much smaller profit per employee and thus, low pay.
Only way to keep these services viable is the level of pay staying very low.
 - c. Even economists are worried...new configuration of work.
3. Robots versus productivity of workers
 - a. Recent research says robots are reducing demand for workers thus, weighing down wages...which have been rising more slowly than productivity.
Some economists concluded use of robots explains the decline in the share of national income going to worker's paychecks over past 3 decades.
 - b. Because workers are pushed to bottom level of economy, productivity remains sluggish.

c. "The view that we should not worry about any of these and follow technology to wherever it will go is insane," says Daron Acemoglu, an economist at MIT.

4. Productivity: where it is high?

a. Semiconductor companies (Intel or NXP) are some of most successful in Phoenix. 2010-2017, productivity (\$value of their production) rose by 2.1%/year

Pay: currently \$2,790 per week on average

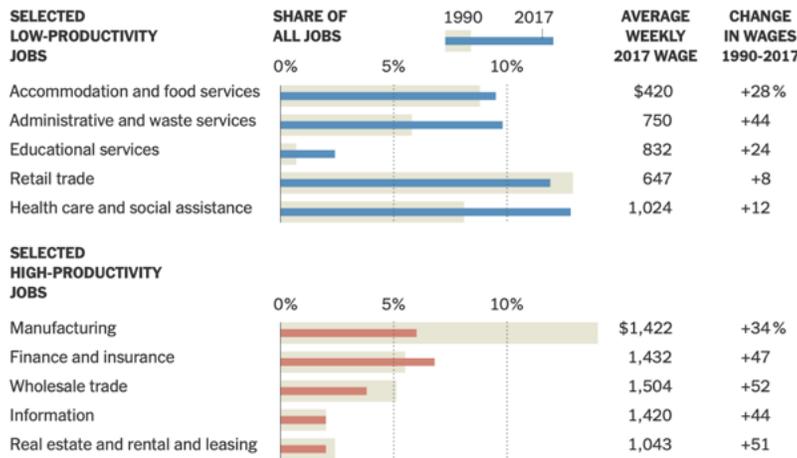
of jobs: not many, in 2017 employed 16,600, 10,000 **FEWER** than 3 decades ago (rely on AI and automation to increase throughput).

b. Axon (makes Taser and body cameras)...today robots make 4X as many Taser cartridges as 80 workers did 10 years ago.

c. In high tech industry same is true: aircraft manufacturing employed 4,234 people in 2017 compared to 4,028 in 2010.

Computer systems design services employed 11,000 people in 2017, up from 7,000 in 2010.

Productivity and job growth in the Phoenix metropolitan area



5. Productivity: where it is low

a. Building services (like janitors and gardeners), employed nearly 35,000 in 2017
Health care and social services accounted for 245,000

Restaurants and eateries employed 136,000, 24,000 more than at the trough of the recession in 2010.

The biggest single employer is Banner Health which has about 50,000 workers includes hospitals, outpatient clinics and home health aides.

Home health aide makes \$24,000 while a nursing assistant makes \$31,000 a year.

6. Comparison

a. The 58 most productive industries (from \$210,000 to \$30 million per worker) employed only 162,000 people in 2017, 14,000 more than in 2010.

b. Employment in 58 industries with the lowest productivity where it tops out at \$65,000 per worker, grew 10X as much over the period...to 673,000

This is Phoenix but the article went on to say this is true across the national economy.

Jobs grow in health care, social assistance, accommodation, food services, building administration and waste services. Tasks are tough to automate, and employers have little incentive to automate due to low costs (not enough savings).

In highly productive industries, the employment has shrunk (like finance, manufacturing, information services and wholesale trade).

7. The Luddites of the 19th Century who famously thrashed the weaving machines because they were taking their jobs...may just have had it RIGHT!

a. So, theory that by reducing prices and improving quality technology was expected to raise demand, which would require more jobs. What's more economists thought more productive workers would have higher incomes. This would create more demand for new, unheard of things that somebody would have to make.

b. In the early 1900 Industrial Revolution...rural economy gave way to industrial economy

In 1900, agriculture employed 12 million

By 2014, tractors, combines, and other equip had flushed 10 million out of the sector.

As farm labor dropped, the Industrial economy kept adding jobs. Farm products prices dropped, increasing demand. And Farmers made more money so bought more industrial products.

c. The new industries were highly productive and also subject to furious technological advancement. Weavers lost their jobs to automated looms; secretaries lost their jobs to Microsoft Windows. But each new spin of the technological wheel, from plastic toys to televisions to computers yielded higher incomes for workers and more sophisticated products and services for them to buy.

SOMETHING DIFFERENT is going on in our current technological revolution. In a new study. Dr. Autor of MIT and Anna Salomons of Utrecht University found that over the past 40 years, jobs have fallen in every single industry that introduced technologies to enhance productivity.

The only reason employment didn't fall across the entire economy is that other less productivity growth industries picked up the slack.

"The challenge is the quality of jobs available to low- and medium-skill workers."