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Amazon's Latest Experiment: Retraining Its Work Force

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As automation technology has leapt ahead, workers increasingly worry about losing their jobs to robots and algorithms. Economists dismiss those concerns, by and large, arguing that workers can grab higher-skilled jobs with better wages.

Amazon may soon find out who is right.

The e-commerce giant said Thursday that it planned to spend \$700 million to retrain about a third of its American workers to do more high-tech tasks, an acknowledgment that advances in technology are remaking jobs in nearly every industry — and that workers will need to adapt or risk being left behind.

Amazon said the program amounted to one of the world's largest employee-retraining efforts. It will apply across the company, from corporate employees to warehouse workers, retraining about 100,000 by 2025. Amazon has about 300,000 employees in the United States.

The investment is a large-scale experiment in whether companies can remake their existing work forces to fit a fast-changing technological world. While government programs have tried to turn factory workers and coal miners into computer coders and data scientists, few of those efforts have succeeded. Corporate attempts have been limited.

But with unemployment low and workers scarce, companies like Amazon feel pressure to look internally to fill their labor needs. Their efforts could help answer a more fundamental question: Will automation be a solution for the great challenges of the 21st-century economy — low wages, rising inequality and anemic overall growth — or make those problems worse?

“The scale and pace of the changes in the work force are unprecedented,” said Susan Lund, an economist at the McKinsey Global Institute, the research arm of the consulting firm McKinsey & Company. “They can’t hire off the street everyone they need. They have no choice but to retrain their own workers.”

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Amazon already faces fierce criticism from politicians on the right and left, including President Trump and Democratic presidential candidates like Senator Elizabeth Warren of Massachusetts. They have held up the company as a symbol of tech industry excess, saying Amazon avoids paying taxes, devalues workers and squashes smaller businesses.

And the fear that robots are taking jobs, and that automation will lead to mass unemployment, has grabbed the popular imagination. Magazine covers warn of a robot apocalypse. Andrew Yang, a former tech entrepreneur, is running for president partly on a platform of offering a universal income to offset jobs lost to automation. The McKinsey Global Institute predicts that up to one-third of the American work force will have to switch to new occupations by 2030.

The prevailing view among economists and technologists is that for the next few years, digital technology, from clever software to warehouse robots, will mainly change jobs rather than destroy them. Tasks become automated, so people spend less time on routine work.

So far, there is little evidence of widespread displacement. Amazon and other companies have hired hundreds of thousands of workers for their warehouses. Manufacturers have added jobs after decades of cuts. The unemployment rate is near a 50-year low, and companies are digging deep into the labor market to find workers — easing education requirements, waiving drug tests and hiring people with criminal records.

Many economists fret that there has not been enough automation. Productivity — the amount of value that employees create, on average, in an hour of work — has been rising slowly. That has helped drag down both economic growth and wages. When workers aren't more productive, it is harder for companies to pay them more.

Amazon's announcement on Thursday could be a sign that the strong labor market is finally pushing companies to make investments in both workers and technology to increase productivity.

Big companies, including Walmart and AT&T, have announced their own training programs in recent years. Companies are also raising wages — last year, Amazon committed to paying a minimum wage of \$15 per hour — giving them more of an incentive to ensure that those workers are productive.

“A tight labor market really enables workers to be able to demand more,” said J. W. Mason, a fellow at the Roosevelt Institute, a progressive think tank. “When they have to pay higher wages, when they have to struggle to find workers, then they take the steps they need to make sure those workers are worth the money.”

Ardine Williams, Amazon's vice president of people operations, said the company had more than 20,000 open positions in the United States. In November, Amazon selected Northern Virginia as the site of a second headquarters, after company executives said they needed to look beyond Seattle, its longtime home, to fill its need for talent.

Automation already plays a central role at Amazon's huge warehouses. Devices tell workers which direction to walk to pick up a package from a shelf. And there are signs that technology is at least easing the company's voracious appetite for warehouse workers: Last holiday season, it hired fewer temporary workers than in the previous year, and last quarter, its head count was up 12 percent, the lowest rise in years.

Amazon isn't trying to turn warehouse pickers into software engineers. Rather, its new program aims to move a large swath of workers up one or two rungs on the skills ladder, turning warehouse floor workers into IT technicians and low-level coders into data scientists.

Ms. Williams said the retraining initiative was built on existing education programs at the company. Software engineering classes will be available for corporate employees without technical backgrounds, she said.

"When automation comes in, it changes the nature of work, but there are still pieces of work that will be done by people," Ms. Williams said in an interview. "You have the opportunity to up-skill that population so they can, for example, work with the robots."

Amazon's announcement met with some skepticism from experts. They noted that American companies had long spent less on training than their European counterparts — and that when they did offer training, it was usually for college-educated, white-collar workers.

Amazon's most prominent retraining program has had only modest adoption internally. In 2012, Amazon started a program called Career Choice to provide up to \$12,000 in tuition and other costs for hourly employees to get certificates or associate degrees in high-demand fields like health care. Even though hundreds of thousands of people have worked at Amazon's warehouses since the program started, only about 25,000 have participated.

Even if the retraining effort succeeds, some workers are bound to lose out. Not every one of them will be able to find a better job.

A report that the McKinsey Global Institute published on Thursday analyzed the impact of automation and the clustering of skilled workers in geographic hubs. The research paper concluded that 25 cities and high-growth hubs could generate 60 percent of the job growth in the United States through 2030. The 54 trailing cities and rural areas, where one-fourth of Americans live, could have no growth in jobs.

Mark Muro, a senior fellow at the Brookings Institution who recently wrote a report on automation and the work force, said increased training would, like higher wages, benefit workers. But he cautioned that there was no guarantee those policies would last when the economy cooled.

And he said that if Amazon did expect large job cuts in the future, offering training now would be a savvy public relations move.

“A less benign view of it is you’re pushing a lot of stuff out publicly at a moment where you know there’s going to be a real serious human accounting in the coming years,” Mr. Muro said. “It’s also good marketing now at a time when you’re beginning to contemplate major staffing changes.”

Steve Lohr and Karen Weise contributed reporting.

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