Walmart's Future Workforce: Robots and Freelancers

Walmart is raising wages, but its plans to use more gig labor and automation put workers at a disadvantage.

Jim Urquhart / Reuters

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Over the past few weeks, Walmart executives have sketched a picture of the company's future that features more self-checkouts and a grocery-delivery business—soon escalating to 100 cities from a pilot program in six cities.

Personal shoppers will fill plastic totes with avocados and paper towels from Walmart store shelves, and hand off packages to crowdsourced drivers idling in the parking lot. Assembly will be outsourced, too: Workers on Handy, an online marketplace for home services, will mount televisions and assemble furniture.

The Walmart of the future relies more heavily on the gig economy and automation. This is an indication of the fierce competition between Walmart, the world's largest private employer, and Amazon. A pair of recent studies suggests that it's also a sign that the U.S. economy is tilting further toward jobs that give workers less market power.

One study, by Arindrajit Dube of the University of Massachusetts at Amherst, Jeff Jacobs and Suresh Naidu of Columbia University, and Siddharth Suri of Microsoft Research, sought to learn whether crowdsourced workers benefit from being able to choose their tasks and hours. The answer matters to a lot of workers. Flexible work arrangements, which include crowdsourcing platforms such as Uber, as well as freelancers and independent contractors, increased about 50 percent from 2005 to 2015. These jobs account for 94 percent—nearly all—of the net employment growth in the United States over that time.

This shift could be good for workers, in theory, if the flexibility of the gig economy lets them switch more easily between employers to take advantage of higher-paying offers. Yet in their analysis of the online-task marketplace Amazon Mechanical Turk, the researchers find that this isn't necessarily happening. MTurk workers, or Turkers, get paid for repetitive tasks, such as tagging objects found in images or verifying restaurant phone numbers. According to the study, Turkers' wages amount to less than 20 percent of their productivity—in other words, for every dollar of value produced on MTurk, workers receive less than 20 cents. The Turkers' share compares with a share of 50 cents to 80 cents of every dollar for workers in the U.S. economy as a whole, Naidu says. "This suggests that much of the surplus created by this online labor-market platform is captured by employers," the researchers write.

That doesn't make intuitive sense; since workers can easily switch between tasks, it seems employers would be forced to compete for them by offering good wages. Why isn't this generally taking place? One explanation is that while workers can shop around for a better deal, employers can do the same. And it may be more important for Amazon to design a crowdsourcing platform that keeps employers happy; after all, Amazon's revenue comes from charging employers a fee. If other platforms such as Uber have a similar design favoring buyers, then the drivers dropping off Walmart's groceries won't have much bargaining power.

"Wages are going to fall," Naidu predicts. "It's interesting that Walmart is being so proactive in gig-ifying its own workforce. Retail is one of the sectors that you thought you couldn't really outsource, but maybe that was wrong."

The second pillar of Walmart's approach, automation, could also be bad for workers. Walmart has doubled its use of self-checkouts in stores, according to a recent investor presentation, and newly remodeled locations have fewer lanes staffed with a cashier. What's more, inside its Store No. 8 incubator, which is experimenting with technologies such as robotics, virtual and augmented reality, and artificial intelligence, Walmart is, according to *Recode*, developing Project Kepler—a store similar to Amazon Go with no checkout lines or cashiers.

In theory, automation doesn't have to eliminate jobs, on balance, or drive down worker pay. It could free up workers to do higher value, better-paid tasks. It could generate consumer demand and create new categories of jobs.

David Autor of MIT and Anna Salomons of Utrecht University recently published a study on automation that examined data on 28 industries in 18 countries in the OECD. They find that, since 1970, automation hasn't reduced jobs—in fact, it has slightly increased them. But since the beginning of the 2000s, automation has reduced workers' share of national income. "This finding is consistent with automation having become in recent decades less labor-augmenting and more labor-displacing," they write.

According to their research, workers' employment, hours, or wages haven't fallen. But wages have risen less rapidly than overall economic growth, with owners getting an increasingly large share. Autor suggests this trend could continue as automation increases. "No, the robots will not take all of our jobs," he says in a Brookings video. "The concern should not be about the number of jobs, but whether those jobs are jobs that can support a reasonable standard of living."

Walmart has been criticized for years for its low pay and skimpy health benefits. The company is also known for its obsession with holding down costs, a factor in its drive toward automation. "We're maniacal about expenses," said Brett Biggs, Walmart's chief financial officer, at an investor conference in March. "I think we have lost some of the edge on that over the last year. You can feel it coming back." Biggs told attendees a nostalgic tale about arriving at Walmart and experiencing his first "supplies roundup," when he and his coworkers dug office supplies out of their desks and dropped them in a central location so they wouldn't have to order more. Then he explained that Walmart employees recently got excited about figuring out ways to reduce the length of a receipt tape.

Still, in January, Walmart—benefiting from an enormous corporate tax break under Donald Trump's tax reform—said it would raise its starting hourly wage to $11 (around $19,000 a year for 34-hour weeks), hand out bonuses, and provide more benefits to full-time employees. Low-wage workers seemed to be gaining power amid a tight labor market.

In fact, as its strategy unfolds, it seems that Walmart may cultivate a relatively smaller, better-compensated core of employees who are supplemented by automation and a flexible cadre of gig-economy workers. Ten years from now, "there will be fewer associates in the Walmart store ... and we will see the wage rate continue to go up," Walmart's chief executive Doug McMillon told The Economic Club of New York in November. "What we would love, not just for Walmart but for retail, is to earn a better reputation about the jobs themselves."

Given high turnover in retail, McMillon said, Walmart expects to eliminate jobs mostly through attrition. As it automates tedious tasks, such as finding inventory in the back room, it expects to offer jobs that pay more, such as customer service and merchandising.

In all of this, Walmart is trying to adapt to the rapid growth of Amazon, which reported almost $178 billion in revenue last year—about $315,000 per employee. Walmart is much larger, with $500 billion in annual revenue, but because it employs about four times as many people, that revenue amounts to just $217,000 per employee. (According to the *Wall Street Journal*, Walmart is in early talks with the insurer Humana about possible business relationships such as an acquisition, which would be a way to diversify away from the retail business where it competes with Amazon.)

The changes to Walmart's business model could be particularly hard on young people who seek retail work. People between the ages of 16 to 24 account for 23 percent of retail workers, nearly double their overall representation in the U.S. workforce. Not all of them can make a seamless shift into the gig economy; Uber, for example, requires workers to be at least 21 years old, and they have to use a four-door car that meets company standards.

It's been ten years since the Pixar animated movie "Wall-E" depicted oversized humans exiled into space, catered to by robots and floating in armchairs like leaden balloons, far above Earth's ruined landscape. A decade ago, the fictional villainous corporation Buy N Large was seen as a thinly veiled satire of Walmart. Today, some suggest Amazon is a more apt comparison. Perhaps before any of these companies eats the whole world, another competitor will rise to take its place. In any case, as Autor, Naidu, and their colleagues suggest, we should worry more about working ever harder to keep up than we should about being shoved aside by our robot overlords.

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