

## Why Robot Taxes Won't Work

by William Hays Weissman

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Those who find their livelihoods threatened by disruptive technologies have long rallied against those new innovations, finding an ally in governments willing to slow adoption. Queen Elizabeth I's declaration that all subjects wear knit caps, for example, created an industry and provided work to those who might otherwise not have had any. William Lee developed the stocking frame in 1589 to alleviate the time-consuming labor required to produce knit caps.

Lee sought a patent from Queen Elizabeth, who rejected it, observing that the invention threatened knitters and "would assuredly bring them ruin by depriving them of employment, thus making them beggars."<sup>1</sup> Recognizing the implications that the technology could have on existing jobs, the queen believed that Lee's invention was simply too dangerous to implement.

Given her concern for the current lot of her subjects, Elizabeth's lack of foresight to see the increases in work the spinning loom would generate should not be held against her. But

notwithstanding her attempt to forestall progress, the stocking frame was implemented, driving down the price of knit caps and cloth. That led English Luddites to smash the stocking frames that were killing their jobs, but to no avail, because innovation won and protectionism lost. The stocking frame is one of many examples.

One of the anticipated consequences of the Tax Cuts and Jobs Act (P.L.115-97) enacted in December 2017 is the accelerated adoption of automation technologies that have the potential to displace workers over the next several years. While a potential boon for some, not everyone likes the notion that technology is rapidly replacing certain jobs. For example, in February 2017 Bill Gates proposed a robot tax to offset the costs of retraining workers displaced by technology.<sup>2</sup>

Gates is hardly the first to sound the alarm about "technological unemployment." In 1930 John Maynard Keynes, in his famous essay "Economic Possibilities for our Grandchildren," posited two reasons why unemployment was not a significant issue before the rise of industrialization: "the remarkable absence of important technical improvements and the failure of capital to accumulate." Keynes then surmised that the rapid rise of capital and technical innovations in the early 1900s

is hurting us and bringing difficult problems to solve. . . . We are being afflicted with a new disease of which some readers may not yet have heard the name, but of which they will hear a great deal in the years to come — namely, *technological unemployment*. This means unemployment due to our discovery of means of

<sup>1</sup>Daron Acemoglu and James Robinson, *Why Nations Fail*, 181-182 (2012).

<sup>2</sup>Kevin Delaney, "The Robot That Takes Your Job Should Pay Taxes, Says Bill Gates," *Quartz* (Feb. 17, 2017).

economizing the use of labour outrunning the pace at which we can find new uses for labour.<sup>3</sup>

Keynes believed technological unemployment to be a “temporary phase of maladjustment.” Besides overlooking numerous labor laws over the centuries as a reason for the absence of structural unemployment, time has also proven Keynes incorrect, insofar as technology continues to cause structural unemployment by shifting the nature of work.

Between Keynes and Gates came the National Commission on Technology, Automation, and Economic Progress. In its 1966 report, “Technology and the American Economy,” the commission observed that “the basic fact is that technology eliminates jobs, not work.”<sup>4</sup> Contrary to those predicting that robots will end all jobs, the current data show that when people and technology mix, work increases. What changes is how work is distributed among jobs. Boston University Law School professor James Bessen explained that problem in a March 2016 article for *Harvard Business Review*:

The reality is that most jobs using computers have seen *growing* employment, not job losses. For example, jobs for bank tellers have been growing since the deployment of ATMs. And this pattern is typical overall.

However, much of the growth in jobs using computers comes at the expense of *other* occupations. Consider, for example, the effect of computers on typographers. Desktop publishing dramatically reduced jobs for typographers in the 1980s, yet it was not a case of computers replacing typographers — it was the substitution of one occupation for another. . . .

The point is that computers contribute to declining employment in some occupations but the net effect of computers is *not* a decline in the total

number of jobs. Computer automation creates about as many jobs as are lost through substitution. Thus computers are not causing technological unemployment.<sup>5</sup>

Perhaps like EF Hutton, when Bill Gates talks, people listen. Some were critical. Former Treasury Secretary Lawrence Summers, in an op-ed in the *Financial Times*, said that while Gates was right about “the gravity of the problem,” a robot tax was “misguided” and little more than “protectionism against progress.”<sup>6</sup>

But others listening seemed to embrace Gates’s idea, such as San Francisco Supervisor Jane Kim, who in August 2017 proposed a “Jobs for the Future Fund.” *Wired* reported that Kim, who got the fund idea from Gates, believes that “proceeds from the tax would bankroll things like job retraining, free community college, or perhaps a universal basic income — countermeasures Kim thinks might make a robotic future more bearable for humans.”<sup>7</sup>

Gates, Kim, and others have played on populist fears that anthropomorphic robots will replace all humans, à la *The Terminator*. Thus, because robots will look like us and take our jobs, we should tax them as individuals.<sup>8</sup> But using fear to design tax policy is a mistake.

For one, there is no clear agreement on what constitutes a robot, meaning it is unclear what to tax and what not to tax. Without well-thought-out definitions, there is no way to administer a robot tax. Take for example a case in which a court addressed whether life-sized, singing mechanical puppets at a Chuck E. Cheese establishment were

<sup>5</sup> James Bessen, “Computers Don’t Kill Jobs but Do Increase Inequality,” *Harvard Business Review*, Mar. 24, 2016 (emphasis in original).

<sup>6</sup> Lawrence Summers, “Robots Are Wealth Creators and Taxing Them Is Illogical,” *Financial Times*, Mar. 5, 2017.

<sup>7</sup> Matt Simon, “Tax the Rich and the Robots? California’s Thinking About It,” *Wired.com* (Aug. 24, 2017).

<sup>8</sup> This view seems to assume that technology is somehow bad, but most humans invent technologies that they believe will improve society. Edison’s invention of the light bulb may have greatly diminished candlemakers’ work, but his intention was to provide bright light to the world, not put an industry out of business. In promoting taxes intended to discourage behavior — think sin taxes on tobacco products — it helps if the object of the tax is something seen as bad. But how can inventions that improve our lives be demonized? The psychology of taxes makes it hard to impose robot taxes without positioning it as if robots are like humans stealing our jobs. But technology itself is neither good nor bad. How humans use technology is what defines the outcomes.

<sup>3</sup> Italics in the original.

<sup>4</sup> National Commission on Technology, Automation, and Economic Progress, “Technology and the American Economy,” Vol. 1, at 9 (Feb. 1966).

“performing” such that Maryland’s admissions and amusement tax applied.<sup>9</sup> The court applied the standard approach of taking the plain and ordinary meaning of the term “performing,” which requires a “formal exhibition of skill or talent,” and held that “because a pre-programmed robot has no ‘skill’ and therefore leaves no room for spontaneous human flaw in an exhibition, it cannot ‘perform’ a piece of music anymore than can a jukebox.”<sup>10</sup> As such, the admissions and amusement tax did not apply.

While the court’s analysis may be textbook appellate review, it seems inadequate to determine the highly complex nature of automation technologies or artificial intelligence today. Is a calculator that can help an employee perform tasks quicker than adding up numbers with pen and paper a robot for tax purposes? Or is the calculator a robot only if it uses formulas or algorithms programmed by individuals? And how do we tell if the calculator results in a loss of jobs, or simply slows the hiring of more workers in the future? Does that difference even matter, and if so, why? These are just a few of the many unanswered questions that must be addressed by any robot tax discussion. Otherwise, a robot tax is little more than populist rhetoric without substance.

Another problem is that from a tax administration perspective, robots pay no income tax because they do not earn income, pay no sales tax because they do not purchase items, and pay no property tax because they do not own anything. As such, any robot tax — even if imposed on businesses that implement robots — would be borne exclusively by humans in the form of higher prices for products or services and lower profits, dividends, or wages. Like any other expense, taxes must be paid from revenue generated by the company, and more expense devoted to taxes means less revenue for other aspects of the business. Business taxes affect customers and employees, not just owners. To ensure that robot taxes are not largely borne by the very same individuals they are intended to

help, thought must be given to the structure of any technology tax.

That leads to yet another problem with a local proposal like Kim’s: Far too few people — only San Francisco businesses — would bear the tax to make an appreciable difference in a larger societal problem. That is always a concern in using state or local tax initiatives to solve regional, national, or international problems. California’s cap-and-trade program is a good example of a state tax attempting to solve an international problem. While driving up Californians’ costs for virtually everything, cap and trade has seemingly done little to curb greenhouse gas emissions worldwide, even as there has been some small reduction in California greenhouse gases.<sup>11</sup>

Even if Kim’s proposal were adopted statewide, it would not be effective at slowing the shift in work from one kind of job to another, or even jobs from one jurisdiction to another. Rather, such a tax in San Francisco or even California would just be an invitation for the other 49 states to court California businesses looking to expand and innovate. As one commentator put it, “robots don’t complain about relocating.”<sup>12</sup>

Imposing taxes is as ineffective a form of protectionism as refusing to grant a patent. For example, Indonesia has long imposed a higher excise tax on machine-made cigarettes compared with hand-rolled cigarettes in an attempt to slow down automation of an industry that once employed large numbers of low-skilled workers, yet the industry continues to grow. In August 2017 South Korea unveiled a tax plan that is not really a technology tax, but a reduction in the tax incentives that were speeding the adoption of

<sup>11</sup>In 2015, the last year data is apparently available, greenhouse gases dropped about 1.5 percent in California. However, the evidence seems to suggest that cap and trade itself is responsible for very little of that reduction, with a down economy caused by the Great Recession, an increase in electric cars, and other improvements in clean energy technology being largely responsible for the drop. See Dale Kasler, “California’s Cap-and-Trade Program Is Costly, Controversial. But How Does It Work?” *The Sacramento Bee*, July 19, 2017.

While it may also be great to be a leader in innovation, and other governments may follow suit, it is no great bargain for California residents to absorb the costs so that perhaps Quebec and Midwestern states will join the cause. Even if reducing greenhouse gases is good for society, it is questionable whether Californians should be shouldering that high cost alone. If liberals really want to address growing inequality in California, reevaluating expensive and questionable programs like cap and trade would be a good place to start.

<sup>12</sup>Robert Kovacev, “The Challenges of Administering a Robot Tax,” *Law360*, Sept. 25, 2017.

<sup>9</sup>*Comptroller of Treasury v. Family Entertainment Centers Inc.*, 519 A.2d 1337 (Md. 1987).

<sup>10</sup>*Id.*, at 1339.

automation technologies. It seems very doubtful that South Korea's attempt to slow innovation will work.

To be fair, neither Gates nor Kim has laid out any detailed robot tax plan, but they have expressed concerns about how technology is affecting people's lives and raised awareness of the need to help those individuals. The real problem, however, is not work, which is growing, but jobs, which are shifting. That is an education issue, not a technology issue. No longer can an individual who performed one kind of largely unskilled manual labor readily find another job performing that type of labor. Manufacturing jobs now require more technical skills, which in turn require education or job training. While Gates and Kim both reference the need for job training, the focus on a tax to pay for it is putting the cart before the horse. Taxes would not keep existing jobs from disappearing or new jobs from being created any more than liquor taxes keep people from drinking. Taxes are an inefficient and, more importantly, ineffective way to prevent behavior.

If people like Gates and Kim are serious about addressing the impact of technology on the shifting nature of work (and not merely jobs), they should start with education reform,<sup>13</sup> which is generally the largest slice of most state and local funding. Looking at how to redesign public and private education from preschoolers to adults — using the billions already being spent — is far more important than imposing new technology taxes that are at best an indirect attempt to solve the wrong problem. ■

<sup>13</sup> Again, in fairness to Gates, the Bill and Melinda Gates Foundation is doing extensive work on education reform, both in K-12 education and higher education. Visit [www.gatesfoundation.org](http://www.gatesfoundation.org) for information on the many education initiatives the Gates Foundation supports.

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