

If Robots Are Coming for Your Job, Should They Also Pay Your Taxes?

by Rebecca S. Christie

Reprinted from *Tax Notes International*, August 29, 2022, p. 1029

If Robots Are Coming for Your Job, Should They Also Pay Your Taxes?

by Rebecca S. Christie



Rebecca Christie

Rebecca S. Christie (rebeccawire@gmail.com or rebecca.christie@bruegel.org) is a nonresident fellow at Bruegel, an economic research think tank in Brussels.

In this article, Christie considers whether a changing global framework means it's time for a robot tax and explores

how that kind of tax would need to be structured and implemented to be effective.

Copyright 2022 Rebecca S. Christie.
All rights reserved.

Unlike the workers who operate it, your grocery store's self-checkout machine usually does not pay employment taxes, but the Brussels community of Molenbeek-Saint Jean is pushing for change. The municipality wants to charge supermarkets €5,600 per automated kiosk in a bid to bring in more revenue and find tax sources that do not depend solely on worker paychecks.¹

Robot workers are the stuff of science fiction,² Amazon warehouses,³ and tax fantasy.⁴ Ever since Bill Gates raised the issue in 2017, tech-friendly populists have looked to a robot tax to break down the digital divide. Idealistic tech tycoons have

tossed out the idea that governments could tax autonomous machines and end poverty: Andrew Yang made the concept a centerpiece of his short-lived presidential campaign,⁵ while others have suggested the United States follow South Korea's lead and use a levy to try to slow the pace of automation.

The hitch is that robots are not actually shrinking employment — at least not in a systematic, one-for-one way that lends itself to an easy and taxable head count.⁶ Research has repeatedly found that in fields in which automation is prominent, the overall workforce tends to increase, not decrease.⁷ Some jobs are eliminated, but others spring up: Robots need programming, oversight, and maintenance, and some humans are freed up to do other things. Even as incentives to automate increase, many tasks still cannot be mechanically outsourced.

Self-checkout stands follow the same pattern. A spokesperson for the supermarket chain Delhaize told Belgium's VRT News that the machines do not reduce total head count.⁸ Yet research suggests that minimum wage levels do affect the number of low-skilled workers in cashier jobs, even as they create opportunities for higher-skilled workers who may move from

¹ Michaël Torfs, "Molenbeek Imposing Special Tax on Self-Scan Check-Outs in Grocery Stores," VRT, Jul. 13, 2022.

² Vernor Vinge, "Technological Singularity" (1993).

³ Matt Simon, "Inside the Amazon Warehouse Where Humans and Machines Become One," *Wired*, June 5, 2019.

⁴ Rebecca Christie, "Do Robots Dream of Paying Taxes?" Bruegel Policy Brief (Oct. 5, 2021).

⁵ Oliver Mitchell, "Robot Taxes, Universal Basic Income, and the Future of Work Up for Debate," *The Robot Report*, Sept. 16, 2019.

⁶ Will Knight, "Robots Won't Close the Warehouse Worker Gap Anytime Soon," *Wired*, Nov. 26, 2021.

⁷ See Georgios Petropoulos et al., "Digitalisation and European Welfare States," Bruegel Blueprint Series 30 (2019); Deloitte, "Man and Machine: Robots on the Rise? The Impact of Automation on the Swiss Job Market" (2015); and Deloitte, "From Brawn to Brains: The Impact of Technology on Jobs in the U.K." (2015).

⁸ Torfs, *supra* note 1.

visible checkout posts to produce, deli, or administration, for example.⁹

The COVID-19 pandemic has offered more evidence that automation is changing the structure of the workforce and leaving some workers behind. Quarantines and stay-at-home requirements accelerated the move to online and digitally assisted spaces, with a corresponding economic shake-up. A 2020 European Central Bank survey of 72 nonfinancial companies found that 90 percent increased their use of automation and other digital services during lockdown. Hardly any respondents expected productivity to decline, and most expected it to increase in the long run. More than half expected a negative long-term impact on employment, however.

Thus, even if overall unemployment is unaffected, we can see that robots are taking some people's jobs, and it makes sense that fiscal policy should make the most of it.¹⁰

The right taxes could help bridge the gap between those profiting from the technological revolution and those it leaves behind. The trick will be to design focused proposals that tap established industries that can afford to pay. The goal is not to impose a surcharge on innovative technology start-ups. Rather, it should be to nudge the tax system toward capital and away from labor in ways that make the overall economy more productive.

The best reason to try for robot taxes is that they are doable. With Europe and U.S. leaders divided, global efforts to squeeze more money out of the world's biggest corporations have faced challenges. U.S. lawmakers are finally making some progress on part of the OECD's two-pillar proposal for a digital tax deal and a minimum global corporate income tax, which gathered support from more than 130 countries. But the U.S. approach may complicate matters because of the way it diverges from the global standards: The Inflation Reduction Act (P.L. 117-169) raised

minimum corporate tax rates to 15 percent using a different approach than in the international deal.¹¹

In the EU, business levies are notoriously hard to address. The European Commission spent a fruitless decade struggling to pass the common consolidated corporate tax base, a proposed system of effective taxation and revenue sharing first put forward in 2011. It finally shifted focus in 2021 to its "Business in Europe: Framework for Income Taxation" (BEFIT) strategy, which will preserve the goal of formulary apportionment by having multinationals pay taxes on their worldwide income and distribute that income based on where profits are generated. BEFIT will not be fully unveiled until 2023 — the commission's next step is a public consultation this fall.

In the meantime, the EU is struggling to enact tax projects, even those that have already garnered consensus. Every EU country except Cyprus signed on to the OECD proposals, yet implementation problems arose immediately. First Poland and then Hungary blockaded the minimum tax, which requires unanimous EU support to proceed. The second part of the OECD package will present even bigger challenges. As a result, EU progress may well be stuck.

Some efforts to tax the tech sector, such as via digital services taxes, have generated trade conflicts — for example, the Office of the U.S. Trade Representative's many open investigations into countries that have put those kinds of initiatives in place — and other pushback because of the global politics in play.¹² Robot taxes, in contrast, could be implemented in more regional and industry-specific ways that sidestep the international arena.

If there is political support to tax industries at the automation vanguard, we should not squander it. As MIT economist Daron Acemoğlu wrote, we can help the economy recover from the pandemic by increasing taxes on capital relative

⁹ Grace Lordan and David Neumark, "People Versus Machines: The Impact of Minimum Wages on Automatable Jobs," National Bureau of Economic Research Working Paper 23667 (last updated Jan. 2018); and Jessie Middis, "Are Self-Serve Checkouts Killing Jobs?" Yahoo News Australia, Apr. 8, 2022.

¹⁰ Alex W. Chernoff and Casey Warman, "COVID-19 and Implications for Automation," NBER Working Paper 27249 (last updated Nov. 2020).

¹¹ Daniel Bunn, "How Does Inflation Reduction Act Minimum Tax Compare to Global Minimum Tax," Tax Foundation (Aug. 2, 2022).

¹² See Christie, "Digital Services Taxes Take Shape in the Shadow of the Pandemic," IMF (Mar. 2021).

to labor to help society through its digital and climate-related transitions.¹³ He argues that automation so far may have been excessive and productivity limiting, rather than focused on the technologies that are best for overall prosperity.

The Molenbeek-Saint Jean tax shows both the promise and the limitations of those kinds of measures. The amount assessed per machine is modest and will not revolutionize city services. That said, every bit of extra revenue takes pressure off the budget somewhere else. National-scale levies could follow a similar pattern. Further, lobbying and political infighting might make the taxes too hard to set up. The Molenbeek-Saint Jean tax was suspended in August after Chamber of Commerce opposition, on the grounds that local authorities are not supposed to impose new business taxes without central Brussels government approval.

The political definition of robot should be broad-minded. In addition to the industrial machines that are easy to imagine and define, “robot” for tax purposes should also include virtual machine workers that operate in the cloud. Examples might include automated insurance claims adjusters, mortgage application reviewers, or loan managers. The robot revolution is a realignment rather than a replacement. Tax designers will want to take stock of where artificial intelligence is generating workplace shifts and look for ways to work within that transition.

Not all jobs that used to be performed by humans should stay that way. A robot tax doesn’t need to penalize washing machine owners for not hiring hand-washing humans, and exploitative labor practices that depend on under- or unpaid workers deserve to go away. Policymakers should therefore avoid the temptation to enact “sand in the gears” taxes that protect bad jobs and shield employers that take advantage. Instead, a good robot tax could facilitate a shift toward better jobs and toward shaping a workforce that can do them.

A functional robot tax should be simple to explain and targeted at the companies that can most afford it.¹⁴ Ideally it would bring in money

that corporations can afford to pay — and might even want to pay as a means of generating political capital and local goodwill. Proceeds should be directed toward programs that help affected workers retrain or retire and should not be considered a general cash cow.

Robot taxes may need to be time-limited — another reason to manage fiscal expectations. German economist Uwe Thummel designed a detailed model, only to conclude that the tax would raise modest amounts and phase itself out in a decade or so as the price of robots falls.

To be successful, the tax — like the self-checkout fee — should be an explicit corporate payment, not buried in a chain of incentives, surcharges, and offsets. The economic impact might be the same, but accountability would be easier to establish. Governments also need to resist the temptation to overpromise what the fiscal windfall can deliver. Too often, tax proposals are preemptively spent many times over what their actual revenues can bring in. Robot taxes will not solve hunger or climate change; even so, they can help pay for training and other economic transition measures or provide a targeted boost to public transportation or other infrastructure.

In general, policymakers should aim to tax companies with extensive market power and influence, rather than newcomers battling for a seat at the table. That suggests a tax aimed at parent companies rather than subsidiaries or start-ups and that includes carveouts for small businesses. Companies that start out using robots are not the same as those that seek out new technology to force out legacy workers. Likewise, a robot tax will not work if it is designed to be protectionist or change behavior. The goal should be a fair levy on industry that can be used to improve the society in which it operates.¹⁵

All of that calls for using the term “robot tax” as a rallying cry, rather than a literal instruction. The 1982 movie *Blade Runner* asked if robots would have true emotions by the year 2019. Now that 2019 has come and gone, we should ask instead how robots can help keep food on everyone’s tables. ■

¹³ Acemoğlu, “Remaking the Post-COVID World,” IMF (Mar. 2021).

¹⁴ See Christie, *supra* note 4.

¹⁵ *Id.*