THEME 01

Making sense of automation tax

TECHNOLOGICAL INNOVATION   AUTOMATION   EMPLOYMENT

Automation plays a substantial role in today's economy and its impact will only increase in the future. One risk associated with this process is that automation could outpace societies in terms of our ability to deal with large-scale job displacement. If so, mass unemployment and structural public budget deficits would be the result. An oft-heard solution entails slowing down the pace of automation through changes in our tax regimes.

Our observations

- The most automated country in the world, South Korea, was the first to implement indirect taxation on automation in 2018. The Korean government reduced incentives (i.e. tax benefits) for automation due to fears of unemployment and losing tax revenue to automation.

- In 2017, the European Parliament rejected a motion to implement a robot tax and economist Lawrence Summers has criticized Bill Gates for suggesting a similar strategy. Nonetheless, the discourse on AI taxation is evolving. At the EmTech Next 2019 conference, pro-tax scientist Ryan Abbot and anti-tax journalist Ryan Avent led a debate on taxing AI. Similarly, the DG of ECFIN recently discussed potential strategies to regulate the impact of automation on the labor market by taxation in Europe.

- Former U.S. presidential candidate Bill de Blasio proposed introducing an automation tax in the U.S. during his campaign. His aim was to target only the investments that increase unemployment by creating a new federal agency that would assess the automation process and its effects on workers.

- Labor taxes are a crucial part of government revenue compared to capital taxes. In the UK, income taxes make up 25% of government's tax revenue, in the U.S., payroll taxes account for more than one third of federal tax revenue and in combination with income taxes, they amount to more than 80% of government revenue.

- The Ex'tax Project is a plan to shift the burden of taxation from labor to resources. Even though its focus differs from that of AI taxes, both proposals signal increasing attention on possible tax reforms in the coming years.

Connecting the dots

As French intellectual André Gorz stated in 1988, "The abolition of work is a process already underway … The manner in which [it] is to be managed … constitutes the central political issue of the coming decades." In fact, automation and job displacement have been commonplace since the start of the Industrial Revolution and, so far, mass unemployment has never been the result (although one might question whether displaced workers are actually better off in their new jobs). Yet, this time around, with AI and robotization threatening an unprecedented number of jobs, concerns foster a debate on possible actions to shield our economies from the dangers of automation. Among the proposed solutions, the introduction of automation taxes stands out.

Currently, most countries incentivize automation via depreciations and tax deductions on capital investments. The idea behind such incentives is that governments should stimulate innovation and productivity to support GDP growth. AI-tax opponents contend that automation increases productivity and that taxing innovation will slow down economic growth. Interestingly, one of the main arguments for taxing automation stems from this exact concern for ensuring a thriving economy. Professor Acemoglu argues that automation does not necessarily favor efficient investments in productivity. Indeed, the structure of capital taxation favors automation even when it is not the most efficient tool to achieve growth. Implementing a tax on automation would make investments in AI more efficient, by eliminating their distorted comparative advantage with respect to labor investments. Another economic justification for implementing automation taxes is the imbalanced composition of government tax revenues. AI-tax enthusiasts worry that automation will create massive unemployment and that payroll and employment taxes will be lost as sources of government revenue. To make matters worse, public expenditures for unemployment schemes, social security and re-training of displaced workers will grow accordingly. On the other side, AI-tax opponents claim that taxing automation would only lead to increased outsourcing of labor to developing countries and hence to decreasing job security and ultimately a further reduction of tax revenue and increase of aforementioned expenditures. According to them, we should focus instead on alternative measures such as wealth taxation, in-firm re-training of workers and new forms of labor compensation (e.g. universal basic income and minimum wages).

Most of today's proposals to tax automation are quite moderate and seek a balance between protecting employment and stimulating economic growth. These are mostly based on indirect taxation, i.e. on reductions of current incentives for investments in automation. For instance, Professors Abbott and Bogenschneider suggest that firms with high levels of worker automation should have less tax depreciation on capital investments. Similarly, a recent study by the University of Oxford and the Singapore Management University proposes cutting the depreciations on investments depending on their effect on employment. They contend that some automation processes substitute employment while others complement it and that only the former should be taxed.

Other proposals are more radical. For example, in *The Software Society*, William Meisel asserts that businesses that replace human labor with automation should be asked to continue to pay payroll taxes for displaced workers even after they stop working. Critics of such taxes point to the fact that it is hard and extremely costly to determine the targets of automation taxes, and we should thus find simpler solutions. Besides concerns over the practicalities of automation taxes, there are disagreements on the rationales for implementing them. Nonetheless, policy proposals on how to regulate the effects of automation share common goals that suggest a common directionality towards more focus on redistribution and job security and new sources of government revenue.

Implications

- The debate on automation taxes might help tackle issues of economic inequality. Indeed, both a tax on capital investments and a tax on wealth would help reduce the rising economic inequality. On the one hand, taxing capital would make investments in labor more attractive, improving the comparative position of workers. On the other hand, taxing wealth would directly reduce the accumulation of capital at the top deciles, smoothing out inequality.

- Taxing automation would not be enough to alleviate the damages of unemployment. Even though it might slow the pace of displacement, its positive impact depends on efficient use of the tax revenue governments would get from it. Indeed, automation-taxes should be complemented by other public policies to ensure that the revenues are used to improve the conditions of the unemployed and at-risk workers.

- Firms could be held responsible for job displacement. They may be asked to provide in-firm re-training for workers at-risk of displacement. This has some potential benefits. Firms could train their workers specifically in the skills they need. Additionally, this would (re-)establish a long-term relationship between workers and employers and provide more stability for workers. This is already happening in big firms and smaller firms might also come to apply this strategy via state-incentives.