Programa de Pós-Graduação em Economia - Edital nº 818/2023

Seleção para o Doutorado 2023 (Início 1º Sem/2024)

Terceira fase - Exame de Língua inglesa

Read the two articles in the annex and answer the following questions in Brazilian Portuguese using Times New Roman 12 or Arial 11.

Question 1: Summarize the text "*Big government is back. How will we pay for it?*" by Emma Agyemang and Chris Giles in no more than 20 lines. Your summary must at least define fiscal activism, identify the main reasons behind its return, and describe the critical areas for increased government spending.

Question 2: Read the text "*Labor Economist: AI May Bring a Boom in Horrible Jobs*" by Lynn Parramore and answer the following questions.

a. What are the four main impacts of Artificial Intelligence (AI) on working conditions, according to the interviewee?

b. What is the interviewee's opinion about technological unemployment and the role of AI in it?

c. How and when can innovations such as AI benefit workers, according to the interviewee?

The Big Read Tax

Big government is back. How will we pay for it?

Countries are spending heavily on defence, welfare and the green transition. With debt levels already high, taxes look certain to rise

Emma Agyemang in Copenhagen and **Chris Giles** in London SEPTEMBER 5 2023

The star turn at the Jackson Hole symposium, the central bankers' equivalent of Davos, is traditionally the chair of the Federal Reserve, whose speech is widely scrutinised for hints about the direction of US monetary policy.

But the most talked-about session at the gathering in Wyoming this year was not a central banker talking about inflation and interest rates, but an academic discussing debt.

Professor Barry Eichengreen of the University of California at Berkeley bore bleak tidings for his select audience. The huge public debts piled up during the pandemic and the financial crisis "are not going to decline significantly for the foreseeable future", he warned, citing a paper he and IMF economist Serkan Arslanalp had written.

Economic growth will probably not be strong enough to bring them down and far from cutting spending, many governments are enthusiastically increasing it, he added.

The Return of Big Government

While making clear he hoped countries would be able to increase tax revenues or improve growth rates to ease public finances, "the challenges are daunting", he said.

This is the first part of a series on how advanced economies are shifting back to using fiscal policy to drive interventions

Part one: Tax and spend redux
Part two: The $100tn path to net zero
Part three: The new price of peace
Part four: The problems of taxing wealth

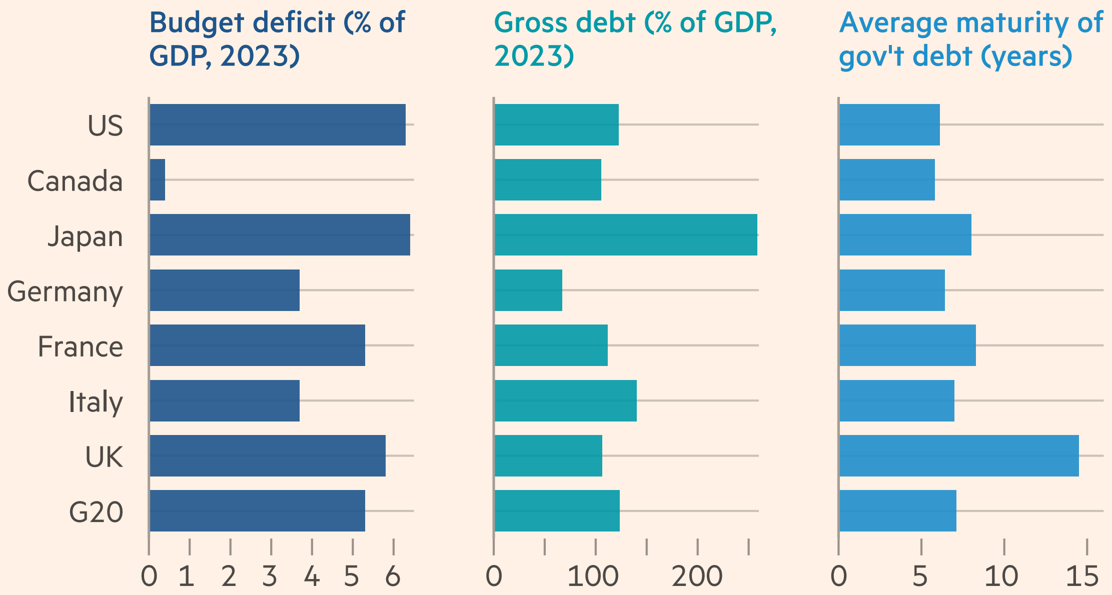
If his prognosis is correct, then an entire consensus around taxing and spending could start to crumble. Since the 1980s ushered in Reaganomics in the US and Thatcherism in the UK, the dominant political idea in many advanced economies has been smaller states that do less and tax less.

But challenges such as the Covid-19 pandemic, the transition to greener energy and rising geopolitical tensions have emboldened governments to be more hands-on. The current US administration is intervening in the economy in a way not seen since the 1930s.

Keith Wade, chief economist and strategist at Schroders, describes this as part of "the return of fiscal activism", with governments spending more and also taking a more prominent role in managing the economic cycle.

Paying for more interventionist government will require a rethink of fiscal policy. Sharply rising borrowing costs have made it more difficult for countries that are already heavily indebted to use the bond markets to finance yet more spending.

Governments’ fiscal headroom is influenced by a number of factors



Taxing the incomes of younger workers to pay for healthcare and state benefits for older citizens — who are often asset-rich but economically inactive — is unlikely to be politically sustainable for much longer. New sources of revenue will need to be found.

“The big issue is how do you persuade the voting public in a democracy that tax revenues are going to rise?” says Edward Troup, the former head of the UK’s tax authority.

“That’s the big political economic question of our time.”

Fiscal attraction

The need for greater government spending is focused on three areas: defence, demographics and climate change.

The fall of the Berlin Wall in 1989 and the end of the cold war brought a peace dividend, with defence spending redirected into other uses. By the end of 2021, fewer than half of Nato’s 31 members met its target of spending 2 per cent of gross domestic product on defence.

But Russia's invasion of Ukraine and rising tensions between the west and China have prompted many governments to expand their military capability.

Three days after the start of the Ukraine war, Olaf Scholz, German chancellor, talked about *Zeitenwende* — a tectonic shift — pledging to meet the 2 per cent target by 2024. Japan is planning a 57 per cent increase in its defence budget.

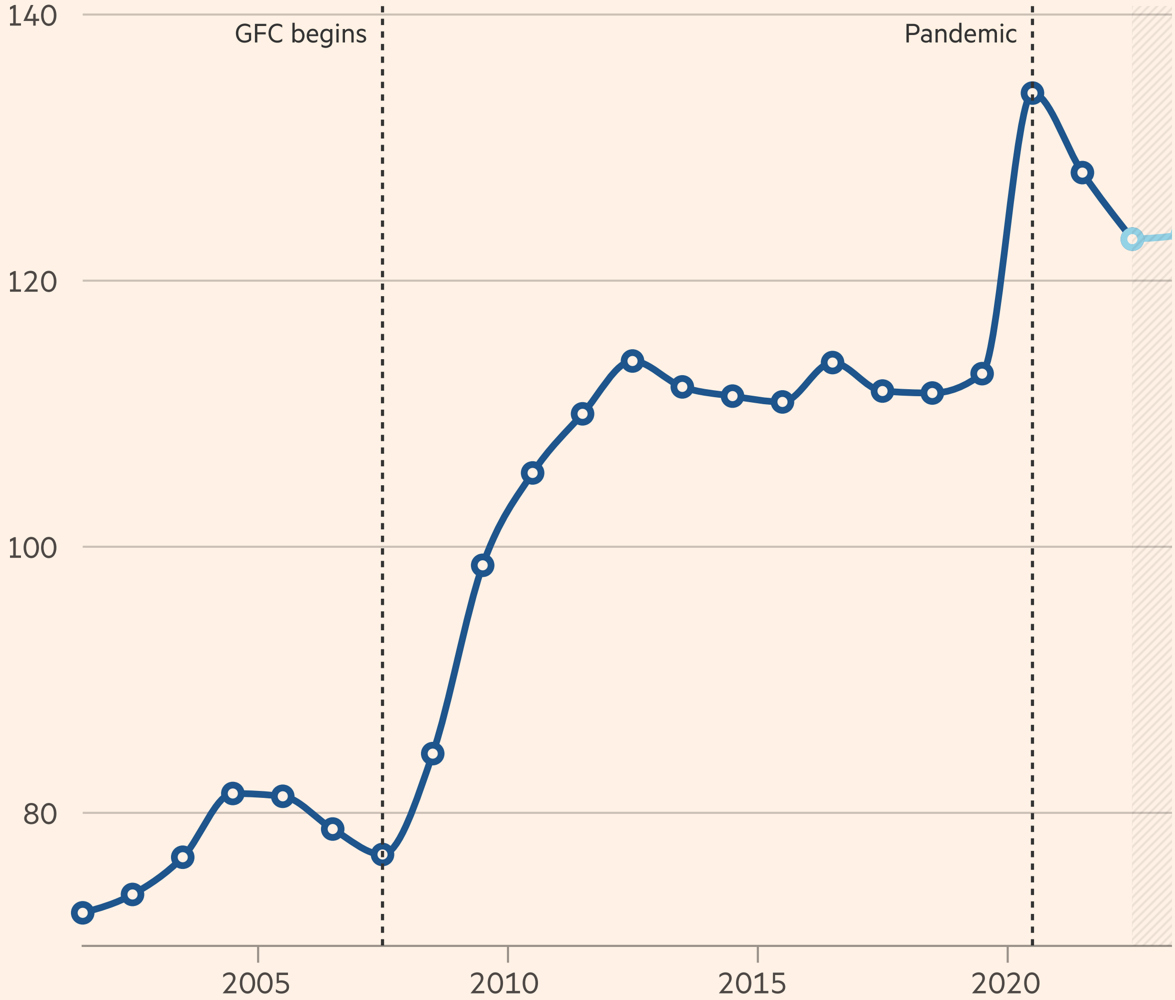
But spending on healthcare and pensions will continue to increase sharply. The old age dependency ratio — calculated as the proportion of people over 65 compared with the number aged 20 to 64 — is set to rise across the OECD, from 33 per cent in 2023 to 36 per cent in 2027 before continuing this rough 1 percentage point a year increase to 52 per cent by 2050.

The exact price of achieving net zero carbon emissions will depend not only on technological innovation, but on governments' willingness to co-operate. Competition between nations to develop or attract green technology is understandable for reasons of national security, but going it alone is likely to raise the cost of greening economies.

The pressing demands of the green transition and increased geopolitical tension are not the only things spurring a renewed focus on fiscal policy.

Public debt soared during the pandemic and the financial crisis

Gross debt as a percentage of GDP, advanced G20



Governments have been emboldened by their interventions during the pandemic and the recent energy crisis in Europe, when they organised the rollout of mass vaccination programmes and financial support packages to households and businesses.

The revival of big government that is more active in addressing social needs brings the need for higher public expenditure to solve problems.

"Greater reliance on fiscal policy means that macroeconomic policy will become more political," Wade says. Whereas central banks rely on a limited toolkit to maintain financial stability and control inflation, fiscal policy "presents choices, such as who and what to tax and where to spend".

A striking example of this is President Joe Biden's green subsidy plan, the Inflation Reduction Act, passed last year. The package is due to hand out hundreds of billions in subsidies and tax credits for green technologies and manufacturing.

The argument for spending for investment has not been advocated so strongly by a US president for decades, according to US tax historian Joseph Thorndike.

"Biden and his people were channelling Franklin Roosevelt in his purest form and unapologetically so," he says. "No one has made this argument with such freedom and such conviction since Roosevelt."

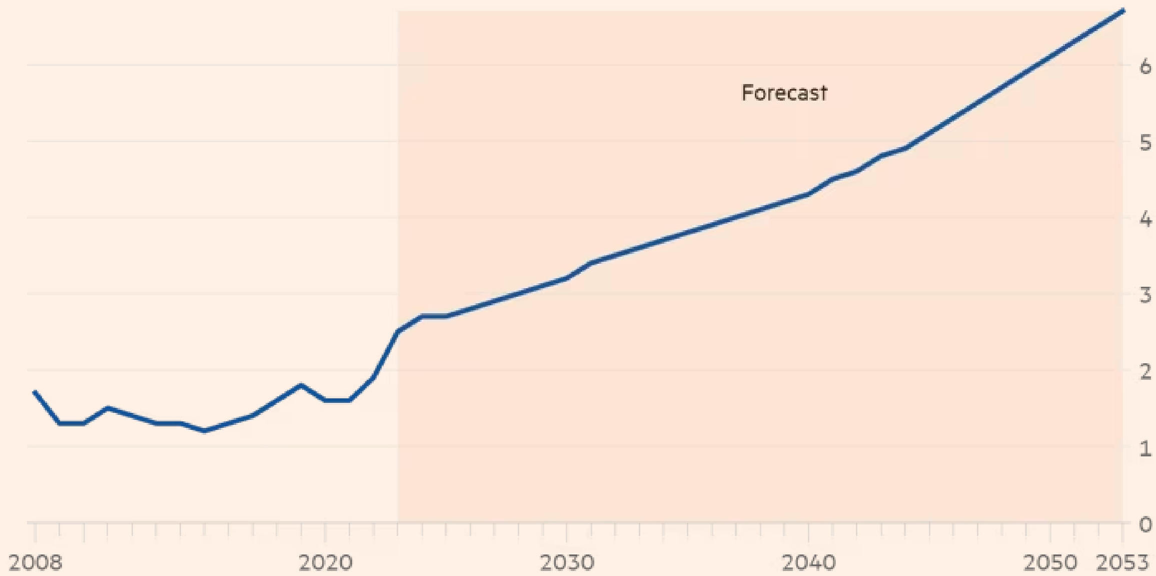
The conundrum advanced economies face is that both the desire and need to spend more comes at a time of mediocre economic growth and tighter financial conditions.

Unprecedented government support to businesses and individuals during the pandemic has already pushed up public debt levels in many advanced economies, while a spike in inflation has triggered a surge in interest rates as central banks battle to tame rising prices.

Increased debt levels and higher interest rates will make it harder and more expensive to borrow in the financial markets, especially for day-to-day spending.

The cost of fiscal activism

US net interest payments on outstanding government debt (% of GDP)



Source: CBO

"The current need for revenue, particularly for more defence spending, is really big," says Pascal Saint-Amans, former head of tax at the OECD. "It looks like tax will remain the flavour of the day."

However, citizens and businesses in advanced economies are already well taxed. OECD figures show that the average tax burden in member states, relative to GDP, rose from 24.9 per cent in 1965 to 32.6 per cent by 1988 as governments expanded social safety nets and healthcare systems.

Levels of taxation then remained fairly flat until this decade, but they have been rising since the pandemic. The average was 34.1 per cent in 2021, according to the OECD.

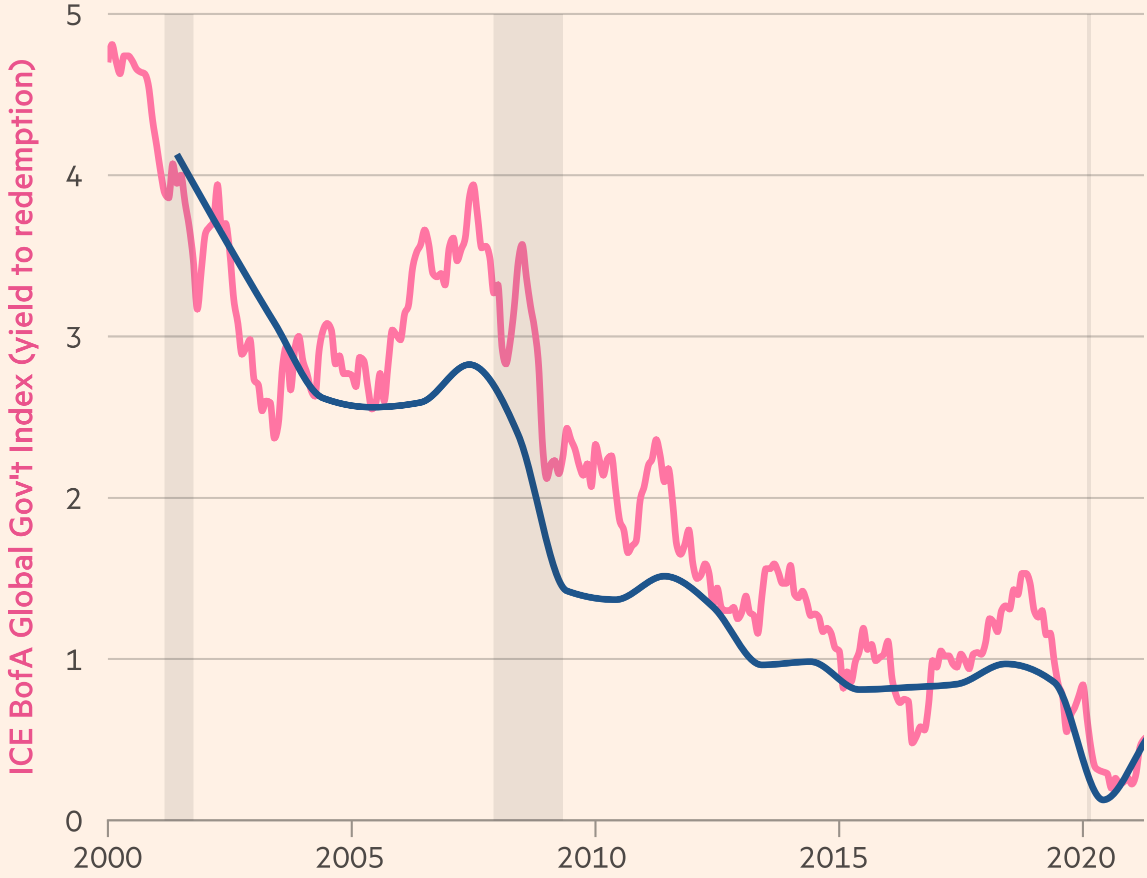
Historically [in the US] the most powerful way to garner support for tax increases has been during times of war, by appealing to "shared sacrifice and patriotism", says Thorndike.

'Fundamental reform'

Telling the public their taxes will need to go up during a cost of living crisis and at a time of higher inflation is a much tougher sell. "We really have no political language to justify raising taxes any more; there's no way to make the case for it," he says.

Helen Miller, deputy director and head of tax at the UK's Institute for Fiscal Studies, points out that cutting public services is the other alternative. But that is also politically difficult. "We're a long way from a public debate which goes: 'Here are the challenges that are coming, what do you want as citizens?'" she says.

Sharp rise in government interest costs



FINANCIAL TIMES Sources: Schroders; LSEG • Shaded areas = recessions

Given the difficult politics, the most likely outcome is that governments will seek to muddle through, raising taxes here and freezing thresholds there without too many people noticing.

But many experts think a more radical approach is now required to fix the many ills in most countries' tax systems.

Judith Freedman, emeritus professor of taxation law and policy at the University of Oxford, says we now need "fundamental reform and not fiddling" with the tax system. This should include looking at the balance between tax on capital and income, whether to tax land more, and the way we tax wealth more broadly, she argues.

Anita Monteith, former head of tax policy at the Institute of Chartered Accountants in England and Wales, says necessity has often been the mother of invention when it comes to tax.

She points to the introduction of a coal tax in the 17th century, after the Great Fire of London. This was levied to help with the colossal costs of rebuilding the City and could be thought of as an early energy tax.

"It just goes to show there's nothing new under the sun when it comes to tax policy," Monteith says. She predicts that governments will turn to more environmental taxes but warns that they will need to think through any unintended consequences carefully.

Mahmood Pradhan, head of global macro economics at the Amundi Institute, says that "without carbon taxation and that commitment from the public sector, we may not make the green transition".

Professor Barry Eichengreen at Jackson Hole, where he said the huge public debts piled up during the pandemic and the financial crisis 'are not going to decline significantly for the foreseeable future' © David Paul Morris/Bloomberg

Another option would be to revert to the trend seen before the 20th century and tax wealth more. This is something a group of millionaires from around the world are urging leaders meeting at the G20 in India this week to consider.

Their letter to heads of state said an international agreement on wealth taxes "would shrink dangerous levels of inequality" as well as raising funds.

"Up until the first world war Britain primarily taxed wealth — land and inheritance," explains Norma Cohen, an honorary research fellow at Queen Mary University of London, and a former FT journalist. "Among the reasons for that was that income inequality was so great. There wasn't enough income to tax."

As societies age and a rising percentage of the population lives on pensions rather than income from employment, wealth could once again make up a bigger slice of the tax take. "Demographic change alone will force us to tax wealth. Income will just not be enough," Cohen says.

Others agree. "Political pressure to tax capital will be perennial," says Pradhan. "Capital gains taxes in a lot of countries are quite low."

Troup argues governments should make more effort to redistribute wealth from older to younger generations.

"Taxes should be raised on me and my generation of boomers that have become unproductive," he says. "The boomer generation is undertaxed. The problem is they're quite vocal and numerous."

Saint-Amans, meanwhile, points to OECD stats on property which showed the tax take from the asset class is modest across advanced economies. A 2021 report found the revenue from immovable property as a percentage of GDP ranged from 0.1 per cent in Luxembourg, to 3.1 per cent in Canada — with an OECD average of 1.1 per cent.

A cartoon printed in Punch in 1872, depicting the British people being raided of their earnings through income tax. Telling the public now that their taxes will need to go up during a cost of living crisis and at a time of higher inflation is a tough sell © Print Collector/Getty Images

Property taxes, particularly those based on the underlying land value, should be reviewed, adds Freedman, although governments considering these should look carefully at the history of what has not worked before and learn from it.

The difficulty with wealth or property taxes as a solution is that historically countries have not found levying them to be easy or politically attractive. Any movement towards these taxes is unlikely to be straightforward.

“Attempts to tax development gains in the past have resulted in taxes that inhibited the release of development land, which is obviously undesirable, or very complex schemes giving rise to avoidance,” Freedman warns.

The recent trend of windfall, or excess profit, taxes in Europe could also be a harbinger of things to come. Freedman says Italy’s surprise introduction of a levy on bank profits in August showed what politicians were likely to do when faced with revenue shortfalls.

“They will have a short-term crisis and introduce a short-term tax,” Freedman says. “That is not going to solve problems in the long run.”

Cohen believes governments could learn from the wartime experience of Britain, and others, which introduced an “excess profit duty” on corporate profits in 1917 to help pay for the war. By the last fiscal year of the war, 1918/19, the tax accounted for a third of revenue raised by Britain.

The shift to a carbon neutral economy and the mass adoption of generative AI could also have an impact on how states tax. Treasuries will, for example, have to rely less on fuel duty as drivers shift to electric vehicles.

Elderly people talk on Ocean Beach in San Francisco. Taxing the incomes of younger workers to pay for healthcare and state benefits for older citizens is unlikely to be politically sustainable © David Paul Morris/Bloomberg

The 20th-century fixation on income taxes could prove outdated in the 21st as labour becomes increasingly automated. Chris Sanger, global government and risk tax leader at EY, says: “If you think about the increasing use of robots and other items — are we still going to get that high proportion [of tax revenue] from work?”

It is not certain that governments will be able to raise revenues significantly, as Eichengreen warned. Even if this is the case, the greater use of tax and spending policies will lead to increased scrutiny of countries’ financial strength and fiscal credibility.

“Governments . . . have to retain a credible fiscal framework in their budgets where, for example, the debt-to-GDP ratio stabilises over the medium term,” says Wade. “Otherwise, they risk the ire of the so-called bond market vigilantes and seeing extra expenditure eaten up by higher interest costs as markets sell off.”

The fiasco of the UK’s 2022 “mini” Budget — when investors were blindsided by the surprise announcement of £45bn worth of unfunded tax cuts and reacted by selling UK gilts — is a case study of what not to do.

The consequences for how governments conduct themselves and the need to address long-term issues will have an impact on economies, markets, people's individual finances and ultimately the planet itself. As always with tax, there will be winners and losers on the way.

"You really need to think through the effects," Sanger says. "Tax policy is a very powerful tool."

Data visualisation by Keith Fray

Article

Labor Economist: AI May Bring a Boom in Horrible Jobs

By Lynn Parramore

AUG 28, 2023 | **LABOR** | **TECHNOLOGY & INNOVATION**

Losing jobs isn't the only thing workers have to worry about. AI may make many jobs worse.

There's a high likelihood that developments in artificial intelligence (AI) are already affecting your work. ChatGPT has attracted 100 million users in a matter of two months (it took Netflix 18 years to reach that milestone). As of May 2023, one survey found that 85% of American workers have used AI tools to perform tasks on the job, and a fifth report "high exposure." A recent report found a similar number in Europe highly exposed. Many eyes are watching the regulatory framework developing in the European Union and how it will impact workplace use of new technologies.

Some hail the coming of AI as the "end of boring work" and claim it is "empowering" employees to achieve "maximum productivity." But who does productivity really benefit? What kinds of jobs can we actually expect? Nadia Garbellini of the University of Modena in Italy has interviewed workers concerning their experience of AI. She explains to the Institute for New Economic Thinking why we should be skeptical of claims that AI will improve conditions at work for most people.

Lynn Parramore: How do you think AI will impact workers?

Nadia Garbellini: In 2020, the European Commission (EU) categorized critical AI applications based on three "strategic value chains." These value chains are IIoT (industrial internet of things); Mobility (AI-enabled transportation and movement); and Smart health (AI for health environments).

All three are capable of strongly impacting workers, but let's focus on IIoT. In the report I mentioned, the European Commission identified 24 relevant AI applications in the IIoT value chain. The AI capabilities used are: insight generation from complex data; language processing, text and audio analytics; image recognition and video analytics; automated decision-making; and machine learning. These applications, in turn, perform four main functions for companies: R&D; supply chain and production planning; core production; and after-sales support.

From interviews conducted with Italian metalworkers from various industries, the report found that the main consequences on working conditions of the application of these technologies are concerning. The report found that workers experienced a lowered job performance in the sense of the knowledge required to perform assigned tasks: with AI, operating complex machines requires less and less knowledge. For the previous generation of metalworkers, the numerical control machines were programmed directly by the worker operating them. Even the detection of minor problems and discrepancies was the responsibility of the operator, who intervened when he deemed it necessary. Today, machines are programmed by computer scientists and engineers who are often not even employees of the company, but of machine suppliers. In other words, workers enjoy an ever-decreasing degree of autonomy and feel deprived of the possibility of using their own intelligence in their daily tasks.

Another issue voiced by the metalworkers was intensification of the pace of work. Since operating machines requires less effort, it is now common that one single worker has to operate more than one machine — maybe 2, or even 3 or 4 — at the same time. After all, workers are told, the machine only has to be started (and in some cases unloaded when the cycle is complete); during the cycle, the worker only has to wait. So in order not to waste these precious minutes, he is given other machines to start in succession. But during the cycle, the worker must pay attention to any problems, jams, blockages of all machines operated. This intensified performance increases fatigue, not only physically, but above all mentally.

The workers also experienced a loss of control over the production process and thus a weakening of the trade union's ability to make demands. There are two causes of this loss of control. First of all, cycle times are presented as the objective outcome of some machine learning/big data processes (whereas algorithms are informed by human beings according to parameters determined by human beings) and therefore out of the realm of bargaining. Secondly, many corporate functions are relocated outside the production unit, and even outside the company or the country. Workers can't reconstruct the supply chain in which they are engaged, and so they are unable to organize themselves effectively as their horizon becomes increasingly narrow.

Finally, monitoring was a concern of the workers. The company can control the individual worker and track his movements in real-time without any need for video surveillance. Each component employed in production is assigned a unique identifier, normally associated with a barcode which is then associated with the different production stages. A worker operating a machine logs in at the beginning of the shift, so it's always possible to know, for each worker, which machine(s) she has been operating, how many cycles have been started, which components have been employed, and which products have been produced. In other words, for each non-compliant output, it is possible to identify the stage at which the problem arose and the identity of the worker performing it.

LP: Are you concerned that AI will take away jobs?

NG: The substitution of labor for capital is one of the main features of capitalism; technological unemployment has always been a concern of the labor movements (think of the Luddites in 19th century England). AI and its industrial applications are also labor-saving, so surely it will be possible to expand production with less than proportional expansion of employment.

However, AI technologies must also be produced; as brilliantly explained in an article by Josh Dzleza in New York Magazine, training AI is very labor intensive. I wouldn't be able to say whether the net effect on jobs is going to be negative or positive. What concerns me, more than the disappearance of jobs, is the quality of the new ones in terms of working conditions, wages, autonomy, alienation, etc. What I fear is a world with millions of underpaid, ignorant, politically naive, isolated workers, stuck at home in front of their computers in both work and leisure time, producing goods and services they cannot afford to buy.

LP: Yet there are enthusiastic predictions about how AI may benefit people in the workplace from economists such as David Autor. What do you say to such predictions?

NG: In a recent interview, David Autor claimed that AI could help rebuild the middle class. He also stated that what he is mostly worried about is the devaluation of expertise. Two studies have been mentioned: one by Erik Brynjolfsson, Danielle Li, and Lindsey Raymond about workers in a software company adopting an old version of chatGPT and one by Shakked Noy and Whitney Zhang about an experiment with college-educated people doing writing tasks. In both cases, the authors concluded that AI narrows the productivity gap between lower-skilled workers and workers with more skills. But in both cases, the sample is not a representative one - the authors are focusing on technologically advanced tertiary sectors which cannot be taken as the entire labor market.

What we actually found with our interviews is that the introduction of AI technologies is increasingly polarizing the workforce between higher- and lower-skilled workers. This does not hold for factory workers only, but also for white collars — take the examples of industrial design and CAD; software production and Scrum/DevOps; etc. It seems to me that this is going to make the middle class smaller and smaller, and correspondingly the lower class, and possibly the numbers of people completely out of the productive economy, larger and larger.

LP: What does history tell us about increased worker productivity and rewards for workers such as higher wages? Who typically benefits from higher productivity?

NG: Productivity in economics is a famously controversial notion. It is often taken non-technically to be something like value added per worker and an indicator of what Marxian economists pointed to as registering the capitalist's ability to extract relative surplus value. Looking at data for recent decades on functional income distribution it is very easy to see that productivity increases have been regularly associated with reductions in the wage share. After all, applied research is carried out by, or on behalf of, big business. The goal is to develop technologies that can be incorporated into industrial processes, improving their efficiency, where efficiency means only economic efficiency, that is, minimization of production costs.

Automation significantly changed between the late 1970s and the early 1980s, with the introduction of information and communication technologies (ICT). The objective of R&D investments was to replace human activity by generating a growing amount of information about the production process. Before the ICT revolution, machines were equipped with an unalterable mechanical memory: no real-time re-programming was possible. Then flexible automation was introduced. Technological developments from the 1980s to the present day allowed companies to push ICT integration through the entire production chain. This was accompanied by developments in organizational science, which have, at the same time, developed, implemented, and refined new business models suitable for large multinational companies committed to maximum rationalization of resources.

In other words, these technologies have been developed precisely in order to allow for productivity maximization, and therefore one should not be surprised to find that their application benefits companies.

LP: How can we ensure that AI is not used against workers?

NG: First of all, we should stop thinking of productivity gains as synonymous with technical progress, and vice versa. We are used to thinking that technical progress cannot but be labor-saving. In reality, there could be labor-consuming technical progress, aiming at preventing worker fatigue, energy-saving, pollution-minimizing, and so on. Of course, this kind of technical progress means that production costs increase, and hence it is not likely in the interest of big companies.

The prerequisite for technology not to be used against workers is that research cease to be controlled by the private sector, and returns fully under public control, directed toward the development of technologies that achieve social and environmental goals. Today we see the opposite trend: research is targeted to produce patents attractive to private capital; even the criteria for funding public universities are based on such assessments.

It would help to give union representatives not only greater rights to information and consultation but also supervisory and control duties and decision-making power in guiding key strategic choices. These issues, of course, are wholly political. /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