POSSIBILITIES AND PRACTICAL EXPERIENCES OF USING ARTIFICIAL INTELLIGENCE IN TAXATION

Ildikó Szabó[*]

assistant professor (Pázmány Péter Catholic University)

Abstract

The present paper aims at analysing whether or not AI/robots should be taxed to counter this backdrop. In the first part, the author summarizes selected targeted options that have been considered for taxing AI/robots. The author also analyses the various options from the perspective of relevant tax policy principles. In light of the assessment and discussion in the article, the author puts forward the idea of a sovereign measure, that is, an education tax. Moreover, given the fact that a sovereign measure may not be sufficient to tackle the issue at stake, the author discusses the possibility of implementing a global fiscal redistribution mechanism (multilateral solution) from developed (surrender jurisdictions) to developing countries (recipient jurisdictions). One such solution is to create a global education tax to foster education or awareness in developing or low-income countries. A much broader solution would be to introduce the so-called planetary tax, which would assist developing or low-income countries in dealing with a wide range of planetary issues.

Keywords: taxation, robot, artificial intelligence, administration, income tax

1. Introduction

Since time immemorial, the concept of individuals have equalled workforce. Individuals have many unique skills that machines are still unable to replicate, yet it cannot be denied that AI/robots are developed to play a role similar as possible to that of the human beings. Certain factors may encourage the use of AI/robots instead of humans; let us enumerate some:

    (I) robots can increase productivity, mostly in repetitive tasks;

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[*] ORCID: https://orcid.org/0009-0001-0781-1995

  (II) robots can mitigate mistakes. They can be more precise and consistent than humans regarding specific functions;

(III) working conditions for humans can be improved by avoiding workers performing arduous tasks (for example, heavy movements). This would then promote a safer work environment;

(IV) robots could also address worker-related shortages;

 (V) labour and production costs can be reduced, and routine tasks can be eliminated through automation. Hence individuals can dedicate more time to non-routine tasks or leisure.

Common examples of the widespread use of AI and robots include the use of
  (I) industrial robots in assembly lines and manufacturing in general;
  (II) self-check-out machines at grocery stores;
(III) self-check-in machines at airports;
(IV) self-payment vending machines for personal goods consumption, such as cigarettes, beverages and snacks;
 (V) self-order machines, such as those found at McDonald's;
(VI) self-driving cars;
(VII) drones used in photography or delivery services;
(VIII) voice-activated assistants.

AI/robots are becoming extremely popular for their performance, sometimes on a par with, or better than that of humans. Examples of service robots: IBM Watson for Oncology aids in supporting cancer treatment; (I) Da Vinci assists medical and surgery purposes; (II) Ross is specialized in legal research; (III) Milo provides education for autistic children; (IV) Shimon plays music; (V) Motoman can play as a chef and cook, and so on.

Based on the examples above, it is likely that AI/robots overtake human workforce in quite a number of areas, causing massive job losses thereby. This probability has an important impact on tax revenues for governments. As an illustration, countries could lose a significant portion of their revenue collected from taxing regular employment income. Likewise, AI/robots, unlike humans, do not buy cars, clothes, food, electronic devices, nor do they contract services. Consequently, production as well as consumption of goods and services may decline. Such a decline in consumption could affect VAT collection; it could lead to lower VAT collection. In other words, employing AI/robots could cause tax distribution effects beyond employment-related tax collections.

The present paper aims at analysing whether or not AI/robots should be taxed to counter this backdrop.

The structure of the article is as follows.

In the first part, the author summarizes selected targeted options that have been considered for taxing AI/robots. The author also analyses the various options from the perspective of relevant tax policy principles. In light of the assessment and discussion in the article, the author puts forward the idea of a sovereign measure, that is, an education tax. Moreover, given the fact that a sovereign measure may not be sufficient to tackle the issue at stake, the author discusses the possibility of implementing a global

fiscal redistribution mechanism (multilateral solution) from developed (surrender jurisdictions) to developing countries (recipient jurisdictions). One such solution is to create a global education tax to foster education or awareness in developing or low-income countries. A much broader solution would be to introduce the so-called planetary tax, which would assist developing or low-income countries in dealing with a wide range of planetary issues.

2. The place of AI in the tax system

In this section, the author examines the following questios:
– How can artificial intelligence be integrated into the current tax system, tax types and the practice of the tax authority?
– What effects (advantages, disadvantages) of artificial intelligence can be identified in terms of current tax types?
– How can either taxpayers or the tax authorities use artificial intelligence?

2.1. AI and the income taxes

A tax is imposed each year on all earned income of individuals or corporations, with some limited exceptions.

Income is defined as all income from whatever source derived. It includes income forms as listed here: compensation for services, gross income derived from a business, gains derived from property dealings, interest, rents, royalties, dividends, annuities, life insurance payouts, pensions, income from discharge of indebtedness, distributed partnership income, income in respect of a decedent, and income from an interest in an estate or trust. Traditionally, income is defined as ordinary (essentially, actively earned income), passive (income earned without active participation) or portfolio (income from investments, such as dividends, interest, or royalties). Income includes capital gain on the sale of a capital asset. A significant challenge will be how to define and classify AI income.

While all types of income[1] can have unique sourcing and characterization issues, intangible income, such as royalty streams, or the sale and exchange of assets that created such streams, can be harder to source and characterize and thus subject to a myriad of rules. It is necessary to determine the characterization of the income as ordinary or capital based in part upon whether the intangible asset was self-created. If so, it is usually taxed more like ordinary income; if not, it may be subject to the lower capital gains tax rate. Sourcing rules also become more complex when taxing intangibles. Digital assets can be harder to find and more easily shifted offshore, limiting the tax reach of any state.

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[1]   Zsolt Halász: *A jövedelem- és vagyoni típusú adók*. Budapest, Magyarország. Wolters Kluwer Hungary, 2022. 331.

Additionally, income abroad can be subject to lower tax rates under the global intangible low-taxed income or foreign derived intangible income provisions, depending upon the ultimate product, intangible or services sold.

2.2. AI in the service of the tax authority

In recent years, we have seen intensive digitalisation in tax reporting, especially in the area of VAT. Tax authorities are now obtaining huge amounts of structured data (such as uniform VAT control files, SAF-T or JPK in Poland). Moreover, the trend of the digital transformation of the tax administration is bound to continue, and soon tax authorities will be able to obtain real-time detailed data on every transaction carried out through the introduction of ongoing reporting systems based on structured electronic VAT invoices in individual countries. As a result, tax administration will have an ever-growing database of extremely high quality data, which, due to its structured nature, can be analysed relatively easily and efficiently. Such an environment provides an ideal basis for the application of AI solutions.

AI-based models have long been an extremely effective tool in the hands of the tax administration, which is able to monitor taxpayer activity on an ongoing basis or detect tax fraud and select taxpayers for tax audits by analysing the data it holds. An example of such a solution is the Polish STIR (Clearing House Information and Communication System) a tool used by tax authorities to counter VAT fraud. This system analyses bank operations carried out in real time and, in the event of identifying high-risk transactions, informs the tax authorities, who can block the bank account in question.

However, AI solutions are not only used to monitor taxpayers and their activities. AI can also assist tax authorities in their dealings with taxpayers, acting as a consultant to manage their affairs. Such a solution, in the form of a rather simple virtual assistant, is used in the UK by the tax administration there (HMRC). In other countries, solutions to support the tax administration in dealing with taxpayers take different forms, where, for example, Spain has introduced a chatbot to support taxpayers with their VAT returns.

However, a key issue that may pose some barriers to the development of AI on the part of the tax authorities, particularly in terms of possible dispute resolution or interpretation of tax law, are ethics and respect for general taxpayer rights. Such are the principle of resolving disputes in favour of taxpayers, or the principle of conducting proceedings in a way that inspires confidence in the tax authorities. Moreover, tax law in some countries is not very stable. Often, the interpretation of tax laws does not follow the rules of logic. Particularly complex cases, which need to be assessed based on experience, often contradictory case law and certain unmeasurable rules, may still require human involvement for some time to come.

2.3. Using AI to facilitate tax compliance

Tax authorities requiring increased transparency across jurisdictions characterize the current tax environment. Sharing information and applying determined approaches to tax management and collection process lacks consistency when across borders. This

expands compliance workload for businesses. Meanwhile they are exposed to increased tax risk and uncertainty about sustainability regarding current business models and group structures. To overcome these challenges, businesses centralize compliance by using technology to aggregate, validate and report for compliance purposes and data analytics on the information they have gathered to identify anomalies and to mitigate risk.

To manage this changing landscape, alongside the increased use of analytics, tax authorities and tax advisors start exploring the possibilities for deploying sophisticated data analytics and Artificial Intelligence (AI) to facilitate compliance and assist professionals and their clients with commonly encountered questions in tax. While data analytics has received a lot of attention, Artificial Intelligence in tax is relatively a new phenomenon.[2]

2.4. AI as a route to VAT settlement automation

AI solutions are still somewhat of a novelty for taxpayers, who are not yet using them as widely as tax administrations. The most obvious use of AI in tax calculation on the taxpayers' side is using it to automate certain repetitive tasks, or the preparation of VAT registers and the submission of tax returns. There are also tools on the market using AI models that can assist taxpayers in other areas affecting VAT settlements, in particular data analysis, verifying correctness and completeness of uniform VAT control files, contract analysis, VAT invoice settlement, payment verification and VAT tax risk assessment.

There is a vast number of commercial solutions using AI for VAT issues. At the same time, due to the dynamic development of this technology and the growing confidence in this still new solution, the role of artificial intelligence is bound to grow serving taxpayers in their VAT settlements.

2.5. Tax advice from AI

More and more people turn for advice to conversational language models such as ChatGPT, even in tax issues. These AI-based technologies can provide quick answers to basic questions by analysing huge databases in a fraction of a second.

However, while AI-based solutions can help answering simple questions, they are no substitute for a tax adviser. Tax law is complex, dynamically changing and requires a case-by-case approach. Language models do not have the ability to assess the reliability of the information provided by the user, which can lead to erroneous conclusions.

Tax advisors not only have the knowledge, but also the experience and ability to assess the nuances and specifics of a given situation. Therefore, while conversational language models can be an excellent support tool, final decisions and consultations on tax matters should be conducted with a trusted specialist in the field.

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[2] Zsolt Halász: Regulating the Unregulateable. *Hungarian Yearbook of International Law and European Law*, 1. (2022), 217–230. http://dx.doi.org/10.5553/HYIEL/266627012022010001013

2.6. New challenges for the tax system

The biggest AI-related challenge the tax system will face is the need to adapt to the new digital world, in which AI will replace the human factor in many areas. In order to remain effective in this new reality, the tax system will have to adapt to new and changing business models.

For example, financial services and medical services are exempt from VAT. Therefore, will services performed by AI in the field of finance (e.g. providing automated trading of financial instruments) or medicine (medical consultations performed by AI) also be able to benefit from the VAT exemption in the same way that the services of brokers and doctors currently benefit from it? Can AI affect designating the place of business, and therefore taxation, of a given taxpayer? Should AI be given tax subjectivity for VAT purposes? Since AI is intended to replace employees, should it not be subject to taxation as human labour is currently taxed? Proposals have emerged in the debate to tax AI, requiring that companies using AI solutions[3] should calculate the aggregate value of their services/goods created due to AI utilisation. Such added value could be taxed at an increased VAT rate. These and many other challenges will soon have to be faced by the world of taxation.

In this rapidly changing reality, attention must be paid to ethical and social implications brought about by the introduction of AI taxation, including potential impact on human employment. In a global context, differences in approaches to AI taxation between countries may even lead to 'tax havens' for technology companies. Solutions to the above issues might be worked out with the help of AI.

3. The introduction of a possible new type of tax for AI

The question raises what basic principles should be taken into account in general when introducing a tax.

3.1. Neutrality

It could be argued that the tax system should be neutral in the sense that it should not incentivize businesses to engage AI/robots as compared to humans. As robots can perform tasks similar to those carried out by humans, the tax costs to engage AI/robots should be as high as the tax costs to hire the human workforce.

Are AI/robots really comparable to human beings and workers? In our view, the answer to this basic question is as follows.

Compared to AI/robots, human beings have human features: free will, creativity, emotional experience, gut feelings, etc. These attributes are relevant even in performing routine jobs. In light of these attributes, it seems that AI/robots and humans are not comparable. Therefore, the neutrality argument that considers AI/robots on an equal

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3   Yan Qing: The concept establishment and system construction of "artificial intelligence + tax collection and management". *Contemporary Economic Management* 12, (2019), 77–83.

footing with humans is incorrect. Consequently, any proposals are indeed questionable that build hold AI/robots to be perfect or close substitutes for humans. Also, such proposals do not factor in the possibility that a substituted individual, unlike AI/robots, can find alternate employment. Moreover, if businesses are taxed higher when investing in AI/robots (e.g. if they are classified as capital assets and depreciation expenses are limited or restricted) as compared to other capital investments, then it is quite clear that the tax system gives preference to investments in the latter (e.g. capital expenses incurred for developing a new generic pharmaceutical product). There seems to be no justification for this.

On the other hand, it could be argued that the taxpayers (especially businesses) engaged in electronic commerce or businesses and industries in automation can have more important role in the economy. In other words, taxpayers (especially businesses) who create or who own or use AI/robots are impacted by such measures. Thus, such taxes (including automation taxes) could be considered non-neutral for businesses that create or use such technologies, as such businesses would need to comply with special rules.

3.2. Simplicity and certainty

Moving on to simplicity and certainty, taxing AI/robots as independent taxable subjects leads to several complications, and surely creates an uncertain tax environment.

The question arises as to how to define AI/robots.[4] Should the definition include a simple vending machine or an ATM, which has already been part of our daily lives for a considerable time, or a sophisticated self-driving car? How different is a self-driving car from an autopilot, used in airplanes for a very long time?

It must allow for a clear delimitation of the substantive or personal scope of the tax; at the same time, it must be future-proof and comprehensive enough to take into account the relevant technological progress. Even among roboticists, there is no consensus concerning this concept. A robot can be defined simply as "a machine controlled by a computer that is used to perform jobs automatically".

Although the European Union rejected a proposal to implement a robot tax, the European Parliament drafted recommendations related to Civil Law Rules on Robotics and approved the text on 16 February 2017. The Resolution does not define AI/robots. In the Annex, it provides common features, such as: (i) capacity to acquire autonomy through sensors and/or by exchanging data (inter-connectivity) and the analysis of those data; (ii) capacity to learn from experience and by interaction; (iii) form of robot's physical support; and (iv) capacity to adapt its behaviour and actions to the environment.

Thus, the following proposals would require a proper definition of the term AI/robots. Developing a definition for both non-tax law and tax law purposes could indeed be challenging.

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4   Jia KAI – Jiang YUHAO: Three basic problems of artificial intelligence governance: technical logic, risk challenge and public policy choice. *China Administration* 10, (2017), 44–45.

3.3. Flexibility

At this stage, the tax loss issues triggered by AI/robots, seem a probable, yer not an actual concern. There is no need to introduce taxes on such innovations. As discussed above, most of the proposals will require defining AI/robots. A narrow definition could lead to the legislation inflexible for future developments. With a broad definition, it could be possible that a household vacuum cleaner could be classified as a robot. Some proposals on taxing AI/robots could lead to tax evasion due to non-compliance, possibly profit shifting. Some proposals apply to selected situations or to selected businesses only. In the near future, all individuals/all businesses could use AI/robots to a certain extent and benefit from them. Accordingly, designing AI/robot-related taxes only for selected situations would lead to the outcome that the system for taxation is neither, flexible nor dynamic.

3.4. The taxpayers – businesses (companies)

Every business (as a separate entity) will be subject to this tax considering that each business or company uses automation or artificial intelligence to some extent.

A revenue threshold will need to be developed for reasons of efficiency. This means that small enterprises would be out of the scope of the contribution. The fund contribution would be applied to entities/self-employed businesses that have annual turnover that exceeds, for instance, EUR 50 million. This threshold is a suggestion, and it should be adapted in accordance with the social and economic circumstances of each state.

The base of the contribution would be the total profit made (accounting profit or taxable profit, whichever is higher). That is becauseaccounting profit may differ from taxable profits in many jurisdictions. Moreover, tax incentives (e.g. input or output incentives) may reduce the taxable profit base of the business as opposed to accounting profits. The rate of the contribution could be based on a certain percentage of the accounting or taxable profits (e.g. 1% to 3%).

The information regarding taxable basis, tax rate and due amount can be integrated in a tax return already submitted by businesses or companies (such as a corporate tax return). By doing so, this would avoid more compliance complexities and costs. The payment could be done on an annual basis, according to the profit accrued during a tax year.

3.5. The taxpayers – individuals

Individuals will be the ones who benefit most from this fund. Nevertheless, it would not make sense to charge the contribution at stake from the ones who are unemployed and who are currently looking for relocation. Accordingly, workers that maintain their employment status during the Fourth Industrial Revolution, people who actually work, can also contribute to the fund to support education programmes based on the gross annual salary they earn.

From a social perception perspective, it would be worth mentioning that tax debates pertaining to individual taxation usually focus on the rich or the poor. In this context, the middle class is the most affected by tax progressivity around the world, founded on the premise that lower income people are mostly exempt, whilst higher income groups have more sources of income and often hire tax professionals to take advantage of loopholes, tax schemes and exemptions.

It would not be a good idea to increase the tax burden of the middle class. Thus, the author' suggestion would address high-income individuals. The definition of a high-income individual would also depend on each state according to the economic and social reality of each country.

Therefore, an individual revenue threshold would be state specific. A percentage of the income crossing the revenue threshold would be subject to the contribution. A certain percentage of the excess will be paid as an education tax (for example, 1% to 3%). When fixing percentages, policy officials should consider many factors, such as the population size, expenses, living costs, marital status, family members and so forth. To facilitate regular payment of this tax, the employer could withhold the levy and pay it to the authorities (for salaried individuals). Alternatively, the individual could pay it while filing their tax return.

4. Automation taxes

Another idea is the implementation of automation taxes. Such taxes are addressed to businesses/ companies which engage fewer and fewer employees. In other words, these taxes aim at reducing the laying off and/or replacement of employees by AI/robots. A few options to introduce such taxes is discussed hereafter.

One option for introducing such taxes is to charge employers (businesses) for unemployment insurance in proportion to their human employment rate. This means that the higher the rate of layoffs or replacements made, the more the employer would contribute to government revenue by paying more taxes. It would indeed work as a kind of compensation for layoffs. Therefore, businesses that decide to replace the workforce by using AI/robots would contribute more since the government would need more money to help those people who are out of the market, even temporarily. In this regard, an agency could be created to develop a system and control and collect all data concerning layoffs and replacement to inform tax authorities.[5]

Another option is the idea of a corporate self-employment tax that would increase the tax burden for companies that produce goods or provide services without using a human workforce.

This model could be compared to the self-employment tax for individuals enforced in some jurisdictions or situations where the owner of a small business is supposed to pay social security, similar to the social security that would be paid on their wages if they were employees. The main goal here is also increasing the collection to guarantee

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[5]   Chen Weiguang: Some Thoughts on the Problem of Artificial Intelligence Governance. *Academic Frontier* 20, (2017), 48–55.

support to those who are unemployed due to automation. For calculation purposes, a ratio of corporate profits could be used to gross employee compensation expense. In case this ratio surpasses a threshold fixed by the government, additional taxes could be applied on corporate profits.

These additional taxes would reflect the amount that the companies avoided paying because of implementing automation. Alternatively, instead of profit ratio, the sales ratio could also be contemplated for this purpose.

Lastly, an alternate proposal to curtail investment in technology is to extend tax benefits for companies that hire people. Those tax benefits could be granted by reducing or exempting from social contributions or contributions to Medicare systems levied on the payroll. Another tax benefit that could be given is the super-deduction of wages paid to humans. For tax purposes from the employer standpoint, these benefits would ensure that humans and machines are treated in the same manner, or at least in a very similar way. Machines do not receive wages subject to taxation, and several jurisdictions grant accelerated tax deductions for the implementation of technologies that are presumably supposed to increase productivity.

Another solution presented is the introduction of narrowly targeted taxes. In 2017, the Grand Council of the Canton of Geneva, Switzerland, proposed a tax on each automated cashier installed in the retail sector. This proposal was rejected.

In 2018, San Francisco County and City enacted AB1184 establishing a new tax on rides made by autonomous vehicles. According to the text, the tax will be levied "on each ride originating in the City and County of San Francisco provided by an autonomous vehicle, whether facilitated by a transportation network company or any other person, or by a participating driver in an amount not to exceed 3.25% of net rider fares, as defined, for a ride and 1.5% of net rider fares for a shared ride". Instead of imposing taxes on AI/robots in general, both models chose to levy taxes on a specific new service or type of automation. Such taxes intend to create a direct link between the tax imposed and remediation of job losses.

5. Education Taxes

At this stage, due to the different opinions on the impact of AI/robots on employment the author shares the view expressed by the United Kingdom and Switzerland, as well as some scholars, that taxes on AI/robots should not be introduced.

Only as time goes by will it be possible to tell how this Fourth Industrial Revolution will turn out; particularly, whether employment levels of human beings will reduce (temporarily or more permanently) or increase (temporarily or more permanently).

It is important to keep in mind that taxes are not an appropriate tool to reduce automation levels (and preserve existing jobs). To draw a parallel, it is the same way that taxing cigarettes does not prevent people from smoking. Levying tax is not always an effective measure to dissuade a given behaviour.

One of the most important policy objectives over the next few years is that policymakers make their best efforts to ensure that the Fourth Industrial Revolution benefits people as much as possible. On the one hand, their aim should be to accommodate and encourage

progress that promotes economic value; whereas they should aim at redistributing benefits and advantages to the ones negatively impacted.

Among other global challenges, one of the main challenges would have to find is a most appropriate balance designing taxes around AI/robots and the actual technological development and innovation; the former should not completely or considerably eliminate the latter. Technology is progressing exponentially and "what is yet to come" is unknown. It may well be possible that "high-tech" and "high employment" do not need to be exclusive – they can actually coexist.

The author holds that policymakers need to be "proactive" rather than being "reactive". Government will need to monitor the evolution of the impact of AI/robots on tax revenues. If reliable economic data starts pointing out that unemployment levels have been increasing due to automation (and not other events, for example, COVID-19), then governments should focus on reskilling workers by providing appropriate education instead of funding support schemes that entail handing out minimum wages. This is because "for every robot we put in the world, you have to have someone maintaining it or servicing it or taking care of it"[6]. One may raise the question "why not create a national skills centre, which would anticipate/shape the needs of the market in terms of skills and help with a programmed reorientation before obsolescence? Or introduce a 'skills insurance', which would help to finance career reorientation?"

By doing so, the chances of people being employed increases. Thus, by empowering individuals and putting them back on the job market, governments can expect taxes from such personnel (payroll taxes, income taxes or consumption taxes). As a start towards this end, policymakers could identify the existing "jobs" which could be automated, and reskill the people working in these jobs.

It is not the purpose of this contribution to discuss what "new" skills will look like; fact is, however, that sufficient information seems to be available in the public domain, especially, suggestions to enhance digital literacy or skills. As best practice let us mention École Polytechnique Fédérale de Lausanne (EPFL); it has created the EPFL Extension School to teach new digital skills to individuals without university qualifications.

6. Innovation perspective on introducing taxation for AI

It does not come as a surprise that several states have rejected the idea of a tax on AI/robots. The UK Parliament rejected the idea of imposing robot taxes "in his evidence to us, the Minister indicated that the Government too found the idea of a robot tax in current automation environment as 'perverse'. We need more robots and not fewer. A tax on them would further discourage take up. We do not believe that a tax on robots is in the interest of businesses or workers in the UK".[7]

A similar conclusion was reached in Switzerland. A statement from the Swiss Federal Council (English translation) declares "the report issued by the Federal Council on

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[6]   Ibid.

[7]   Ibid.

11 January 2017 on the main framework conditions concerning the digital economy, which analyses the situation in the context of the Digital Switzerland Strategy, does not foresee any immediate need to fundamentally revise the social and fiscal systems in force. In addition, current knowledge does not allow us to anticipate a negative effect of the digitization of the economy on employment". In 2017, the European Union rejected the adoption of robot taxation.

Moreover, in light of the BEPS initiative, in particular BEPS Action 5, many governments have introduced input and output-related tax incentives (IP boxes) for promoting R&D. AI technology would typically fall under qualifying IP assets. Thus, imposing taxes on such assets would be contrary to the R&D policy of many states. Then they could be considered to hamper innovation. Comparing its own tax system with Japan's system for taxing AI/robots, the UK Parliament stated: "we recommend that the Government brings forward proposals in the next budget for a new tax incentive designed to encourage investment in new technology, such as automation and robotics".

With respect to encouraging investments, Italy's 2020 Budget (Law no. 160 of 27 December 2019) introduced a tax credit ranging from 6% to 40% equivalent to a cash grant enjoyed when investing in Industry 4.0 assets. Investments in machinery and other equipment controlled by computer systems and/or operated by smart sensors or drivers and drives linked to the computer system of an industry or factory are such eaxmples. Taxpayers can also offset such credit with some other tax debts/liabilities.

There are requirements to classify an asset as an "Industry 4.0" asset.[8] The pertinent Law entered into force on 1 January 2020 and replaces the previous provisions known as hyper or super-depreciation.[9]

Similarly, Poland has announced its intention to encourage investments in robots from 1 January 2021 onwards. The idea is to provide a tax relief that would allow both individuals and companies additionally to deduct 50% of costs relating to this type of investment, regardless of the size or the sector. This measure will also encompass costs regarding the lease of robots, the acquisition of software required to operate such robots and staff training.

One can also note that the proposals to provide AI/robots with separate tax personality or to install on them specific taxes leave us without justification for such innovations. Relying on such a logic we could call for a tax on all technology that lowers the need for the involvement of people. Would this also encompass taxing all technology based on e.g. the wheel or the leverage mechanism, as these have for millennia made human work superfluous. In other words, what is the fundamental difference between the wheel and a robot?

If AI/robots were to alter fundamentally our behaviour making the majority of the world's population docile due to lack of gainful employment, it would not suffice to amend our fiscal policies. The world would need to find firstly new social, secondly

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[8]   Min Xu – Jeanne M. David – Suk Hi Kim: The Fourth Industrial Revolution: Opportunities and Challenges. *International Journal of Financial Research* 9, 2. (2018).

[9]   Wu Handong: Institutional Arrangement and Legal Regulation in the Age of Artificial Intelligence. *Social Science Abstracts* 12, (2017), 76–78.

economic and thirdly fiscal paradigms. To illustrate the depth of such a change, the very concept of money and remuneration would need to be replaced; the majority of those in need of goods and services would have no means of offering anything tangible in exchange for them. Furthermore, in the absence of a market, our understanding of capital would need to change. Consequently, taxation itself may become obsolete as a concept.

On the other hand, if AI/robots are just another step in our development saga; tools that will help us surmount future obstacles such as climate change, aging of the population and the global demographic decline. Our attention should not be focused on trying to fiscally target novel material objects i.e. robots; we should attempt to understand social trends they might be connected to.

7. Conclusion

Based on the transformation taking place worldwide and the uncertainty regarding the future, the discussion tackling taxation of AI/robots will be standing for a while. It concerns dilemmas whether high rates of unemployment will be widespread due to replacement of human workforce by machines. Yet studies conducted by several respected institutions reach different conclusions.

The wide range of targeted proposals presented so far could be difficult to implement. Besides, most of them violate commonly accepted principles of tax policy, such as neutrality, simplicity/certainty, efficiency, effectiveness and fairness, as well as flexibility.

The author believes that taxing AI/robots would slow down innovation, which directly impacts the fields of science, health, economy, security, nutrition, the environment, leisure and so forth. Moreover, it would also deter people from enjoying innumerable benefits arising from AI/robots in all those fields. For such reasons, those new technologies should not be taxed.

Governments need to be proactive and not reactive. COVID-19 has taught this lesson to many "reactive" governments as the number of people affected by the virus was substantially high. If it ever happens that a trend of unemployment due to automation is witnessed in a state, the government will need to have a damage control plan in place so as to invest in people's education. This article discussed the possibility of implementing an earmarked education tax, in this regard on national level; a contribution that would be allocated to a special fund dedicated to finance and foster education programmes.

Individuals and businesses would pay such a contribution, as both of them would benefit from the fund, hence the programmes. The tax rate would be levied on companies accounting or taxable profits, whichever is higher. Individuals will be pay when their gross annual income exceeds a certain threshold. The thresholds will be established in accordance with the economic reality of each country or region. The contribution will be made on an annual basis, and related information and payments would be integrated with tax returns that are already submitted by the taxpayers, thus avoiding an increase in compliance obligations.

However, many countries would not be in position to implement or fully benefit from an education tax. A new global "social contract" argument should be built on the existing one to implement a global fiscal redistribution mechanism.

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