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ARTIFICIAL INTELLIGENCE, SMART ROBOTS AND THE NEW ELECTRONIC ABILITY TO PAY TAX

The development of artificial intelligence and the mainstream adoption of so-called “smart robots” continue to challenge the tax system as we know it, requiring deep reflection on the adequacy of its structure to this new reality. This update explores the implications of the ongoing technological evolution — now also reflected in the institutional adoption of systems such as the virtual assistant CatIA — and discusses the attribution of legal personality and taxability of smart robots. It further encourages debate on emerging tax solutions resulting from technological progress and automation, considering the new European regulatory framework established by Regulation (EU) 2024/1689, which lays down harmonised rules on artificial intelligence.

Advisory Team

THE FRAMEWORK

We are facing a rapidly changing reality, both socially and economically, as a result of technological progress driven by artificial intelligence (AI) systems and smart robots.

These technological changes continue to profoundly reshape the labour market, gradually replacing human labour with automated solutions, a phenomenon that raises extremely important tax questions: will the development of smart robots lead to technological unemployment? how will existing tax systems adapt to these developments?

Replacing human labour with AI applications or autonomous and intelligent robots could bring with it an exponential increase in efficiency, although it will have a direct impact on traditional public tax revenues, especially those from human labour.

Today, with the new dynamics introduced by AI, there is an urgent need to re-evaluate the traditional concepts of "work" and "productivity" in the tax field.

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For example, the Tax Authority itself has begun to incorporate artificial intelligence solutions into its communication channels with citizens and businesses. In this regard, particular reference should be made to the introduction of CatIA — the Virtual Assistant of the Directorate-General for Economic Activities — developed under the Simplex Programme. This AI-based system, available 24 hours a day, provides real-time guidance on matters such as commerce, services, food and beverage businesses, consumer rights, and other legal obligations, reflecting an institutional effort towards digital modernisation and proximity with the public.

We are therefore faced with a challenge to maintain the sustainability of current tax models. This challenge requires a profound rethinking of existing national and international tax structures, systems and policies to respond effectively to the demands of this new digital age.

THE SMART ROBOT'S ABILITY TO PAY TAX

The negative impact on tax revenues of the proliferation of artificial intelligence and so-called smart robots is not merely an academic issue; this debate has profound tax implications, particularly in terms of the potential erosion of tax revenues. It is this

complexity and problem that has led to the discussion on the feasibility of giving robots legal personality, a proposal that was initially motivated by the need to clarify liability issues, but which quickly proved to be of undeniable relevance in the tax field.

In fact, giving legal personality to smart robots is a potentially effective solution for classifying them as taxable persons, although we face unprecedented challenges, particularly about their autonomy and capacity to act.

However, this debate goes beyond mere legal classification and is part of a broader context that includes ethical, political, and economic dimensions. Complex questions about the nature of the rights and obligations that could be attributed to intelligent robots are raised by the possibility of considering them as taxable persons. Moreover, the complexity of these issues is exacerbated by the need to adapt legal-tax frameworks to emerging new (economic and social) realities, a task that continues to challenge conventional practice and requires an innovative approach that recognizes all the *praxis* of this new reality.

Despite the possibility of granting legal personality to non-human entities, this does not imply that smart robots can automatically be granted tax personality, since the ability to be considered a taxable person depends on criteria that go beyond the mere existence of legal personality, focusing on economic capacity and the possibility of attributing autonomous assets.

Thus, the identification of an economic base that justifies tax liability rather than the attribution of legal personality per se is the central issue. And while this approach suggests a critical reflection on the concept of legal capacity, which should not be seen as an automatic consequence of legal personality, but as a manifestation of an economic capacity susceptible to taxation, it is also in line with the principle that tax law should prioritize substance (economic) over form (legal). This principle seems particularly relevant in the context of artificial intelligence and intelligent robots.

Thus, the need for a legal framework that can accommodate the specificities of these new realities is highlighted by the problem of taxing technological "entities". The possibility of recognizing passive tax personality for intelligent robots, artificial intelligence units, based on their ability to generate income or own assets, thus challenges traditional paradigms, and requires an innovative approach that also considers technological advances and their economic impact.

It is therefore a challenge to rethink the foundations of our legal-tax system in the 21st century, as the determination of the smart robots' passive ability to pay tax will necessarily involve a balancing act between tax justice and technological innovation.

THE ELECTRONIC CONTRIBUTION OF SMART ROBOTS

As we have seen, the transition to an increasingly automated economy is an unavoidable reality. Just like the industrial revolution in the 19th century, it will bring us new challenges. Replacing people with machines or even changing the work structure through the digital divide will mean a reduction in government tax revenues and, at the same time, an increase in social benefits caused by rising unemployment and the replacement of people with machines.

The need to correct these imbalances and mitigate these losses has led to the first proposal to tax the robots responsible for eliminating jobs (the so-called "robot tax"). Although rejected by the European Parliament in 2017, this idea is already in force in South Korea (EP Resolution 2015/2103 INL).

Defining who will be liable for the new tax is essential in this context. Initially, in our opinion, it could be the owner of the robot. However, we believe that the robot itself - considered as an "autonomous and intelligent entity" with legal capacity and possibly personality - could assume this responsibility. However, it remains an open question and subject to debate as to the exact methodology for this taxation.

A closer examination of the legal and practical foundations of the new taxation of robots in an era of continuous digital and industrial transformation will therefore be inevitable. The proposal paves the way for innovations in tax law but also requires legal and economic structures to adapt to the changes that automation brings to society and to the global economy and society in general.

THE AI ACT: THE ARTIFICIAL INTELLIGENCE REGULATION

Regulation (EU) 2024/1689 of the European Parliament and of the Council, dated 13 June 2024, comprising 180 recitals, 113 articles and 8 annexes, establishes the world's first binding legal framework specifically dedicated to artificial intelligence (AI), positioning the European Union as a pioneer in the ethical and secure regulation of this emerging technology.

Based on a risk-based approach, the Regulation classifies AI systems into several categories — ranging from prohibited practices to minimal-risk systems — imposing proportionate obligations according to the level of risk involved. High-risk systems — such as those used in managing critical infrastructure, education, biometric identification or recruitment — are subject to compliance requirements such as fundamental rights impact assessments, human oversight, technical robustness and auditing. AI systems with an

unacceptable level of risk, such as those used for social scoring, subliminal manipulation or indiscriminate facial recognition, are expressly prohibited.

Failure to comply with the obligations set forth in the Regulation may result in penalties, including fines of up to €35,000,000 or 7% of the annual worldwide turnover of the infringing company.

The AI Act also adopts a broad scope of application, including extraterritorial provisions. It applies not only to operators established in the European Union, but also to entities based in third countries, provided that the AI systems they develop or make available have effects within the EU. This extraterritorial scope enhances the effectiveness of the Regulation in a global technological context, bringing international providers of general-purpose AI models — particularly those deemed to pose systemic risks — within its reach.

The Regulation entered into force on 2 August 2024, but its application is staggered until 2027, with certain obligations only coming into force in 2030 for AI systems already placed on the market. This phased implementation is intended to allow economic operators to gradually adapt to the new requirements while ensuring the effective implementation of a technologically neutral but legally complex regulatory model.

Its practical application will ultimately result in a significant reconfiguration of the legal obligations applicable to technology companies, developers, users and public authorities, particularly regarding compliance with European principles of transparency, safety and respect for fundamental rights in the field of artificial intelligence.

In this context, the relevance of the AI Act in the tax sector is particularly noteworthy. The use of artificial intelligence systems by tax administrations — such as virtual assistants, automated screening tools or predictive models — and by taxpayers — through tax simulation platforms or automated filing systems — may pose risks requiring enhanced legal scrutiny. The opacity of decision-making processes, the lack of human oversight, or algorithmic bias may compromise fundamental rights such as equality, non-discrimination and protection from unjustified administrative decisions. Therefore, the use of AI in tax systems, whether by public or private entities, must strictly comply with the safety, explainability and accountability standards set forth in the Regulation, ensuring that the use of such technology remains compatible with the principles of the rule of law.

TAX CHALLENGES AND SOLUTIONS: AN UNCERTAIN FUTURE!

Considering the above, there is a need for a balance between tax neutrality and targeted incentives. Tax neutrality could ensure a level playing field between human labour and robots, thereby preventing distortions in the labour market. The trend towards automation could be counterbalanced by tax incentives to retain or hire human workers. At the same time, a possible solution seems to be to impose a tax increase on companies that benefit exclusively and predominantly from automation without using human labour (this would compensate for the social impact of technological unemployment, although it must be carefully calibrated so as not to discourage innovation).

An alternative solution could be found in the emergence of a new guaranteed minimum income as a safeguard for human workers affected by automation. This GMI could provide a safety net for those whose jobs have been replaced by technology, guaranteeing a minimum standard of living, and mitigating social tensions. However, there are issues of financial sustainability and the impact on work motivation.

Another conceivable approach could focus on directly taxing the use of intelligent robots. This would create an income attributable to the robots, which would be subject to income tax, but would remain in the sphere of its owner, thus encouraging a cautious use of automation. On the other hand, such income attributable to robots could also be subject to social security contributions. This would help to compensate for the decline in the number of (human) workers.

In the first stage, a tax based on the ratio between income and the number of human workers could also be considered, and in a second stage, the tax could be imposed directly on the robot, reflecting an electronic ability to pay tax - this measure, although innovative, raises complex questions about the tax personification of non-human entities.

Another possible tax solution would be to create a new tax on the ownership of the intelligent robot in the sphere of its owner, similar to the taxes applied to cars, boats or airplanes. In practice, a tax with an annual rate that depends on the value and the capacity of the "equipment" - such a tax would lead to a certain administrative simplicity, although it would need to be carefully evaluated so as not to discourage investment in technological innovation.

Finally, there could also be a royalty on the use of robots. This “fee”, acting as a license to use, would be proportional to the capacity or time of use of the robot. And the link between the use of robots and the advantages granted by the state could be established. In this way, companies that make a significant contribution to social or economic development through automation could receive incentives or tax benefits.

CONCLUSION

Each of these tax solutions presents benefits and challenges. The key to their effective implementation will be a careful balance between encouraging innovation and automation, protecting the (human) workforce, and maintaining the sustainability of public tax revenues. A dynamic and adaptive approach to tax policy will be required as the technological landscape continues to evolve.

The consolidation of institutional systems based on artificial intelligence — particularly *CatIA* — and the entry into force of Regulation (EU) 2024/1689 clearly demonstrate that technological development is no longer a distant prospect, but a present and regulated reality. Accordingly, the formulation of tax policies in this new era will increasingly require a dynamic, well-informed and structurally adaptable approach in response to the pace and complexity of technological progress.

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