

# Editorial

## *European Law Restrictions on Tax Authorities' Use of Artificial Intelligence Systems: Reflections on Some Recent Developments*

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The article discusses the increasing use of artificial intelligence (AI) by tax authorities in the European Union, the resulting benefits and risks, and the necessity for an appropriate legal framework. Tax administrations employ AI systems for various tasks, from risk detection to legal analysis. While automation offers efficiency, there are also risks, such as violations of fundamental rights and discrimination, illustrated by examples like the Dutch childcare benefits scandal. It deals with two relevant EU regulations, namely the General Data Protection Regulation (GDPR) and the proposed European AI regulation (AI Act), emphasizing the need for more clarity and protection for taxpayers. The GDPR imposes a principled ban on fully automated decisions but allows exceptions if appropriate measures are in place. The AI Act introduces a right to human intervention for high-risk AI systems, but the author argues that the regulations are not clear enough, especially in view of the upcoming 'tax administration 3.0' model of the OECD further reducing human intervention. In short, specific guidelines and regulations are needed to ensure the fundamental rights of taxpayers in an increasingly automated tax environment.

**Keywords:** Artificial Intelligence (AI), Tax authorities, General Data Protection Regulation (GDPR), European Union Artificial Intelligence Regulation (AI Act), Fundamental rights, Tax collection process, Human intervention, Risk detection, Taxpayer assistance, Tax administration 3.0 model (OECD)

### 1 INTRODUCTION

In the European Union, public authorities are increasingly using artificial intelligence (AI) systems. Tax authorities are said to be at the forefront of this,<sup>1</sup> and it is expected that as a result of the fast development of AI systems, this use will increase even more in the near future, including in tax matters. The speed of development of AI systems also explains that the definition of this concept is difficult to grasp and needs regularly updating. Purely tentatively, the following definition

can be given: “artificial intelligence system” (AI system) means a machine-based system that is designed to operate with varying levels of autonomy and that can, for explicit or implicit objectives, generate outputs such as predictions, recommendations, or decisions, that influence physical or virtual environments<sup>2</sup>

The increased use by tax administrations of AI systems is driven by a number of factors: the increased tax documentation requirements that have led to agreements on automatic information exchange, country-by-country reporting and administrative cooperation (DAC); the increased importance of digital marketplaces and e-sharing websites (such as Amazon or Airbnb) that require tax administrations to increase their audit capacity and the trend since the financial crisis whereby for austerity reasons employment in tax administrations has been sharply reduced in the EU leading them to an increased use of AI-audit systems.<sup>3</sup>

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<sup>1</sup> D. Hadwick, ‘Error 404 – Match Not Found’, *Tax Enforcement and Law Enforcement in the EU Artificial Intelligence Act*, (1) EUCRIM 55–60 (2023), doi: 10.30709/eucrim-2023-005. It is reported that by 2023 – albeit unevenly spread across 18 EU Member States – at least 70 AI systems are used by national tax authorities (see AITAXADMIN.EU., *Open-access repository of the Use of AI by Tax Administrations in the EU*, DigiTax Centre (D. Hadwick ed., University of Antwerp), <https://www.uantwerpen.be/en/projects/aitax/> (accessed 11 Jan. 2024). Also within the European Union, since May 2019 Eurofisc members have been using a proprietary tool (i.e., TNA or Transaction Network Analysis) to detect VAT fraud at an early stage. TNA is an automated data mining tool that interconnects Member States’ tax IT platforms. In this way, cross-border transaction information can be quickly and easily accessed, and suspicious VAT fraud can be reported nearly in real time ([https://ec.europa.eu/commission/presscorner/detail/en/IP\\_19\\_2468](https://ec.europa.eu/commission/presscorner/detail/en/IP_19_2468)) (accessed 11 Jan. 2024).

<sup>2</sup> This definition can be found in the version of Art. 3(1) of the Proposal for a regulation of the European Parliament and of the Council laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) and amending certain Union legislative acts (COM(2021)0206 – C9-0146/2021 – 2021/0106(COD)) as amended by the European Parliament on 14 Jun. 2023 (<https://artificialintelligenceact.eu/wp-content/uploads/2023/06/AIA-%E2%80%9393-IMCO-LIBE-Draft-Compromise-Amendments-14-June-2023.pdf>) (accessed 11 Jan. 2024).

<sup>3</sup> This decline would average 14.2% in the EU and be as high as 30% in some countries, such as Belgium, Latvia and Lithuania. (D. Hadwick, *Slipping Through the Cracks, the Carve-outs for AI Tax Enforcement Systems in the EU AI Act*, European Open (Upcoming Q1 2024), with reference in footnote 16 to: L. Fulton, *The impact of*

Tax administrations use AI systems for a wide variety of purposes. In doctrine six archetypal functions are identified<sup>4</sup>: (1) taxpayer assistance (e.g., virtual conversational assistants or chatbots), (2) data collection, (3) risk detection, (4) risk-scoring, (5) nudging (e.g., automated communication to non-compliant tax payers in order to encourage them comply or to inform vulnerable taxpayers to receive assistance), (6) jurisprudence analysis by machine learning systems to help tax administration predicting e.g., the success of a specific tax claim. It can be expected that more other functions will become possible in the future.

However, it has since become clear that the use of AI systems by the (tax) authorities has not only benefits but also risks. Public scandals such as the Dutch childcare benefits scandal<sup>5</sup> or the Australian Robodebt case<sup>6</sup> clearly demonstrate the risk that careless use of AI by public authorities can pose to citizens' fundamental rights, including their right not to be discriminated. These scandals also show how without adequate human intervention or supervision, blind reliance on AI systems to underpin legal decisions of public authorities can lead to tragedies for citizens.

In light of these developments, an appropriate legal framework for the use of AI systems by (tax) authorities is increasingly pressing. Moreover, this need seems even more compelling when reading the vision outlined by the OECD in its discussion paper on the taxation model of the future, released on 8 December 2020.<sup>7</sup> This 'tax

administration 3.0' model, to be distinguished from the ongoing tax digitization process (referred to as 'tax administration 2.0' in the OECD note<sup>8</sup>), essentially abandons the collection and storage of tax-relevant data at tax administrations. It leaves such data in their 'natural environment'. Using technology, these datasets held by taxpayers, as well as third parties and other public authorities, will be linked together to calculate the correct amount of tax due. Subsequently, the tax calculation will be fully automated and the payment will finally flow directly to the tax authorities. Tax will just happen. In that model, human intervention (both from the taxpayer and the tax official) is greatly reduced and replaced by AI-systems.

## 2 EUROPEAN LEGAL FRAMEWORK

At present, two EU initiatives that are relevant for this legal framework can be mentioned: (1) the General Data Protection Regulation (GDPR)<sup>9</sup> and (2) the proposal for the European Union Artificial Intelligence Regulation (AI Act) on which political agreement was reached between the Council and the European Parliament on 9 December 2023. The final text of the latter proposal still has to be formally adopted jointly by the Council and the Parliament. It is envisaged that this text would apply from 2026. The following briefly discusses the tax relevance of both legal instruments in light of the increasing use by tax administrations of AI systems.

### 2.1 GDPR

AI tools used by tax authorities to detect, for example, tax fraud, are in any case subject to the requirements of the 'GDPR' which focusses on the processing of personal data, including data processing through AI (Article 2.1 of the GDPR). The GDPR places particular emphasis on accountability (see Article 5.2 of the GDPR). Several provisions in the GDPR aim to force the data processor to verify compliance with the data protection principles through *ex ante* compliance assessments and document this self-assessment (see Articles 24 to 43 of the GDPR). Although data processing can also be monitored retrospectively and competent authorities can impose sanctions (Articles 51 to 59 and Article 83 of the GDPR), including heavy fines for violations of the GDPR principles, enforcement of the latter principles still relies heavily on the strength of self-assessment.

*and-products/tax-administration-3-0-the-digital-transformation-of-tax-administration.pdf*).

<sup>8</sup> Note that 'tax administration 1.0' refers to the tax administration from the paper era.

<sup>9</sup> Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 Apr. 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

<sup>4</sup> Hadwick, *supra* n. 3 and D. Hadwick, *Behind the One-Way-Mirror: Reviewing the Legality of EU Tax Algorithmic Governance*, 4 EC Tax Rev. 184–201 (2022), doi: 10.54648/ECTA2022019.

<sup>5</sup> This scandal raised when an AI system used to detect childcare benefit fraud wrongly identified low-income families as fraudsters, forcing them to repay large sums of legally obtained benefits. D. Hadwick & S. Lan, *Lessons to Be Learned from the Dutch Childcare Allowance Scandal: A Comparative Review of Algorithmic Governance by Tax Administrations in the Netherlands, France and Germany*, 13 (4) World Tax J. (2021), doi: 10.59403/27410pa; ; D. Hadwick, S. De Raedt & A. van De Vijver, *De toeslagenaffaire in Nederland. Aanleiding tot evaluatie van het fiscaal algoritmisch bestuur in België*, Tijdschrift voor Fiscaal Recht 387–405 (2023); M. van Eck, D. van Hout, en M. Weijers, *Olievlék op vleek. De zwarte lijst(en) bij de Belastingdienst*, (20) Nederlands Juristenblad 1606–1612 (2022). Question O-000028/2022 of the European Parliament to the European Commission, 28 Jun. 2022 on the Dutch childcare benefit scandal, institutional racism and algorithms, [https://www.europarl.europa.eu/doceo/document/O-9-2022-000028\\_EN.html](https://www.europarl.europa.eu/doceo/document/O-9-2022-000028_EN.html) (accessed 11 Jan. 2024).

<sup>6</sup> This scandal concerned a system in Australia designed to automatically recover allegedly overpaid welfare benefits. The system was inaccurate and led to heavy public criticism. As with the Dutch scandal, the Australian government was slow to respond to the troubling signals and it took public notice to force them to action. Report of the Royal Commission into the Robodebt Scheme, 7 Jul. 2023, <https://robodebt.royalcommission.gov.au/publications/report> (accessed 11 Jan. 2024); Question O-000028/2022 of the European Parliament to the European Commission, 28 Jun. 2022 on the Dutch childcare benefit scandal, institutional racism and algorithms, [https://www.europarl.europa.eu/doceo/document/O-9-2022-000028\\_EN.html](https://www.europarl.europa.eu/doceo/document/O-9-2022-000028_EN.html) (accessed 11 Jan. 2024).

<sup>7</sup> OECD, Forum on Tax Administration, *Tax Administration 3.0. The Digital Transformation of Tax Administration* 29 en 49 (8 Dec. 2020) (<https://www.oecd.org/tax/forum-on-tax-administration/publications->

It is important to note that the GDPR is also based on a principled prohibition of automated decisions involving the processing of personal data where it could significantly affect citizens' lives. This prohibition is articulated in Article 22.1 of the GDPR<sup>10</sup> and applies also to decisions that considerably affect taxpayers. Such decisions may not be made solely on the basis of automated processing of personal data. Human intervention remains necessary. However, the GDPR does not clarify how intensive or how active this human's involvement must be. The European Data Protection Board's Guidelines on automated individual decision-making and profiling for the purposes of the GDPR<sup>11</sup> (hereinafter the 'Guidelines') posited that human intervention must be 'meaningful', if not there is a decision without human intervention. More specifically, it stressed that, in order to achieve actual human intervention, it must be ensured: (1) that the monitoring of the decision-making is meaningful, and not just a symbolic act, (2) that this intervention must be carried out by someone who is competent and capable of changing the decision, and (3) that he must include all relevant data in his analysis. It is striking that the wording in the Guidelines remains rather vague and the assessment of whether human intervention is actually meaningful will have to be done on a case-by-case basis. Ultimately, it falls to the courts to assess whether the human intervention is sufficiently meaningful and whether or not there is a purely automatic decision-making process. For example, the Court of Justice recently ruled in the case of an automated establishment by a credit information agency of a probability value ('scoring') concerning the ability of a person to meet payment commitments in the future, there was automated individual decision-making.<sup>12</sup>

However, in certain well-defined situations and under certain conditions, it is allowed that individual decisions are taken without human intervention (Article 22(2) of the GDPR). According to Article 22 (2) b GDPR public authorities, including tax authorities, can take automated decisions without human intervention if this is 'authorised by Union or Member State law to which the controller is subject' (Article 22(2)(b) GDPR).

In that case, however, the law must provide 'appropriate measures to protect the rights and freedoms and legitimate interests of the data subject' (Article 22(2)(b) GDPR). It is notable that at first sight the GDPR leaves Member States a great deal of discretion in choosing these measures. Recital 71 of the preliminary considerations of the GDPR provides some guidance on what measures could be considered. In particular, it is recommended that any authorized automated decision-making be accompanied by specific information to the data subject and include his or her right to obtain human intervention, express his or her point of view, receive an explanation of the decision taken following such an assessment and challenge the decision.<sup>13</sup> In view of more legal certainty more explicit guidance on these appropriate measures seems necessary.

## 2.2 AI-Act

According to its Explanatory Memorandum the AI-Act has the objective to facilitate investment and innovation in AI, but also to see human rights respected, as well as – more generally – regulate the impact of AI on humans.<sup>14</sup> It intends to build on existing legal frameworks and to be proportionate and necessary to achieve its objectives.<sup>15</sup> In view of the principle of proportionality the AI Act is structured on the basis of a 'risk-based approach' that distinguishes the following categories of risks: unacceptable risks, high-risks and low or minimal risks.<sup>16</sup>

In view of its human-centred approach the AI Act installs a right to human intervention, although this right is only provided for AI systems with a so-called high risk. AI systems are classified as high-risk primarily based on the intended purpose of the AI system (see Chapter 1 of Title III of the proposed AI Act). In that context, autonomous AI systems with mainly fundamental rights implications are considered high-risk systems. They are further defined in Annex III of the proposed AI

<sup>10</sup> Article 22.1 GDPR states as follows: '1. The data subject shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her'.

<sup>11</sup> Guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679 (wp251rev.01), <https://ec.europa.eu/newsroom/article29/items/612053> (accessed 11 Jan. 2024).

<sup>12</sup> ECJ 7 Dec. 2023, C-634/21, OQ v. Land Hessen, intervenor Schufa Holding AG, ECLI:EU:C:2023:957. For another example see the decision of the Court of Amsterdam, 4 Apr. 2023 (200.295.742/01), ECLI:NL:GHAMS:2023:793: according to that Court decisions by Uber (the group that provides online services in the transport sector through a digital platform), which deactivated the Uber Driver account of drivers who used Uber's services through the Driver app, were fully automated decisions without meaningful human intervention.

<sup>13</sup> In the above cited Schufa-case (see footnote 12) the Court stated recently the following (para. 68): 'Thus, in the event that the law of a Member State authorises, under Article 22(2)(b) of the GDPR, the adoption of a decision solely based on automated processing, that processing must comply not only with the conditions set out in the latter provision and in Article 22(4) of that regulation, but also with the requirements set out in Articles 5 and 6 of that regulation. Accordingly, Member States cannot adopt, under Article 22(2)(b) of the GDPR, regulations which authorise profiling in disregard of the requirements laid down by those Articles 5 and 6, as interpreted by the case-law of the Court'. In this context, it should be noted that the ECJ also sets certain limits on the use of black box algorithms in light of Article 47 Charter Human Rights (right to an effective judicial remedy) (ECJ 21 Jun. 2022, C-817/19, *Ligue des droits humains*, para. 195).

<sup>14</sup> EU Commission, Explanatory Memorandum to the Proposal for a Regulation of the European Parliament and of the Council laying down harmonized rules on Artificial intelligence (Artificial Intelligence Act) and amending certain Union legislative acts COM/2021/206 final, 1.1. (21 Apr. 2021).

<sup>15</sup> *Ibid.*

<sup>16</sup> *Ibid.*

Act. For example, AI systems in the sphere of law enforcement (see point 6 of Annex III to the proposed AI Act) that are used, for example, to carry out individual risk assessments of natural persons in order to estimate the risk of a natural person committing a criminal offence (again) are considered a high-risk AI system. Recital 37 of the initial proposal of the AI Act published on the 21 April 2021 prescribed that ‘systems used by tax administrations should not be regarded as high-risk systems of law enforcement authorities’. This carve-out was remarkable knowing that the first draft of the proposal was published only three months after the revelation of the Childcare benefit scandal caused by the Dutch tax administration (see *supra*).<sup>17</sup> Later on this recital was amended. Currently recital 38 (former recital 37) in fine of the proposed AI Act states the following: *AI systems specifically intended to be used for administrative proceedings by tax and customs authorities should not be considered high-risk AI systems used by law enforcement authorities for the purposes of prevention, detection, investigation and prosecution of criminal offences*.<sup>18</sup> This amended recital raises several questions. The carve out it contains supposes clear criteria to distinguish between administrative and other proceedings by tax and customs authorities.<sup>19</sup> In Article 70.1 sub (c) of the AI-Act the distinction is made between criminal and administrative proceedings.

If the logic of recital 38 is that AI systems used in administrative proceedings by tax authorities do not pose a high risk as opposed to when used in criminal proceedings, one should first be aware of the difficulties that may exist in distinguishing between these two types of proceedings. Indeed, it is also not clear whether the case law on the distinction between administrative and criminal proceedings as it exists in Article 6 of the European Convention on Human Rights (ECHR) and on which this aforementioned distinction in recital 38 might be based, can be used as guidance.<sup>20</sup> Furthermore one can raise the question

whether making the distinction between those two types of proceedings makes sense. Why should the use of AI-systems for data collection, risk detection and risk-scoring by tax authorities with a purely administrative end-goal be treated differently then when they are used in view of another (criminal) proceeding? Both types of use (administrative or non-administrative) can raise fundamental rights issues. Viewing the important role AI systems will play in the tax collection model as put forward in the OECD tax administration model 3.0, more protection of the taxpayer is needed even when these systems are only used with a purely administrative end-goal. For instance in the AI-Act, AI systems aimed at biometric identification are considered as high-risk systems (see point 1 of Annex III to the proposed AI Act), unless they are specifically intended to be used for administrative proceedings. The tax administration 3.0 model however does rely on biometric data to identify taxpayers. The carve out in recital 38 in fine risks becoming problematic in that context. Another example concerns AI systems regulating the access to and the use of public services and benefits. The AI-Act considers those systems also as high-risk systems (point 5 of Annex III to the proposed AI Act). Even nowadays tax administrations are often deployed to grant benefits either directly or indirectly in the form of tax credits or deductions of all kinds. The use of AI systems with that objective by the tax authorities need in our view – although purely administrative – also be surrounded by sufficient safeguards for the taxpayers fundamental rights.

### 3 CONCLUSION

The increasing use of AI systems in the EU by tax administrations raises questions about the protection of taxpayers’ fundamental rights. In particular, the question arises whether a far-reaching automation of the tax collection process in which an active human intervention (both of the taxpayer and the tax official) is gradually reduced, does not also require an explicit provision to keep human control possible during the tax collection process.

The GDPR assumes a principled ban on purely automated decisions. Meaningful human intervention is the rule. However, for tax matters, the GDPR does allow this prohibition on purely automated decisions to be put aside. In that case, however, the law must provide ‘appropriate measures to protect the rights and freedoms and legitimate interests of the data subject’. More explicit guidance on these ‘appropriate measures’ seems necessary.

An analysis of the AI Act reveals that the use of the AI systems by tax authorities – due to the carve-out provision in recital 38 of the AI Act – is not clearly regulated. More explicit regulation is however needed to ensure that the fundamental rights of taxpayers are not violated. If in the future, as advocated by the OECD in its tax administration 3.0 model, human intervention in the tax collection process will be further reduced, this need for more clarity becomes more imperative.

<sup>17</sup> Hadwick, *supra* n. 3.

<sup>18</sup> Council of the European Union, Proposal for a Regulation of the European Parliament and of the Council laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) and amending certain Union legislative acts- General approach, 25 Nov. 2022, <https://data.consilium.europa.eu/doc/document/ST-14954-2022-INIT/en/pdf> (accessed 11 Jan. 2024).

Note that the proposed Regulation mentions ‘should not be considered high risk’, while the European Parliament’s amendment mentions ‘should not be classified as high-risk’. The question arises whether by this amendment the European Parliament does not seem to recognize that while it is intrinsically about high-risk AI, AI in a tax environment should not be classified as such for this regulation (Amendments adopted by the European Parliament on 14 Jun. 2023 on the proposal for a regulation of the European Parliament and of the Council on laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) and amending certain Union legislative acts (COM(2021)0206 – C9-0146/2021 – 2021/0106(COD))).

<sup>19</sup> See e.g., the critique in this respect of Hadwick, *supra* n. 3.

<sup>20</sup> Notwithstanding the case law on the distinction between administrative and criminal proceedings in Art. 6 European Convention of Human Rights (ECHR) on which these distinction might be inspired. See in this respect Hadwick, *supra* n. 3.