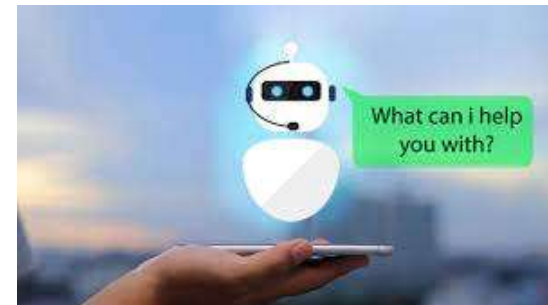


Transparency in tax technology

Focus

- Tax technology used by tax administrations
 - Digital platforms for submission of tax returns
 - Chatbots
 - Data mining
 - ...



- Extent of transparency on the use of this tax technology



Why transparency?

Tax technology that involves AI :

- AI: transparency requirement is generally acknowledged – basic requirement for “trustworthy AI”
- see proposed Regulation on AI : motivation for transparency:

“The use of AI with its **specific characteristics** (e.g. opacity, complexity, dependency on data, autonomous behaviour) can **adversely affect** a number of **fundamental rights**” (f.ex.: respect for private life (Articles 7), non-discrimination (Article 21)).
“**effective redress** for affected persons will be made possible by ensuring **transparency** and traceability of the AI systems coupled with strong ex post controls”.



Why transparency ?

- **Tax technology that involves AI :**
- Case law: Dutch SyRI – case (*Systeem Risico Indicatie*)
 - SyRI is a legal instrument used by the Dutch government to detect various forms of fraud, including social benefits, allowances, and taxes fraud.
 - Allowed using algorithm-based profiling based on a wide range of historical “training” data: tax data, data on movable and immovable property, data on social assistance benefits, housing data, education data, ...
 - More risk predictions in certain disadvantaged areas, vulnerable neighborhoods



Why transparency ?

- NL Court of Den Haag, 5/2/2020
 - SyRI qualifies as an interference in private life (art. 8 ECHR), only legitimate if there is a fair balance between interests of the parties
 - Insufficient transparency to weigh the interests involved
 - Predictive model (not public)
 - Extensive list of categories of data listed in the law, but no information about data actually processed
 - No notification in case of risk prediction
 - Human intervention unclear
 - Lack of transparency is even more serious because of (unintentional) discriminatory effects



Why transparency?

Tax technology that does not involve AI:

- mostly processing of personal data
 - not only when data explicitly refers to an individual
 - *“any information related to an identified or identifiable natural person”*
 - f.ex.: value of houses
 - data on legal persons mostly mixed with data on individuals when processed for tax purposes (Google Spain Case 2014)
 - f.ex.: tax return contains data on directors, employees...



Why transparency ?

Tax technology that does not involve AI:

- GDPR is applicable:
 - Transparency is cornerstone principle
 - Why?
 - To check compliance with GDPR principles (proportionality, prohibition of processing sensitive data, storage limitation, ...)
 - Also to protect other fundamental rights (cons.4 GDPR):
“..., freedom of thought, conscience and religion, freedom of expression and information, freedom to conduct a business, the right to an effective remedy and to a fair trial, and cultural, religious and linguistic diversity”.

Why transparency?

Technology used by public authorities

- principle of good administration
 - Art. 41 and 42 Charter (addressed to bodies of the Union, but general principle of EU-law)
 - Access to documents (32 Belgian Constitution), obligation to give reasons for decision
- Right to be informed is also an aspect:
 - Freedom of expression (art.10 ECHR: "...This right shall include freedom to (...) receive information (...)")
 - Right to private life (art. 8 ECHR)

Current legal framework

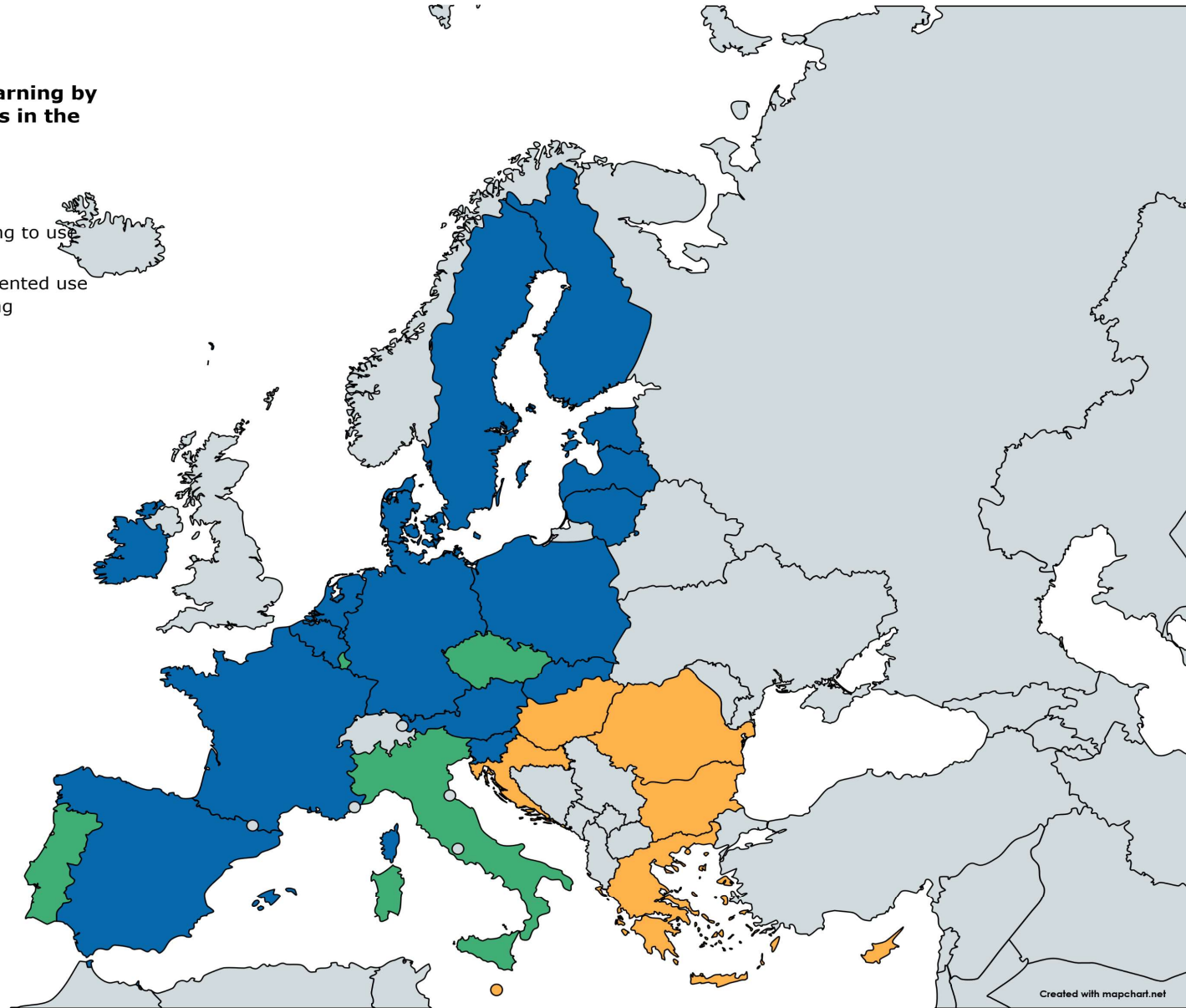
- Omnibus Regulation
- Principle based - vague
- AI: “Current legal framework is not sufficient”

Impact for tax?

- What kind of tax technology is used in practice?
 - Is AI involved?

Use of machine-learning by tax administrations in the EU

- Tax admin. using machine-learning
- Tax admin. planning to use ML in near future
- No publicly documented use of machine-learning



Impact for tax?

- How transparent are tax authorities?
 - What do we know?
 - What do we need to know?
 - Relation to the purpose of transparency
 - Balance with the legitimate interests of TAs

Impact for tax?

- Case study:

Belgium - Data mining for fraud detection

TAX FRAUD

Data mining in Belgium

- Data mining?
 - “process of finding anomalies, patterns and correlations within large data sets to predict outcomes”.
 - So:
 - **algorithms**
 - to find **the coherence** within a large set of data
 - create mathematical “model” (**profiling**)
 - **Apply** the model to the population of taxpayers
 - **Self learning**

Data mining in Belgium

- Exists in Belgium for at least 18 years
 - Indirect sources
 - working paper of the federal Planning Bureau in 2003, ...

Data mining in Belgium

- Article 5 of the Law of August 3, 2012 on the processing of personal data by the FPS Finance
 - Legal framework: former directive on the protection of personal data 95/46
 - “the FPS Finance can **combine** the personal data it gathered in the framework of its legal tasks for the establishment of a **datawarehouse**. This datawarehouse enables the FPS to conduct “targeted audits based on **risk indicators**” and to “analyse relational data of several departments within the FPS”.
 - The data will be encrypted
 - Decoding only in case of risk of violation of the law

Data mining in Belgium

- Since the “implementation” of GDPR in Belgian law (September 5, 2018): article 5 of the Law of August 3, 2012 was amended
- -> clarification of definition:
- “(...) the Federal Public Service Finance can, (...),
 - on the one hand, carrying out targeted audits based on **risk indicators** and,
 - on the other hand, carrying out analyses on relational data originating from various administrations and/or services of the Federal Public Service Finance,combine the data (...) in a data warehouse as a result of which **data mining and data matching processes** can be carried out, including **profiling** within the meaning of Article 4, 4) of the GDPR

Data mining in Belgium

Profiling art. 4, 4° GDPR:

“profiling’ means any form of automated processing of personal data consisting of the use of personal data **to evaluate** certain personal aspects relating to a natural person, in particular to **analyse or predict aspects concerning that natural person's** performance at work, economic situation, health, personal preferences, interests, reliability, behaviour, location or movements”

Data mining in Belgium

- Article 5 of the Law of August 3, 2012 on the processing of personal data by the FPS Finance
 - For **each category** of data that is added to the datawarehouse, an **authorization** of the Federal Authority Sectoral Committee (within the (former) Privacycommission) is required.
 - Sectoral Committees: role within a unique Belgian model with authorisations for electronic data flows within federal public authorities
 - Authorizations published
 - Authorization 2015/8.

Data mining in Belgium

| | | | |
|--------------|---|---------------------------|--|
| Klantenlijst | Bevat de lijsten van de klanten BTW-belastingplichtigen dienen aan te geven, en de bedragen aan omzet en BTW per klant. | CODE_DECLARATION_TVA_CASE | Code de la case dans une déclaration à la TVA. Gedeeld met BTW Aangifte. |
| LOCO | Het systeem bevat de informatie betreffende de aan- en verkoop; en verhuur van onroerend goed. | LOCO_EIGENAAR | Overzicht van de eigenaren van een perceel en hun informatie. |
| LOCO | Het systeem bevat de informatie betreffende de aan- en verkoop; en verhuur van onroerend goed. | LOCO_PERCEEL | Overzicht van de percelen en hun locatie. |
| STIRFRAUDE | Resultaten van controle-acties BBI | CODE_FRAUDE_ACTIV_REF | <i>Bevat de gebruiker en systeem</i> |
| TAXI | Personenbelasting komende uit TaxOnWeb(TOW) en scanning (papieren formulieren). | TAXI_DOSSIER | Bevat de dossiergegevens van de personenbelasting. |

Data mining in Belgium

| | |
|--|--|
| Fichier du FISC NL | Le fichier reçu par l'Administration fiscale des Pays-Bas permettant d'identifier les détenteurs belges de biens immobiliers aux Pays-Bas. |
| JRC (Joint Research Committee) van de Europese | JRC (Joint Research Committee) de la Commission Européenne. DB2 ou excel comprenant les prix moyens par code produit, par pays d'origine et pays de destination pour les importations, utilisé pour être comparés au prix réellement pratiqué. Il s'agit d'un contrôle supplémentaire et une validation des prix calculés. |
| Mémorial Luxembourgeois | Base de données contenant des listes des citoyens belges ayant des fonctions d'administrateurs dans des sociétés grand-ducales. Ces listes contiennent l'identification des belges, le nom de l'entité au Luxembourg, la fonction exercée, les dates relatives à ces fonctions ainsi que les dates et références relatives à la publication au journal officiel. |
| Mathematisch model van de verkoopwaarde van huizen | Het is informatie over de berekende verkoopwaarde van onroerend goed die is opgenomen in Report Layer PATBASL in 3 velden : de meest waarschijnlijke verkoopwaarde, de minimum normale verkoopwaarde, de maximum normale verkoopwaarde. |
| Offshore leaks, offshore ISI | Ensemble de données (assez hétéroclites) collectées par un collectif de journalistes internationaux relative à des structures situées dans des paradis fiscaux. |

Data mining in Belgium

- Amendment of article 5 of the Law of August 3, 2012 by the law of September 5, 2018
 - Integration of personal data provided **by a third party** in the data warehouse is subject to a deliberation of the competent chamber of the “**Information Security Committee**”.
 - Step backwards?
 - Only third party information (what about internet information, DAC, ...?) – no deliberation is published
 - Information Security Committee = new organ (Federal Authority Sectoral Committee was abolished) – not part of DPA - law provides safeguards of independency – however: complaint at EC

Data mining in Belgium

- Article 11 and 11/1 of the Law of August 3, 2012 (as amended in 2018):
- **Transparency rights** of data subjects (right to be informed - 13 and 14 GDPR - and right of access - 15 GDPR) can be **postponed or limited** during tax audit or preparation thereof in case the application of these rights could be detrimental for the tax audit.
- Art. 23 GDPR: member states are allowed to restrict rights if necessary and appropriate to safeguard public interest (taxation) and when the essence of fundamental rights is respected

Data mining in Belgium

- **Transparency rights** of GDPR: information on:
 - purpose of the processing
 - categories of personal data
 - sources of the personal data
 - ...
 - whenever automated decision making is involved, including profiling: “**meaningful information about the logic involved** as well as the significance and the envisaged consequences of such processing for the data subject”...

Data mining in Belgium

Meaningful information about the ‘logic involved’

The growth and complexity of machine-learning can make it challenging to understand how an automated decision-making process or profiling works.

The controller should find simple ways to tell the data subject about the rationale behind, or the criteria relied on in reaching the decision. The GDPR requires the controller to provide meaningful information about the logic involved, not necessarily a complex explanation of the algorithms used or disclosure of the full algorithm.⁴⁰ The information provided should, however, be sufficiently comprehensive for the data subject to understand the reasons for the decision.

Working Party Article 29 – Guidelines on Automated Individual decision-making and Profiling for the purpose of Regulation 2016/679.

Link with data science



- How to understand the algorithm ?

Thank you !



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