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France's approach to artificial intelligence by the French tax system

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L'appréhension de l'intelligence artificielle par la fiscalité française

The application of GTP4 Chat has opened up new and more intense possibilities for the application of artificial intelligence At the same time, the possibility of acquiring new and more information in a difficult balance between greater administrative efficiency and the necessary respect for the privacy of personal data The use of artificial intelligence procedures has become massive on the part of the Ministry of Finance, but the corresponding applications have been of a varied experimental nature. The consequences of this technological revolution on tax procedures and its necessary legal framework, both by the legislator and by the independent administrative authorities (in particular the CNIL) and the courts, have yet to materialise.

L'application du Chat GTP4 a ouvert des possibilités nouvelles et plus intenses pour l'application de l'intelligence artificielle Dans le même temps, la possibilité d'acquérir des informations nouvelles et plus nombreuses dans un équilibre difficile à trouver entre une plus grande efficacité administrative et le respect nécessaire de la vie privée des données personnelles L'utilisation de procédures d'intelligence artificielle est devenue massive de la part du ministère des finances, mais les applications correspondantes ont été de nature diversement expérimentale. Reste encore à matérialiser les conséquences de cette révolution technologique sur les procédures fiscales et son nécessaire encadrement juridique tant par le législateur que par les autorités administratives indépendantes (notamment la CNIL) et les juridictions.

Keywords: Digital economy; Ministry of Economy and Finance; fines management; tax control; targeting fraud; IA innovative management.

Summary: 1. Adapting tax audits to the new digital economy – 2. The use of public data placed online for taxation outside the digital economy – 3. Massive development of the use of AI by the Ministry of the Economy and Finance – 3.1. AI not intended for control purposes – 3.1.1. AI LLaMandements de gestion des amendements – 3.1.2. Weak signals' AI for predicting company failures – 3.2. AI intended for control – 3.2.1. Targeting fraud and enhancing requests – 3.2.2. Innovative real estate AI

The launch of ChatGPT in November 2022 was perceived by the public as a digital revolution opening a new era. However, artificial intelligence (AI) technologies were envisaged as early as the 1950s and experienced a boom in the 2010s well before ChatGPT thanks to the development of the computing power of information systems and new machine learning techniques. According to the OECD, "an artificial intelligence system is an automated system that, for explicit or implicit objectives, infers, from received inputs, how to generate output results such as forecasts, content, recommendations or decisions that can influence physical or virtual environments. Different AI

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systems have varying degrees of autonomy and adaptability after deployment".[1] This definition was taken up literally in the draft Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law of 17 May 2024. Thus, in the explanatory report of the convention, it is mentioned that this "definition reflects a broad understanding of what artificial intelligence systems are, in particular in contrast to other types of simpler software systems, based on rules defined solely by natural persons to automatically execute operations". But it should above all be noted that this highly symbolic choice to rely on the definition adopted by the OECD on 8 November 2023 stems from the need to improve international cooperation on the subject of artificial intelligence and above all reflects a desire to achieve governance of artificial intelligence at the global level. Similar ambition is found in EU Regulation No. 2024/1689 of 13 June 2024 establishing harmonised rules on artificial intelligence. While for the Committee an artificial intelligence system is "software that is developed using one or more of the techniques and approaches listed and that can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations or decisions that influence the environments with which it interacts", the European Parliamentarians (drawing on the work of the OECD and considering that the notion of an AI system should be closely aligned with the work of international organisations working in the field of AI) successfully insisted on the introduction of the notion of autonomy. Thus, Article 3 of the adopted Regulation provides that an AI system means an "automated system that is designed to operate at different levels of autonomy and can demonstrate an ability to adapt after its deployment, and that, for explicit or implicit objectives, infers, from the inputs it receives, how to generate outputs such as predictions, content, recommendations or decisions that can influence physical or virtual environments". Thus defined at the global and European level, it remains to be seen how national administrations, and in particular tax administrations, have understood the impact of this new technology. First, it is appropriate to measure how public authorities have adapted to the new digital economy to identify taxpayers and taxable transactions (I). Secondly, it is worth mentioning the recent experiments in the collection and use of certain data accessible on the net even though they concern traditional economic bases (II). Finally, it is appropriate to analyze how tax investigation and control practices are being rethought through the use of data mining and artificial intelligence (III).

1. Adapting tax audits to the new digital economy

Traditionally, the tax administration has a right of communication (articles L 81 et seq. of the LPF) which authorizes its agents to take cognizance and copy a certain number of documents from taxpayers but also from third parties to use them for assessment, control or recovery purposes. This old prerogative, particularly valuable for the administration when exercised with third parties (such as banks, insurance companies, bailiffs, notaries, social security organizations or other public administrations) has been modernized to adapt to the impact of new technologies and especially to developments in the digital economy and more recently the collaborative economy.

In this context, the law allows agents to obtain information relating to unidentified persons (LPF, art. L 81, al. 2). This involves soliciting electronic communications operators and access providers (LPF, art. L 96 G), in order to detect serious offences, all punishable by an increase of 80% (hidden activity, trafficking in illicit goods, failure to declare assets abroad, inadequacies noted or omissions in declarations taking the form of an abuse of rights or fraudulent manoeuvres).

In its old wording, tax agents could, without prior authorisation (within the framework of the right of communication), obtain communication, for the purpose of researching or establishing certain offences listed exhaustively, of certain data held by electronic communications operators and Internet access and hosting providers. This concerned the data processed and stored relating to the identification of the seller or service provider, the nature of the goods or services sold, the date and

1. OCDE, *Council Recommendation on Artificial Intelligence*, OECD/LEGAL/0449

amount of sales or services carried out, etc., making it possible to detect or prove certain frauds, particularly international ones.

The legislator had to reform this system to initially comply with the case law of the Constitutional Council with regard to the right to respect for private life.[2] Consequently, Article 15 of Law No. 2018-898 of October 23, 2018 relating to the fight against fraud framed this system with specific guarantees, namely:

- the limitation of the purposes pursued to the search for or the observation of the most serious breaches, such as hidden activities, the holding of undeclared foreign accounts, false invoices, schemes intended to mislead the tax administration;
- the requirement of prior authorization from the public prosecutor, issued upon reasoned request from the administration;
- the obligation to destroy the data collected within a limited time frame because the information communicated to the administration must be destroyed at the latest after a period of one year from its receipt, with the exception of that used in the context of a control procedure, which must be destroyed upon expiry of all avenues of appeal.

Since these guarantees are still considered insufficient following the case law of the CJEU[3] and the Council of State,[4] the legislator has again intervened, in two stages, to limit the implementation of this right of communication. First of all, Article 173 of the Finance Act for 2021 placed the exercise of the right of communication with Internet operators under the authorization of a controller of connection data requests who now issues prior authorization in place of the public prosecutor. In order to guarantee his impartiality, this controller is elected, alternately, by the Council of State and by the Court of Cassation from among their members for a non-renewable period of 4 years. Its independence means that it cannot receive instructions from the DGFiP or any other authority. Then, Article 145 of the Finance Act for 2022 further restricts the scope of the tax administration's right of communication with electronic communications operators and Internet access and hosting providers. The latter is thus limited to only the most serious offences, namely those that are generally punished by an increase of 80%.[5]

- If the right to privacy has led the legislator to restrict the effectiveness of Article L 96 G of the LPF by reducing its scope, this does not fundamentally harm the tax administration since it now has wide access to the desired information with the new Articles 1649 ter A et seq. of the CGI, creating a reporting obligation for platform operating companies, which connect

2. Cons. const., 8 Sept. 2017, no. 2017-752 DC and 2017-753 DC (Procédures no. 11, November 2017, comm. 293 Comment Ludovic Ayrault

   83. The communication of connection data is likely to infringe the right to privacy of the person concerned. By failing to provide sufficient safeguards for the procedure set out in the provisions in question, the organic legislator has disproportionately infringed this right.

3. CJUE, gde ch., 6 oct. 2020, aff. C-245/19 et C-246/19, Luxembourg c/ B et a.. :; Dr. fisc. 2020, n° 42, act. 330

4. [4]CE, ass., 21 avr. 2021, n° 393099, 394922, 397844, 397851, 424717 et 424718, French Data Network et a. : JCP G 2021, 659 , note A. Iliopoulou-Penot

5. The following offences are therefore now excluded from the right to obtain information from electronic communications operators: shortcomings, omissions or inaccuracies in declarations, punishable by an increase of 40% in the event of deliberate failure to comply (CGI, art. 1729, a); breaches of invoicing rules, for which the penalty has just been brought into line with the Constitution (CGI, art. 1737, I); transfers of sums to or from abroad via undeclared accounts, undeclared life insurance policies or by means of cash transfers carried out in disregard of customs declaration obligations, punishable by a 40% increase in the taxation of the corresponding income (CGI, art. 1758, al. 1); late filing of the annual IFI return when this follows disclosure of foreign assets, punishable by an increase of 40% (CGI, art. 1728, 5); breaches by trusts administrators, punishable by a fine of €20,000 (CGI, art. 1736, IV bis); breaches by individuals, associations and companies not having a commercial form, domiciled or established in France, concerning the references of foreign accounts, punishable by a fine of €1,500 per undeclared account, as well as, under the same penalties, concerning repayable non-interest bearing advances that they grant (CGI, art. 1736, IV, 2); non-compliance by subscribers to life insurance policies taken out with organisations established abroad, subject to a fine of €1,500 per undeclared policy (CGI, art. 1766).

people remotely, electronically, with a view to selling goods, sharing goods or providing a service. Indeed, several parliamentary reports[6] highlighted the inadequacy of the tax system in the face of the development of the collaborative economy. If the income generated through these platforms is in theory taxable under ordinary law conditions, very little is actually declared, resulting in a significant loss of tax revenue but also unfair competition for traditional economic operators. In order to remedy this situation, the legislator has intervened on multiple occasions to strengthen the reporting obligations incumbent upon these digital platform operators.

- Firstly, Law No. 2015-1785 of 29 December 2015 on Finance for 2016 established, incumbent upon online platforms, not only a duty to inform users about their tax and social obligations on the occasion of each transaction but also the transmission of a "user statement" which summarizes the gross amounts received through them and the number of transactions carried out during the year.[7]

- Not allowing a real "tax inquisition", this initial system was supplemented by an obligation to automatically declare to the tax authorities the income of platform users (law no. 2016-1918 of 29 December 2016 on the 2016 amending finance law, and law no. 2018-898 of 23 October 2018 on the fight against fraud). In this context, platform operating companies, which connect people remotely, electronically, with a view to selling goods, sharing property or providing a service in France, must transmit to the tax authorities the same information that they provide to their users, namely the identification of the platform operator, the identification of the user, the status of individual or professional, the number of transactions carried out, the user's bank account and of course the total gross amount of transactions carried out over a year. This declaration, which must allow the identification of sellers or service providers and account holders, is filed electronically with the tax authorities no later than January 31 of the year following the year in which the transactions were carried out. As an exception, transactions carried out by persons who have carried out, during the declaration period, fewer than 20 sales of goods for a total amount of less than €3,000 are not subject to declaration.

- Following the adoption of the "DAC 7" directive of March 22, 2021, Law No. 2021-1900 of December 30, 2021, relating to the Finance Act for 2022, completely modified the system within the new Articles 1649 ter A et seq. of the CGI, by introducing a harmonized reporting obligation. Coming into force in 2023 (for an initial declaration sent no later than 31 January 2024), the new system is intended to be more effective because it concerns more platform operators and is part of an international logic of information exchange. All platform operators resident in France or those "established in accordance with French law" must now subscribe to this declaration obligation, as well as those with a permanent establishment in France or having set up a head office there. However, non-resident operators are mainly targeted, when they "facilitate operations to be declared" and have not submitted a similar tax declaration to their own tax administration, when they are located in another Member State or in a State that has concluded an agreement with France allowing an automatic exchange of information concerning operations carried out by sellers or service providers via digital platforms. Although the number of operators subject to this obligation is greater, it concerns fewer operations. Of course, it still targets the provision of services by natural persons, sales of goods, rentals of modes of transport or real estate of any kind; but rental transactions relating to other movable property are no longer concerned. Similarly, transactions carried out by natural persons are not subject to declaration having carried out, during the declaration period, less than 30 sales of goods for a total amount of less than €2,000.

6. Notably Senate, info. report no. 690, 17 Sept. 2015 and Senate, info. report no. 481 of 29 March 2017.

7. Although 'DAC 7' does not expressly require platforms to inform sellers or service providers of their potential tax obligations, this obligation, introduced by the 2016 Finance Act in Article 242 of the General Tax Code, has been maintained throughout the various reforms and transpositions.

- The effectiveness of the system is guaranteed by the existence of a range of sanctions against defaulting platform operators. Thus, according to Article 1736 XI of the CGI, failure by platform operators to comply with their obligations is punishable by a fixed fine, which is subject to modulation according to the nature of the offence committed and, in any event, cannot exceed €50,000. At the same time, the legislator has provided for the possibility of including platform operators who repeatedly fail to comply with their reporting obligations on a "blacklist" of non-cooperative platform operators (CGI Art. 1740 D), the publication of which is subject to the agreement of the Tax Offences Commission. Finally, regarding platform operators located outside the European Union, Article 1740 E provides for specific sanctions since they may have their individual registration number withdrawn upon expiry of a period of three months following two formal notices (respectively of 3 months and 30 days) to comply with their reporting obligations.

2. The exploitation of public data posted online for taxes unrelated to the digital economy

While the digital economy has required the adaptation of reporting obligations and other means of information research available to the tax administration, the latter is taking advantage of these same new technologies and new uses to equip itself with means of control for taxes whose base is in no way linked to digital technology. Indeed, in order to facilitate the identification of fraudulent behavior, Article 154 of Law No. 2019-1479 of December 28, 2019 on Finance for 2020, supplemented by Decree No. 2021-148 of February 11, 2021, taken after the opinion of the CNIL (Deliberation No. 2020-124 of February 10, 2020) authorized the tax administration, on an experimental basis and for a period of three years, to collect and exploit freely accessible content published on the Internet by users of online platform operators. Potentially prejudicial to privacy and freedom of expression online, this massive and automatic collection of personal data on websites and social networks was first subject to the requirement of guarantees set by the National Commission for Information Technology and Civil Liberties (CNIL)[8] and then to very partial censorship by the Constitutional Council[9] in order to establish a precise framework. Indeed, while it validated the system overall, the Constitutional Council nevertheless considered that it disproportionately infringed the right to respect for private life and freedom of expression and communication insofar as it concerned failures or delays in producing a tax return within 30 days of receiving a formal notice. For the constitutional judge, "in such a situation, the administration, which has formally notified the taxpayer to produce his return, is already aware of an infringement of the tax law, without needing to resort to the automated system for collecting personal data".

8. CNIL, Décision n° 2019-114 du 12 sept. 2019

9. Cons. const., Décision. n° 2019-796 DC du 27 déc. 2019

This framework operates at three levels:

- First of all, the tax administration can only use "open data", i.e. data that is deliberately disclosed and access to which does not require entering a password or registering on the site. It is also specified that when the person is the owner of a personal page on the Internet allowing third parties to post comments, these comments cannot be exploited in any way.
- The conditions for storing the information collected have also been specified: only data that can detect fraudulent behavior may be stored for a maximum period of one year for exploitation purposes. All other data must be destroyed within 30 days, or even 5 days for sensitive data: this particularly concerns health status, racial or ethnic origin, sexual orientation, etc.
- Finally, the information collected can only be used to detect certain tax offences, namely hidden activities, deliberate breaches or fraudulent manoeuvres aimed at a fictitious or artificial domicile abroad, smuggling and the sale of counterfeit products as well as customs laundering. Furthermore, the information collected in this context cannot alone form the basis for a recovery. Transmitted to the agents of the services responsible for territorially competent control for corroboration and enrichment, this data only makes it possible to establish that there are indications that a person may have committed one of the offences referred to.

Due to the success of this experiment, the 2024 Finance Act not only extended these provisions until 31 December 2025, but also broadened their scope. While the initial system was restricted to the sole collection and exploitation of content freely accessible on websites and clearly made public by their users, the current text authorises the collection of data even when access to these platforms requires registration for an account: in practice, tax and customs administration agents will thus be able to create an account on the website of an online platform in order to access content made public by taxpayers.[10] In addition, with regard to tax offences, deliberate breaches or fraudulent manoeuvres that have led to an understatement or concealment of revenue are now also targeted. In return for this strengthening of the collection system, "the 2024 Finance Act provides for the obligation for the tax administration and the customs administration to transmit to the CNIL the list of collection operations undertaken. Furthermore,"these administrations will also have to make available to the public, throughout the duration of the experiment, information that is easily accessible online on the purposes and operating procedures of the authorized treatments."[11] As Professor DUSSART observes, if the tax audit procedures are very strictly regulated by a set of guarantees offered to taxpayers, "the use of data mining technologies or those derived from artificial intelligence does not call into question the taxpayer's traditional guarantees."[12]

In parallel with this rise in "web scraping", the 2024 Finance Act opens up the possibility for tax agents to carry out pseudonymous investigations on websites, social networks and messaging applications. In addition to the fact that agents have the possibility of learning about information publicly accessible on the internet, even if this requires the creation of a user account, the main new feature is to take advantage of this pseudonymity by exchanging with taxpayers suspected of breaches. In this context, agents have the ability to extract and retain data and evidence obtained during exchanges with suspected persons.

To the extent that the Constitutional Council has not ruled on this power to extract and retain data, doubts may be expressed about its constitutionality: however, the legislator has provided the system with guarantees.

- First of all, the new article L10-0 AD of the Book of Tax Procedures provides that only public finance agents with at least the rank of public finance controller (and subject to benefiting

10. Audrey Vivaldi, Extension and extension of the experiment of the collection by the Administration of content freely accessible on online platforms, Tax Law No. 3, January 18, 2024, comm. 147

11. Ariane Périn-Dureau, One year of intangible taxation, Electronic Commerce Communication No. 2, February 2024, 3.

12. Vincent Dussart, Artificial intelligence and data mining in the service of corporate tax audits, in Business and artificial intelligence, Dir. Alexandra Mendoza-Caminade, Presses de l'Université Toulouse Capitole, 2023, p. 167

from special authorization) can carry out this type of investigation. While the text guarantees agents that they are not criminally liable for their actions, it nevertheless specifies that these agents must not encourage taxpayers to commit a breach: otherwise, the acts are null and void.

- But it appears above all that this new right of investigation has a limited scope; it is only applicable to search for or establish a hidden activity, a deliberate breach, abuse of rights or fraudulent maneuvers, a failure to declare a foreign bank account, etc., a presumption of undeclared income from certain illegal activities.

While the guarantees provided by the legislator are therefore numerous, some commentators regret that the text is "silent on the possibility for agents to process the data collected".[13] The question is all the more relevant since this data processing could prove to be automated with the development of new AI available to the tax administration.

3. The massive development of the use of AI by the Ministry of Economy and Finance

According to the Court of Auditors, the departments and services of the Ministry of Economy and Finance are studying, developing or operating no less than 35 artificial intelligence systems in 2023, of which thirteen are already deployed and operated, eight are under development and 14 are envisaged or are the subject of a feasibility study.[14] These technologies are classified from a technical point of view into three categories by the Court of Auditors:

- "Natural language processing, which allows the creation of generative AI capable of creating and analyzing texts, images or sounds…;
- Classification and prediction by clustering or regression, which allows AI to be trained to detect anomalies or risky files, to automatically generate samples of files representative of a set, or to contribute to the automatic generation of responses by selecting data adapted to the request;
- Image analysis by neural networks: these networks are composed of at least three layers of neurons: an input layer that receives raw data, connected to a hidden layer that processes this data, itself connected to an output layer that produces the result".

These new technologies are mainly intended for fraud detection, since 16 AI systems out of 35, or 46% of the total, are dedicated to it (2): however, there are other experiments that are more or less directly of interest to taxation that deserve to be mentioned (1).

3.1. AI not intended for control

On April 23, 2024, Prime Minister Gabriel Attal presented a family of generative artificial intelligence models called "Albert", capable of autonomously producing content intended to speed up administrative formalities and provide safe, clear and effective answers to users of public services.[15] While eight "Albert" models have already been launched, only two are currently used within the administration, including an experiment by "France Services" which provides agents of the 2,750 counters in the network with a specific written response to questions asked by citizens. Regardless

13. In this sense: Catherine Cassan and Paul Mispelon, Possibility for Administration agents to carry out active investigations under pseudonyms on websites, social networks and messaging applications, Tax Law No. 3, January 18, 2024, comm. 148

14. Court of Auditors, "Artificial intelligence in public policies: the example of the Ministry of Economy and Finance", Report S2024-1165 of July 18, 2024, p.14

15. Court of Auditors, "Artificial intelligence in public policies: the example of the Ministry of Economy and Finance", Report S2024-1165 of July 18, 2024, p.14

of the deployment of this integrated artificial intelligence system "Albert" which goes beyond the scope of compulsory levies, two experiments directly related to taxation deserve to be presented.

3.1.1. The LLaMandements AI for managing amendments

The General Directorate of Public Finances (DGFiP) has initiated the LLaMandements project which is based on a "large language model" (abbreviated to LLM) which is a type of AI for the synthesis of parliamentary work. It is a tool for monitoring amendments to PLFs, allowing their semantic analysis, the grouping of families of amendments, the identification of duplicates and producing a summary. Its objective is not only to allow the understanding and analysis of text but also to generate it. Benefiting in particular the Budget Directorate and the Tax Legislation Directorate, this new AI was used for the first time during the examination of the draft finance bill for 2024: it allowed the Tax Legislation Directorate to synthesize several thousand amendments tabled by senators and deputies. Thus, the LLaMmendements AI system relieves agents of tasks consisting of classifying and summarizing parliamentary amendments. To achieve this result, the tax administration relied on the Meta (Facebook) language model, already used by the Interministerial Digital Directorate.

3.1.2. AI "Weak Signals" for predicting business failures

After an experimental phase in Bourgogne-Franche-Comté, the General Directorate for Enterprises (DGE), the Banque de France, the General Delegation for Employment and Vocational Training (DGEFP), the Central Agency for Social Security Organizations (ACOSS), the Interministerial Directorate for Digital Technology and the State Information and Communication System (DINSIC) and the General Directorate for Public Finances (DGFiP) have signed an agreement to deploy a business failure prediction tool called "Weak Signals".

This is a "partnership approach" between administrations that makes it possible to identify fragile businesses as early as possible in order to offer them support solutions adapted to their needs. The project is based on an algorithm, based on learning mechanisms, which calculates the risk of failure at 18 months for companies with more than 10 employees, by mobilizing and cross-referencing all the data held by government departments, social security organizations and the Banque de France. Financial data (financial ratios, balance sheet and income statement) are thus cross-referenced and analyzed.

As well as employment data and social data. In this protected framework, authorized agents can, on the one hand, consult the data relating to companies available to the various government departments and, on the other hand, prioritize their instigations and, therefore, optimally target contacts with fragile companies identified by AI, while adapting their support.

Concerning sensitive data, the "Weak Signals" AI system has been the subject of significant guarantees: thus the confidentiality of the data is ensured because the AI system is hosted on an infrastructure that has obtained the SecNumCloud label issued by ANSSI (National Agency for the Security of Information Systems). This label aims to attest to the "quality and robustness of a cloud service" and thus includes real guarantees in terms of confidentiality and protection of sensitive data. Furthermore, to inspire confidence among both users and businesses, the "Weak Signals" system required a high "level of explainability" as observed in the 2024 Court of Auditors report. Thus, its purpose is presented on a public page and is specified in a user guide, but above all "the code of the AI system is explained at all levels (from the source code to the business result) with specific popularization work for users".

3.2. AI for control

In its activity report for 2022, the Directorate General of Public Finances highlighted the opportunities offered by artificial intelligence combined with data sharing. Thus, the share of controls targeted by Artificial Intelligence and data mining increased from 32.49% in 2020 to 44.85% in

2021 and 52.36% in 2022 (while in 2018, the figure was only 13.85%. This change is explained by the multiplication of DGFIP initiatives to exploit the full potential of new technologies. Thus, the DGFiP exploits or develops predictive AI (in particular within the framework of the Fraud Targeting and Request Valorization program), image recognition AI (following the already operational example of Innovative Land), and generative AI.

3.2.1. "Fraud Targeting and Request Valorization"

Aware of the potential of artificial intelligence in fraud detection, the DGFIP launched a data processing program called "Fraud targeting and query valuations" (CFVR). Initially limited to professional data, then extended in 2015 to data relating to individuals with a link to a company, the CFVR has concerned all individuals since 2017.[16] The ambition of this automated anti-fraud processing is to model fraudulent behavior, based in particular on the characteristics of proven fraud cases, which should make it possible to "carry out actions to prevent, search for, detect or prosecute criminal offenses as well as operations to search for, detect or prosecute tax breaches".[17] It should facilitate, by improving the tax administration's analysis capabilities, better identification of potentially fraudulent situations by highlighting inconsistencies or reporting failures in taxpayer files. This program uses the "mass data cross-referencing" method, which allows the identification of discrepancies between taxpayers' declarations and reality: as observed by the CNIL (in a Deliberation No. 2020-123 of December 10, 2020), CFVR processing is based on data mining techniques and allows predictive modeling, risk analysis, the search for atypicalities or inconsistencies and links between different people or professional entities.[18] Concretely, the algorithm cross-references data, lists the "divergences by stake threshold" and then calculates a relative percentage difference between the declared value and the real or estimated value. In addition to predictive modeling, the search for atypical features or inconsistencies, the search for links between different people or with professional entities, the functionalities of this processing have gradually been extended to allow the automatic sending of requests for information to taxpayers following a comparison of information revealing inconsistencies in tax returns. However, the Court of Auditors also points out that while the CFVR facilitates the discovery of fraud, it does not "under any circumstances characterize tax fraud but simply notes an anomaly or possible irregularity".[19] In doing so, it recalls the decision of the CNIL according to which "the data modeled by the CFVR processing will in no case lead to the automatic programming of tax audits, nor a fortiori to decisions directly binding on taxpayers.[20] The CFVR processing therefore only constitutes a tool to assist and guide the work of agents and not a profiling tool intended to directly identify potential fraudsters". If fraud detection is automated, its repression will always be human: the whole point, however, is to reduce the cost of this human intervention. Indeed, "the CFVR has made it possible to reduce the costs of programming tax audits without changing the volume or objectives of this programming… thus 50% of the programming concerning professionals and 30% of the programming concerning individuals now

16. Indeed, by a deliberation no. 2015-186 of June 25, 2015 (JORF no. 0225 of September 29, 2015), the CNIL had expressed reservations about an overly broad scope of application of the CFVR due to "the innovative nature of the system and the risks that it is likely to pose to data protection". It considered that the CFVR processing should be, initially, limited to certain individual taxpayers and not indiscriminately target all natural persons. As the decree of February 21, 2014 was revised and feedback was provided with additional guarantees, not only was the CFVR processing made permanent but it was also extended to fraud relating to individuals.

17. Order of 21 February 2014 establishing the creation by the Directorate General of Public Finances of an automated anti-fraud process called "targeting fraud and evaluating requests", JORF No. 0055 of 6 March 2014

18. Deliberation No. 2020-123 of December 10, 2020 providing an opinion on a draft decree amending the decree of February 21, 2014 establishing by the Directorate General of Public Finances an automated anti-fraud processing system called "targeting fraud and valuing requests" (request for opinion No. 1726052 v8), JORF No. 0101 of April 29, 2021

19. Court of Auditors, Study report "Detecting tax fraud by individuals", 15 Nov. 2023, p.36

20. Deliberation No. 2019-115 of September 12, 2019 providing an opinion on a draft decree amending the decree of February 21, 2014 establishing by the Directorate General of Public Finances an automated anti-fraud processing system called "targeting fraud and valuing requests" (request for opinion No. 1726052 v7), JORF, No. 0278 of November 30, 2019

rely on a team of 32 people assisted by data mining, compared to around 500 people in 2018."[21]

At the same time, an ambitious PILAT (Control Management and Analysis) project was initiated in 2018, which aims to completely overhaul the tax audit information system. Based on the observation that the tools available to agents are too numerous, heterogeneous and compartmentalized, this project should result in the implementation of new applications and the rewriting of existing tools deemed obsolete. The stated ambition is to achieve not only "a pooling of information within the control services, but also a sharing of data on an ongoing basis, from the programming of the operation to its actual recovery and, where applicable, the contentious decision". Organized in the form of bricks or modules, the project includes the entry into service of new applications in stages until the end of 2027. In this context, a decree was adopted on March 11, 2022,[22] after the opinion of the CNIL,[23] which authorizes the DGFIP to implement computerized and automated processing of personal data. This module of the PILAT project called GALAXIE makes it possible to visualize, "at the national level, on the one hand, links existing between professional entities (participation links), and between professional entities and natural persons (management, partner or shareholder links), and on the other hand, contextual elements on the financial and tax situation of these persons".[24] This new tool is part of a logic of complementarity with the CFVR processing since the data processed comes from the processing of fraud targeting and valuation of requests as part of a monthly feed.

3.2.2. AI "Innovative Land"

A final, more sector-specific example of the use of big data and artificial intelligence is the "Innovative Land" project. In addition to the CFVR, local direct taxation was the opportunity to experiment with one of the first applications of data cross-referencing or statistical learning methods since the "Innovative Land" project allows the valorization of data from aerial photographs taken by the National Institute of Geographic and Forest Information (IGN). Thus, the algorithms make it possible to extract better delineations of built buildings and the existence of swimming pools from public aerial images of the IGN. A computer processing then compares this data with the declarations of the owners made to the urban planning and tax administration departments: any discrepancies and anomalies are thus highlighted, which allows an administrative agent to initiate an operation to follow up with the owners of undeclared or incorrectly declared properties. First tested in 9 departments in 2022 (which allowed the taxation of more than 20,000 swimming pools under the property tax for the year 2022 for an amount of 10 million euros in additional revenue, the system was generalized throughout France in 2023, making it possible to identify 122,533 owners of taxable swimming pools in 2023 for an annual gain of approximately 43 million euros (according to the latest figures communicated to the Senate Finance Committee on January 31, 2024).[25] However, the Court of Auditors puts this progress into perspective in view of the additional workload for agents: this is linked to the increase in the number of swimming pools subject to property tax

21. Court of Auditors, "Artificial intelligence in public policies: the example of the Ministry of Economy and Finance", Report S2024-1165 of July 18, 2024, p.34

22. JORF n°0076 of March 31, 2022

23. Deliberation No. 2022-025 of February 17, 2022 providing an opinion on a draft decree establishing the personal data processing service called GALAXIE by the Directorate General of Public Finances (request for opinion No. 2223022)

24. Art. 2 of the decree of March 11, 2022 authorizing the General Directorate of Public Finances to process personal data called GALAXIE

    The personal data processed are listed in Article 3 of the decree: for companies and legal entities, this includes the SIREN number, the name, the dates of creation and cessation of activity, the legal status, the activity carried out, the tax obligations, the tax regime, the tax address for taxation and, above all, data relating to VAT credit refunds, fees paid, numbers, sensitive person indicators, data relating to tax compliance, data relating to the bank account, links between managers and partners, etc. For individuals, this includes data relating to tax obligations, reference tax income, year of income declaration, household tax number, high-stakes file indicator, sensitive person indicators, links between managers and partners, etc.

25. Sylvie Vermeillet and Didier Rambaud, Senate, Report No. 491 "AI, taxes, social benefits and the fight against fraud", April 2, 2024:

but also due to the limits of AI because Foncier Innovant still generates many false positives that it is up to agents to exclude from the process.[26]

In addition to these two AI systems already in operation, the DGFIP is developing other projects. This is the case, for example, of the "Valorisation des cessions immobilières" (VCI) program currently under development: it is a tool for predicting the market value (market price) of a property for residential use (house or apartment), thus allowing a comparison with the declared sale price. Another example that could be mentioned is the AI system called "Econtact", which is a text generation tool designed to respond to user requests without human intervention. This "chatbot" is based on the DGFiP's FAQs (frequently asked questions) for users as well as a sample of real questions/answers.

The proliferation of these initiatives to deploy artificial intelligence systems demonstrates the awareness of the French tax administration and its willingness to adapt. The consequences of this technological revolution on tax procedures and its necessary legal framework still need to be materialized, both by the legislator and by independent administrative authorities (notably the CNIL) and the courts.

26. Court of Auditors, "Artificial intelligence in public policies: the example of the Ministry of Economy and Finance", Report S2024-1165 of July 18, 2024, p. 40