

How are tax authorities using your data?

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Data use and management: The latest front on the tax battlefield

The amount of data being created, captured, copied and consumed has exploded worldwide, reaching 59 zetta-bytes in 2020. Fuelling this ever-expanding data sphere is the rocketing growth of digitalization (Holst, 2021). As a sizable part of this ocean of data pertains to tax, tax authorities are boosting their data extraction, management and analytics skills, a trend further heightened by the COVID-19 pandemic.

New technologies: an ace up tax authorities' sleeve

Tax authorities are already several years into their enhancement journeys of their data analytics and data science capabilities, homing in on the collection, analysis, and use of data in their day-to-day operations. The recently published "Tax Administration: Digital Resilience in the COVID-19 Environment" (OECD, 2021) gauged the impact of digitalization on tax authorities during the COVID-19 crisis, specifically regarding taxpayer services, compliance risk management, remote working, IT systems and providing wider government support. This paper, which required the cooperation of different tax administrations, demonstrates their shared commitment to these digitalization efforts.

Some tax authorities' services have already undergone drastic transformations, with agencies leveraging existing data analytics, data science and artificial intelligence (AI) technologies to hit their targets faster and more efficiently. But what are these technologies, and how do they relate to the tax field?

Data analytics is the science of analyzing raw data to uncover trends and make predictions. Much of this is automated by mechanical processes and algorithms that transform raw data for human consumption (Xia and Gong, 2015).

Data science should not be confused with data analytics. While both offer ways to understand big data and are often used to analyze large databases through coding languages such as R or Python, they have different relationships with time. Data analysts mine big data for historical insights, while data scientists harness big data to create models that can predict or analyze the future. AI is the simulation of human intelligence in machines; they are programmed to think like humans and mimic



their actions. The term is also applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving (Poole *et al.*, 1998).

Data technologies deployed by tax authorities to better oversee taxpayers

More efficient tax collection

The steady growth of tax revenue as a percentage of GDP over time is due in part to tax authorities' digital maturity. For example, between 2015 and 2017, tax revenue as a percentage of GDP grew in Luxembourg by 3% compared to the United States' 4%. The United States' tax revenue growth is partly due to the Internal Revenue Service (IRS) harnessing AI and big data to boost the efficiency of the agency and its employees. The IRS has propagated a data-driven mindset throughout the organization by cultivating the awareness and visibility of big data amongst its staff. When resources and budgets are squeezed, AI and big data allow IRS agents to work faster and smarter.

By employing data and predictive analytics, the IRS can uncover useful information about taxpayers faster and more efficiently during audits or criminal investigations, supporting decision making and case selection for all jurisdictions. Coordination with other law enforcement and federal agencies is also enhanced, as they can combine large tax and financial data with other data sets to investigate cases more thoroughly, and de-conflict other data by resolving contradictory conclusions during the investigation process (Federico and Travis, 2019).

Data gathering

Showcasing the importance of efficient data collection is the Russian Federal Tax Service's (RFTS) new information requirements. Since 1 January 2015, taxpayers in



Russia are required to submit value-added tax (VAT) transactional data with their electronic VAT returns. That year, domestic VAT revenues mushroomed by more than 12%, the equivalent of around US\$4 billion (RUB267 billion). As economic growth alone cannot explain this tax collection hike, it is likely that the RFTS delivered its vision for a nationwide VAT analytics platform, which increased oversight and encouraged taxpayers to meet their tax obligations.

Another example is Country-by-Country Reporting (CbCR). One of the first outcomes of the OECD Base Erosion and Profit Shifting (BEPS) project, this legislation has now spread worldwide. On 13 December 2016, Luxembourg was one of the first countries to introduce the requirements into domestic legislation through Bill 7031 transposing Council Directive (EU) 2016/881 of 25 May 2016. These CbCR requirements were amended on 18 March 2019 to update the list of jurisdictions with which the Luxembourg tax authorities (LTA) will exchange CbCR information.

The CbCR is a template form that multinational enterprises (MNEs) complete and share with tax authorities in countries where they have a taxable presence, provided they meet the requirements (for example, a total consolidated group revenue of more than EUR750 million). It provides aggregate data for each jurisdiction where the MNE has a tax presence, including country-level financial data and the global allocation of income; taxes paid; and certain indicators of the group's economic activity locations. This information is distributed to the relevant tax administrations through a standard filing process that results in an automatic exchange of information for tax matters.

Real-time tax monitoring

Another big data success story is the Spanish Minister of Finance's (SMoF) real-time

monitoring of taxpayers' reporting requirements. Since 1 July 2017, taxpayers in Spain are obliged to comply with a new VAT reporting system known as the immediate supply of information (SII). This system is aligned with other VAT reporting systems across Europe and beyond, such as the United Arab Emirates and the United Kingdom.

SII requires relevant taxpayers to submit issued or received invoices to the Spanish tax authorities within four days, to update their VAT ledgers on the Spanish tax authorities' (STA) online platform.

The information must be submitted in a specific XML format to allow a frictionless review by the STA.

In the meantime, other countries like Italy and Hungary have also decided to require the quasi-real-time digital transmission of transactional data via implementing mandatory e-invoicing systems.

Interestingly enough, while some of these tax authorities may yet lack the full capacity to holistically process such a huge amount of data, the fact that taxpayers must provide their data even before filing their tax or VAT returns has obliged them to ensure the correctness of this data and the tax treatments applied. This has already led to a significant upshift in tax revenues for the Member States that have implemented these digital reporting obligations. For indirect taxes in the EU for example, the impact on the VAT Gap has been impressive. The VAT Gap is the result of a theoretical calculation that compares the expected VAT revenues of EU Member States with the actual VAT revenues collected.

In 2014, the overall VAT Gap in the EU was EUR162 billion and represented 14.2% of expected VAT revenues. In 2019 it dropped to EUR125 billion, representing 9.6% of total revenue.

More interestingly, in countries without specific digital or real-time reporting/audit systems, the VAT Gap remained stable. This is contrary to Spain, where the VAT Gap dropped from EUR7 billion and 10% in 2014 to EUR2.5 billion and 3.1% in 2019. To leverage on these successes, as stated in its Annual Tax and Customs Control Plan 2021, the SMoF intends to tighten its scrutiny on taxpayers who claim to live abroad through massive data processing.

Use of blockchain and AI

It is no secret that Estonia is at the vanguard of public sector digitalization. A founding member of the Digital Nations organization since 2014, Estonia was a first adopter of blockchain technology, using it to back up all government information. And by employing scalable blockchain technology to maintain and manage tax-

payer data, the country remains a leader in this field.

Showcasing the success of this approach is that the average Estonian tax return takes only five minutes to complete, due to the form being pre-filled. This is possible because a single shared platform, X-Road, effectively unites all government services and links all aspects of citizens' digital identities through one secure identity logon.

Other tax authorities are also making ground in the data revolution. Through its Making Tax Digital initiative, the UK aims to become one of the world's most digitally advanced tax administrations. The Australian Taxation Office plans to make use of data, analytics and tools to extend automation and analytics use cases and enhance their realized AI capabilities. Meanwhile, China has been deploying technology through its Golden Tax System, 1,000 Taxpayers Initiative, and blockchain invoicing pilots.

Conclusion

There is no doubt that tax authorities in Europe and elsewhere are significantly enriching their data analytics, data science and AI capabilities to monitor taxpayers in a faster, streamlined and more efficient way, with the ultimate goal of improving tax collection in their jurisdictions. The time is now for taxpayers to rethink the way they handle their accounts and tax data—and, more importantly, how they plan to collaborate with tax authorities in a post-COVID-19, digitally advanced era.

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Boom de la digitalisation alors que l'assurance vie s'adapte à de nouvelles attentes

Une récente étude menée par Lombard International Assurance S.A., leader européen en matière de solutions de structuration patrimoniale et successorale à travers l'assurance vie en unités de compte à destination des personnes fortunées, de leurs familles et des institutions, révèle que les professionnels du patrimoine basés en Europe anticipent un essor considérable de la digitalisation dans le secteur de l'assurance vie en unités de compte, les trois quarts (75%) des répondants s'attendant à un niveau de digitalisation «élevé» à «très élevé» au cours des trois prochaines années.

Publié à la mi-mars 2021 et réalisé en association avec Accenture Luxembourg, ce rapport inédit en Europe offre une perspective pan-européenne approfondie des usages et opinions sur l'assurance vie en unités de compte. Dans un environnement de plus en plus dépendant des technologies, les conclusions du rapport montrent clairement un besoin d'amélioration des services faisant appel aux solutions digitales afin que le secteur reste pertinent vis-à-vis des professionnels du patrimoine et de leurs clients fortunés.

Fait intéressant, le rapport révèle qu'il existe des divergences significatives en termes de perspectives entre les pays. Ainsi, parmi les répondants basés en Belgique, la quasi-totalité (93%) déclare qu'elle s'attend à ce que le marché de l'assurance vie en unités de compte connaisse un niveau de digitalisation «élevé» à «très élevé» au cours des trois prochaines années. La France et l'Italie sont également parmi les plus optimistes, ce chiffre atteignant respectivement 90% et 80%. Ce sont les professionnels établis au Royaume-Uni qui se révèlent être les plus incertains quant au niveau de digitalisation au cours des trois prochaines années, 15% d'entre eux attendant explicitement un degré de digitalisation «très faible» – soit environ trois fois la moyenne européenne (6%). L'offre digitale arrive d'ailleurs en tête des critères clés que les professionnels du patrimoine prennent en compte lorsqu'ils choisissent un fournisseur d'assurance vie en unités de compte.

D'après le rapport, le critère «existence d'une plateforme digitale de services et de canaux de souscription dématérialisés» est classé en quatrième position – les trois premiers critères étant «rapidité et efficacité du service», «bonnes relations et communication avec l'équipe de la compagnie d'assurance» et «compétences, expertise et connaissances techniques».

Rôle déterminant de la technologie en tant que facilitateur de service

Néanmoins, il reste du chemin à parcourir dans la course au digital. S'agissant de la qualité des offres digitales actuellement proposées par les fournisseurs d'assurance vie en unités de compte, les professionnels du patrimoine sont loin d'être impressionnés.

L'indice de satisfaction générale des services disponibles à l'heure actuelle s'est établi à une moyenne de 2,89 sur une échelle de notation de 1 à 5 (5 signifiant «très satisfait»). Il apparaît notamment que les outils de simulation et les applications pour smartphones semblent le plus faire défaut. Les professionnels du patrimoine basés en France et au Portugal sont les plus satisfaits, accordant respectivement aux offres de services digitalisés qu'ils reçoivent la note de 3,5 et 3,6 sur 5. Cela montre néanmoins qu'il reste des efforts à fournir.

Le rapport souligne également le rôle fondamental de la technologie pour fournir un service d'excellence, une sécurité renforcée et une expérience plus mobile. Parmi les professionnels du patrimoine basés en Europe, lorsqu'on leur demande d'identifier quelles technologies ils considèrent comme les plus impor-

tantes, les répondants ont classé «les technologies en matière de service client», «la cybersécurité» et «les technologies mobiles» dans le top trois.

Le besoin de digitalisation demeure

Un thème constant et qui apparaît tout au long du rapport est le rôle déterminant que la digitalisation devrait jouer dans l'évolution du secteur de l'assurance vie en unités de compte. Dans leurs réponses, les professionnels du patrimoine considèrent qu'une offre digitale à la pointe doit figurer en tête des nouveaux services offerts par leurs fournisseurs.

Ainsi, interrogés sur les services supplémentaires que les fournisseurs d'assurance vie en unités de compte devraient proposer, plus d'un répondant sur cinq (22%) identifie «la souscription 100% digitale et les e-applications» comme son option privilégiée, alors que les «gammes de solutions innovantes adaptées à chaque besoin» arrivent en deuxième position (18%).

Une fois de plus, la digitalisation passe au premier plan dans leur troisième priorité, avec le besoin de «solutions digitales permettant de réduire les coûts d'acquisition client et d'augmenter la productivité du courtier» (16%).