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北京市丰台区广安路 9 号
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投稿方式：
电话 86-10-63886739，63886745
邮箱 britj@britacom.org

订阅方式：
电话 86-10-63543735，63543753
邮箱 dl@ctax.org.cn

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Address	9/F & 10/F, Tower 1, GTFC Plaza, 9 Guang'an Road, Fengtai District, Beijing, 100055, P.R.C
Tel	86-10-63584624
Website	http://www.britacom.org
Email	britj@britacom.org
Submission	Tel: 86-10-63886739, 63886745 Email: britj@britacom.org
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In Brief

Empowering Taxpayers Through Technology-Driven Services and Education

Ferenc Vágujhelyi

Ferenc Vágujhelyi
Commissioner
National Tax and Customs Administration
Hungary

Abstract: What tasks do technological changes taking place in the world impose on tax administrations, and at the same time, what opportunities do they create in enforcing the principle of public responsibility? How can innovations like European Digital Identity Wallet (EUDIW) be applied in the authentication environment? What assistance can the authorities provide in the integrity of taxpayers' business data? What developments are seen in the work of the Hungarian tax administration to use transaction-based data to contribute to a more modern public administration system and, last but not least, to a fair public burden? How does blockchain as a technology platform support data integrity? How does personalized and easy-to-understand communication revolutionize customer information? These questions are answered in this article.

Keywords: Tax administration; Tax compliance; Transaction-based data service; EUDIW; Blockchain technology; Public burden

1. Empowering the Taxpayer

For centuries, tax authorities have equipped themselves with the tools to register, audit, and enforce tax obligations, thereby pooling societal resources for collective benefit. But in an evolving landscape, should we reconsider who gets to wield that power? Is it revolutionary to shift our focus toward empowering the taxpayer? Not necessarily; rather, it reflects an acknowledgment of the rapidly changing world around us.

Advancements in technology have rapidly thrust businesses into the digital realm, a place where every transaction leaves a digital footprint. Consider the transformation of traditional taxi services by companies like Uber. In the past, hailing a cab involved an anonymous cash transaction that left little to digital record. Contrast this with using Uber, where not only your personal and payment information is shared but also your travel habits, urgency of the trip, and even your tipping preferences are laid bare in the digital universe.

This digital ubiquity has dual implications: it complicates the taxpayer's ability to obscure their financial trails, but it also poses new challenges for tax authorities accustomed to combating tax evasion through traditional means. Both parties must adapt to this new paradigm. In this article, we'll explore how tax organizations can guide taxpayers through these transformations in a mutually beneficial way.

2. E-Filing: The Evolution of Tax Data Collection

Data is undeniably the currency of the future, shaping our approach to information gathering in an increasingly digital world. For tax authorities, the cornerstone of this data collection has traditionally been tax returns. The National Tax and Customs Administration (NTCA) recognized this change early on, introducing an electronic tax return system as early as 2003. Fast forward to today, e-filing is not just an option — it's a mandatory requirement for all economic entities.

The only exception to this rule is individual taxpayers who aren't engaged in private entrepreneurship. However, even among this group of taxpayers, e-filing is gaining traction as the preferred method for filing tax returns.

By making e-filing compulsory for businesses and increasingly popular among individual taxpayers, we're not just modernizing our data collection methods; we're fostering an environment that aligns with the digital norms of the 21st century. This sets the stage for more efficient tax administration and, ultimately, an empowered taxpayer.

3. E-Filing: Ensuring Legally Binding Tax Returns Through Digital Identification

One of the most critical aspects of electronic tax filing is establishing a secure and reliable framework for digital identification and data authentication. Initially, the Public Key Infrastructure (PKI) was viewed as the silver bullet, designed to securely tether the e-document to both the taxpayer and the data within it. However, the PKI approach introduced a considerable administrative burden for small and medium-sized businesses (SMBs). Challenges ranged from the short validity periods and the costs associated with certificate authorities to the need for specialized hardware like smart card readers, not to mention the digital literacy required to navigate these complexities.

As a workaround, most people reverted to using the Central Identification Agent, a government-operated service that employs a user ID/password methodology and offers two-factor authentication and remote electronic signature capabilities.

However, the future holds more promise with the European Digital Identity Wallet (EUDIW), grounded in the principles of the European Self-sovereign Identity Framework (ESSIF). Under new EU regulations currently in planning, the power of authentication is poised to be quite literally in the palms of citizens. A wallet application on smartphones will handle front-end identification and authentication processes, sharing some similarities with blockchain-based wallet apps.

By embracing innovations like EUDIW, we

can simplify the authentication landscape while fortifying the integrity of the tax-filing process, putting us on a path to truly empower the taxpayer.

4. Assisting Taxpayers in Upholding Business Data Integrity

In the realm of value-added tax (VAT), e-filing services have long featured built-in mechanisms for internal data integrity checks. However, the capabilities for data analysis have dramatically expanded with the advent of more detailed, transaction-level data collection systems. These advancements enable tax authorities to cross-reference and analyse data from multiple taxpayers simultaneously, thereby ensuring integrity across an entire business process.

Take our online invoice reporting system as an example, it gathers comprehensive data on all domestic invoices directly from the issuers. Simultaneously, the recipients of these invoices report them in their VAT returns. This dual-channel reporting allows us to identify any discrepancies, such as "orphan" invoices that appear on the recipient's side but have no corresponding entry from the issuer. In such cases, we can proactively reach out to both parties involved to rectify the mismatch and amend the reporting accordingly.

By instituting a more comprehensive approach to data integrity — one that spans multiple actors in the business ecosystem — we are not merely streamlining tax administration but also empowering taxpayers with a framework that supports compliant and accurate reporting.

5. Event-based Reporting Platform (EMAP): Leveraging Blockchain for Enhanced Data Integrity and Transparency

Recognizing the limitations of the current monthly employment data reporting system, the Ministry of Finance initiated a study to explore avenues for improvement. One major drawback is the lag in data availability; monthly summaries are only finalized at the month's end, yet certain obligations — like health insurance eligibility — require immediate registration from the first day

of employment. Additionally, these records hold long-term implications, often resurfacing decades later when individuals seek to verify their social contributions upon retirement.

Maintaining the long-term integrity of electronically signed documents is another hurdle, especially as older signature technologies become obsolete. This is where the immutable properties of blockchain — or a distributed ledger technology (DLT) managed by public administration — come into play. By reporting cryptographic credentials for each key employment event (e.g., new employment, sick leave, unpaid leave, paid leave, salary payments, and employment termination) to a DLT database, we have achieved a dual purpose. First, we preserve credible data indefinitely, where only hash codes and digital signatures are publicly visible. Second, employees can independently access and verify all data pertinent to them, ensuring that obligations like personal income tax and social contributions have been accurately reported and paid by their employers, thereby safeguarding their future pension entitlements.

In this way, blockchain serves not merely as a technology but as an enabler that reinforces the operational integrity and transparency of tax administration systems. Yet, this is not without its challenges, as we'll explore in our next example.

6. E-Payment: Simplifying Compliance Through User-Friendly Solutions

Traditionally, we communicated decisions on vehicle tax via letters containing detailed calculations and instructions. The onus for payment rested on the individual car owner, and it was expected to be fulfilled through bank transfers. However, this approach often led to delays and non-compliance.

2023 marked a turning point with the launch of our mobile app, designed to simplify the payment process. Users were able to settle their vehicle taxes at the touch of a button, needing only their car registration numbers as identification. The app was an overwhelming success, attracting hundreds of thousands of users across iOS and Android platforms.

We recognized, however, that not all taxpayers have the same needs. Larger professional clients, such as transportation companies with fleets of vehicles, still require detailed notifications and prefer to process their payments through bank terminals.

This dual approach exemplifies how technology can empower taxpayers to comply effortlessly. By making the payment process as simple as a single button-push, we eliminate barriers to compliance without demanding taxpayers to have a deep understanding of tax intricacy. In doing so, we create a more inclusive and efficient tax ecosystem that accommodates the diverse needs of our constituents.

7. Customer Information: From One-Size-Fits-All to Tailored Communication

While a comprehensive 130-page guide on annual changes to personal income tax may be a treasure trove for tax experts, it's hardly user-friendly for the average taxpayer. For instance, a literature teacher looks to include income from renting an apartment on her tax return — sifting through those pages would be a daunting, if not impossible, task. The reality is that individual taxpayers and SMBs rarely seek intricate legal explanations; they have specific questions and are looking for straightforward answers.

Traditional static text that aims to cover all regulated situations often ends up being overwhelming and ineffective. Customer information should not be a lecture but a dialogue — a two-way communication where the customer's input guides the provision of targeted, relevant information. This interaction should always culminate in the delivery of a concrete solution, be it a link to the necessary e-service or documented proof that the issue at hand has been resolved.

While it's true that such an adaptive customer care approach can't address every possible scenario, it shouldn't be dismissed for its imperfections. Instead, this method offers a practical, focused way to empower taxpayers with the information they need, promoting a more efficient and user-centric tax system.

8. Conclusion: Empowering Taxpayers Through Context-Driven Solutions

Empowering taxpayers to comply is not solely about disseminating information; it's an art that involves recognizing the individual's life or business circumstances and providing tailored, succinct solutions accordingly.

In this new digital era, where technology continually reshapes our methods and expectations, tax organizations have a unique opportunity. We can evolve from mere enforcers of tax regulations to enablers that facilitate easier and more intuitive interactions for taxpayers. Whether through streamlined e-filing systems, blockchain-based data integrity solutions, simplified e-payment options, or personalized customer information, the aim remains the same: to make compliance less of a burden and more of a facilitated process.

By adopting these forward-thinking strategies, we not only modernize our tax systems but also empower taxpayers to be more proactive and confident in their interactions with tax authorities. In doing so, we contribute to a more effective, transparent, and inclusive tax ecosystem for the 21st century.

A New Citizen Service for a New Age:
Actions Taken by the Spanish Tax Administration

José Borja Tomé

José Borja Tomé
Director
Departamento de Informática Tributaria
Agencia Estatal de Administracion Tributaria
Spain

Abstract: Tax Administrations make big efforts to provide citizens the information and assistance they need and have increased remote services through digital channels. However, customer service has deteriorated in many cases especially after the pandemic, due to lack of resources and sometimes impacted by the consequences of the extension of remote work.

The Spanish Tax Administration has developed a new service strategy, which aims to deliver homogeneously any service as needed so that citizens can choose whatever service that is more convenient to them, remote or face-to-face. From the perspective of its staff, any staff will be enabled to provide any service through any channel.

Keywords: Taxpayer service; Citizen service; Customer service; Remote workers; Spain

1. Citizen Services Rendered by AEAT

Facilitating tax compliance and reducing burdens on taxpayers using state of the art solutions is a strategic line of action of Agencia Estatal De Administracion Tributaria (AEAT), the Spanish Tax Administration. The natural step already at stage is building a 3.0 Tax Administration, aligned with the principle that "tax should just happen". However, as we all know, tax does not always "just happen".

Integration with taxpayers' natural systems whenever possible eases compliance, but tax legislation is extremely complex, and is subject to fast changes in response to social and economic demands. As a result, many citizens end up needing help just to make tax happen.

A good example of this complexity is Tax Administrations' websites, particularly the Spanish Tax Administration: sede.agenciatributaria.gob.es. While simple in appearance, its thousands of underlying options enable a variety of services ranging from the payment of taxes or fulfilment of customs obligations, to application for grants. Even though most functionalities are simple, self-service can be a nightmare for users facing more than 800 different procedures of all kinds on the site, and they will probably need help.

Tax Administrations, thus, set up

"customer service for citizens in tax" or, in short, "citizen service", to provide the information and assistance citizens need, and involve effort and resources in accordance with the huge demand for these services.

Unsurprisingly, AEAT gave more than 7 million appointments for assistance last year. More than 9,000 agents out of 27,000 employees delivered the service, even though more than one million appointments ended as citizens' no shows.

No matter how advanced the integration with natural systems of taxpayers and third parties may be, the underlying complexity will always need attention. Personal income tax is just one of AEAT's more than 800 procedures, but it has always received extra attention due to its social impact. In order to reduce the burden on taxpayers, the collection of personal income tax is carefully examined every year in order to introduce any possible improvement, simplification and further integration with natural systems, and prefilled declarations are provided to taxpayers for many years now. However, it still requires huge resources for assistance.

In 2023, individuals filed more than 22 million personal income tax declarations, and most of them lodged in self-service: 15 million through AEAT's website, 5 million using third party software, mostly by representatives and tax consultants, and more than 500,000 through a specific app, most of them at one click. Many taxpayers however still needed help. More than 1 million lodged their income tax declarations by means of a simple telephone call, using a specialized system attended by more than 6,000 officials, and more than 700,000 citizens still visited physical offices, to have their declarations personally prepared by dedicated staff.

In total, adding information requests to declaration assistance, more than 2 million appointments were scheduled for this matter. Additionally, AEAT's virtual assistants were used more than 800,000 times and the YouTube channel had 2.6 million visualizations.

Personal income tax is a good example that even though facilitating citizens' self-service in all procedures should be the first priority for any Tax Administration, as the best assistance is no assistance needed, customer service is still essential. When this service is not provided effectively during the tax return, taxpayers' compliance will be worsened due to ignorance and misunderstandings, and the cost of correcting incompliance is much bigger in terms of effort and reputation than providing information and assistance. Therefore, these services cannot be left aside, and the cost of the involved resources is big enough to justify their use in the most efficient way.

2. Remote Services Deployed by AEAT

Times have changed. In the past, most services were face-to-face. However, especially after the pandemic, AEAT has deployed multiple different remote services, in addition to increasing self-service assistance tools. In practice, a myriad of independently designed assistance modes are available. The old but yet essential face-to-face assistance coexists now with several remote human assisted services, such as video assistance, chat, the tax collection call center, the IT call center…, alongside with self-service assistance tools, such as chatbots, calculators, virtual assistants, etc. In this situation, it is time to rethink the service Tax Administrations should provide.

AEAT is a fully digitalized Tax Administration, so when looking at its service offering from a geographical and functional perspective, all procedures are available through its website and apps everywhere and for anybody using computers and mobile phones for digital remote self-service. But as we have already seen, this is not enough, not only because of the difficulty for some groups of citizens to have access or interact with technology — the digital gap — but also because of the already mentioned complexity.

Sometimes onsite self-service may be useful for citizens who lack access to digital tools, or who experiment any kind of barriers in the use of technology. For this purpose, AEAT has set up kiosks and other solutions such as assisted video conferencing in the premises of remote local administrations. However, these kinds of services are only available in a limited number of locations and cover a small range of necessities.

On the other hand, onsite face-to-face services are easy to use due to the use of natural language for human interaction, and can be accessible to users regardless of their circumstances or age. Unfortunately, providing the complete catalog of services in all locations would not only be inefficient, but is simply impossible, due to the limited availability of the most specialized staff, which cannot be assigned to all locations.

In this scenario, remote human assistance could fill in the gap, providing any service to anybody anywhere. This, altogether with movement limitations during the pandemic, is why remote services have developed so quickly in the past years. Such fast development has come at a cost of an irregular service deployment. In order to illustrate it, let us look at four of AEAT's most popular remote information and assistance services:

a) The new dedicated Digital Offices, where specially trained personnel handle incoming calls using contact center infrastructure, chat or mail, with or without appointment, and can even fulfill certain procedures for taxpayers, such as telephone payments or deferment of debts. While these new Digital Offices have successfully demonstrated the potential of providing fully remote service, the specialization of their staff and legal competence assignment for many procedures to officials appointed to physical offices limit the range of services they can provide.

b) Traditional general information telephone lines provide simple information and are more limited in functionality. Due to the lack of user authentication or specialized staff, citizens can't expect to solve all their needs there. In most cases, when they call, they might just expect to be redirected to face-to-face appointments with the right office or official.

c) The already mentioned income tax return telephone declaration system is another case of success, but its scope is naturally limited to the procedure it has been designed for.

d) The increasingly popular digital identity credential video service, which provides digital credentials for the authentication of users in remote channels for any public administration, not only tax, through video calls. This service is very useful for users who need authentication for any digital service, but is again limited exclusively to this functionality.

In addition, different chatbots and virtual assistants provide self-service information for the most demanded services.

In summary, different services are tailored to different needs, but each has its own limitations. AEAT has not yet reached a full coverage of services and functionalities as a whole.

However, we are in a new era where resources keep shrinking in order to reduce costs, face-to-face and remote services demand increases, and mixed remote and in-office work is widespread, so Tax Administrations cannot continue to do things as they did in the past. Therefore, in order to increase efficiency, we must unleash the potential of our staff. All staff should be able to provide the service that is needed in any moment and from anywhere. And, at least for AEAT, that is not still the case. But it will be.

3. The Integration of Citizen Service

A prerequisite for that goal is integrating all data, and digitalizing it both inwards and outwards, something AEAT has already achieved and has been running in its private cloud for years. So now is the time to integrate citizen service.

This integration of citizen service should be approached by "Enabling the whole Tax Administration to deliver homogeneously any service as it is demanded". In that case, citizens would use the services that were more convenient to them, instead of being forced to use the services available to them for their digital skills in their location.

More importantly, digital services should ensure the same quality as face-to-face services. In this way, we could expect a majority of citizens to choose the former for practical reasons, and this would be a big advantage for Tax Administrations, because digital services can be provided more efficiently, due to less location restrictions and easier management and integration of remote workers.

This is completely different from forcing citizens to turn digital by closing physical offices, as many other organizations are doing, and being criticized for. Tax Administrations should provide instead a New Citizen Service in which digital services are as good as face-to-face and citizens are encouraged to choose the best option for them depending on their circumstances, and not depending on the nature of the services that are provided.

Ensuring the same quality of service in digital as in person is not an easy task, and requires, at least:

- Enabling all the staff to provide whatever service it is skilled for through any channel;
- Enabling the provision of services with or without appointment as needed; and
- Ensuring that the former are enabled for the whole range of procedures not only for information, but more importantly, for the fulfilment of procedures.

One of the biggest challenges faced by this New Citizen Service concept is a cultural and organizational change. As different services have been deployed in the past with different requirements and in different contexts, a mindset change is necessary, as all functional areas: tax management, collection, customs… will need to reach a common vision and strategy, with:

- Common KPIs that allow monitoring and comparison of service performance;
- Single points of entry, such as a single website, which AEAT has already been running for many years, but also a recently launched single telephone number;
- Uniform opening hours; and
- A common organization for assistance, which takes into account and balances the respect to functional areas specialties.

4. Prospects

In order to accomplish this new vision, the development of a whole set of common tools and systems is also essential. These systems should implement the new procedures under the principles of simplicity, ease of use, generality and homogeneity, and will probably need to evolve from preexisting infrastructures in order to ensure ease of transition. Some of these systems are as the following:

a) The first essential infrastructure is a complete inventory of the service offering. This catalog must list all the services and their characteristics as much detail as possible, such as the channels through which the services can be delivered, if a pre-appointment must be demanded, due for example to limitations in staff availability, if identity is necessary to comply with data protection, or if acting on behalf of somebody else is allowed. AEAT already did this for the digital self-service channel on its website, but it now needs to do the same for personalized customer service. Self-service optimization and prioritization have been arranged in the past around the concept of service demand, so that the most used services are the ones to which more efforts and attention are given. In a similar way, the priority and optimization of personalized customer service should be arranged around the concept of the demand of those services. Moreover, as always, feedback from customer service requirements needs to be carefully evaluated in order to

identify procedure and system inefficiencies and improve self-service design.

b) Another key infrastructure is the workers availability record. This is a dynamic system where the availability of each worker is scheduled, so that it is possible to know at any time, in which channels or locations they are available, as well as the services and even languages they are able to serve citizens. This map of staff availability requires management effort in order to keep updated, but it is essential to ensure that workers are in disposition to serve citizens through different channels in an efficient way.

c) Taking the former systems as a base, and as an evolution of previous appointment request systems, a new service request system improves significantly user experience, and benefits from an integral vision of the whole staff and service provision through all channels, including face-to-face. In order to ensure ease of use, AEAT has designed a new three-step service in which:

- First step, citizen identification, authentication and acting on behalf of a third party if needed are completed.
- Second step, the citizen selects his assistance request from a user-friendly categorized list of services. It is difficult for the public to choose from a wide variety of services, so most demanded services should be offered in the first place. However, what really improves usability is personalizing the list of services, taking into account the services each citizen is more probable to be needing due to his personal circumstances. AEAT's communications will also include QR code, which users may scan to be directed to the related service, and eventually, be handled by the official in charge of their files, if needed.
- Third step, whenever agents may be available, immediate service will be offered, for example through outgoing calls. When immediate service cannot be provided, for example because no agents are available, the system will offer a choice of the best appointments it can find, taking into account user preferences such as channels, proximity or immediateness.

The citizen will receive the resulting appointment details through the channels he is subscribed to, and the appointment is scheduled so that the interactions can be assigned to agents and service is granted in a timely manner.

d) While service request is important, quality in the digital or in-person provision of the service is even more important. For the digital provision, a unified communication platform will grant access to all the channels including contact center functionalities for all the staff. The use of a single communication platform for all internal and external communications ensures usability, an integral supervision of the service, and facilitates integration with the rest of the systems. Moreover, value added functionalities, in some cases powered by artificial intelligence, such as automatic translation or sentiment analysis, may further improve quality of service.

e) In order to ensure quality of the attention in all cases, agents need the best possible information when providing the service, while at the same time, all data related to the provided service must be recorded. A Customer Relationship Management system must organize the staff's work and integrate in real time the information of all interactions with citizens, regardless of channel as well as the result and quality of attention. That information must be available for agents who provide service, in addition to the whole set of significant data from AEAT's private data cloud that provides a 360-degree vision of the taxpayer from a service perspective, such as his profile, debts, latest files and communications, pending procedures… Once more, a user-friendly organization and personalization of this information, which takes into account the circumstances of the demanded service, as well as citizen and agent characteristics, can further increase usability, and directly improve service quality.

All of this information is available through AEAT's data analytic tools for management, who in this way has an integral vision of the provided service, can evaluate and monitor relevant KPIs, and make appropriate decisions regarding service delivery.

Simple as it may be from a conceptual perspective, a project of this nature is not easy in practice. It demands organizational, functional, technical and even cultural changes. Work is in progress and, step by step, the first versions of the IT tools are now fully operational and AEAT is adding services, staff and channels to the system. A single telephone number, and an integral service scorecard for management are also in place, the unified communication platform selection and contracting is ongoing, and, in the meanwhile the integration of different tools, such as previous contact center infrastructures with office telephone lines, is achieved in a more seamless way.

This new approach can bring important benefits to Tax Administrations:

a) Improvement of the use of resources, such as:

- The best agent can be assigned to each interaction;
- Dead time between interactions can be minimized;
- Remote workers' time can be monitored, optimized, and assigned to the tasks that are most needed; and
- Resources can be assigned to necessities with no organizational or territory restraints through digital channels, while keeping track of the efforts and results of each agent.

b) Service monitoring for management, allowing data-based decision to further improve quality and efficiency, as the new approach provides an integral view of service provision to the whole organization.

c) Improve the quality of services and give citizens the right to choose the mode of service.

Customer service has deteriorated in many sectors, especially after the pandemic, due to lack of resources and sometimes impacted by the consequences of the extension of remote work. It is time for Tax Administrations to take a step forward and show the way in which top quality service can be provided using the same or even less resources through a much more efficient way.

This new customer service model will help AEAT facilitate citizens when tax does not just happen.

The Future of Tax Administration

Ashot Muradyan

Ashot Muradyan
Deputy Head
State Revenue Committee
the Republic of Armenia

Abstract: This article analyzes the historical progression of tax administration in the utilization of computer technology since the mid-20th century. The digitalization of tax administration is divided into three main stages which are elaborated respectively. The most precise analysis is performed for today's practice with using of machine learning and artificial intelligence (ML&AI), and the key areas for ML&AI implementation in tax administration are identified. Some examples and results of applying ML&AI tools in Armenian Tax Administration are also presented. Plans for future activities in the area of digitalization are also presented. The article also tries to predict in which direction progress will go, what will be the most important change in Tax Officer vs. Taxpayer Cooperation.

Keywords: History of digitalization; Armenian Tax Administration; ML&AI; Tax Officer vs. Taxpayer Enhanced Collaboration

1. Evolution of Computer Technology in Tax Administration: A Three-Stage Overview

The historical progression of tax administration in the utilization of computer technology unfolds in three distinct stages since the mid-20th century.

1.1 Stage One: Emergence of Programmable Electronic Computers (1945-1980s)

The first stage began in 1945 with the inception of the first programmable electronic computer. This marked the initiation of a transformative era where computers were utilized as precise and fast calculators, revolutionizing the way tax administrations operated. However, the progress during this initial stage was predominantly quantitative, focusing on enhancing computational capabilities rather than fundamentally changing the nature of tax-related processes.

In this early stage, tax administrations embraced computers as efficient tools for registering taxpayers, calculating taxes, and managing financial transactions. The evolution of the computer industry played a pivotal role, providing increasingly sophisticated and powerful machines with larger memories and storage capacities. This progression empowered tax authorities to meticulously record financial data, calculate tax liabilities, and manage arrears and overpayments more accurately.

A significant milestone in computer progress was the invention of personal computers. This innovation democratized access to sophisticated computing tools, placing them on the desks of every employee. The widespread availability of personal computers further empowered tax administrations to streamline their processes and enhance their ability to calculate and collect taxes.

However, it is crucial to acknowledge that the aforementioned changes were predominantly quantitative, focusing on improving efficiency rather than fundamentally altering the core functions of tax administration. The true qualitative shift came with the realization that the fundamental processes of taxpayer self-assessment, filing tax returns, and decision-making by the tax administration remained unchanged, regardless of the technological medium used.

1.2 Stage Two: Digitalization and Personal Computers (1980s-2010s)

The second stage of tax administration evolution marks a pivotal period when the sheer volume of information amassed by tax authorities surpassed a critical threshold, ushering in an era where this wealth of data can be harnessed for transformative purposes. Although defining this threshold remains elusive, it is evident that different tax administrations reach this point at various times, contingent upon their technological capabilities. This phase is characterized by intensive digitalization, wherein the immense data accumulated necessitates computerized tools for interpretation and utilization.

In this phase, tax authorities gain access to qualitative tools that revolutionize tax administration. Across the globe, digital technologies are extensively employed to deliver services to taxpayers efficiently. A notable example is Armenia, where numerous electronic platforms to enhance service quality for taxpayers have been established since 2008. While these platforms simplify taxpayers' lives, they concurrently empower tax authorities with an unprecedented volume of taxpayer information. The approach shifts from mere control of taxpayers to actively assisting them in fulfilling their obligations.

A significant innovation is the widely adopted pre-filling tax return process. Leveraging information from diverse sources, including taxpayers and third-party entities such as financial institutions and utility providers, tax authorities generate draft tax returns before the official due date. These drafts are then sent to taxpayers for approval. This proactive approach streamlines the tax-filing process, allowing taxpayers to review and confirm accuracy or make necessary corrections.

To alleviate the burden on taxpayers, the scope of on-table (cameral) audits is expanded. The wealth of historical data allows tax authorities to analyze submitted tax returns, identifying potential errors or discrepancies. Taxpayers are then notified in a user-friendly manner, given the opportunity to rectify mistakes without incurring additional penalties. This marks the emergence of an effective risk management system, made possible by the judicious use of collected information.

Collected data significantly enhances on-field audits by enabling a targeted approach. Thorough analysis of the amassed information aids in identifying high-risk taxpayers, streamlining the audit process and minimizing the impact on both taxpayers and tax officers. The focus shifts toward a more efficient and targeted audit strategy.

The overarching goal of this stage is to render the tax administration as user-friendly as possible. By maximizing the provision of electronic services to taxpayers and minimizing the tax burden, this approach aims to create an environment conducive to cooperation and compliance. It sets the stage for a seamless transition into the next phase of tax administration evolution.

1.3 Stage Three: Advanced Digitalization and the Rise of AI (2010s-Present)

In the pursuit of advancing the "tax authority-taxpayer relationship" to the next level, the primary objective of the third stage is to navigate the challenges posed by the overwhelming volume of taxpayer data. Traditional technologies have proven inadequate in enhancing the efficacy of our analysis and risk management system. Despite commendable efforts from the government and tax administration to achieve high taxpayer compliance through non-confrontational and user-friendly approaches, a lingering perception of a "superior-inferior" dynamic persists in the minds of both taxpayers and certain tax officers. It is imperative to revolutionize the vision for tax administration development and overhaul the existing model of interaction between the tax authority and the taxpayer. A profound transformation in the narrative is essential to foster a more collaborative and mutually beneficial relationship.

For many years, conventional wisdom held that effective tax collection required stringent control measures and that taxpayers, if given the chance, would prefer to conceal portions of their income. These beliefs have long shaped the attitudes and behaviors of both tax officers and taxpayers alike. However, we are optimistic that a transformative shift in this paradigm is on the horizon. It falls upon the leadership of tax authorities to spearhead the evolution of the mindset among tax inspectors and taxpayers. Cultivating a new culture is imperative, one that embraces innovative approaches in administering tax collection. The implementation of novel methods is poised to revolutionize the perspectives of both tax officers and taxpayers, ushering in a new era of cooperation and transparency.

In the ever-evolving landscape of digitalization and emerging technologies, the relationship between tax authorities and taxpayers is undergoing a transformative shift. The advent of new technologies, widespread internet usage, and the prevalence of smartphones are leveling the playing field, placing tax officers and taxpayers in equal positions regarding tax payments. As barriers dissolve and global connectivity becomes seamless, the traditional paradigm of tax inspector versus taxpayer (see Figure 1) is giving way to a more collaborative and informed relationship — a new paradigm of tax consultancy and contribution (see Figure 2).

The rise of open societies and governments fosters transparency, allowing taxpayers to understand how their contributions are utilized for addressing mutual issues. Taxpayers are no longer mere contributors but consciously engaged participants in government projects. This evolving dynamic sets the stage for a new era of relations between tax authorities and taxpayers.

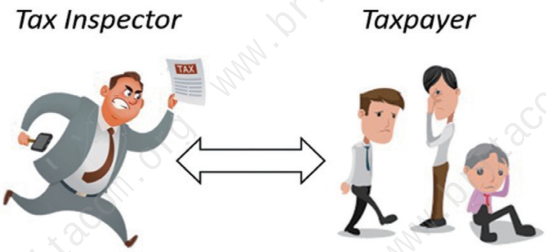


Figure 1. Current paradigm

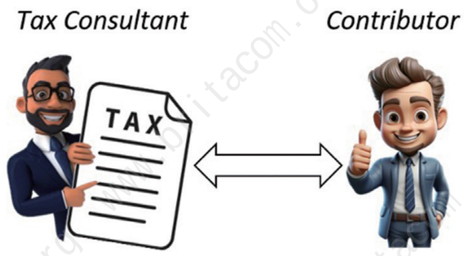


Figure 2. Future paradigm

2. Current Initiatives by the State Revenue Committee of Armenia

In contemplating the future of tax administration, the question arises: will tax inspectors continue to play a core role, or will new technologies supplant them? The integration of machine learning and artificial intelligence (ML&AI) into tax administration is gradually reshaping taxpayers' behavior and enabling the analysis of vast datasets to identify patterns beyond human recognition.

Key areas for ML&AI implementation in tax administration include:

- behavioral analysis;
- prevention of tax frauds;
- forecasting tax tendencies and risk recognition;
- resource planning by artificial intelligence; and
- full traceability of goods.

The State Revenue Committee of Armenia (SRC) exemplifies the proactive adoption of ML&AI methods in tax administration. Faced with a staggering influx of approximately 19 million units of information daily from various sources, including tax and customs declarations, electronic invoices, and third-party data, the SRC recognizes the necessity of leveraging technology. This substantial volume of data is received online, alleviating any additional burden on taxpayers and underscoring the indispensability of ML&AI in managing such vast datasets. The SRC has already initiated work in behavioral analysis, fraud prevention, and other areas, demonstrating a commitment to leveraging technology for enhanced efficiency.

2.1 Tracking Imported Products

One exemplary application of ML&AI within the Armenian Tax Administration lies in the meticulous traceability of goods across the Republic of Armenia. This sophisticated system enables the comprehensive tracking and analysis of the entire goods supply chain, commencing from importers or producers and concluding with the end consumer. By leveraging information stored in databases, encompassing importer data, customs pricing, producer details, and pricing at various intermediary stages such as wholesaler and retailer levels, the system effectively mitigates the possibility of tax evasion by taxpayers.

To illustrate the practical implementation of this model, let's delve into its use in monitoring the consumption of rice in Armenia in the year 2022. The total rice consumption is derived by summing up sales with tax receipts at each layer of the network and sales with invoices where the buyer remains unidentified. It's essential to acknowledge that unidentified buyer invoices do not necessarily indicate unconsumed rice; hence, a prudent approach involves incorporating a simulated markup to account for this aspect. In this particular model, a 30% markup was applied to better reflect reality.

To assess the model's efficacy in product identification along the network, a comparison is made between the total final consumption product and the identified consumption. In the case of rice importation, where a total of AMD2,599,216,214 worth of rice was brought in, the quantity found in the final nodes of the network, representing final consumption, surpasses the imported amount by approximately 1.1 times.

Despite the assumption of a 30% markup throughout the entire supply chain, the model's robustness is evident, as variations in the markup do not significantly impact the results. This suggests that the approach successfully identifies nearly all imported rice, showcasing the effectiveness of the implemented system in ensuring transparency and minimizing potential tax evasion.

2.2 Detecting Tax Fraud

Another important project is development of tax fraud detection models. The tax fraud detection project stands out as a crucial initiative that harnessed the power of machine learning tools to formulate alternative models for audit and fraud prediction. Leveraging data from 2020 to 2021, the project aimed to forecast audits and fraud events for the year 2022. The Gradient Boosting Trees model emerged as a standout performer, demonstrating a remarkable accuracy of over 90% for audits and exceeding 70% for fraud predictions.

The key finding was groundbreaking: targeting audits based on the 1st decile of predicted fraud increased success rates almost twofold compared to a random selection of taxpayers for audit. In a significant practical application, the model was deployed to assess the 2022 Complex Tax audit list, encompassing nearly 800 taxpayers identified by the SRC risk-based system. The machine learning model revealed that within the first decile, consisting of 326 out of the 798 identified taxpayers, the probability of fraud was 1.9 times higher compared to the rest of the identified taxpayers.

The tangible success of the project has paved the way for further advancements in technology. Notably, amendments to existing legal acts have been implemented, empowering the tax authority to integrate AI and machine learning tools into the risk management system. These promising results underscore the potential of these innovative technologies in enhancing the efficiency and effectiveness of tax fraud detection and risk management practices.

2.3 Investigating Taxpayers' Behavior

One other interesting research was done

for investigation of taxpayers' behavior. The tax fraud detection project represents a significant endeavor leveraging machine learning tools to create alternative audit and fraud detection models. A particularly intriguing aspect of the research involved investigating taxpayers' behavior, specifically exploring the impact of audits on both the audited individuals and their immediate neighbors. The focus was on taxpayers with legal addresses in Yerevan for the year 2022, utilizing tax receipts and turnover data to construct a comprehensive model.

To address key research questions, latitude and longitude information for selected taxpayers' addresses were gathered, followed by the identification of up to 10 nearest neighbors within a 200-meter radius. The dataset, encompassing around 3,250,000 observations, underwent meticulous analysis, incorporating an event study approach to discern the effects of audits. This involved comparing changes in reported turnover before and after the audit event, considering the dual outcomes of effective and ineffective audits. The model also controlled for firm-level individual fixed effects such as time trends, weekdays, and holidays.

Preliminary findings from this ongoing project reveal that even ineffective audits, where no fraud was identified, bring an increase in reported turnover. Moreover, an intriguing discovery was made regarding the impact on non-audited taxpayers stemming from the audit of their neighbors.

As the project continues its development stage, a compelling avenue for further exploration could involve extending the research to rural regions and contrasting the findings with those in urban areas. Understanding the relationship between taxpayer behavior and the severity of punishment is crucial, with potential insights into communication and information-sharing levels among taxpayers serving as a valuable by-product of this research.

3. Future Prospects: Navigating Toward Enhanced Collaboration

The Armenian Tax Administration is firmly convinced that the future implementation of ML&AI methods in tax administration is indispensable. Our upcoming plans involve expanding the scope of these methods to enhance database quality. This expansion includes the introduction of a Data Cleansing Subsystem, Object Management Subsystem, Big Data Processing and Integration Subsystem, and Business Intelligence Subsystem. These initiatives aim to optimize the utilization of collected data for the mutual benefit of both the tax authorities and taxpayers. It is conceivable that, in the future, a unified tax type may be adopted worldwide, reducing the tax burden and simplifying the payment process to be imperceptible, easy, and automatic.

Recognizing that tax administration not only comprehends all facets of a taxpayer's activities but can also predict potential future steps in their business is a pivotal revelation. This insight empowers taxpayers to proactively navigate their responsibilities, mitigating the risk of penalties by fostering transparency and honesty. Additionally, targeted and efficient audits, informed by predictive analytics, promise positive outcomes.

We acknowledge that achieving these goals is a gradual and challenging process. While we understand that a shift in taxpayers' behavior cannot be solely achieved through education and persuasion, we firmly believe that leveraging the new possibilities afforded by recent advancements in computer technology can expedite this transformative journey.

4. Conclusion: The Human Element in Tax Administration

In answering the question of whether tax inspectors will be replaced by AI or robots, the unequivocal response is that humans are irreplaceable. While technology augments efficiency and insights, the management and ethical application of AI require human oversight. The ongoing transformation in tax administration is a testament to the synergy between technological advancements and human ingenuity, paving the way for a future where tax compliance is not just a duty but a collaborative effort for societal advancement.

Discovering Tax Potency in Social Media Analytics:

Indonesian Case Studies

Iwan Djuniardi

Iwan Djuniardi
Assistant to Minister
Tax Regulation and Law Enforcement
Ministry of Finance
Indonesia

Abstract: Social media influencers are one of the tax targets that have the potential to increase tax revenue significantly. There are many challenges that Indonesia's tax authority must face in collecting taxes from influencers, starting from processing social media data and detecting influencers' habit patterns, to the need for technology that is capable of analyzing data with complex relationships. In this article, we will show a solution, which combines several technologies together such as Data Crawlers, Computer Vision, and Graph Analytics, capable of comprehensively discovering the tax potential of social media. This article will also list several use cases created to discover tax potential from social media to demonstrate how this solution can comprehensively analyze data from social media combined with tax documents that have been collected previously.

Keywords: Tax potential; Social media; Data Crawlers; Computer Vision; Graph Analytics

1. Introduction

Nowadays, social media influencers have indeed become one of the most popular professions, especially in Indonesia. Like in many other countries around the world, social media influencers in Indonesia have a large following on platforms such as YouTube, Instagram, and TikTok. They use these platforms not only to share content with their followers and engage with their audiences, but also to monetize their content and do some product endorsements.

In general, these social media influencers get revenue from platforms and it is calculated based on Cost Per Mille (CPM) and Engagement Rate. CPM is used on YouTube, while Engagement Rate is used on Instagram and TikTok. Meanwhile, there are social media endorsers/marketers that get revenue based on Computer Vision. This system needs advanced technology to imitate the human ability to detect objects from social media content. Computer Vision is powerful in detecting and classifying goods endorsers/marketers from massive amounts of social media contents. There are indications that several content creators are doing tax avoidance/evasion. If the Directorate General of Taxes (DGT) can collect revenue from social media influencers that do tax avoidance, it has the potential to significantly increase state tax revenue.

There are several challenges to taxing social media influencers. DGT must ensure the accuracy of data regarding personal profiles, subscribers/followers, view hours, and AdSense amount. For the content creator, DGT must ensure about expensive/luxury purchases, fake accounts, and social media shops/showcases.

Some of the tax avoidance/evasion practices taken by social media influencers are as such:

• Posting pictures or videos of lavish vacations or expensive purchases but not reporting the income or assets that paid for them;

• Sharing links to offshore bank accounts or other financial institutions that can help people hide their wealth and evade taxes;

• Creating fake profiles or accounts to launder money or conceal financial transactions; and

• Connecting with other individuals or groups online who are also involved in tax evasion schemes.

There is potential for collecting a large amount of content creators' unreported taxes, about more than Rp1 trillion per year. The previous method used to estimate tax potency is using simple web scrapping and only a small amount of influencers can be detected. Currently, there is no technology to analyze tax potency from social media users.

2. Objective

In analyzing the tax potential of social media influencers, there are three objectives to achieve: Data Crawler, Computer Vision and Graph Analytics.

2.1 Data Crawler

A Data Crawler is the first step of the analysis to gather accurate, relevant data from various social media platforms. Approaches that need to be carried out for a Data Crawler are:

• Gathering data all over the data sources; using Open Source Intelligence (OSINT) Tools to crawl structured and unstructured data from various social media platforms.

• Selecting and integrating the relevant data; for structured data, we can use data related to the user's account or content and aggregate it to use case development. For unstructured data (photos/videos from social media content), we need to ingest it into object storage. Using REST-API, we can feed the data to the Computer Vision system to extract entity information and aggregate it to use case development.

These approaches will provide the following benefits: creating dataset from social media for further analysis and optimizing the process of analysis.

2.2 Computer Vision

Computer Vision takes an important role in discovering hidden insights from social media content to enrich the context and relationship of data.

Computer Vision will have these approaches:

• Feed the system with unstructured data from social media

The data being analyzed comes from social media content. This data will go through a pre-processing stage before being used in the next step.

• Image processing

Social media content is analyzed centrally on servers that are generally located in the monitoring system.

• Defining scenarios

There are two scenarios to develop this system:

➢ Face recognition

Get personal information from a person detected in social media content and find the owner of social media account based on accumulated social media identity matching.

➢ Object detection

Categorize an asset in social media content, then find the value of that asset and find its tax potency.

• Human review

Human is needed to monitor the alerts generated by the system and decide what should be done.

These approaches will bring the following benefits: detecting possible entities behind social media content and enabling the system to evaluate possible assets detected in social media content.

2.3 Graph Analytics

Graph Analytics is a tool used to aggregate social media data combined with data from tax documents so that it can produce more comprehensive analysis. Several basic differences differentiate graph databases from relational databases (RDBMS) in general.

2.3.1 Data model

Relational databases use a tabular structure to store data. Data is organized into tables with rows and columns, and relationships between data are established through foreign keys and joins. Meanwhile, graph databases use a graph data model, where data is represented as nodes, edges, and properties. Nodes represent entities, edges represent relationships between entities, and properties store attributes associated with both nodes and edges.

2.3.2 Relationships

In relational databases, relationships are typically handled through foreign keys and join operations. Joining tables can be complex, especially for deep and complex relationships. Meanwhile, graph databases are optimized for storing and querying relationships. Traversing relationships in a graph database is efficient and straightforward.

2.3.3 Query language

Structured Query Language (SQL) is the standard language for querying and manipulating data in RDBMS. SQL is not specifically designed for handling graph-like queries efficiently. Conversely, graph databases often use query languages specifically designed for working with graph data, such as Cypher (used in Neo4j). These languages make it easier to express and execute graph-related queries.

2.3.4 Performance

RDBMS systems are optimized for data retrieval and updates using SQL queries, which are efficient for certain types of data but can be less efficient for graph-like queries with deep relationships. Meanwhile, graph databases excel in performance when querying relationships. They are designed to quickly traverse connections between nodes, making them suitable for applications that rely heavily on traversing complex networks.

3. Use Case

To be able to explore use cases comprehensively, in this analysis social media data will be collaborated with data from tax documents to produce a comprehensive analysis. The combination of these two data sources will be divided into several node labels in the graph database which can be explained as follows:

• Person; nodes formed based on data from taxpayers' documents registered with the DGT. Properties associated with Person nodes include their name, Personal Identification Information (PII) address, taxpayer ID, and tax records.

• Account; nodes formed based on previously crawled social media account owner data. Properties associated with Account nodes include their username, account statistics related to their contents (total followers/subscribers, the date of account creation, and accumulative views/likes/shares), and other account information.

• Content; nodes formed based on information related to content posted by the account owner. Properties associated with Content nodes include content statistics, captions, and other information.

• Hashtags; nodes are formed based on any hashtags used in previously crawled content.

• Asset; nodes formed based on the results of analysis of unstructured social media data using the Computer Vision method.

The graph scheme that will be created to support the analysis can be seen in Figure 1.

Compatible with the analysis using the graph, several use cases can be exposed, especially if we are talking about discovering tax potency in social media. Social Media 360 provides a holistic view of entities in social media for get-

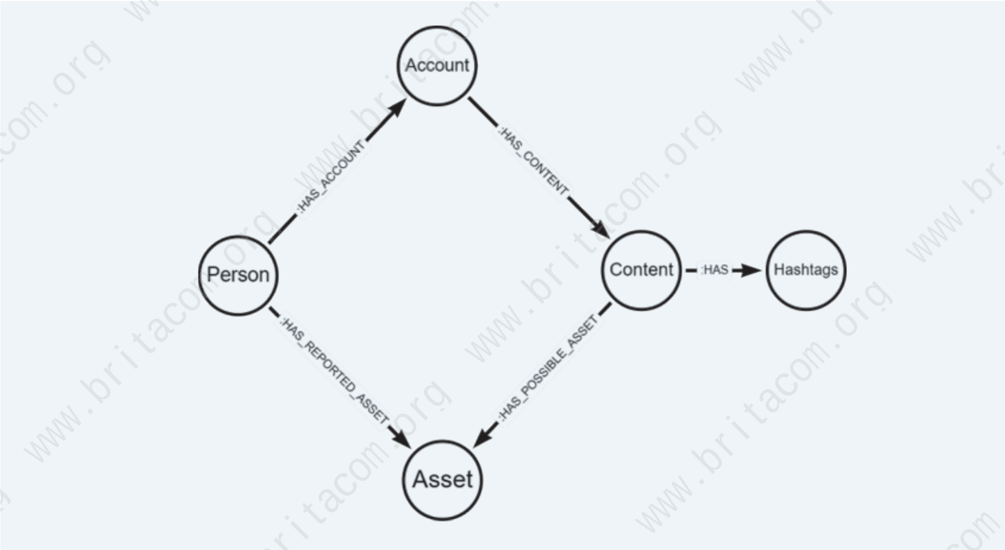


Figure 1. Simplified graph schema

ting some account activity, performance, and engagement. Entity Resolution is to find the real ownership of social media accounts. Tax Potency Prediction is to find and predict tax potency for all social media account owners.

3.1 Social Media 360

Social Media 360 is the first step in the graph analytics process to provide a trusted, single view of the person, social media account, content, and more information.

Social Media 360 has the following approaches to be carried out:

• Connecting all the relevant data; we will ingest structured and unstructured data that are processed in the previous stage to a graph database. Then, we create relationships between nodes to produce a holistic view of social media data.

• Applying graph algorithms to the connected data to find out the 360 degrees of view.

These approaches will offer the following benefits: obtaining a comprehensive overview of social media accounts and understanding the social media account activity.

3.2 Entity Resolution

Next, approaches for Entity Resolution are as follows:

• Applying graph algorithms to the connected data to find out the fake social media account; and

• Applying graph data science (GDS) algorithm and Intelligent Tools framework to analyze the real ownership of social media account.

These approaches will provide the following benefits: understanding the patterns of ownership of social media account and identifying the real ownership of social media account.

3.3 Tax Potency Prediction

And last, approaches for Tax Potency Prediction are:

• Applying GDS algorithm and Intelligent Tools framework to discover tax potency from social media users' activities; and

• Analyzing unstructured data from social media content with Computer Vision to identify possible non-reported assets.

These approaches will bring the following benefits: discovering tax potency from each social media user and calculating the estimated value of overall tax from social media users.

4. Use Case Visualization

Use cases can be explained by some visualization. It can be a story about how some of the use cases depend on some information that is

Figure 2. Flow of data into use case

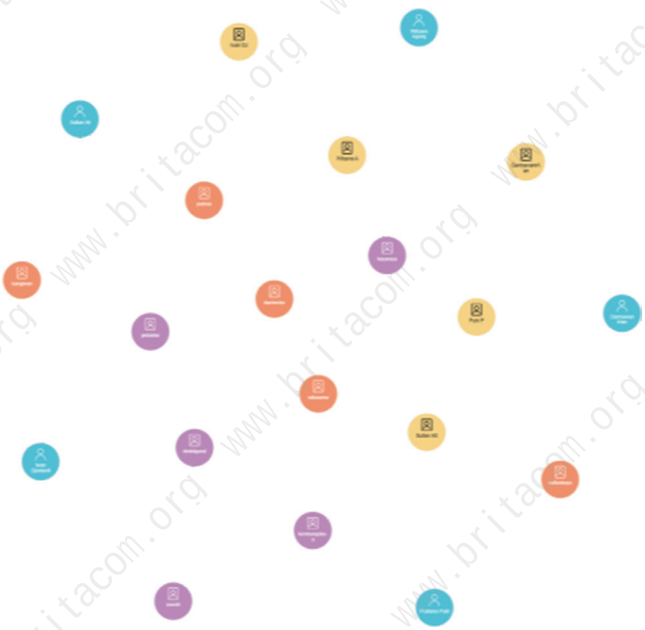
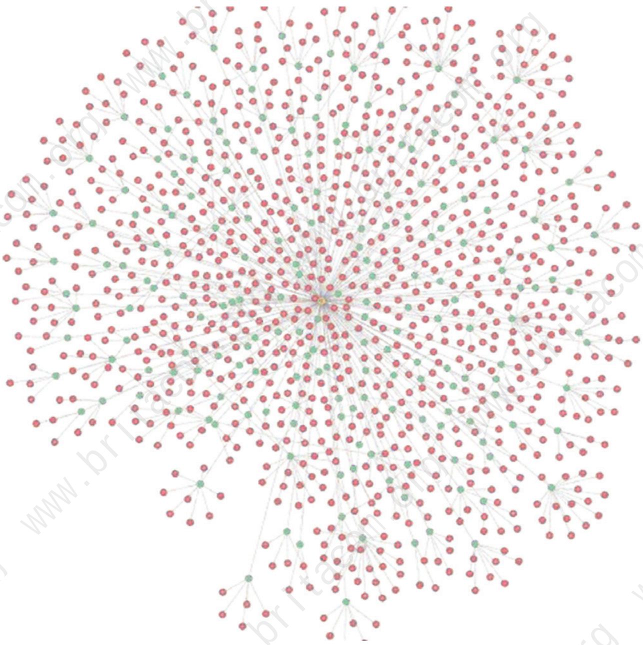


Figure 3. Entity visualization data

Note: Blue nodes represent Person nodes, while yellow, orange, and purple nodes represent Account nodes from YouTube, Instagram, and TikTok, respectively.



related or relevant data from various social media platforms. The flow of data into the use case is shown in Figure 2.

4.1 Crawling Data

Crawling data is to get information regarding social media users and accounts. It happens if we want to create a dataset from social media for further optimizing the process of analysis. Five taxpayers are the subjects of analysis in this article, and these five people are some of the most influential social media influencers in Indonesia. Everyone will see their social media accounts based on three platforms that are popular in Indonesia, namely YouTube, Instagram, and TikTok as shown in Figure 3.

4.2 Social Media 360

In this era, social media users, as we know, can have many different Users and each user can have more than one different social media account (YouTube, Instagram, and TikTok). One User can have more than one account on a specific social media (ex: Instagram), which can be called a second account.

After reaching the data that we need, the data are collected and organized based on our analysis with a graph algorithm or graph database. Figure 4 is a representation for the visu-

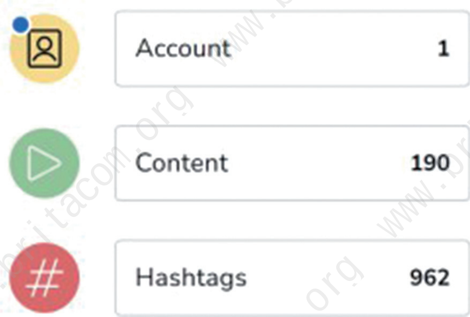


Figure 4. Social Media 360 of Iwan Djuniardi's account

alization of the graph with an example target account of "Iwan Djuniardi", and as we expand his node in Graph Database, we can see that his node is interconnected with different nodes like Contents and Tags.

The data enables a holistic view that gives various information about the user (name, email), account (username, email, revenue, etc.), and content (caption, like count, view count, share count, content_link, etc.)

4.3 Entity Resolution

In this use case, we will divide the analysis into two stages: Account Level and Person Level.

4.3.1 Account Level

In this stage, we use an Intelligence tool that uses facial recognition to correlate social media profiles across different sites on a large scale. It takes an automated approach to search popular social media sites for target names and pictures to detect and group a person's presence, outputting the results into a report that an operator can quickly review.

4.3.2 Person Level

In this sub-use case, we will see how social media account data that has been crawled will be connected to Person nodes that have been created in the database. Broadly speaking, two possible scenarios could occur:

• For an account that has the same information (email, phone, etc.) as the person's information, we can automatically identify the account owner; and

• For an account that doesn't have the same information as any person's information, we apply face recognition to social media content to find possible entities, then aggregate all possible entities related to the social media account and determine the real ownership of the account.

4.4 Tax Potency Prediction

For the ultimate use case, which talks about Tax Potency Prediction, it can be correlated with social media activity (such as YouTube), we use $5 CPM to estimate social media monthly revenue from each account, while for Instagram we use Engagement Rate (calculated by the ratio of likes & comments count to followers count) and content rate.

All social media revenue from each platform for each user becomes the estimated monthly revenue, and the cumulative revenue from each user becomes the overall monthly revenue projection.

In another case, Tax Potency Prediction can be correlated with Asset Valuation. Each person can have several assets that are reported in annual tax return (SPT) and Tax Potency Prediction can predict possible assets owned by a person that are not reported.

The asset type, brand name, and value of that asset depend on the name of the owner. Column value is calculated as the estimated value of overall tax from social media.

Once we detect which assets are likely to be non-reported assets, the DGT will carry out verification to check whether the non-reported assets are under the ownership of the person read in the database or not.

5. Next Action

There are still many things that can be improved from the system described in this article. Some of these things are:

• Creating a bigger system to accommodate a huge social media dataset;

• Collecting more personal data to identify more users behind social media accounts;

• Collecting large datasets regarding goods data to detect more objects from social media content; and

• Accurately identifying social media algorithms to calculate CPM/Engagement Rate.

6. Conclusion

In this article we have shown how to integrate Data Crawler, Computer Vision, and Graph Analytics to discover tax potential on social media, both from social media activity and detecting possible non-reported assets. With improvements in several aspects related to data preparation and integration of analytics systems, it is hoped that the legible tax potential predictions can be more accurate, and the system can be used on a larger scale.

Transparency of Tax Law and Tax Administration

Inland Revenue Department, Government of the Hong Kong Special Administrative Region, the People's Republic of China

Inland Revenue Department
Government of the Hong Kong Special Administrative Region
the People's Republic of China

Abstract: Transparency of tax law and tax administration is vital to the fair, effective and efficient operation of a tax system. To achieve and improve transparency, various means and channels are available. This article sets out the measures adopted by the Government of the Hong Kong Special Administrative Region in promoting and improving transparency of tax law and tax administration.

Keywords: Transparency of tax law and tax administration; Channels for dissemination of tax information; Communication with taxpayers; Stakeholder consultation and engagement

1. Introduction

Transparency of tax law and tax administration is fundamental to the upholding of the rule of law in a tax system, as taxpayers are entitled to know not only what the law is but also how the law is to be applied to them in practice. Tax transparency is also a vital element of a robust tax system. Increasing tax transparency will improve understanding, foster trust between the tax administration and taxpayers, promote compliance, reduce tax evasion, ensure fairness and equity, as well as enhance the efficiency of tax administration. All these contribute to a better compliance environment, providing long-term benefits for taxpayers and the economy, which in turn will also help create a favourable environment for business to operate and invest. This article explains the measures adopted by the Government of the Hong Kong Special Administrative Region, the People's Republic of China (hereinafter referred to as "Hong Kong SAR") to achieve and improve transparency of tax law and tax administration.

2. Dissemination of Tax Information

2.1 Channels to Tax Information

There are three major official online platforms through which tax information is provided to the public, namely the

Hong Kong e-Legislation, the website of the Inland Revenue Department of the Hong Kong SAR Government (hereinafter referred to as "IRD") and the GovHK.

Hong Kong e-Legislation[1] is the official database of the legislation in the Hong Kong SAR. It provides free online access to current and past versions of consolidated legislation, including the Inland Revenue Ordinance (IRO), the major tax statute in the Hong Kong SAR, as well as other statutory rules and regulations.

IRD's website[2] enables the public to conveniently obtain comprehensive and the most current information about taxation in the Hong Kong SAR, including tax laws, court judgments, tax measures, departmental practices, guidelines and tax information on specific hot topics.

GovHK[3] is the one-stop portal created by the Hong Kong SAR Government where the public can easily access those most sought-after Government information, including tax information published by the IRD.

2.2 Published Materials

In the Hong Kong SAR, full text of the tax laws administered by the IRD, decisions of the Board of Review (an independent tribunal constituted under the IRO) and court judgments are published and easily accessible online. These materials help taxpayers better understand the operation of the tax laws, how the laws are interpreted and how they are applied to specific cases, thereby promoting clarity and consistency in the application of the tax laws.

Comprehensive tax information provided through the IRD's website includes the following:

• Departmental Interpretation and Practice Notes (hereinafter referred to as "Practice Notes"). The Practice Notes set out the IRD's interpretation of the applicable tax laws and practices adopted in relation to important tax issues for the information of taxpayers and tax representatives. While not having the force of law, the Practice Notes help taxpayers better understand the IRD's stance on specific issues and how it will apply the relevant laws in practice, thereby ensuring consistency in the application of the tax laws, providing transparency in tax administration and reducing taxpayers' compliance costs.

• Pamphlets and guidelines. These materials contain tax information on a wide variety of topics in simpler terms for the general information of persons unfamiliar with the tax legislation. Examples and answers to frequently asked questions are also provided to facilitate understanding.

• Detailed tax information on specific topics. There are thematic content pages covering tax issues of interest to businesses, individuals, property owners, employers, tax representatives, etc. Detailed guides on the completion and filing of tax returns are available at dedicated pages to facilitate taxpayers' compliance. Other specific topics include tax measures proposed by the Government in its budgets, tax payments and refunds, procedures for objections and appeals against tax assessments, status of tax cases under appeal, tax issues of charitable donations and tax-exempt charities, and double taxation relief and exchange of information arrangements.

• Tax administration policies. These include policy information on penalty, official secrecy, collection and use of personal data, tax recovery, etc. For example, the IRD publishes its penalty policy to enhance transparency of the potential penal actions on non-compliance. Taxpayers are informed generally of the factors taken into account by the IRD in considering the types of penal actions and the quantum of the penalty. Press announcements of successfully prosecuted court cases are also issued to alert the public of the serious consequences of tax evasion. By explaining the IRD's policies in administering the official secrecy provisions in the relevant leg-

1 https://www.elegislation.gov.hk.

2 https://www.ird.gov.hk.

3 https://www.gov.hk.

islation and the protection of personal data, the public is assured of the IRD's strict adherence to the legislative requirements and the proper handling of their information, thereby enhancing the trust between the public and the department. With policies on tax recovery actions summarised in an easy-to-understand manner, taxpayers are reminded of the importance to pay tax on time and what recovery actions they can expect the IRD to take where tax is in default. They are also informed of the possibility of applying for paying tax by instalments in case of financial difficulties.

• Advance ruling cases. A statutory advance ruling mechanism is in place in the Hong Kong SAR under which the Commissioner of Inland Revenue may, upon the receipt of an application, make a ruling on how the provisions of the IRO will apply to the applicant or the arrangement specified in the application. Selected rulings of general interest are published in a format that does not disclose the identity of the taxpayer concerned. While only serving as general reference, these published rulings provide guidance on the IRD's interpretation and application of the tax laws in specific situations and can help promote predictability and transparency in tax administration.

• Performance pledge. The IRD publishes performance pledge to set out the service standards that a taxpayer can expect from the IRD[4], e.g. the number of days within which a response will normally be given for a certain type of tax claim. The pledge covers a broad range of services, from enquiries to assessment of tax returns, objections, tax payments and refunds, business registration, complaints, etc. Annual reports on performance pledge are also published to inform the public of the extent to which the IRD achieved its performance targets in the past year.

All the above measures help taxpayers better understand their rights, responsibilities and potential tax liabilities under the relevant tax legislation. They also give taxpayers a clear idea on the service they are to receive from the tax administration and how they may cooperate with the tax administration to discharge their obligations. The result is a higher level of compliance from taxpayers and enhanced efficiency of tax administration.

The IRD also publishes annual reports to enable taxpayers and other stakeholders to gain a fuller appreciation of the operations and performances of the department[5]. The annual reports contain, among others, detailed information about the various functions of the IRD, the different types of revenues collected with further breakdowns and yearly comparisons, the cost of collection, its work on international tax collaboration, legislative amendments related to the work of the department, taxpayer services, adoption of information technology and electronic services, and human resources matters such as organisational structure, staff establishment with age and gender profiles and training.

3. Communication with Taxpayers

The IRD recognises that effective communication with taxpayers through user-friendly services would enable them to obtain clear and accurate tax information easily, thus enhancing their willingness to comply voluntarily. To facilitate communication with taxpayers, the IRD runs an Enquiry Service Centre, uses designated email accounts for specific tax matters and provides real-time interactive service to the public.

3.1 Enquiry Service Centre

The IRD's Enquiry Service Centre handles counter and telephone enquiries. The Centre is equipped with a computer network linked to the IRD's Knowledge Database to enable the IRD's staff to provide an immediate "one-stop" service.

The Enquiry Service Centre operates an Interactive Telephone Enquiry System with over a hundred telephone lines to handle taxpayers' calls. Through the system, callers can speak to

4 https://www.ird.gov.hk/eng/abo/per_tcp.htm.

5 https://www.ird.gov.hk/eng/ppr/are.htm.

the Centre's staff during office hours and access a wide range of tax information on a 24-hour basis.

During peak periods, the IRD extends the service hours of telephone enquiry services, redeploys manpower resources and employs part-time staff to strengthen daytime telephone enquiry services.

3.2 Designated Email Accounts

Apart from generic email accounts for general enquiries, the IRD has provided designated email accounts for communication on specific subject matters. Each email account aims to serve one subject matter (such as profits tax, business registration and stamp duty). As such, the email enquiry can reach the responsible section earlier, enabling a faster response time.

3.3 Chatbot

In addition to the above, the IRD has provided in its website a real-time interactive service, a Chatbot named "Iris". "Iris" stands for "Inland Revenue Interactive Service", which means the intelligent assistant of the IRD. "Iris" provides round-the-clock instant service in answering general queries relating to tax on individuals.

4. Engagement with Stakeholders

The IRD keeps close contact with stakeholders including business representatives, accountancy and taxation professional bodies and trade associations. These stakeholders play a key role in assisting the IRD to enhance its tax administration services. They also serve as a bridge between the IRD and taxpayers and have a constructive role in promoting tax compliance. The forms of engagement cover meetings, consultation and delivery of seminars.

4.1 Meetings with Stakeholders

The IRD holds regular meetings with professional bodies and other stakeholders to maintain effective communication. In those meetings, views on interpretation of tax laws, tax administration, controversial tax issues and practical matters are exchanged, concerns of the IRD and difficulties encountered by the industry are discussed, and improvements for efficiency are explored.

For example, there is an annual meeting between the IRD and the Hong Kong Institute of Certified Public Accountants which is a professional accounting body in the Hong Kong SAR responsible for regulation of the accountancy profession. Minutes of the meeting recording the detailed discussions are published, which provide useful reference for taxpayers and tax practitioners on issues of common interest and concern.

The IRD, along with other relevant Government authorities, attends monthly meetings with the Joint Liaison Committee on Taxation, a discussion forum set up on the initiative of the accountancy and commercial sectors. It is independent of the Government and its current members include chambers of commerce, and professional accounting and taxation bodies.

4.2 Consultation

In proposing amendments to tax legislation, introducing new tax initiatives, and designing new systems, services, or products, prior consultations with interested parties such as businesses, professional bodies and tax practitioners are often carried out in order to obtain best assurance to future acceptance and enhance effectiveness.

The Hong Kong SAR Government is taking a more proactive approach in engaging stakeholders to solicit their views, and may consult stakeholders through the issue of consultation papers, presentation of proposals and holding of briefings and engagement sessions. This helps ensure that the technical design and implementation approach of tax measures and initiatives will align with the relevant policy objectives, and that the intended tax outcomes will be achieved.

As an example, in a recent legislative amendment exercise of the *Inland Revenue (Amendment) (Taxation on Foreign-sourced Disposal Gains) Bill 2023*, a stakeholder consultation was conducted through the issuance of a consultation paper and the organisation of several engagement sessions. More than 70 organisations, including tax professionals, local and foreign chambers of commerce, trade and professional bodies and representatives of the financial services sector, were engaged. A number of constructive suggestions were received from the stakeholders and taken on board in formulating and refining the legislative proposal, which had greatly facilitated the successful passage of the Bill.

As another example, in implementing the enhanced facilities for electronic filing of profits tax returns, the IRD has been conducting rounds of consultation and briefings to solicit stakeholders' views to ensure that the initiative will be taken forward smoothly, both before rolling out the service in April 2023 and on a continuing basis. Numerous consultation sessions, webinars and meetings with more than 5,000 participants from various professional bodies, information technology and professional accounting firms have been undertaken. Such consultation and engagement work has proved to be instrumental to the successful roll-out of the initiative and is still ongoing.

4.3 Delivery of Seminars

The IRD delivers seminars organised by professional bodies to share with practitioners the key elements of recent amendments to tax law, updates on assessing practices, and practical experience in handling taxpayers' claims. The seminars help the tax practitioners enhance their technical knowledge and professional skills to meet changing responsibilities of themselves and their clients, which in turn enhance compliance and efficiency.

5. Concluding Remarks

Transparency of tax law and tax administration plays an important role in improving tax environment in the post-pandemic era. Multiple means and channels are required to achieve and maintain transparency. Proactive and interactive approaches by tax administrations are conducive to fostering tax transparency.

Generative AI:
The Power Behind Large Language Models and Its Use in Tax Administration

Jeffrey Owens*

Jeffrey Owens
Director
WU Global Tax Policy Center
Institute for Austrian and International Tax Law
Vienna University of Economics and Business (WU)

Abstract: This article examines the potential of Generative AI to transform the operation of tax systems and the potential barriers that will have to be overcome. It is intended to start a conversation amongst BRI tax administrations on the areas where AI could have the greatest impact on taxpayer service and compliance.

Keywords: AI; Chatbot GPT; Tax transformation; Tax administration; BRI

1. Introduction

In today's digital era, the potential of artificial intelligence (AI) to revolutionize various sectors and industries is becoming increasingly evident. The use of chatbots powered by AI in the work of tax administrations has already demonstrated its value. The emergence of ChatGPT,[1] an advanced form of chatbot technology, has elevated the capabilities of AI-driven conversations to new heights by comprehending and generating human-like texts and having a contextual understanding that enables it to produce coherent and relevant responses.

As tax administrations seek innovative solutions to streamline operations, improve taxpayer services, and optimize resource allocation, the integration of large language models (LLMs) emerges as a promising avenue. However, the incorporation of LLMs in the work of tax administrations is associated with challenges that must be addressed.

There is a need to employ a proactive approach and adopt adequate regulations and a principle-based approach to responsible use of AI. The G7, G20, OECD, UN and EU are taking the lead in establishing the principles governing responsible use

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1 Disclaimer: The author of this paper refers to ChatGPT version 3.5, unless explicitly stated otherwise.

of AI,[2] but more remains to be done; BRITACOM has a relevant role to play in this regard.

2. An Old Technology with New Applications

A chatbot is a computer program, often powered by AI,[3] that understands, interprets and engages in conversations in natural language[4] with its users, providing logical and automated answers to questions posed to it.[5] Without the need for human intervention, the tool finds and shares useful information. There are different types of conversational models and their functionalities vary from least to most advanced.[6]

More advanced chatbots that use AI and machine learning, the so-called generative chatbots, are capable of understanding behavior patterns and different contexts to provide more accurate answers to users. They "learn" not only from their training data, but also from the users' preferences and engagement.[7] Although chatbots have been used for years for different purposes, the technology came into the spotlight recently with the emergence of ChatGPT.

ChatGPT, a tool developed by the company OpenAI, is an LLM that is programmed to perform tasks that would normally require human intelligence to be accomplished. The tool exceeds the capacity of previously existing chatbots by using reinforced learning techniques, which translate into more advanced interpretation capabilities.[8] It engages in human-like conversations, answers follow-up questions in a logical manner, remembers what users said earlier in the conversation, recognizes and admits its own mistakes, challenges incorrect premises and rejects inappropriate requests.[9] Large Chinese tech companies, including Baidu, launched in 2023 a similar LLM called Ernie Bot.[10]

A user can ask the model to draft a docu-

2 See *G7 Hiroshima Leaders' Communique May 20, 2023*, https://www.mofa.go.jp/files/100506878.pdf; OECD. AI Policy Observatory (2019). *G20 AI Principles*, https://oecd.ai/en/wonk/documents/g20-ai-principles; OECD. AI Policy Observatory (2019). *OECD AI Principles Overview*, https://oecd.ai/en/ai-principles; EUR-Lex (2021). *COM (2021) 206: 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,* https://eur-lex.europa.eu/legal-content/EN/HIS/?uri=CELEX%3a52021PC0206.

3 AI is the science of mimicking human thinking abilities to perform tasks that generally require human intervention, such as recognizing patterns, making predictions, recommendations or decisions. AI can "autonomously" solve problems by using advanced computational techniques to obtain insights into trends and improve risk management. See FATF (2021). Opportunities and Challenges of New Technologies for AML/CFT. Paris: FATF.

4 Natural language is a language spoken by humans. Natural language processing is a branch of AI that enables computers to understand, interpret and manipulate human language. One example is fuzzy logic, which is a technique that takes imprecise, incomplete, ambiguous or distorted data and extracts useful information and processes it using multiple values in a way that produces usable output. In addition, natural language processing tools can be used to capture texts and scan large public data from social media and global internet research (web scrapping) for analysis, construction or formation of databases. See FATF (2021). Opportunities and Challenges of New Technologies for AML/CFT. Paris: FATF.

5 IBM. *What Is a Chatbot?*, https://www.ibm.com/topics/chatbots.

6 A. Collosa & D. Vasco (2023). *Can ChatGPT Be Used in Tax Administrations? (Part 1)*, https://www.ciat.org/ciat-blog-podra-utilizarse-chat-gpt-en-las-administraciones-tributarias/?lang=en#_ftn1.

7 Forbes. *What Is a Chatbot? Everything You Need to Know,* https://www.forbes.com/advisor/business/software/what-is-a-chatbot/.

8 A. Collosa & D. Vasco (2023). *Can ChatGPT Be Used in Tax Administrations? (Part 1)*, https://www.ciat.org/ciat-blog-podra-utilizarse-chat-gpt-en-las-administraciones-tributarias/?lang=en#_ftn1.

9 OpenAI. *Introducing ChatGPT*, https://openai.com/blog/chatgpt.

10 Z. Yang (2023). *Chinese ChatGPT Alternatives Just Got Approved for the General Public*, https://www.technologyreview.com/2023/08/30/1078714/chinese-chatgpt-ernie-government-approval/.

ment, write a computer code, write an email, answer questions on specific technical topics, analyze texts, and give ideas on a range of areas as well as anything else imagination allows.

All these capabilities are made possible because of large-scale trainings. The tool was trained using Reinforcement Learning from Human Feedback (RLHF).[11] The training process involves two main steps: (i) unsupervised pre-training: the language model is exposed to a vast corpus of publicly available texts from the internet and licensed content;[12] and (ii) supervised fine-tuning training: the model is trained with content generated by human reviewers, who provide conversations in which they are both the user and an AI assistant. In addition, ChatGPT improves by trainings on the conversations users have with it, unless the user chooses to disable this option.[13]

3. Potential Uses of LLMs for BRI Tax Administrations

The primary role of tax administrations is the collection of tax revenue necessary to fund public services.[14] The emergence of Generative AI (GenAI) provides more opportunities for BRI tax administrations to enhance their capabilities and perform their public service roles. The features of ChatGPT relevant for tax administration include contextual understanding, language generation capabilities, task adaptability (it can be used in different domains), multilingual proficiency, scalability, zero-shot and few-shot learning (ChatGPT can understand new tasks without the need for extensive training and can also learn new tasks with a few examples), and fine-tuning potential.[15]

3.1 Enhancement of Services to Taxpayers

The use of LLMs in tax administration can enhance the provision of services to taxpayers. Many tax administrations have already adopted different variants of chatbots and virtual assistants. The website of the Inland Revenue Authority of Singapore has a chatbot available to help taxpayers with their enquiries on how to fulfil their tax obligations.[16] Brazil's tax administration uses chatbots which include a specialized language, runtime and a natural language processing service based on a deep learning model.[17] Japan's tax administration introduced a chatbot for tax consultation — the chatbot automatically provides answers to taxpayers' common questions on the website.[18]

LLMs can automate repetitive tasks (such as language-related tasks)[19] and free up human resources, giving tax officials the capacity to handle more complex queries, increasing employees' morale and productivity.[20] The technology has the ability to memorize training data, making it

11 OpenAI. *Introducing ChatGPT*, https://openai.com/blog/chatgpt.

12 Yogesh K. Dwivedi, Nir Kshetri, Laurie Hughes, et al. (2023). "So What If ChatGPT Wrote it?": Multidisciplinary Perspectives on Opportunities, Challenges and Implications of Generative Conversational AI for Research, Practice and Policy. 71 *International Journal of Information Management* 102642, p.3.

13 J. Joshua. *Data Controls FAQ*, https://help.openai.com/en/articles/7730893-data-controls-faq.

14 OECD (2022). *Tax Administration 2022: Comparative Information on OECD and Other Advanced and Emerging Economies*, https://doi.org/10.1787/1e797131-en.

15 Partha Pratim Ray (2023). ChatGPT: A Comprehensive Review on Background, Applications, Key Challenges, Bias, Ethics, Limitations and Future Scope. 3 *Internet of Things and Cyber-Physical Systems*, pp.121–154, 125-126.

16 Eugene Goh (2022). *Singapore's Journey in the Digitalisation of Tax Administration*, http://mddb.apec.org/Documents/2022/FMP/SFOM19/22_sfom19_009.pdf.

17 Tax Administration 2022, 81.

18 Tax Administration 2022, 81.

19 Ibid 134.

20 Yogesh K. Dwivedi, Nir Kshetri, Laurie Hughes, et al. (2023). "So What If ChatGPT Wrote it?": Multidisciplinary Perspectives on Opportunities, Challenges and Implications of Generative Conversational AI for Research, Practice and Policy. 71 *International Journal of Information Management* 102642, p.48.

useful for information and knowledge management on the BRI tax administration's internal databases, enabling them to provide consistent answers to short and relatively simple queries.[21] It can enhance the predictability and reliability of the BRI tax administrations due to the consistency; it can also explain tax laws to taxpayers in a simple language, ensuring transparency and giving taxpayers the opportunity to hold the public servants accountable.

3.2 Risk Management and Predictive Analysis

LLMs can be trained to analyze historical data and make predictions about future tax revenues and potential tax gaps simulating different socio-economic and political scenarios. In the context of BRI tax administrations, the analysis of historical data can aid in the prediction of tax non-compliance and identification of high-risk taxpayers.

Due to its machine learning capabilities, LLMs can automatically identify patterns, anomalies, and relationships within the data that would not have been apparent from manual review of the data.[22] The tool can generate predictions[23] about taxpayer behaviors which would be useful in the forecasting of tax fraud. For example, Canada's revenue authority uses predictive modelling to identify compliance for income tax and VAT in small and medium-sized enterprises (SMEs) via data mining and machine learning algorithm.[24]

ChatGPT can be used to identify vulnerabilities in computer systems and databases including coding mistakes,[25] as well as resolving the errors.[26] ChatGPT can also identify and aid in managing potential threats to the tax system,[27] promoting the integrity of the tax system and preserving the taxpayers' data.

3.3 Tax Audits and Compliance Checks

LLMs can be instrumental in tax audits and compliance checks. It can be trained to recognize patterns in tax returns that are commonly associated with underreporting of income, tax evasion and fraud. The natural language processing techniques enable tax officials to synthesize information from multiple resources simultaneously, saving the time spent on manual reviews of taxpayer documentation.[28]

3.4 Dispute Resolution

Within the legal community, AI is used to forecast litigation outcomes and the automatic computation of billable hours.[29] The use of AI in online dispute resolution (ODR) as a mediator has grown significantly since the COVID-19 pandemic.[30] BRI tax administrations can use LLMs in research, document drafting, e-discovery, and review of legal documents, conducting background checks and assessing the risks, en-

21 Council of the European Union (2023). ChatGPT in the Public Sector — Overhyped or Overlooked?. ART — Research Paper, p.12.

22 Partha Pratim Ray, 138.

23 Ibid 139.

24 Fernando Serron Anton (2021). Artificial Intelligence and Tax Administration: Strategy, Applications and Implications, with Special Reference to the Tax Inspection Procedure. 13 *World Tax Journal* 4, p.598.

25 ART Research Paper, 13.

26 Partha Pratim Ray, 137.

27 Ibid 138.

28 Ibid.

29 Hanna Roos (2023). *Arbitration Tech Toolbox: Let's Chat Some More about ChatGPT and Dispute Resolution*, https://arbitrationblog.kluwerarbitration.com/2023/04/08/arbitration-tech-toolbox-lets-chat-some-more-about-chatgpt-and-dispute-resolution/.

30 Hibah Alessa (2022). The Role of Artificial Intelligence in Online Dispute Resolution: A Brief and Critical Overview. 31 *Information & Communications Technology Law* 3, pp.319–342, 320.

abling them to make informed decisions.[31] The technology can streamline and accelerate arbitration proceedings by summarizing large amounts of data quickly and accurately; it can reduce the costs of proceedings, increase efficiency and reduce delays, enhancing overall productivity.[32]

Argentina uses "Prometea", a predictive AI to optimize administration of justice by accelerating judicial processes for the benefit of the citizens.[33] It performs repetitive tasks, acts as a virtual assistant, predicts solutions and helps provide information required to assemble a case file, giving the prosecutors the opportunity to decide if the predicted outcome is worthy of consideration,[34] thus freeing judicial officials and allowing them to focus on complex cases that require human inputs.[35] Colombia's "PretorIA" is a tool for judges, providing a platform for the analysis of citizens' complaints and the prediction of predefined criteria which it then reports to judges. Arbitrator Intelligence is another AI tool used in arbitral proceedings — it analyzes data from arbitral awards.[36]

In the sphere of international tax treaty dispute resolution, GenAI can be deployed to streamline the Mutual Agreement Procedure (MAP)[37] by identifying the main drivers of disputes and so straightforward solutions can be provided.[38] GenAI could additionally be deployed to automate the procedure of determining the admissibility of MAP requests based on pre-determined objective criteria.[39] For MAP requests that are admissible but with low risk (routine and fact-based), GenAI could issue a preliminary automated MAP decision based on previous cases with similar patterns.[40]

4. The Main Risks Associated with the Use of ChatGPT in the Work of BRI Tax Administrations

Like other technologies, LLMs have flaws and can cause problems that might disrupt normal execution of the tasks, and the principles of the operation, and ultimately undermine trust between tax administrations and taxpayers.

4.1 Inaccurate Answers and "Hallucinations"

ChatGPT may produce inaccurate answers ("hallucination") and make reasoning errors.[41] The tool generates responses based on the patterns that it learnt from the data used for its training. Apart from the fact that such data is obtained by scrapping the internet sources that are not always reliable (e.g., Wikipedia), the availability of the training data is limited to September

31 Ibid Partha Pratim Ray, 136 -137.

32 Linda L. Beyea (2023). *The Rise of ChatGPT: Why Arbitrators Need to Take Notice*, https://www.adr.org/blog/The-Rise-of-ChatGPT-Why-Arbitrators-Need-to-Take-Notice#:~:text=ChatGPT%20has%20the%20ability%20to%20streamline%20the%20arbitration,in%20analyzing%20documents%20and%20preparing%20submissions%20in%20arbitration.

33 Juan G. Corvalán & Enzo Maria Le Fevre Cervini (2020). *Prometea Experience. Using AI to Optimize Public Institutions — CERIDAP*, https://ceridap.eu/prometea-experience-using-ai-to-optimize-public-institutions/?lng=en.

34 OECD/CAF (2022). *The Strategic and Responsible Use of Artificial Intelligence in the Public Sector of Latin America and the Caribbean*, https://doi.org/10.1787/1f334543-en.

35 OECD/CAF (2022), 35.

36 Josephine Bhavani Rajendra & Ambikai S. Thuraisingam (2022). The Deployment of Artificial Intelligence in Alternative Dispute Resolution: The AI Augmented Arbitrator. 31 *Information & Communications Technology Law* 2, pp.176-193, 180.

37 Christina Dimitropoulou, Sriram Govind & Laura Turcan. Applying Modern, Disruptive Technologies to Improve the Effectiveness of Tax Treaty Dispute Resolution: Part 2. 46 *INTERTAX* 12, pp.960-970, 966.

38 Ibid.

39 Ibid.

40 Ibid.

41 OpenAI (2023). *GPT-4 Technical Report*, https://arxiv.org/pdf/2303.08774.pdf, p.10.

2021.[42]

The tool lacks real-time awareness of the context of the requests and, consequently, generates the answers based on the information embedded in a user's input. It may misinterpret the input due to ambiguity of language and provide information that is technically and semantically correct but does not match what a user intended to receive or produces wrong reasoning. Such errors can seriously affect the work of the BRI tax administrations by resulting in inaccurate tax advices or guidances to taxpayers, as well as causing inconsistent tax enforcement practices.

4.2 Discriminative and Biased Answers

There are ethical concerns raised by the application of LLMs, with the issues of biases, discrimination, transparency, and responsibility increasingly appearing on the agenda. There are many examples of discriminative outputs containing racial, ethnical or gender biases by ChatGPT.[43] Even though the algorithms behind the LLM are not necessarily perceived as discriminative themselves, such issue might arise because of the ChatGPT training process.[44] Discriminatory patterns can be accidentally embedded in the datasets used for machine learning[45] and human feedback might also lead to absorption of various biases, since humans can be discriminatory themselves.

4.3 Transparency Concerns

BRI tax administrations, following the principle of transparency and accountability of public administration, should notify taxpayers about the use of AI in their work.

Achieving transparency may, however, be challenging as LLMs are "black box" model by its nature, which means that it is difficult to understand how the system produced certain results. ChatGPT does not provide references and sources of information for its answers and cannot provide a detailed breakdown of how it arrived at a specific result.[46] This causes explainability of the model difficult to achieve, making it challenging to address the outputs of biases or verify the accuracy of answers produced by ChatGPT. The lack of transparency and explainability can hinder both taxpayers' and tax administrations' ability to present evidence or challenge deci-

42 OpenAI (2023). *GPT-4 Technical Report*, https://arxiv.org/pdf/2303.08774.pdf, p.10. However, Microsoft Bing, a "research assistant" based on GPT-4, generates detailed answers by conducting complex real-time web scrapping in accordance with users' requests. See Bing (2023). *Introduction to the New Bing*, https://www.bing.com/new?-form=MY028Z&OCID=MY028Z. Nonetheless, the correctness and veracity of the output will rely on the quality of the Internet data used to generate the answers.

43 Gender bias: Example of Gender Bias in ChatGPT (ravitdotan.com); Ethnicity bias: Netherlands Using Secret & Potentially Illegal Algorithm to Profile Visa Applicants, Investigation Says — SchengenVisaInfo.com; Race discrimination: AI and housing discrimination: the case of mortgage applications | SpringerLink.

44 This refers to so-called automation bias when people thoughtlessly accept an automated decision or recommendation (see, for example, Cordula Kupfer, Rita Prassl, Jürgen Fleiß, et al.(2023). Check the Box! How to Deal with Automation Bias in AI-based Personnel Selection. 14 *Frontiers in Psychology*. https://www.frontiersin.org/articles/10.3389/fpsyg.2023.1118723/full.

45 Dolores Morondo Taramundi (2022). Discrimination by Machine-Based Decisions: Inputs and Limits of Anti-Discrimination Law. 35 *Law and Artificial Intelligence*, *ITLS*, p.76.

46 In fact, when asking ChatGPT itself to provide the source for a response generated by the tool, it gave the following information: "As an AI language model, my responses are generated based on a mixture of licensed data, data created by human trainers, and publicly available data. I don't have direct access to specific sources or the ability to browse the internet. I can provide general information and answer questions based on my training, but I cannot fetch or cite specific sources like a search engine would. If you have a specific question or topic in mind, feel free to ask, and I'll do my best to assist you with the information I have been trained on." See conversation in https://chat.openai.com/share/70f50960-5f64-4e8a-bb00-9d7356ba873b, accessed on 04.06.2023.

sions, potentially violating the right to fair trial.[47]

4.4 Privacy, Confidentiality, and Data Protection Issues

The use of LLMs raises privacy concerns regarding the data that is collected. This issue is especially relevant for tax administrations, which collect, store and process sensitive personal information including taxpayers' financial details, social security numbers and other personally identifiable information.

Data breaches or unauthorized access to stored data can result in privacy violations and potential misuse of personal information. Finally, given the differences in the safeguards against privacy and data protection violations around the world, issues can arise when such data is collected and processed in the cross-border context.

5. The Way Forward

As BRI tax administrations embrace the power of AI and leverage advanced language models like ChatGPT, it is crucial to be aware of the evolving landscape and anticipate the implications it holds. The rapid progress of AI technology presents both opportunities and challenges that BRI tax administrations must navigate with care.

Considering the diversity in experiences, BRITACOM can provide a forum for exchanges of experience among BRI tax administrations.

5.1 Current Regulatory Landscape

Numerous regulations aiming to govern various aspects related to the use of AI, such as data privacy and cybersecurity, were enacted in the previous years.[48] Nonetheless, these do not address every issue arising from the use of AI. For example, the possibility of a user requesting for their data to be deleted from ChatGPT is addressed by data protection regulations of the EU, the US and Japan, but it is not clear how this problem could be solved if a user resides in other jurisdictions.

More comprehensive regulatory frameworks for AI started to be discussed. Among those, the EU has proposed the Artificial Intelligence Act (AI Act) in 2021. The Members of the European Parliament negotiating position require ensuring safety, transparency, traceability, non-discrimination, and sustainability of the AI systems used in the EU.[49] In the United States, a bill for an Algorithmic Accountability Act was proposed in 2022 with an emphasis on automated decision systems, advocating that organizations deploying such systems must take measures to identify and mitigate the social, ethical, and legal risks.[50] Canada introduced a Directive on Automated Decision-Making in 2019 and established a Centre for Cyber Security.[51] Countries in Asia (e.g., China and Singapore) have also been putting in measures to mitigate the risks associated with GenAI.

47 Aleksandra Bal (2022). Black-Box Models as a Tool to Fight VAT Fraud. 35 *Law and Artificial Intelligence, ITLS*, p.234.

48 Some examples are the EU GDPR, the Cybersecurity Law of the People's Republic of China (2017), and Singapore's Personal Data Protection Act (PDPA) (2013, amended in 2020). See *Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016*, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0679; Standford University. *Translation: Cybersecurity Law of the People's Republic of China (Effective June 1, 2017)*, https://digichina.stanford.edu/work/translation-cybersecurity-law-of-the-peoples-republic-of-china-effective-june-1-2017/; and Personal Data Protection Commission Singapore. *PDPA Overview*, https://www.pdpc.gov.sg/Overview-of-PDPA/The-Legislation/Personal-Data-Protection-Act.

49 *Artificial Intelligence Act, European Parliamentary Research Service, PE 698.792 (June 2023)*, https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698792/EPRS_BRI(2021)698792_EN.pdf.

50 Mökander J., Juneja P., Watson D.S., et al. (2022). The US Algorithmic Accountability Act of 2022 vs. The EU Artificial Intelligence Act: What Can They Learn from Each Other? *Minds & Machines* 32, pp.751–758. https://doi.org/10.1007/s11023-022-09612-y.

51 Government of Canada. *Directive on Automated Decision-Making*, https://www.tbs-sct.canada.ca/pol/doc-eng.aspx?id=32592.

Nevertheless, considerable progress remains to be made, and countries must proactively anticipate potential challenges by amending existing legislation or enacting new measures, e.g., establishing minimum standards to govern the utilization of LLMs. Collaboration between BRI tax administrations, policymakers, and technical experts will be essential to adapt regulations and frameworks to effectively govern the use of AI-powered systems in tax administration.

5.2 Principle-Based Approach

Going beyond regulations, the path forward for integrating GenAI within BRI tax administrations requires a principled approach. As governments stand at the crossroads of innovation and regulation, they need to find a balanced way to use new technology while still following rules. Building upon the insights presented in this paper, the next step could be for the BRITACOM to set a clear set of principles and best practices. These guidelines should provide a roadmap that helps administrations navigate the complex process of integrating advanced AI technologies into tax operations.

Principles of responsible use of AI have been mapped out by several inter-governmental organizations, governments, civil society and private sector companies over the past years.[52] Although specific guidelines may vary according to its intended audience, scope, depth and jurisdiction, common themes on principles for responsible AI arise in most papers.[53]

5.2.1 Transparency and explainability

Explainability refers to the ability of an AI system or algorithm to provide understandable and coherent explanations for its decisions, predictions, or outputs, enabling users to comprehend how and why a particular outcome is reached. A transparent AI system allows users and stakeholders to gain insights into how the system functions, how it processes data, and how it reaches its conclusions or outputs.[54]

Explainability can be challenging to achieve in AI systems for several reasons, the main one being the complexity of the algorithms and models that power these systems. Many AI models, including ChatGPT, consist of millions or even billions of parameters which interact in intricate ways to generate responses or decisions, making it difficult to interpret how particular outcome was produced. Different methods have been developed to make AI-models more transparent and interpretable.[55] Transparent explanations enhance accountability and enable efficient decision-making. It allows tax administrations to address biases and errors, promoting fairness and accuracy.

5.2.2 Confidentiality, privacy and data protection

Privacy and data protection entail that GenAI systems must be created and utilized in

52 See, for instance, *G20 AI Principles*, https://oecd.ai/en/wonk/documents/g20-ai-principles; *OECD AI Principles Overview*, https://oecd.ai/en/ai-principles; National Governance Committee for the New Generation Artificial Intelligence (2019). *Governance Principles for the New Generation Artificial Intelligence: Developing Responsible Artificial Intelligence*, http://www.chinadaily.com.cn/a/201906/17/WS5d07486ba3103dbf14328ab7.html; European Commission's High-Level Expert Group on Artificial Intelligence (2019). *Ethics Guidelines for Trustworthy AI*, https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai; IBM (2019). *Everyday Ethics for Artificial Intelligence*, https://www.ibm.com/watson/assets/duo/pdf/everydayethics.pdf.

53 Fjeld Jessica, Achten Nele, Hilligoss Hannah, et al. (2020). *Principled Artificial Intelligence: Mapping Consensus in Ethical and Rights-Based Approaches to Principles for AI*. Berkman Klein Center Research Publication No. 2020-1, https://ssrn.com/abstract=3518482 or http://dx.doi.org/10.2139/ssrn.3518482.

54 Fjeld Jessica, Achten Nele, Hilligoss Hannah, et al. (2020). *Principled Artificial Intelligence: Mapping Consensus in Ethical and Rights-Based Approaches to Principles for AI*. Berkman Klein Center Research Publication No. 2020-1, https://ssrn.com/abstract=3518482 or http://dx.doi.org/10.2139/ssrn.3518482.

55 J. McDermd, Y. Jia, Z. Porter, et al. (2021). Artificial Intelligence Explainability: The Technical and Ethical Dimensions. 379 *Towards Symbiotic Autonomous Systems* 2207, https://doi.org/10.1098/rsta.2020.0363.

accordance with established privacy and data protection laws and guidelines.[56] This includes the development of quality and integrity standards for collecting and processing data, and clear guidelines for retention and deletion of data.

BRI tax administrations must obtain clear and informed consent from taxpayers and ensure transparency about the purpose and scope of data usage, as well as collect only the minimum amount of personal and sensitive data necessary for its purposes. Data should not be stored longer than necessary for their intended purposes.

GenAI-generated outputs, including insights and predictions, must be used solely for tax administration purpose, while its repurposing for unrelated activities without explicit consent should be avoided. Whenever possible, anonymization and aggregation techniques should be applied to guarantee confidentiality and protect the safety of individual identities and sensitive information.

BRI tax administrations must assure that taxpayers are in control of their personal data collected and stored in GenAI systems by providing the ability to access, correct, and delete their personal data, as well as control the scope of AI processing related to their tax information.

When sharing data and GenAI-generated outputs with other government agencies, BRI tax administrations should ensure that privacy and data protection standards are upheld, as well as regularly conduct audits and assessments of such systems to ensure ongoing compliance with these principles.

5.2.3 Fairness and non-discrimination

The principle of fairness and non-discrimination should be translated into the development, design, training, and use of GenAI. In designing, deploying and operating LLM tools, BRI tax administrations should strive to hire staff from diverse backgrounds, cultures and disciplines to ensure a wide range of perspectives, foster inclusion and minimize the risk of excluding minoritarian views.

Human oversight aids adherence to the anti-discrimination principle and avoidance of societal injustices or impact on vulnerable underrepresented groups.[57] GenAI tools need to be audited for bias and discrimination[58] and, if it happens, there should be remedies available against it.[59]

5.2.4 Accountability and legal responsibility

Countries must strengthen the oversight mechanisms on the use of GenAI. BRI tax administrations and tax officials must be held accountable and legally responsible for the exercise of public power using GenAI. The persons responsible for the different phases of the LLM tools (design, development, deployment and operation) should be identifiable and accountable.[60] Tax officials must uphold the tax law and be held responsible.

The implementation of a GenAI Accountability Framework, which can govern the audit of LLM tools and allow for effective validation, testing and monitoring of these systems is

56 *Amendments Adopted by the European Parliament on 14 June 2023 on the Proposal for a Regulation of the European Parliament and of the Council on Laying down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts (COM(2021)0206 – C9-0146/2021 – 2021/0106(COD))*, *Amendment 213*, https://www.europarl.europa.eu/doceo/document/TA-9-2023-0236_EN.html.

57 Australia Government (2023). *Australia's AI Ethics Principles*, https://www.industry.gov.au/publications/australias-artificial-intelligence-ethics-framework/australias-ai-ethics-principles.

58 María Amparo Grau Ruiz (2022). Fiscal Transformations Due to AI and Robotization: Where Do Recent Changes in Tax Administrations, Procedures and Legal Systems Lead Us?. 19 *Northwestern Journal of Technology and Intellectual Property* 4, pp.325-363, 335.

59 UNESCO. *Recommendation on the Ethics of Artificial Intelligence*, 23 November 2021.

60 Australia Government (2023). *Australia's AI Ethics Principles*, https://www.industry.gov.au/publications/australias-artificial-intelligence-ethics-framework/australias-ai-ethics-principles.

important.[61] Governments need to ensure the monitoring and testing of AI tools by technical and policy experts, and invest in tools that allow self-evaluation and error detection.[62]

6. Concluding Remarks

The use of LLMs in BRI tax administrations' operations provides both benefits and risks. To ensure the successful integration of ChatGPT, BRI tax administrations may launch pilot studies that allow for controlled testing and evaluation of the technology in real-world scenarios. These should involve collaboration among BRI tax administrations, AI experts, and relevant stakeholders to assess the feasibility, effectiveness, and potential risks of implementing LLMs.

A principled-based approach upholds the principles of transparency and explainability, confidentiality, privacy and data protection, fairness and non-discrimination and accountability and legal responsibility, in the design, deployment, and use of LLM tools.

Given the global nature of tax administration and the potential impact of ChatGPT on taxation systems worldwide, there is a pressing need for governments at a global level to establish rules and regulations to govern the tool, promoting consistency and facilitating the exchange of best practices among jurisdictions. The UN, with support from the BRITACOM, can play a pivotal role in facilitating international cooperation and coordination in this regard.

61 Duncan Bentley (2022). Tax Officer 2030: The Exercise of Discretion and Artificial Intelligence. 20 *eJournal of Tax Research* 1, pp.72-100, 94.

62 Ibid, p.77.

An Ethical Framework for the Use of AI by Revenue Authorities

Grant Wardell-Johnson and Conrad Turley

Grant Wardell-Johnson
Global Tax Policy Leader
KPMG

Conrad Turley
ASPAC Tax Policy Leader
KPMG

Abstract: The use of AI may give rise to substantial benefits but also significant risks for revenue authorities. This paper provides a brief outline of the perceived strengths and weaknesses of AI and potential use of AI in tax administration. These include the use of AI in risk assessment such as the selection of taxpayers for review or audit, the detection of fraud, nearest neighbour guidance, predictive analysis, anticipating changes in behaviours, improving revenue authorities' internal efficiency including transfer pricing benchmarking, and providing support and guidance to taxpayers through chatbots. Revenue authorities are strong candidates for the use of AI given that data is central to what they do. The paper postulates more than 20 principles which could form the basis of an ethical framework for revenue authorities including policies on transparency, communication, traceability, explainability, human supervision, processes for the rectification of errors, data protection, privacy and cyber-security. We believe that the adoption of these policies will reduce risks to revenue authorities and build trust in tax systems. We also believe that sharing best practices amongst revenue authorities should be a clear BRITACOM initiative consistent with its aims and objectives.

Keywords: AI; Tax administration; Ethical framework

1. Purpose and Objectives

This paper seeks to add to the important, vibrant and extensive discussions on AI, but it does so in the context of the use of AI by revenue authorities.[1] Revenue authorities hold a special place in society. Not only are they the principal mechanism by which governments obtain

1 There is an increasing level of literature in this domain including Benita Mathew (2024). Responsible AI in Tax Administration, Who or What Should Be Responsible? University of Surrey; Owens, Piakarskaya, Costa, et al. (2023). Generative AI: The Power Behind Large Language Models and Their Use in Tax Administration. 112 *Tax Notes International*; Sullivan & Hewings (March 2024). What Does 'ChatGPT' Mean for the Future of Tax? VIC Tax Forum; General Secretariat, Council of the European Union (April 2023). ChatGPT in the Public Sector — Overhyped or Overlooked?; David Hadwick (2023). 'Error 404 — Match Not Found', Tax Enforcement and Law Enforcement in the EU Artificial Intelligence Act.

funds for the benefit of its citizens, in the course of which they gather huge amounts of data ripe for the use of AI, but they are also one of the key institutions giving rise to trust and morale in the community. This means that how they manage AI is of critical importance and flows through to others in society.

This paper seeks to outline the principles of an ethical framework for the use of AI processes with a focus on revenue authorities. This is not to deny that taxpayers including businesses do not have ethical responsibilities on the use of AI. We strongly believe that they do while this discussion also needs to be progressed. Some of that progress will be driven by businesses themselves, but revenue authorities can also help in promoting good business behaviour which we have incorporated into our draft framework below.

2. Executive Summary

Unquestionably AI has significant strengths that can drive substantial change for the benefit of society, including its raw power to undertake tasks, the potential reduction in human error, the speed at which it can conduct operations, the manner in which it can "free up" resources to improve productivity, the accessibility it can provide for many and, if trusted and used well, the manner in which it can reduce bias.

On the other hand, there are significant perceived weaknesses. These include AI possessing inadequate general knowledge, a potential lack of transparency where the AI process becomes a "black box", potential widespread lack of trust in outcomes, fear of a lack of human oversight, large scale adverse societal impacts and potential discriminatory bias.

Revenue authorities will need to deal with both these strengths and weaknesses. The potential for the use of AI in the tax arena is substantial, reflected by the large number of revenue authorities indicating they are currently using AI or intend to do so in the immediate future. Some of the potential uses of AI in the tax arena are fraud detection, risk analysis, benchmarking and nearest neighbour guidance. This is alongside predictive analysis and anticipating changes in behaviours, tax chatbots to convey information, and the use of AI for document analysis. In the latter case, AI could be used to detect withholding tax liabilities, draw delineations based on circumstances, and distinguish between an improvement on capital account and a repair on revenue account.

This can apply in many domains, the most prominent of which are VAT and consumption tax, personal income tax and corporate income tax. But the use of AI clearly extends to other taxes and can drive change to bring taxpayers into the formal sector.

This paper advocates more than 20 specific principles that should be considered in an ethical framework. Each of these principles seeks to deal with the concerns raised above in the specific context of revenue authorities.

3. What Kinds of AI Are We Talking about?

Artificial Intelligence is not a new phrase. There are many forms now commonly used and potentially usable in the tax domain. For example, *Machine Learning* which involves various data analysis and extraction techniques; *Predictive AI* which is the use of data to make predictions about future events and is used in risk analysis; and *Natural Language Processing* which can be applied in chatbots and language translation. In addition, one critical development of relatively recent times is Generative AI using Large Language Models (LLMs).

With the risk of oversimplification, Generative AI firstly scans substantially the whole of the internet. It then gives each word a 4-character token and records the relative location of each token to other tokens within a text. Afterwards, it determines a probability of the relationship of one token to another. This becomes a neural network of tokens, words and locations which is based on probability. When prompted with a question it will use its neural network to predict an answer which itself is based on probability, though subject to learnings from historical corrections and bearing in mind that it can remember what has already been asked.

The Generative AI model has no inherent knowledge beyond the probabilities derived

from its neural network. It can thus pick up on erroneous information which might not be obvious to a reader because of the manner in which an answer is delivered. This is generally referred to as "hallucination". That is, it can be plain wrong which presents significant risk.

4. What Are the Perceived Strengths of AI?

Potentially, AI can be accurate within certain domains and reduce human error, very fast compared to human processing, and able to perform consistently within certain parameters. AI can also provide thoroughness and augment human capacity. To summarise it can free up resources for other activities and reduce "noise" in decision making.

5. What Are the Perceived Weaknesses of AI?

Generative AI has the capacity to "hallucinate", and aside from this, it lacks "general knowledge". It can also lack transparency, which, if not properly managed, can lead to a lack of trust. Moreover, AI has the potential to operate without sufficient human oversight and could potentially make decisions based on discriminatory criteria. If it results in systemic errors, they can be of a very large scale. An example of the detrimental use of AI by a tax administration involves the automation of the assessment of a childcare allowance — it is referred to as the *toeslagenaffaire* which we refer to below as the Dutch Childcare Issue.[2] While the issues involved are multiple and complex, essentially the technology gives rise to racial profiling which has substantial adverse implications for many impacted. Also there is the Australian *Robodebt* issue which involved certain flawed data matching.[3]

6. How Are Revenue Authorities and Other Regulatory Bodies Likely to Use AI?

According to the OECD, more than 40 revenue authorities worldwide have indicated that they are or intend to integrate AI into their processes.[4] AI can play a role across the full sweep of revenue authority activities, including taxpayer registration, tax assessment, compliance management, dispute prevention and resolution, and wider taxpayer services. As noted above, the fuel for AI training and application is massive data sets, and revenue authorities have accumulated huge volumes of data to feed these processes.

Before looking in the next section at how AI can play a role in the administering of different tax types, we first look at the different functional applications of AI in tax administration. We consider below the potential AI usage in risk assessment (e.g., selection of taxpayers for review/audit, and detection of fraud), for improv-

2 See Hadwick, op cit.

3 See Mathew, op cit.

4 OECD (2019). *Tax Administration 2019: Comparative Information on OECD and Other Advanced and Emerging Economies,* https://doi.org/10.1787/74d162b6-en.

ing revenue authorities' internal efficiency (e.g., TP benchmarking), and for providing support and guidance to taxpayers.

6.1 Risk Assessment — Patterns and Trends

AI models used by revenue authorities can be trained to recognise patterns. In the process of collating taxpayer information, these models are commonly used to detect underreporting of income, tax evasion, and fraud.

Multiple different sources of data can be gathered and synthesised using AI's natural language processing techniques. This include tax returns and other tax reporting, e.g., Country-by-Country Reporting (CbCR), financial statements, third-party reporting (financial institutions, employers, and other government departments), internationally exchanged information, as well as data "scraped" from social media and digital public platforms. Revenue authorities' records of their prior audits can also be leveraged by AI models — through machine learning the models can progressively improve their risk assessment and audit selection criteria.

The volume of revenue authorities' data on which AI can act has already been greatly enhanced in recent years with the shift to e-administration. As taxpayers themselves integrate AI into their own systems, this is set to further enhance the flow of data to revenue authorities, with real-time aggregation of information by the taxpayers facilitating instantaneous data feeds to the authorities. This can be reinforced by automated and AI-driven taxpayer systems, through which revenue authorities can request to access information via Application Programming Interfaces (APIs).

In time, much of the routine work involved in tax administration processes could be handled by AI. AI could drive more accurate identification of at-risk taxpayers for review and audit. Leveraging past data, machine learning can identify behaviour patterns that might indicate fraud or non-compliance and use this to predict potential tax violations. It can flag up unusual transactions (e.g., payments to unregistered sellers meriting further attention) or deviations from expected outcomes, such as notable mismatches between the reported incomes and expenditures of individuals.

Alongside AI enhancement of risk assessment processes, AI can also enhance the conduct of compliance actions, including entry of data, tax calculations, review of documents, benchmarking, etc. Many revenue authorities have expressed a desire to rationalise existing labour costs by using AI analytics to drive decision making and compliance actions.

Of course, great care needs to be taken with the use of AI for risk assessment given the potential for "hallucinations" noted above, whereby AI could generate outputs for revenue officers which read as reasonable and plausible but are in fact incorrect. This can be as a result of inappropriate reasoning by the AI model, out-of-date input data, or an improper semantic processing of the query posed to the system by a revenue officer. Additionally, AI training could potentially lead to biases in selection, which compromise its effectiveness. This might be the case, for example, where the AI is trained on prior audit case data, or where the risk metrics used for selecting those audit cases had, of themselves, certain biases.

Such risks demand that revenue officers be able to apply a critical lens to what information is produced through AI. Given how critical the inputs are, existing revenue authority datasets may need to be reworked so that they can be properly used by the AI for training (e.g., consistent data structures, definitions, etc.).

It also demands that revenue officers have a robust understanding of how AI tools operate so that they can be optimally used. Notably, while LLMs are becoming ever more capable of dealing with complex contextual factors, they are still much better at articulating particular tax rules rather than applying the rules to multifaceted situations, for which tacit knowledge may be needed which is not readily built into an AI system. Furthermore, given that AI models are built around the leveraging of past patterns to develop new patterns, new tax rules may leave them without past pattern data to leverage. As such, for revenue officers to effectively use these systems they would need to have a good sense of "prompt engineering", i.e., structuring their queries to the AI model in a manner that works within the grain of its capabilities.

6.2 Improving Revenue Authorities' Internal Efficiency — Benchmarking

As noted, revenue authorities' internal efficiency can be greatly increased by leveraging AI.

• AI natural language processing capabilities can expedite entry of data, tax calculations, and review of documents.

• Internal and external coordination can be improved, for example AI could sort incoming emails and direct to the appropriate case workers. AI could determine the optimal point in time to send out letters/prompts to taxpayers, including for debt collection, and task dispatch.

• Time-consuming activities such as foreign language translation can also be handled effectively by AI, facilitating enhanced data collation and communication.

• Compliance checks can be facilitated by AI's natural language processing ability to reference (in the case of income/expense classification) existing revenue authority guidance, case law, and prior year tax treatments by a taxpayer.

• In this regard, both revenue officers and company's tax department personnel may look to use AI-driven tax "co-pilots" in their work. So, when the fixed asset element of a tax computation is being prepared, AI could immediately source relevant tax effective lives, or VAT treatments, or determinations of capital vs. revenue. Or when a tax position paper is being prepared, AI could immediately present relevant, supporting case law or commentary from external sources.

Consequently, the capacity of revenue officers is freed up for more complex and expert tasks (equally the case for company's tax department personnel who are leveraging such tools). Of course, this is subject to the caveats above that AI is best at the organisation, composition and simple analysis of legal rules, but may struggle with more complex legal judgments and issue spotting.

One area of particular note for improved internal efficiency is in relation to transfer pricing. As Generative AI becomes more advanced, it can be leveraged to draw on extensive data resources for the generation of TP benchmarking sets. This is of course subject to having appropriate regard for copyright and data protection laws when feeding data into the technology. However, a further intriguing dimension to the impact of AI on TP is the manner in which patterns and processes of underlying value creation may be changing, and how this creates challenges for TP analysis and comparables availability. This is dealt with further below in the corporate income tax part of the next section of this article.

6.3 Providing Support and Guidance to Taxpayers — Bots and Nudges

One of the clearest applications of AI LLMs in tax administration is the usage of chatbots to assist taxpayers with queries on tax rules and with completing tax compliance processes. Some of the earlier chatbots did not use AI (e.g., rule based virtual assistants) but simply were programmed with pre-written Q&As by revenue officers. These bots however faced limitations in what queries they could handle and might lack contextual and semantic sophistication in dealing with taxpayers' requests. As revenue authorities progressively replace these earlier virtual assistants with AI-driven chatbots, however, they can more flexibly deal with a wider range of queries. They have a much greater capacity to comprehend queries put to them, as the use of significant quantities of training data gives them a level of contextual understanding, and their human like responses raise the quality of interactions.

A very helpful capability of AI chatbots is in the area of language simplification — they can render complex legalistic clauses in simple lay terms for the ease of taxpayer understanding. This improves steadily over time through machine learning from interactions with taxpayers.

Another area of note is "nudges" to taxpayers, drawing on behavioural insights. This falls within the field of prescriptive analytics (i.e., considering the impact of revenue authorities' actions on taxpayer behaviour), rather than the predictive analytics mentioned above (i.e., pattern analysis to anticipate problems, such as likely inaccuracies in prepared returns). These nudges have been found to be quite effective in practice, such as on-screen pop ups providing guidance on expense deduction limits when a taxpayer is filling out that part of their tax return. This includes alerts to the effect that the amount claimed looks highly relative to that claimed by individuals with a similar profile (e.g., same profession, same area) — this is referred to as nearest neighbour guidance. While versions of these nudges existed pre-AI, new AI-driven versions can be much more sophisticated and effective and further drive "embedded compliance". To the extent that tax administration systems and AI programmes can directly interface with taxpayer systems in real time (such as via APIs), this can also drive more comprehensive and effective "upstream compliance", prompting behaviour change when commercial transactions are initiated.

This is alongside further areas of taxpayer services that can be enhanced via AI, including:

• More comprehensive AI-driven pre-filling of taxpayer returns, which can leverage greater ranges of data sources — this has been shown to elevate compliance rates;

• AI can evaluate what means of contact/support are more effective for different groups of taxpayers (e.g., in relation to debt collection) and modulate accordingly; and

• AI analysis of non-compliant behaviour can feed into the underlying design of new tax policies, reporting processes, and forms of revenue authority guidance/nudging which are more likely to produce results.

As positive as all of these AI use cases are, the limitations and risks of the technology also need to be borne in mind, such as the biases and potential "hallucinations" mentioned above. Indeed, a key dimension of AI roll-out in future may be the integration of features that adequately "explain" how the AI reached its conclusions. As it stands, LLMs train themselves on vast volumes of data (the sources of which will typically not be stated) and generally do not explain how they reach their conclusions, potentially making it impossible to understand why they produce a specific result. In order to ensure the preservation of taxpayer rights and ensure that AI is achieving appropriate outcomes, more work may need to be conducted on designing AI in a manner that makes its functioning clear, including the factors taken into account by AI in making a determination in relation to a particular taxpayer.

7. Receptivity of AI to Different Sectors and Types of Taxes

7.1 VAT and Consumption Tax

VAT provides very fertile ground for the application of AI, both on the taxpayer and tax authority sides, given the huge volume of transactions that need to be handled.

Typical taxpayer applications of AI so far have been in automating routine and repetitive processes, such as the recording and checking of VAT data from incoming invoices (e.g., proper item classification and rate application). This can then be extended to the preparation of VAT registers and the submission of tax returns. AI can also look to progressively play a role in verifying the correctness and completeness of VAT control files, contract analysis, VAT invoice settlement, payment verification and VAT tax risk assessment.

Revenue authority's ability to monitor taxpayer activity, including fraud detection and audit selection, is greatly enhanced by AI. Existing access to third-party data streams already allows for identifying transactions in real time. For example, the Polish tax authority, drawing on daily data feeds from banks, monitors for high-risk banking transactions and can trigger the blocking of bank accounts. AI-driven social network analysis can identify groups of companies and individuals which may be involved in carousel fraud, by analysing the linkages between these persons and product supplies, and thereby visualising the networks. More generally, AI can detect anomalies in large data sets to identify false input credit or refund claims, or identity theft. This is alongside increasing revenue authorities' use of VAT chatbots to deal with a wide range of queries on administrative and substantive VAT rules.

With many countries progressively providing for real-time data feeds on their transactions to revenue authorities, structured data (e.g., VAT electronic invoice processing-relevant) on billions of transactions will flow daily to revenue authorities. Such voluminous and structured data is grist to the mill for AI learning and pattern recognition purposes.

A further interesting dimension is how the application of VAT rules will adapt to changes in business models and commercial practices. For categories of VAT services currently treated as exempt in many countries, such as in areas of finance and medical service delivery, conceivably the rendering of these services by AI in certain instances might lead to the revisiting of these VAT exemptions.

7.2 Personal Income Tax

Several of the personal income tax-relevant usages of AI have been highlighted above. On the revenue authority side, alongside risk assessment and fraud detection (e.g., overclaiming of deductions, or disparities between reported income and consumption indicators), much of the progress being made is in the space of "nudging" individual taxpayers towards more tax compliant behaviour. This is achieved via AI support with pre-filling returns, using various calibrated "prompts" (e.g., nearest neighbour guidance), and evaluating what type/level of contact/support might most effectively steer the behaviour of specific taxpayer cohorts. This is alongside the natural language ability of chatbots to render complex tax provisions in layman terms.

That being said, it might take some time before AI support for personal income tax is fully mature. For example, while AI is progressively being integrated into the tax software provided by commercial tax preparers, there has been much media coverage of the answers, given by the software, being misleading or unhelpful in certain instances. Another issue can be where quality or formatting issues arise with data coming from third parties (e.g., sharing/gig economy, e-commerce platforms, common reporting standard), or collected by revenue authority "web crawlers" from social media and the broader internet — without appropriate screening/treatment this can lead to suboptimal AI application results.

7.3 Corporate Income Tax

As noted above, with the greater use of AI in the production of goods and services, the patterns and processes of underlying value creation may be changing. This may consequently create challenges for TP analysis and comparables availability.

In this regard it has been observed that, within an MNE group, engineers in Country A may be using a lot of AI tools developed in Country B. This then begs the question as to whether the Country A entity should be getting the same returns that they had previously or whether part of these profits may now need to be allocated to other entities, including those in Country B. This might lead to a pivot, in the TP analysis, to focus on where the assets are based, rather than looking at the presence of adequate substance in jurisdictions under development, enhancement, maintenance, protection and exploitation (DEMPE) analysis.

There will need to be updated benchmarks, and increased definitional clarity around AI functions and the value that AI adds to production processes. Consistent definitions (e.g., of the business function that AI performs, of IP related to AI-generated content) will need to be applied across countries to ensure some measure of tax certainty. Proprietary AI models are highly unique, so finding comparables (e.g., for supplies of AI products between group entities) would be extremely challenging (perhaps increasing the value of TP approaches that seek to measure "costs avoided", etc.). Furthermore, the widespread use of Generative AI could also increase the value of data (e.g., mass customisation of personalised medical products). This then puts further focus on the ownership of the data and the country from which it is sourced (which may seek greater profit allocations in consequence).

Increased work at OECD level may be needed for this, and the Belt and Road Initiative Tax Administration Cooperation Mechanism (BRITACOM) may also be well placed to help

BRI tax authorities to get to common understandings on these matters.

7.4 Other Taxes (e.g., Property Taxes, etc.)

The potential of AI in relation to enforcement of property taxes is neatly illustrated by the widely reported use, by the French tax administration, of AI and satellite images to detect 20,000 undeclared swimming pools in 2022. Swimming pools raise the rental value of properties. As used for French property tax calculation, they lead to significant additional tax assessments. It was noted that the AI was not completely accurate (e.g., mistaking solar panels for pools, or missing pools in the shade), but nonetheless the French tax authority considered it a success and planned to extend it to detect undeclared home extensions. Further innovative uses of AI, in combination with novel data sets, may arise over time in relation to property and other taxes.

7.5 Informal Sector and Formalisation Process

The informal sector remains a significant part of many economies, with great variation among BRI jurisdictions. Per IMF research, some BRI jurisdictions have an estimated shadow economy falling under 10% of GDP, and others range up to 50%.[5] However, changes in how informal sector activity is conducted, in combination with the application of AI, could progressively impact the level of economic formalisation and state capacity to tax such activity.

In particular, the shift to digital payments and away from cash transactions in many economies is key — this shift may be further fostered by digital payment obligations and tailored incentives for their use. The progressive domination of digital payments may facilitate the application of AI by revenue authorities to identify individuals or entities who are not registered for tax but engaging in extensive economic activities. This of course depends on extensive transaction data being available to the authorities, in a structured manner, along with necessary safeguards on its use. Consideration also needs to be given to new forms of digital payment, such as using cryptocurrencies, which could limit the informal sector transaction data to which AI could be applied.

This is alongside other use of technology for picking up the "traces" of informal economic activity, such as usage of online cash registers to curtail informality in the retail sector, and the use of AI in combination with alternative data sets, such as satellite imagery as highlighted above.

8. What Are the Main Specific Ethical Concerns That Arise from AI?

AI process may be seen as a "black box". A principal concern is that an AI process can become a black box. Consequently, there is a lack of transparency surrounding the source of the data being used, how it is being considered in an algorithm, the nature of the algorithm itself, the traceability of the outputs of the AI process back to source information and processes and the lack of explainability in a reasonable manner to a lay person. (See AI process ethical principles 6, 7 and 8.)

AI process may have inadequate human supervision. Human supervision is required to detect and rectify errors. One fear is that the AI process is outside the realm of human intervention and there are inadequate processes for dealing with errors in a timely and inexpensive manner. Properly dealing with this requires the potential intervention of sufficiently senior resources capable of overriding the AI process, such personnel having sufficient competence and knowledge of the process and its potential pitfalls. This human supervision needs to be monitored and should be subject to reports under an audit process. (See Principles 9, 10 and 11.)

5 Leandro Medina & Friedrich Schneider (2018). Shadow Economies Around the World: What Did We Learn over the Last 20 Years? IMF Working Paper. Richard Davies (March 2020). The Huge Hidden Economy Is Missing from and Distorting Our Data. *Financial Times*.

AI process may produce discriminatory bias. Experience to date, particularly in relation to the Dutch Childcare Issue noted above, is that the potential for discrimination in AI processes is significant, invidious and may cause substantial reputational damage. A key point here is that AI processes may meld corelation with causation. In doing so they may discriminate based on any number of irrelevant factors including race, ethnicity, age, gender, employment status and a multitude of other factors. This could cause immense damage to a revenue authority and result in a loss of trust in the whole revenue collection system out of all proportion to the discriminatory bias itself.

One point to raise here is that AI processes may be the source of discriminatory bias, rather than become part of the solution. That is, AI may be used to detect bias in a system and thus undo what is presently detrimental. Properly managed this has the potential for enhancing the reputation of a revenue authority. (See Principle 12.)

AI process may be insecure and result in privacy breaches. Data protection, and rights to privacy are of significant importance to revenue authorities. Certain AI processes may enhance the risks of cyber-attack or malicious intent. In particular the use of taxpayer data in insecure LLMs may open that data to a loss of protection and privacy. This means that revenue authorities need to have a process to evaluate the tools they use for data protection and possibly to bring "in house" some of those tools (e.g., translation tools) so that taxpayer data remains protected.

Potential taxpayer identification may not only be direct but also indirect particularly, where there are a limited number of actors involved in the class of individuals to whom the data could be applied. While this issue applies to all data collected by revenue authorities, it is enhanced in an AI environment where cross-checking of data can narrow down the number of actors to low levels. (See Principles 13, 14 and 15.)

AI processes give rise to consequences which are disproportionate. The major scandals for the misuse of AI technology such as the Dutch Childcare Issue have a specific element that the consequences of an incorrect AI evaluation were substantial. A further point of interest is how some revenue authorities are looking for tax compliance to be "built into" business processes (upstreaming). For example, since 2023 in India a large enterprise must use the e-invoicing pre-clearance system to generate an invoice for a sale of goods within or between states within India. Getting the e-invoice pre-clearance allows for an "e-way" bill to be obtained, and this is needed to transport goods between states — otherwise they will be impounded. If the transaction counterparty was non VAT registered, then the system cannot generate the documents. If there were to be an AI overlay on this, and the AI leads to improper outcomes, this could also stymie real business activities. In the case of a revenue authority each AI process needs to be evaluated in terms of the impact on taxpayers if the process produces error. Is it merely that a notice to lodge an income tax return is incorrectly issued or are there accusations of criminal activity which may involve the passing of information on to other authorities? Each process needs to be evaluated separately having regard to the consequences of error. For example, an error rate of 1% in the case of technology used to send an ambulance following a call for serious medical treatment would not be acceptable to society. (See Principle 16.)

The risk of AI process failure can adversely impact trust in the whole tax system. Revenue authorities need to aim to be the most or one of the most trusted institutions in a particular society. The flow on impacts of an AI process failure can go well beyond the event itself and undermine trust in the revenue authority as a whole and more generally the government institutions of a society. This is a heavy burden, but one which is critical for revenue authorities to accept. (See Principle 17.)

There is a fear that a taxpayer will not have adequate appeal rights within a legal framework beyond the administrative framework. One potential fear is that taxpayers will not have access to simple and inexpensive rights of appeal against an adverse finding outside the administrative framework that gave rise to that adverse finding. This was a significant issue in the Dutch Childcare Issue. (See Principle 18.)

Taxpayers will be concerned about sharing information with other domestic authorities. This touches on a number of concerns outlined above, particularly the potential for significant adverse consequences. It does suggest that special rules should be developed for intra-authority transfer of information that was obtained from an AI process. (See Principle 19.)

Taxpayers will also be concerned with sharing data with non-resident authorities (likely to be other revenue authorities). Whilst this is an issue outside the domain of AI, it is enhanced for AI process derived data. The reputational risk here not only concerns specific individuals and businesses, but also the revenue authorities providing and receiving the information. (See Principle 20.)

There is concern that tax officials will lack the skills to understand and deal with AI-related issues. The use of AI processes including their potential abuse has come upon societies, businesses and individuals very quickly. A well-founded fear is that revenue authorities will not have the knowledge or understanding of AI issues on a sufficiently widespread basis to understand concerns. This suggests that widespread training of staff on AI and the specific revenue processes where it is used and not used are needed. (See Principle 21.)

9. What Are the General Principles That Should Be Applied in Developing an Ethical Framework

There are a number of general processes that should be embedded in the development of an ethical framework. These points are pertinent to most revenue authorities.

Launch a consultation process with input from a wide group of stakeholders. This should include revenue officers, finance ministry officials, and business and taxation associations. Dealing with AI should be considered to be a long-term journey and one that requires input from multiple players in society. Managing it correctly is a win-win result for all parties. (See Principles 1, 2 and 3.)

Ensure that the rollout of an AI process is gradual with appropriate pilots. Adopt a measured process to rollout to minimise potential error and maximise benefits. The use of limited pilots can assist in achieving this. (See Principle 4.)

Adopt an environment that encourages significant feedback and accountability. This needs to be managed carefully so that personnel do not feel threatened, but that honest feedback is strongly encouraged. The ensuing accountability for those responsible for introducing AI processes needs to be viewed in a positive light for all concerned. This should be part of a culture of continuous improvement. (See Principle 5.)

Provide for regular independent oversight. Ensure oversight is positively enframed yet honest. It should probably occur every 12 months and be publicly disclosed. The revenue authority needs to be provided with an opportunity to respond including addressing any specific issues identified. (See Principle 22.)

Share best practices with others. This should include other domestic authorities and revenue authorities. (See Principle 23.)

Section 10 below seeks to incorporate these general principles for revenue authorities with specific principles relating to AI.

10. Summary of Potential AI Process Ethical Principles for Revenue Authorities

Principle 1: Ensure a thorough consultation process for raising potential issues from the perspective of employees, individual taxpayers, businesses and other government departments. Ensure consultation is ongoing with a permanent advisory group.

Principle 2: Ensure community buy-in by dealing with concerns of interested parties.

Principle 3: Seek to embed both revenue authority and taxpayer rights and responsibilities based on mutual recognition of the complexity of the issues involved.

Principle 4: Ensure a measured rollout with the use of appropriate pilots which can reduce risk of failure and increase a timely understanding of potential issues.

Principle 5: Embed AI processes with a culture of continuous improvement. This should reflect the rapidly changing environment in which the issues are raised.

Principle 6: Ensure traceability which will involve parties knowing where information used in an AI process comes from and the basis for it being considered reliable.

Principle 7: Ensure explainability which will require that data and its use in an AI process is explicable, reasonable and easily understood by a lay person.

Principle 8: Communication to stakeholders should involve explanations of traceability and explicability and other bases for dissipating risks.

Principle 9: Human supervision should be required and involve personnel who are competent and well-trained, sufficiently senior to override an AI process, and accountable.

Principle 10: Process monitoring including timing targets for rectification of errors and consideration of secondary impacts. Also consideration should be given to the potential disproportionate nature errors relative to benefits in some circumstances.

Principle 11: Audit reporting for each AI process. This needs to be tailored depending on the process.

Principle 12: Ensuring systemic discriminatory bias is eliminated requires constant vigilance given the significant potential for both unfairness and reputational damage.

Principle 13: Develop an AI specific data protection policy for revenue officers including the use of tools of a general kind such as LLMs and grammar correction software.

Principle 14: Develop in-house general AI tools for translation and grammar where appropriate to ensure security of taxpayer data.

Principle 15: Embed privacy rights in an ethical framework document. This will help bring overall confidence and trust in the system.

Principle 16: Evaluation of each AI process must take into account the consequences of error for the taxpayer which could be substantial for an individual or business.

Principle 17: Evaluation of each AI process must take into account the consequences of error for the revenue authority, the tax system and government institutions as a whole.

Principle 18: Provide for a simple and inexpensive appeal right for taxpayers potentially adversely impacted by an AI process and ensure this is communicated to stakeholders.

Principle 19: Special rules for sharing taxpayer information with other domestic authorities which reflect any heightened risk profiles from AI process-obtained information.

Principle 20: Special rules for sharing taxpayer information with other international authorities based on this heightened risk.

Principle 21: Widespread AI training for revenue officers such that AI awareness occurs throughout the organisation.

Principle 22: Regular oversight from a separate body or a party that is seen to be independent. This could be an annual report and would be a whole of organisation report unlike the auditing review outlined in Principle 11.

Principle 23: Share best practices with others including revenue authorities.

11. Conclusion

Ultimately, AI is with us now in a substantial manner. Whilst it does give rise to many potential benefits, there are also significant potential detriments which need to be properly managed. The development of ethical frameworks by tax administrations as proposed by this paper will reduce risks arising from AI and hopefully build trust in the revenue system.

The BRITACOM could play a positive role in bringing to the best practices consistent with Clause 5.2 *Nur-Sultan Action Plan (2022-2024)*. This could include the development of best practices for BRITACOM participants and regular updates on the opportunities and problems associated with the use of AI by revenue authorities. It is noted that the use of AI in tax administration is an area of focus for the 5th BRITACOF in Hong Kong SAR, China in 2024.

Insights on Crypto Asset Tax Reporting and Tokenisation of Real-World Assets

Peter Brewin

Peter Brewin
Tax Partner
Crypto and Web3
Co-Leader
PricewaterhouseCoopers
Limited

Abstract: To keep pace with the development of the crypto industry due to its sheer size and complex business models, the Organisation for Economic Co-operation and Development (OECD) introduced the Crypto Asset Reporting Framework (CARF) to enhance transparency in relevant transactions. It is envisaged that the introduction of CARF will facilitate the exchange of information and potentially lead to increase in tax revenues for those jurisdictions enacting such requirements in due course. In turn, industry players will need to assess the implications this will have in their business from reporting readiness and implementation perspectives. Meanwhile, the tokenisation of real-world assets (RWAs) is gaining momentum. The legal and tax implications that may arise from this latest development can be complex and uncertain.

Keywords: Tax service; Cryptocurrency; Digital asset; Crypto Asset Reporting Framework; Blockchain; Distributed ledger; Tokenisation

Since the early days, the crypto asset industry has grown significantly in size and sophistication. Alongside increasing regulatory clarity and paths to licensing, changes and developments are also taking form in enforcement intensity and tax. This article will discuss two important developments, namely crypto asset tax reporting and the legal and tax implications arising from tokenisation of real-world assets (RWAs).

1. Crypto Asset Tax Reporting

Global custodians are predicting that 5%~10% of all assets will be tokenised by 2030, potentially a market worth USD19.5 trillion. This presents new opportunities in the market and tax to collect. With the latest market developments, including but not limited to exchange traded funds, the crypto market cap has well exceeded USD2 trillion. These breakthroughs have attracted the attention of domestic tax authorities and the international tax community.

Tax authorities estimate that non-compliance and misreporting on crypto asset holdings currently range as high as 55% to 95%. Based on an analysis published by the US Government Accountability Office, misreporting fell from 55% to 5% in instances where third party information was required. The root causes of the misreporting and non-compliance include:

(i) unclear tax guidance from tax authorities;

(ii) lack of information; and

(iii) behaviour given crypto transactions currently happen outside of tax information reporting obligations.

The determination of a tax liability requires granular data to be enriched to determine the character, source, timing, basis, deductions/adjustments, etc. Whilst data captured on a blockchain can support the calculation of a tax liability, they are incomplete as a tax liability typically focuses on the aggregation of events (cost basis of purchase, basis adjustments, fair market value determination and gain/loss or ordinary income earned). This information needs to come from other parties involved in a crypto asset transaction (on-ramp, off-ramp, exchanges, etc.) and may potentially be siloed for being on/off chain.

The scale of this issue will increase as more asset-classes are tokenised (e.g., securities). Absent tokenisation, some of these underlying assets would have been subject to third party tax information reporting under the Organisation for Economic Co-operation and Development's (OECD) Common Reporting Standard (CRS), which is based on year-end values and aggregation of payment events during a year. As these asset classes are tokenised, they potentially move outside of this tax information reporting regime because crypto assets can be transferred and held without interacting with traditional financial intermediaries.

We have seen an increase in the global effort by governments and tax authorities to counteract misreporting. The emergence of traditional and digital assets will continue to occupy a hybrid financial ecosystem for the foreseeable future, disrupting value chains and processes while enabling new products and services. The success of the tax information reporting effort enhances regulatory frameworks across the globe and the maturity of the digital landscape as we know it. The OECD is spearheading these efforts with momentum from global forum members and others, as outlined below.

2. OECD's Framework

The G20 appointed the "Global Forum on Transparency and Exchange of Information for Tax Purposes", a forum of 168 jurisdictions convened under the auspices of the OECD, to oversee widespread implementation of a Crypto Asset Reporting Framework (CARF) "for the automatic exchange of information related to crypto asset transactions by 2027… with some flexibility". As of 1 December 2023, 54 jurisdictions, largely those that have active crypto markets, had stated their intent to swiftly implement the CARF. Amendments are also being made to the CRS to include e-money and expand the definitions to cover digital assets and crypto derivatives. Importantly, the CARF is a separate and complementary framework, so there will be some businesses reporting under both the CRS and the CARF. There are options to switch off certain reporting under the CRS if such information is reported under the CARF. This requires crypto platforms and other crypto asset service providers to start sharing taxpayer information with tax authorities, to be exchanged with other tax authorities on a global basis.

The CARF framework will require businesses such as exchanges, brokers, custodians, and wallet providers, inter alia, to collect and report information on the identity and transactions of their users to the tax authorities of their residence or jurisdictions of operation.

Reportable transactions include:

(i) exchanges between crypto assets and other crypto-assets;

(ii) exchanges between crypto assets and fiat currencies; and

(iii) transfers and reportable retail payment transactions of crypto assets.

Reportable retail payment transactions are transfers of crypto assets in consideration of goods or services for a value exceeding USD50,000.

Reportable crypto assets include those that can be used for payment or investment purposes. Central bank digital currencies and stablecoins, which are specific e-money products, are captured by the CRS as they share functional similarities with fiat money in bank accounts, whereas other stablecoins and cryptocurrencies are expected to be reportable under the CARF. Non-fungible tokens (NFTs) need to be evaluated on a case-by-case basis. Whilst true collectibles or NFTs that merely reflect an ownership record might not be used for payment or investment purposes, other NFTs very well could be (for example, most NFTs on public blockchains are freely tradable on NFT marketplaces for crypto currency payment and thus could be argued to have a secondary market). It is also worth noting that while in many respects, the definition of reportable crypto assets aligns with the Financial Action Task Force guidelines on anti-money laundering and know-your-client requirements, the scope of reportable crypto assets under CARF can be argued to have broader application — particularly for NFTs.

Businesses subject to these rules will be required to conduct extensive tax due diligence procedures on crypto asset users to determine if they are reportable. These procedures largely follow the self-certification model used for the CRS. Accordingly, starting around 2026, operating models will need to have changed and data will have been collected to facilitate reporting in future years. Tax authorities are already planning on how they will utilise this data — for instance voluntary disclosure regimes for unpaid crypto taxes have appeared in advance of the exchange of crypto asset transaction data to give taxpayers the opportunity to regularise their affairs.

3. European Union — Directive on Administrative Cooperation in the Area of Taxation 8

Complementing the recent OECD developments is the European Union's (EU) Directive on Administrative Cooperation in the Area of Taxation 8 (DAC8). DAC8 provides an update to the existing CRS legislation and the exchange of cross-border information and is broadly aligned with the OECD's CARF initiatives. The Directive was adopted by EU Member States and entered into force on 13 November 2023. EU Member States will have until 31 December 2025 to transpose the new rules into national law with first application for most provisions from 1 January 2026. DAC8 applies to crypto asset service providers, a defined term, whether they are regulated or not (the latter will be required to register in one single Member State for the purpose of complying with their reporting obligations).

4. Implications for Tax Information Reporting

Whilst setting up a compliance programme and new operating model to deliver accurate and timely reporting will require significant change and budget, the industry has some advantages compared with traditional financial institutions that are reporting information under the CRS.

Notably though, many crypto asset service providers are cloud-native and do not hold client and transactional data in paper form or legacy systems that are not configured for tax reporting. The cloud presents new opportunities to deliver a compliance programme involving structured, semi-structured and unstructured data at scale. Data lineage and traceability are going to be critical success factors in relation to producing accurate tax information returns and demonstrating a resilient compliance operating model.

• Bridging of different data sets such as other crypto services providers, blockchains, price indices, public beneficial ownership databases are all possible in the cloud. Business events engines can record and reconcile the enrichment of data from source to where it is recorded in a golden source.

• The tax due diligence, reconciliation and reporting processes can then be applied in an automated manner. Machine learning models can be developed to profile and identify reportable crypto asset users.

• Generative artificial intelligence models allow new opportunities to engage directly with the data — for instance a risk manager may be interested in different features compared with the tax reporting manager. The data may even identify opportunities to deliver new and proactive services.

• Horizon-scanning can result in quicker change compared with traditional software-as-a-service (SaaS) models requiring lengthy change request procedures.

Compliance could be a differentiator — the benefits are cost-effectiveness, scalability, and innovation that the cloud offers. This could allow those who are brave and move quickly to gain a competitive edge in the dynamic, fast-growing market for crypto asset and related services.

5. Tokenisation of Real-world Assets

Tokenisation refers to the digital representation of real-world assets (RWAs) using distributed ledger technology (DLT). Assets that are generally used for tokenisation range from securities (e.g., equities, bonds, loans, and money market products) to illiquid assets (e.g., real estate, artwork, collectibles, and intellectual property such as music).

The tokenisation process involves blockchain technology to provide a record of ownership of these RWAs. The benefits of this are the certainty provided by an immutable record of ownership, and the ease of being able to update that record via electronic transactions, rather than paper.

It is important to distinguish between classes of use case where digital tokens are used to represent ownership. In some cases where a token sits alongside a physical asset, the token *certifies ownership, but only as an adjunct to the ownership of the physical asset*, certifying the status of the owner and the authenticity of the asset. This might be the case, for example, with a digital certificate relating to a gemstone or a luxury fashion item. The conventional laws of contract govern the sale and ownership of the asset; the digital token merely corroborates the ownership and authenticity of the item.

This can be contrasted with cases where the ownership of the token is *the legal mechanism by which ownership of the asset is perfected*. A legal mechanism is established whereby the ownership of an asset is represented by tokens. Ownership of a token is ownership of the asset, in that it confers beneficial entitlement to all of, or a share of, the asset. The asset in question could be tangible (for example, a real property or an artwork) or intangible (for example, a share or security).

These digital assets, or tokens, are fungible and transferrable, and may be traded in a marketplace. Transfer of the token prima facie transfers ownership of the asset, in the same way that executing a share transfer form transfers ownership of the share.

From a tax perspective, the key question to consider is whether tokenisation of RWAs (tangible and intangible) results in tax treatment that may be different from holding the RWAs directly.

In the use cases where the token acts only as corroborative certification of ownership of an asset, and that asset is transferred under conventional rules of contract, it seems very unlikely that the existence of the token would have any impact on the tax analysis.

This article therefore focuses on the latter case, where transfer of a token is intrinsically and legally linked to the transfer of beneficial ownership of an underlying asset.

In determining the tax treatment, the underlying rights of the contracting parties will be an important factor. Each participant on the DLT may have different roles to play and, hence, the tax treatment of each party should be considered.

6. Legal and Tax Framework

There is a growing awareness of the benefits of and market opportunities in tokenisation. Tax and regulatory authorities in many jurisdictions are beginning to engage with industry participants to develop a framework for the new industry to flourish and to allow digital assets to be used in the financial system.

In legal terms, it is important to first consider how an RWA can be tokenised. Some elements of a contractual framework is necessary. At its simplest, this could consist of a contract whereby:

- one or more investors jointly agree to own an asset ("the Asset") in agreed proportions;
- those proportions are represented by tokens;
- the agreement stipulates that a transfer of a token is only permitted if the transferee agrees to become party to the agreement in place of the transferor; and
- the agreement therefore constitutes joint ownership of the Asset.

A more complex legal mechanism leading to a similar result might be specifically constituted as a partnership, a trust, or a similar vehicle by which a nominee holds conventional legal title to the asset, but the beneficial interest is governed by the transferrable tokens. Ownership of a token makes the holder a beneficial owner of the underlying asset, by virtue of being a partner, or a beneficiary of the trust, or whatever status arises from the nature of the vehicle.

It seems likely that, over time, standard structures will develop to achieve this in key markets and for key asset classes. Similarly, jurisdictions wishing to facilitate this type of arrangement may introduce specific laws to facilitate these structures, similar to the laws that currently govern securitisation in many territories. At the present time, in most jurisdictions, such laws have not yet been created, and various legal structures are being explored.

Similarly, not many jurisdictions have adopted specific tax rules to address tokenised forms of RWAs directly. The general trend seen in most jurisdictions is to adapt the existing tax rules to cater to the potential new asset classes being created. In addition, we are seeing revenue authorities around the world issuing guidance and interpretation notes on how they view the treatment of digital assets, which is a helpful start. Many are also adopting additional disclosure requirements for digital assets as part of the tax return process.

7. Direct Tax Considerations

As noted above, the tokenisation of an RWA will allow one or more interested parties to acquire a stake in that digital asset in the form of a token. The token, by some mechanism, entitles the owner to income or gains arising from the asset. In some cases (e.g., where the underlying asset is real property), it may also result in the token holder having liabilities or obligations. The question arises as to how these matters should be dealt with for tax purposes.

When considering this, it will be important to establish whether the tax law in question regards ownership of the token as direct ownership of the asset, or as ownership of an interest in a vehicle which itself owns the asset. As noted above, the mechanisms used to create a tokenised interest in an asset are not straightforward and, as a result, it may not be obvious which of these explanations is correct. This could become a contentious matter if multiple jurisdictions are involved in the given transaction.

This question will have to be answered on a case-by-case basis, with different answers for different jurisdictions, vehicles, and underlying asset classes.

However, once situations become more complex, it seems likely that care will need to be taken to analyse specific investments to determine how the investor should be taxed. The issues generally depend on the class of asset.

Some examples are given below.

7.1 Tokens Linked to Physical Assets

Let's start by assuming that ownership of a tangible asset in tokenised form is likely to be for investment purposes.

As a starting point, income and gains arising from the token would be similar to those arising from the underlying asset. There may be a difference of classification depending on whether the tax law in question views the arrangement as a direct holding of the asset. That difference itself is unlikely to make a significant difference to the quantum or timing of taxable income.

However, there could be differences to the treatment and deductibility of associated expenses. For example, if an individual owns real estate, he/she may be able to deduct from his/her taxable income the costs of insurance, maintenance, etc. There may also be specific deductions available from the cost of buying and selling the property. How do these costs play out in the case of a tokenised real estate asset, if tax law treats this as token ownership? Does an insurance contract he/she takes out result in a deductible cost if it is insuring the value of the property which he/she does not own (even supposing that the insurer allows that he/she has an insurable interest)? Does the payment made for maintenance or repairs result in an allowable cost of owning the token? These are some examples of the issues to be thought through when considering the appropriate tax treatment.

7.2 Tokens Linked to Financial Assets

Tokens acquired over financial assets such as shares, securities, bonds, etc. are another example to consider. Much like the scenario for physical assets, tokens over financial assets are expected to follow the same tax treatment as holding the financial asset directly. For example, interest accruing to a token holder over a bond is expected to be treated as income subject to tax in the same manner as holding the bond directly.

However, where the returns in question would normally be exempt from tax (for example dividends in certain jurisdictions), it becomes a little less clear. If it is assumed that the nature of the return attributed to a token holder is still a dividend, the tax treatment should remain the same. However, the dividend paid no longer meets the definition of an exempt dividend (because the nature of the taxpayer's receipt is now treated as a payment in respect of a token, rather than a dividend in respect of a share), it may be that certain revenue authorities will view this as ordinary income subject to tax.

Similarly, disposal of a token representing an ownership interest in a share will give rise to questions as to whether the investor is eligible for participation exemption, depending on the local law and the exact nature of the tokenisation vehicle.

There will also be corresponding questions for the issuer of the tokenised shares or securities. In determining the beneficial owner of the instruments for the purposes of applying withholding taxes, it may be necessary to look at the tax characterisation of the tokenisation structure.

It will be important for tax regimes to find a way to manage this in a manner consistent with the investor's tax analysis, otherwise questions will arise as to whether tax withheld by the issuer on a bond coupon is treated as creditable when the issuer is being taxed on the corresponding token receipt.

8. Value-added Tax and Tokenisation

Value-added tax (VAT) — known as goods and services tax in some jurisdictions — is a transaction-based tax. The precise VAT consequences of various events in the tokenisation cycle will likely depend on the underlying contracts and the form of the transaction. We discuss below the potential VAT consequences, starting with formation, followed by various operational activities, and finally the cessation.

8.1 Tokenisation Event

Fundamentally speaking, asset tokenisation is the process of transforming an underlying asset into a unit of a digitised asset called a "token". Importantly for and in the context of VAT, the ownership of the underlying asset is not transferred as a result of the tokenisation event. In some cases, the asset may be fractionalised as a result of the tokenisation, allowing multiple persons to own a part of the asset.

It is likely that a bare tokenisation event is not a value-added supply for consideration and would be outside the scope of VAT. However, if any explicit fees are charged for services provided, it is likely that VAT would apply.

8.2 Services Associated with the Formation of Tokens

The concept of "token generation" generally refers to the service of generating (or forming) a token on a DLT system on behalf of the owner of the underlying asset that is being tokenised.

The VAT treatment of any such generation (or formation) services will likely depend on the nature of the underlying asset that is tokenised and whether or not an explicit fee is charged for those services.

8.3 Token Custody Services

Depending on the context and the regulatory scheme, token custody services would usually cover services associated with holding tokens on behalf of clients/owners or with how the tokens are recorded on the DLT system. These services are similar in some ways to custody services for other types of securities or assets, but exist against the backdrop of tokenisation.

The VAT treatment of token custody services may ultimately depend on the nature of underlying assets represented by the tokens. For example, would custody services that relate to tokenised shares be VAT-exempt, which would mirror the treatment of custody services in the traditional securities market? How would this compare to the custody of tokenised assets like artwork which one would expect to be taxable? Finally, if the custody services relate to both taxable and exempt assets, would VAT apportionment be required?

8.4 Operating a Token Exchange

In a commercial and regulatory sense, operating a token exchange would fulfill the same function as a conventional exchange. The token exchange functions would provide a market — governed by rules — that would bring parties together and allow for token trades to take place.

Globally, crypto currency exchanges are typically viewed to be VAT-exempt. Similarly, many types of services performed on a stock exchange are VAT-exempt. However, other market intermediaries facilitating the exchange of non-security assets are typically viewed as making taxable supplies.

Given that these exchanges may trade tokenised forms of a wide variety of assets, and subject to individual jurisdiction regulators' specific tax policies in this area, the VAT treatment may be expected to mirror the treatment for the exchange of the underlying asset. This could mean that the VAT liability would depend on the nature of the underlying asset being traded: VAT-exempt if the underlying asset is a security, and subject to VAT in the case of other underlying assets. If both types of underlying assets are being traded, a VAT apportionment may be necessary based on a reasonable method or an approved industry protocol.

8.5 Transfer of Tokenised Assets

The VAT implications of transferring tokenised assets could be expected to depend on the nature of the underlying assets.[1] Similarly, when a token, representing a fraction of the ownership, is transferred, the VAT treatment would also be expected to follow the nature of the underlying assets.

8.6 Fractionalised Assets and Tax Administration

The VAT treatment of the revenue derived from the underlying asset (e.g., rent in the case of real estate or royalties in the case of art) would likely depend on the underlying services provided.

In the case of a fractionalised asset, this raises the question which party (or parties) should be responsible for accounting for VAT on the revenue generated with the fractionalised asset. In principle, the fractionalised owner should be liable for VAT for its portion of the revenue derived from the underlying asset. This approach may lead to administrative challenges (e.g., many potential taxpayers) and inconsistent VAT treatment. In the latter case, if a private individual holds a token representing a fraction of an asset the income may not be generated in the course of a business or taxable activity. Furthermore, fractionalised ownership of a moveable asset (such as art) may pose additional challenges when the

1 For example, EU Commission Working Paper No. 1060, VAT Committee WP1060 "Question Concerning the Application of EU VAT Provisions — Initial VAT Reflections on Non-fungible Tokens".

asset is moved between jurisdictions.

To tackle these challenges, regulators may need to consider making another party (e.g., the token issuer or token exchange operator) responsible for accounting for VAT on the income generated from the underlying asset.

8.7 Cessation Events

The owner of a token may seek to cancel the token, for example, if the underlying asset no longer exists or the token is no longer functional. A starting point could be that the cancellation of digital tokens in such situations is outside the scope of VAT, as there is no supply for consideration or any value-added activity. However, this may depend on the circumstances and the situation may be different, for example if the cancellation of the token results in a transfer of the ownership of the underlying asset.

8.8 Other Challenges

A key challenge is determining the place of supply of the various services (generation, custody, transfer, valuation, validation, etc.) provided in connection with the tokenisation of RWAs. If some services, such as generation, are provided by electronic means they will likely qualify as electronically supplied services, subject to VAT in the place of location of the customer/recipient. In other cases, such as the tokenisation of real estate (or other assets with special place of supply rules), the place of supply of the underlying services may be considered the place where the real estate is located. Focusing on the underlying asset is likely to be important in determining the VAT treatment.

9. Conclusions

Tokenisation will create new financial opportunities to acquire an interest in RWAs. Tax authorities around the world are beginning to pay closer attention to digital assets, including tokenised RWAs. Acquiring and disposing of tokens are expected to be taxable in most jurisdictions, unless transactions in the underlying asset would otherwise be exempt. However, there is uncertainty as to whether revenue authorities will see returns linked to tokens in the same way as holding the RWAs directly. This space should be watched and specific guidance and advice on local tax laws that might be applicable to transactions involving tokens should be sought.

Tokenisation of RWAs can come in many forms, with a number of structures being potentially feasible as the technology and ecosystem mature. Depending on the type of asset, the token can be minted to directly represent the relevant asset, or to represent the economic rights to the asset through a special purpose vehicle or even through a trust. Given the variations and complexities, it will be important to assess each tokenisation on its own merits when determining the tax treatment in accordance with local tax laws and practices.

Building Tax Capacity in Developing Countries*

Cindy Negus and Juan Carlos Benitez

Cindy Negus
Senior Economist
Revenue Administration 1 Division
Fiscal Affairs Department
International Monetary Fund

Juan Carlos Benitez
Senior Economist
Tax Policy 2 Division
Fiscal Affairs Department
International Monetary Fund

Abstract: Building tax capacity is central to the role of government in achieving the sustainable development goals, addressing climate change, and ensuring debt sustainability. Despite progress in revenue mobilization, there is still a large unmet tax potential in low-income developing countries. Increasing tax capacity requires a firm commitment to building institutions that govern the tax system and manage tax reform, and to improving the design of core taxes. To enhance understanding, this article provides a synopsis of why improving tax capacity is important and contains insights on trends in revenue mobilization, how to strengthen tax policy and the role of supporting institutions. Furthermore, it explores the importance of a sound legal framework for tax certainty, which plays a crucial role in shaping investment choices and can significantly affect economic growth.

Keywords: Tax capacity; Revenue mobilization; Tax policy; Revenue administration; Economic growth

* This article is an abridged version of Juan Carlos Benitez, Mario Mansour, and others (2023). Building Tax Capacity in Developing Countries. Staff Discussion Note SDN/2023/006. Washington, DC: International Monetary Fund (IMF). This paper contributes to the global dialogue around domestic revenue mobilization and the need for countries to generally create more fiscal space. Although the focus of this article is on developing countries, much of it is relevant for all economies alike. Please note that the views expressed in this paper are those of the authors and do not necessarily represent the views of the IMF, its Executive Board, or IMF management.

1. Introduction

Building tax capacity — the policy, institutions, and technical capabilities to collect tax revenue — is central to the role of government in development. Tax capacity is also integral to achieving the Sustainable Development Goals (SDGs[1]), addressing climate change, and ensuring debt sustainability.

Despite progress in revenue mobilization, there is still a large unmet tax potential in low-income developing countries (LIDCs). Tax revenue has progressed in LIDCs, with the average tax-to-GDP ratio increasing by about 3.5 percentage points since the early 1990s to 13.8% in 2020. New empirical evidence suggests that a further increase is possible. Achieving this goal will require a firm commitment to building institutions that govern the tax system and manage tax reform, and to improving the design of core taxes.

Key findings of this paper are:

• LIDCs can raise their tax-to-GDP ratio by, on average, 6.7 percentage points to achieve their full potential. Institutional reforms, by bringing them to the level of government effectiveness of emerging market economies (EMEs), can raise an estimated additional 2.3 points. The total — 9 percentage points of GDP — would help enable the state to play its role more fully in sustainable, inclusive, and resilient development.

• This revenue increase requires strengthening the design of core taxes — value-added tax (VAT), excises, and personal and corporate income taxes. The focus should be on tax base broadening through reforming ineffective tax expenditures, neutral taxation of capital income, and better use of real property and carbon taxes.

• Improvement in institutions that govern the tax system and manage tax reform is key to yielding results. It calls for tax policy units (TPUs) to forecast and analyze the impact of tax policies across all economic policy dimensions, greater professionalization of public officials working on tax design and implementation, better use of digital technologies to strengthen revenue administration, and transparency and certainty in how policy and administration are translated into legislation.

• Tax capacity must continue to rest primarily on improving the design and administration of the core domestic taxes. Ongoing international cooperation on the taxation of the profits of multinational enterprises (MNEs) is insufficient to meet revenue needs of LIDCs.

2. Why Improve Tax Capacity?

Achieving the SDGs, addressing climate change, and stabilizing debt in LIDCs require a significant and sustainable boost in tax revenue. The COVID-19 pandemic has exacerbated the challenges faced by LIDCs in mobilizing revenue to fund their spending needs.

Beyond its fiscal function, tax capacity is associated with accelerated growth and better institutions. Gaspar, Jaramillo, and Wingender (2016) estimate that once a country crosses a tax (excluding Social Security Contributions — SSCs) revenue threshold of 13% of GDP, the likelihood of an acceleration of growth increases significantly. Their interpretation, following Besley and Persson (2013), is that revenue collection enables the state to fund public spending and improve the quality of market-supporting institutions. Modern revenue administration practices can also spur wider innovation in other government agencies and policy areas, strengthening the social contract between the state and citizens. Extending the scope for taxation requires forward-looking investments in institutions, tailored to individual country circumstances. Inclusive policies and stable leadership are essential.

1 The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries — developed and developing — in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth — all while tackling climate change and working to preserve our oceans and forests.

3. Progress and Potential

3.1 Trends in Revenue Mobilization

Tax revenues increased steadily in LIDCs. From about 10% of GDP in the early 1990s, tax revenues (including SSCs) rose to 13.8% of GDP in 2020, but the growth pace has stalled since 2010. In EMEs, the ratio increased by 4.9 percentage points over the same period but also stagnated since 2010 (see Figure 1).

Tax-to-GDP ratios have increased with changes in development levels. Countries with larger economic output and stronger institutions have generally been able to mobilize more tax revenue. For LIDCs, the distribution of tax-to-GDP ratios is tightly centered around 10%, with only few countries collecting more than 15%. This clustering suggests that because many LIDCs have not crossed that 13% threshold, they are struggling to evolve in GDP per capita toward EMEs. The distributions of tax-to-GDP ratios in EMEs and Advanced Economies (AEs) are centered around 20 and 30 percent of GDP respectively and exhibit greater dispersion.

Taxes on consumption and income spurred revenue growth in LIDCs as shown in Figure 2. The growth of the VAT during 1990-1999 and 2000-2009 contributed to an increase in total tax revenue of 1.9 percentage points of GDP, more than compensating for losses from taxes on international trade and other taxes (1.2 and 0.8 percent of GDP, respectively). This policy shift represented a departure from more distortive trade taxes in favor of consumption taxes and created an administrative challenge that required collecting taxes from a large number of domestic enterprises, in addition to the few large importers operating at the border. VAT performance has continued to improve during 2010-2020, contributing to an increase in total revenue collection by 0.7 percentage points of GDP, with a peak in 2012. The largest improvement in the last two decades, however, has been on income taxes. LIDCs' tax revenue was bolstered by improvements in corporate income tax (CIT) (1.0 percentage point of GDP), personal income tax (PIT) (0.8 percentage points of GDP), and, to a lesser extent, property taxes and excises.

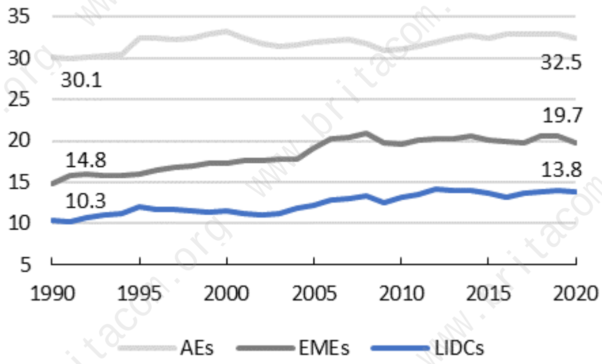

Figure 1. Tax revenue, 1990-2020 (% of GDP)
Source: Authors, based on World Revenue Longitudinal Database (WoRLD).

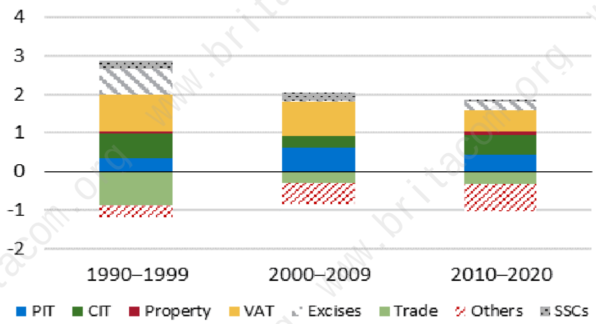

Figure 2. LIDCs: Changes in main taxes (% of GDP)
Source: Authors, based on WoRLD.

Consumption-based taxes are the main source of revenue for LIDCs, but income-based taxes are on the rise. Consumption taxes represented approximately 62% of all taxes, down from over 70% in the 1990s — when they were 8.0% of GDP. The reliance on indirect taxes decreases with the level of development, and as LIDCs have continued to develop, the tax mix continues to shift. Given that indirect taxes are easier to collect and enforce, LIDCs tend to rely on them to compensate for lower institutional capacities. The rise of income-based taxes in LIDCs (from 24% of total tax revenue in the 1990s to 34% in the 2010s) contributes both to revenue mobilization and improving overall progressivity of taxation, as has been the case in AEs (Benedek et al, 2022).

3.2 Tax Potential and Tax Effort

Besides institutional factors, differences in revenue mobilization across countries are driven by differences in economic structures. Estimates of tax potential, defined as the highest level of tax revenue (excluding SSCs) a country can mobilize under comparable situations, based on an empirically determined benchmark observed in other countries, provide useful insights. Figure 3 shows estimates of tax potential in AEs, EMEs, and LIDCs.

LIDCs' estimated tax potential amounts to 19.9%[2] of GDP, and their average tax effort is 0.67, as shown in Figure 3. Differences in tax effort estimates reflect variations in tax policy, tax compliance, and interactions between the two. The estimates imply that LIDCs could raise 6.7 percentage points of GDP in additional tax revenue. In comparison, in AEs and EMEs, tax potentials are estimated at 26.0 and 22.5 percent of GDP, indicating a tax effort of 0.94 and 0.78. Focusing on the VAT, which accounts for about one-third of tax revenue, microdata-based studies have decomposed the tax gap into a compliance gap and a policy gap, showing that the former is markedly higher in LIDCs than it is in other country groups.[3]

Improvements in government quality could enable raising additional tax revenue in LIDCs. Research results suggest that the tax potential depends on indicators of state capacity, as proxied by government effectiveness estimates. This is illustrated by simulations where government effectiveness scores in LIDCs are set, as aspirational objectives, to match the average of EMEs, holding all else constant. Under this scenario, the associated tax potential increases by an additional 2.3 percentage points of GDP, reaching 22.2% of GDP. This result suggests the potential for more tax revenue in LIDCs that would accrue from improving revenue collection institutions. In the real world, most of these factors are interrelated, and a holistic approach to government reform is most likely to succeed.

A Medium-Term Revenue Strategy (MTRS) is one approach that can help achieve a holistic approach to revenue reform, as shown in Box 1. An MTRS serves as the glue binding together various government agencies involved in tax policy design and implementation, taxpayers and civil society engaging with the tax system, and external development partners supporting reforms.

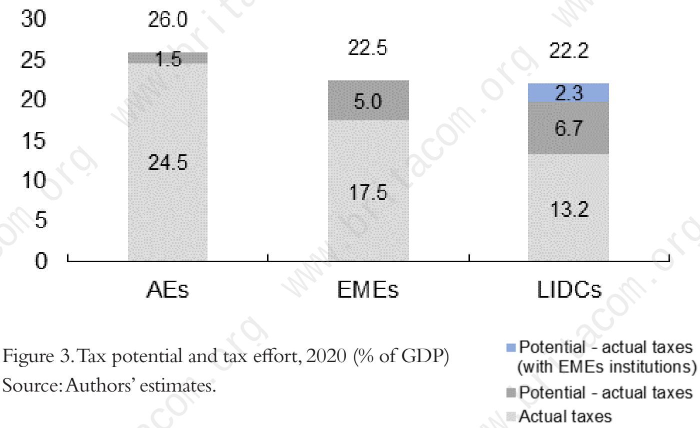

Figure 3. Tax potential and tax effort, 2020 (% of GDP)
Source: Authors' estimates.

Box 1. The Medium-Term Revenue Strategy

A Medium-Term Revenue Strategy (MTRS) frames tax system reform holistically over the medium term with four interdependent components:

- A revenue target to support economic and social development;
- A comprehensive approach addressing policy, administration, and legal framework interlinkages;
- A sustained political commitment from formulation to implementation; and
- A coordinated support among capacity development partners to align with government leadership and priorities.

The MTRS has been used in 24 countries, including eight LIDCs (PCT, 2022).

2 Tax effort is the ratio of the observed level of tax collection over an estimated tax potential.

3 See Hutton (2017). The VAT tax gap is estimated in relation to a country's own tax base, typically final private consumption. On the other hand, a VAT tax potential would be estimated in relation to the base and policy and institutional choices of other countries.

4. Tax Policy: Strengthening the Core

4.1 Taxing Consumption

4.1.1 The untapped revenue potential of VAT

VAT is central to revenue mobilization in LIDCs, but exemptions and reduced rates erode its performance. VATs raised on average 4.7% of GDP in 2019, below EMEs' average of 6.4%. Standard VAT rates, averaging about 15%, are on par with the average rate in EMEs and do not explain the low revenue productivity. C-efficiency[4] in LIDCs, however, averaged 37% in 2020, reflecting a combination of various VAT reliefs, and relatively high revenue administration gaps. To pursue progressivity, basic commodities (for example, staple foods, transportation, electricity, gas) are commonly taxed at reduced rates or exempted, benefiting both low- and high-income individuals. In 2020, VAT tax expenditures (the revenue cost of VAT exemptions and reduced rates) amounted on average to about 1.3% of GDP in LIDCs (0.8% in AEs and 0.6% in EMEs) (Redonda et al, 2022). Aligning the VAT with changing consumption patterns due to digitalization presents an opportunity to broaden its taxable base in LIDCs. Effectively levying VAT on the import of digital services and products bought online will increasingly be vital to protect the taxable base, as consumers shift to online digital services and direct purchases of goods from foreign vendors. It also helps ensure a level playing field for domestic businesses.

4.1.2 Excises can complement VAT and address externalities

Excise taxes can be used in LIDCs to raise more revenue and reduce the impact of externalities and internalities through changes in consumer behavior. Excises on petroleum products, alcoholic beverages, tobacco products and equivalent, unhealthy foods (for example, sugary drinks), and single-use plastic have the appeal of being widely consumed, but relatively easy to collect from a limited number of producers, or on imports at the border. Their revenue yield, typically between 1.5 and 2.5 percent of GDP, has been trending upward in LIDCs and EMEs. There is room to increase excise revenues through better design and consistent applications across taxpayers — especially importers vs. domestic producers, and state-owned vs. private enterprises. LIDCs can also make more and better use of environmental taxes. Carbon pricing is needed to address environmental externalities (IMF, 2021). Fuel excises are a form of carbon pricing and have been used for a long time in LIDCs, primarily as a revenue instrument, but with rates set low and differentiation across product types not reflecting their carbon content or environmental externalities. Reducing implicit and explicit fuel subsidies and promoting decarbonization could raise additional revenues and help achieve climate objectives.

4.2 Taxing Income and Wealth

On average, PITs as a share of GDP rose from 1.5% in 2005 to 2.5% in 2021. In many LIDCs, design weaknesses include a high exempt threshold, a relatively low top rate, and a relatively high, top income bracket, above which the top rate applies. Also, because labor formalization is often an issue in LIDCs, simplified regimes for the self-employed and micro-enterprises can improve compliance. Taxing wealth could generate additional revenue and be redistributive. The first step in many LIDCs would be to reinforce the taxation of the return on wealth or capital income (for example, interest, dividends, capital gains), which is often absent or levied at significantly lower rates — and could be collected through final withholding (Benedek et al, 2022; IMF, 2017). Countries with well-developed and effectively implemented PITs can consider inheritance taxes which are relatively easier to implement than recurrent wealth taxes and face lower compliance risk.

4 C-efficiency is the ratio of observed VAT collections over its theoretical potential calculated by applying the standard VAT rate to aggregate private consumption.

Recurrent taxes on real property can be effective in raising revenue and enhancing progressivity. The property tax, which several LIDCs have adopted in some form, raises on average 0.25% of GDP (0.6% in EMEs). Because it is relatively easy to collect once the appropriate administrative infrastructure is in place (namely, a cadaster and property valuation systems), and is mostly redistributive and efficient, it can be an important element of equitable revenue mobilization in LIDCs.

The CIT is an important source of revenue in low-income countries. Because it is levied on corporations, the CIT is relatively effective as a tax revenue instrument in weaker institutional environments. Like the VAT, however, the CIT base can be affected by costly tax expenditures. Pervasive investment incentives to attract foreign direct investment by providing outright CIT exemptions and tax holidays are costly, in addition to being ineffective, inefficient, and prone to abuse (PCT, 2015).

The global minimum tax under Pillar Two of the Inclusive Framework[5] agreement is an opportunity for LIDCs to re-design their investment tax incentives, with less pressure to reduce the standard rate (IMF, 2023). The minimum tax would dampen the effectiveness of tax incentives by reducing the benefit to investors. Such incentives can therefore be reformed to make the CIT less distortionary — for instance, by introducing full expensing for some capital goods, bringing the tax closer to a cash-flow tax, or allowing a cost for equity investment to neutralize the debt bias and reduce profit shifting (IMF, 2016; De Mooij et al, 2017). Even with Pillar Two, profit-shifting and abusive tax avoidance will remain a risk. Efforts can usefully focus on simple yet effective anti-abuse provisions and on expanding source taxing rights, including by revisiting tax treaties (Beer et al, forthcoming; PCT, 2021). For instance, introducing fixed margins for some distribution and marketing activities of MNEs could be expanded. Limitations on the deductibility of base-eroding expenses and retention of meaningful interest rates on services can offer a similar remedy to mitigate base erosion risks and tend to be more commensurate with existing administrative constraints (IMF, 2023).

4.3 Taxing Natural Resources

Non-renewable natural resources (oil, gas, and mining) are important sources of revenue in many LIDCs. It is common for countries to have sector-specific taxes, in addition to or in lieu of general taxes, to address sectoral particularities, such as location-specific economic rents that can be taxed at higher rates without strong investment reaction.

Reliance on natural resource revenue exhibits a negative relationship with tax revenue in LIDCs. An analysis of the relationship between natural resource tax revenue and other tax revenue shows that an increase in 1 percentage point of GDP in the former is associated with a statistically significant reduction of 1.06 percentage points in the latter in LIDCs, and 0.96 percentage points in EMEs. In contrast, AEs show a positive, albeit small and statistically insignificant relationship. This outcome suggests that developing countries endowed with natural resources substitute away from mobilizing non-resource tax revenue, calling for a need for balanced tax reforms.

A well-designed natural resource fiscal regime should capture a substantial share of economic rent from more profitable projects while ensuring early and dependable revenue from the start of production. It is therefore advisable to use profit and rent taxes together with royalties and to design the overall fiscal regime to be progressive in relation to profitability outturns while providing certainty and clarity in the presence of high volatility in international prices.

5 The OECD/G20 Inclusive Framework on BEPS (IF) was established to ensure interested countries and jurisdictions, including developing economies, can participate on an equal footing in the development of standards on BEPS related issues, while reviewing and monitoring the implementation of the OECD/G20 BEPS Project. Refer to: https://www.oecd.org/tax/beps/flyer-inclusive-framework-on-beps.pdf for additional information.

5. The Role of Supporting Institutions

5.1 Building Tax Analysis Capacity, Tax Policy Units (TPUs)

The effectiveness of tax policy choices in achieving their objectives is informed by ex ante analysis and ex post monitoring and evaluation. Institutionalization of tax analysis capabilities is relevant.

The primary function of a TPU is to act as a technical advisor to government and its institutions. This includes:

• producing objective analyses of tax reform options by estimating their revenue, distributional, and behavioral impact; producing regular tax expenditures assessments and reports (Heady et al, 2019; Beer et al, 2022) to provide transparency and monitoring of how government spends through the tax system;

• building a baseline of tax revenues over the budget cycle for a set of policy parameters, and estimating deviations from it, caused internally by policy changes, or externally by shocks to the various tax bases;

• producing objective and credible communication material to explain to the public the economic rationale and intent behind changes in tax policies, and their link with other economic policies; and

• coordinating relations and collaborating with other government agencies, and externally with other governments.

TPUs have had a positive impact on fiscal management and tax transparency. In AEs and increasingly EMEs, it is inconceivable for fiscal management to operate without TPUs — the case of several countries is well documented in Grote (2017). Countries where these units were set up have produced tax expenditures reports, prepared granular revenue forecasts, estimated the revenue cost of policy options, and, in some cases, produced distributional analyses of tax policy changes, and they have had some impact on drafting tax legislation. Countries without TPUs often struggle to produce timely analyses of policy options.

5.2 Modernizing and Digitalizing Revenue Administrations

Strengthening institutions tasked with collecting revenue is vital for developing tax capacity. There is evidence that improving tax administration practices, particularly in relation to compliance risk management and use of third-party data, is associated with growth in revenue collected, after controlling for tax policy changes (Chang et al, 2020). When mobilizing additional revenue, the choice between improvements in tax administration practices or interventions and policy changes deserves more attention than it is usually given, especially when countries have low administrative capacity (Keen et al, 2017).

5.2.1 Resources and governance

Revenue administrations need sufficient funding to ensure adequate professional human and information and communications technology (ICT) resources. Better human resource management correlates positively with a higher rate of on-time filing of core taxes and lower collection costs. Attracting and retaining the best staff, with the highest integrity standards, lies at the heart of an effective revenue administration. AEs benefit from experienced staff with long tenure in specialized technical work areas. The share of experienced staff is smaller in EMEs and LIDCs, which indicates a potential area for improvement (Crandall et al, 2021). Allocation of staff by function also matters. There is a difference between the percentage of staff allocated to audit in AEs and LIDCs (with EMEs in the middle): for AEs this exceeds 30%, while for LIDCs it is about 20%, as shown in Figure 4. Up-to-date IT systems are also essential to enhance staff productivity and effectiveness.

Ensuring that tax administrations operate at arm's length from political interference reduces opportunities for rent-seeking behavior. Balancing this independence, governments should ensure accountability and transparency, a foundation of the public's trust in a fair tax system. Furthermore, effective oversight, including internal and external auditing, is vital to good governance.

Strengthening cooperation between tax

and customs administrations could leverage data use and improve efficiency and effectiveness in revenue collection. With appropriate governance and management arrangements, separate revenue agencies can work cooperatively.

5.2.2 Compliance risk management

Categorizing the taxpayer population in segments with similar characteristics and organizing the tax administration around these segments can contribute positively to managing compliance risk. Segmentation by size, profitability, income level, etc., is a key element of a broader compliance risk management, which promotes taxpayer services tailored to a set of common characteristics and enforcement actions targeted to taxpayers who are the most likely to be non-compliant.

Modern revenue administrations maximize voluntary compliance with an integrated, holistic approach combining preventive, detective, and corrective actions. Taxpayer service strategies, including measures to lower compliance costs, are critical to that approach.

5.2.3 Digitalization and analytics

Revenue administrations in LIDCs routinely have lower levels of digitalization of core operations — notifying, invoicing, pre-filling, filing and payment, and assessments. On-time filing

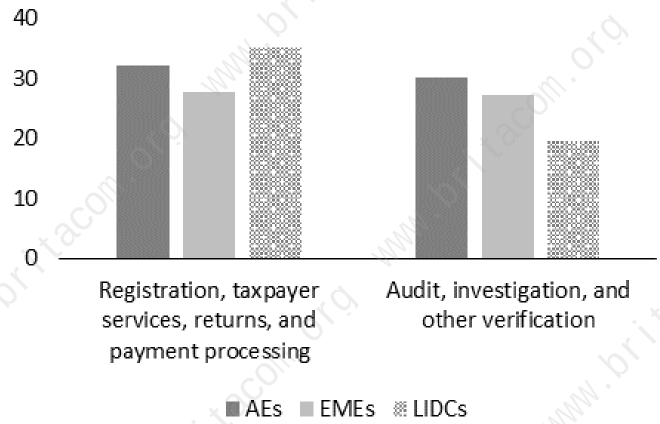

Figure 4. Allocation of staff in tax administrations, average 2018-2021 (% of total staff)
Source: Authors, based on CIAT, IMF, IOTA, and OECD (2022).

rates lag those in AEs (but are close to EMEs), especially with respect to the PIT, as shown in Figure 5. LIDCs also lag other country groups in electronic filing and the use of third-party data in pre-filling tax returns, although the gap has shrunk. Recent empirical research suggests that greater digital adoption in revenue administrations is associated with higher domestic tax revenue collection and a reduction in the VAT compliance gap (Bellon et al, 2022; Mengistu et al, 2023). Digitalization is, therefore, not only an

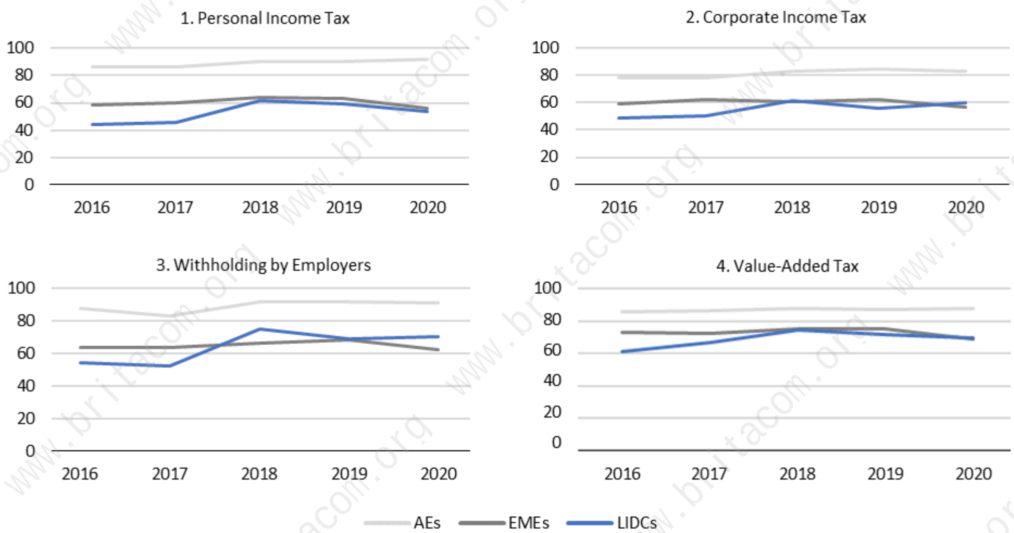

Figure 5. On-time filing rate of tax returns, 2016-2020 (% of expected tax returns)
Source: Authors, based on International Survey on Revenue Administration (ISORA), https://data.rafit.org.

efficiency-enhancing investment but could also enhance revenue without changes in policy.

6. Ensuring a Sound Legal Framework

Developing simple and effective tax legislation requires a clear legal framework. Tax certainty for taxpayers influences investment decisions and can have a significant impact on economic growth. Tax legislation is a critical component of tax certainty (IMF et al, 2019), and is especially important in LIDCs, where certainty, simplicity, and clarity, as well as the inclusive process of policymaking, must be protected in a context of relatively weaker institutions. The design of tax laws involves striking a balance between simplicity and comprehensiveness. This is best achieved by requiring the preliminary clause of any provision to set out its overarching principle, with deviations from that principle then explained in more specific provisions that follow. Further rules to allow smooth implementation can be housed in supplementary application rules and regulations. Experience shows that a credible legislative process should have the following features:

• A tripartite tax law design model, comprising the ministry of finance (as lead agency responsible for tax policy and related legal issues), revenue administration agencies, and non-government stakeholders such as the private sector and civil society organizations.

• Consultation between internal stakeholders should occur at the initial design stage and public consultation should take place in relation to draft legislation where possible.

• Tax laws should be subject to debate, review and/or approval of a representative legislative body before taking effect and the impact of substantive new tax laws should be monitored to ensure that the legislation is operating as intended.

• All tax policy measures should be in legislation without exceptions. This includes tax incentives, allowances, and other measures which affect tax revenues.

• The frequency of changes in the tax legislation should be kept to a minimum and there should be timely communication of changes.

A growing number of countries are introducing tax procedure laws separate from tax laws to address administrative aspects across multiple taxes. This could simplify compliance and make it more effective, especially since interconnectivity of taxes is important for compliance behavior. It also allows policymakers to keep tax laws relatively stable over time.

7. Conclusions

LIDCs need revenue to pursue the SDGs and manage debt sustainability. It is estimated that additional spending of 16% of GDP is required in LIDCs to meet spending needs for important areas such as health, education and infrastructure. The current debt crisis in some LIDCs has added to the urgency of revenue mobilization. Reforms for revenue mobilization should focus on the imperative of leveraging core domestic tax policies. While ongoing international collaboration on the taxation of the profits of MNEs has generated hopes for additional revenue, these are estimated to be modest compared to the overall revenue needs for LIDCs.

There is considerable scope to collect more revenues in LIDCs, measured by their estimated tax potential. At about 13.2% of GDP on average, tax revenues in LIDCs are well below their 20% potential, holding constant economic structure and the quality of institutions. If governmental effectiveness improves to that of EMEs, that potential would increase by another 2.3 percentage points of GDP.

Reforms should increasingly focus on building fiscal institutions. Investment in tax policy units can help a country identify and prioritize reforms based on country-specific data and be more effective in addressing cross-cutting issues connected with tax policymaking — for example, climate change and industrial policy. Strengthening and digitalizing revenue administrations and ensuring that they are not dominated by political influence, and remain well managed and well-funded, are prerequisites to compliance improvement. Increased use of digital services and processes, taxpayer segmentation, and risk-based compliance management are examples of reforms that can have a sustained impact on revenue collections. A transparent and robust legal framework is necessary for certainty of tax outcomes to taxpayers.

Coordination is critical to improve tax capacity. Because the broader institutional context matters, careful prioritization and coordination of reforms across government agencies involved in policymaking is key. Ultimately, successful tax policy and administration reforms feed into a virtuous circle where tax capacity and state capacity reinforce each other, with additional revenue and improved public goods strengthening policies and institutions, and their public acceptance.

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Reducing the Tax Burden? Opportunity to Craft a Balanced Approach under Pillar Two

Edwin Visser, Blazej Kuzniacki and Pedro Schoueri*



Edwin Visser
Partner
Dept. Global Tax Policy Leader
PwC Netherlands

Blazej Kuzniacki
Senior Manager
International Tax and Tax Policy
PwC Netherlands

Pedro Schoueri
Senior Manager
International Tax and Tax Policy
PwC Netherlands

Abstract: The global minimum tax impacts the effectiveness of tax incentives. Many countries view tax burden reduction as a necessary lever to promote foreign direct investment (FDI) and economic growth. In this article, the authors provide a broader perspective. The proposed holistic approach may offer insights to low-income and emerging countries in facing current challenges in the sphere of taxation and economic growth.

Keywords: Enhancing FDI; Reducing tax burden; Tax mix; Tax and non-tax factors; Adjusting tax system to Pillar Two

* Edwin Visser, Member of the Advisory Board of the BRITACOM, Dept. Global Tax Policy leader and partner at PwC NL; Blazej Kuzniacki, Senior Manager on International Tax and Tax Policy at PwC NL; Pedro Schoueri, Senior Manager on International Tax and Tax Policy at PwC NL. The authors thank Giorgia Maffini PhD, Director and Special Advisor on Tax Policy and Transfer Pricing at PwC UK for her thorough review of this article and for her suggestions.

1. Introduction

In pursuit of economic development, countries regularly make use of various tax incentives. However, the political agreement of the OECD/G20 Inclusive Framework[1] (IF) on a global minimum tax (Pillar Two or GMT) may fundamentally change the deployment of this type of measure.[2] In particular, the minimum effective tax rate (ETR) of 15% imposed via domestic GMT rules is expected to offset some of the advantages intended by tax burden reductions, thus requiring a fundamental reconsideration of how countries go about the promotion of economic growth and the attraction of cross-border real investment flows .

In brief, GMT consists of three interlocked rules: (1) Qualified Domestic Minimum Top-up Tax (QDMTT); (2) Income Inclusion Rule (IIR); and (3) Undertaxed Profits Rule (UTPR) (further also as: Pillar Two Rules). The rules are interlocked because if QDMTT does not top up tax up to 15% ETR, then IIR or UTPR will do so. Arguably, IIR and UTPR activate a pressure mechanism on states to implement QDMTTs in order to ensure that MNE Groups in the scope of Pillar Two pay at least 15% of global minimum tax somewhere in the world (wherever constituent entities (CEs) of MNE Groups are located), under QDMTTs, IIRs or UTPRs, irrespective of any risk of tax avoidance or harmful tax competition.[3]

This paper will contextualize the current *status quo* around tax competition, highlighting the long history of fight against potential harmful effects and the existence of other measures available for countries to pursue their economic objectives. This backdrop will serve as a template for the discussions about the effects of the GMT: To what extent are tax incentives still effective? Could countries consider pursuing their economic goals through optimizing their taxation mix or even through levers outside the tax system?

2. Tax Competition and Fiscal Pressure

2.1 Background on Tax Competition

With the rise of globalization and increased mobility of factors of production, countries have an incentive to compete for investment and profit flows by increasing the relative attractiveness of their economies, also via their tax systems, including through tax incentives.[4] This is particularly true for jurisdictions that are inherently less attractive because they are smaller, peripheral and/or their economy is at a different stage of development.

This phenomenon, commonly referred to as "race to the bottom", has been viewed by some as pernicious to the countries when considered collectively, even if it may be beneficial to a few jurisdictions — typically referred to as low-tax jurisdictions. In particular, the pressure exerted by this type of competition would restrict both higher- and lower-tax countries'

1 145 states and jurisdictions as of the day of publication of this article. See OECD (2023). *Members of the OECD/G20 Inclusive Framework on BEPS*, https://www.oecd.org/tax/beps/inclusive-framework-on-beps-composition.pdf (accessed 1 February 2024).

2 For the OECD's Pillar Two model rules with accompanied materials see: OECD. *Tax Challenges Arising from the Digitalisation of the Economy — Global Anti-Base Erosion Model Rules (Pillar Two)*, https://www.oecd.org/tax/beps/tax-challenges-arising-from-the-digitalisation-of-the-economy-global-anti-base-erosion-model-rules-pillar-two.htm (accessed 1 February 2024).

3 A reference to the "harmful race to the bottom on corporate taxes" and the need to set "a floor for tax competition among jurisdictions" was abandoned in the OECD Statement of January 2020 most likely due to the political sensitives caused by the acknowledged discontent among some countries on this issue. See OECD (2020). *Statement by the OECD/G20 Inclusive Framework on BEPS on the Two-Pillar Approach to Address the Tax Challenges Arising from the Digitalisation of the Economy*, https://www.oecd.org/tax/beps/statement-by-the-oecd-g20-inclusive-framework-on-beps.htm, para. 4 in appendix 2.

4 OECD (1998). *Harmful Tax Competition: An Emerging Global Issue*, https://doi.org/10.1787/9789264162945-en, p.14.

abilities to raise enough revenues to match their domestic public expenditure needs. The underlying assumption is that all countries need and want a certain, unspecified level of public expenditure. Additionally, tax competition would create a possibility for taxpayers to reduce their tax liabilities in high-tax jurisdictions, while benefiting from their public expenditures (e.g., in infrastructure).[5]

Even though the economic evidence on the magnitude of the "race to the bottom" is still ambiguous,[6] the discussions highlighted above led the OECD to examine the issue. In its 1998 report, the organization identified "harmful" types of tax competition. This would be the case where "tax havens" and "preferential tax regimes" target mobile income through measures displaying key factors including "no or low effective tax rates" (gateway criterion), "lack of effective exchange of information", "lack of transparency" and "no substantial activities" (in the case of tax havens) or "ring fencing" (in the case of preferential regimes). In this way, the proposed approach targeted specific types of competition that would have "harmful" effects, but endorsed countries' ability to freely design their tax system where no harmful effects would occur.

The success of the initiative has been mixed, with political support waning over time.[7] However, the promotion of exchange of information and transparency saw a renewed measure of success in the aftermath of the 2008 financial crisis, with the advent of the Global Forum on Transparency and Exchange of Information for Tax Purposes. At the time, other elements of tax competition, e.g., the ability to set low tax rates and reduce the tax base were not contemplated.

The Base Erosion and Profit Shifting (BEPS) Project sought to "revamp" the work on harmful tax practices, requiring substantial activity for any preferential regime. Since then, the OECD reports have peer reviewed 319 preferential regimes, leading to the abolition or amendment of 189 regimes.[8]

Despite these impressive numbers and the significant progress in combating BEPS, the IF countries rallied around the idea of setting a floor to tax competition in order to address the remaining BEPS issues. This initiative, now known as Pillar Two or the GMT, is no longer anchored on substantial activity, ring fencing or any other proxy for "harmful" tax competition. Rather, the GMT mitigates the impact of no or low effective taxation itself, setting the floor at the level of 15% of ETR.

2.2 Fiscal and Non-Fiscal Roles of a Tax System

At the outset of the initiative, the IF articulated that the GMT:

"could effectively shield developing countries from the pressure to offer inefficient incentives and in doing so help them in better mobilizing domestic resources by ensuring that they will be able to effectively tax returns on investment made in their countries".[9]

This framing of the GMT objectives raises

5 OECD (1998). *Harmful Tax Competition: An Emerging Global Issue*, https://doi.org/10.1787/9789264162945-en, p.15.

6 Even though on average the statutory CIT rates fell between 2000 and 2022, there was a slight increase on average in the CIT revenue as a share of GDP between 2000 and 2019. See OECD (2022). *Corporate Tax Statistics, 4th Edition*, https://www.oecd.org/tax/tax-policy/corporate-tax-statistics-fourth-edition.pdf (accessed 1 February 2024).

7 See for instance, *U.S. Congressional Research Service Updates Report on OECD Tax Haven Initiative, R40114*, https://www.taxnotes.com/tax-notes-today-international/compliance/us-congressional-research-service-updates-report-oecd-tax-haven-initiative/2010/03/25/1947y (accessed 1 February 2024).

8 *OECD/G20 Inclusive Framework on BEPS, Progress Report September 2022 – September 2023*, https://www.oecd.org/tax/beps/oecd-g20-inclusive-framework-on-beps-progress-report-september-2022-september-2023.pdf (accessed 1 February 2024).

9 OECD (2019). *Programme of Work to Develop a Consensus Solution to the Tax Challenges Arising from the Digitalisation of the Economy*, https://www.oecd.org/tax/beps/programme-of-work-to-develop-a-consensus-solution-to-the-tax-challenges-arising-from-the-digitalisation-of-the-economy.pdf (accessed 1 February 2024).

a number of significant issues[10] — including for instance the convenience, for low-income developing countries, of adding the complexity of the GMT to the tasks of their tax administrations. Even more broadly, a potential drawback for those countries would be the potential shielding not only of inefficient but also of effective tax incentives.

There are valid reasons for countries to make different tax policy decisions, including when it comes to incentives. The 1998 report already acknowledged that "there are no particular reasons why any two countries should have the same level and structure of taxation" and that "these are essentially political decisions for national governments". More specifically, the report also acknowledged that:

"countries with specific structural disadvantages, such as poor geographical location, lack of natural resources, etc., frequently consider that special tax incentives or tax regimes are necessary to offset non-tax disadvantages, including any additional cost from locating in such areas. Similarly, within countries, peripheral regions often experience difficulties in promoting their development and may, at certain stages in this development, benefit from more attractive tax regimes or tax incentives for certain activities".[11]

This excerpt acknowledges that the purpose of tax systems is not only resource mobilization. In addition to fairness considerations, the tax system can also support the pursuit of economic development — including through the use of tax incentives.

Indeed, the level of taxes levied in a particular country tends to be commensurate with the level of public goods offered by that country.[12] Countries with poor infrastructure, geographical location, small markets or other structural disadvantages will only lose competitiveness if their ETR is equal to that of other countries that offer more beneficial conditions.

2.3 Fiscal Levers for Promoting Real Investment Flows and Economic Growth

Even if tax incentives can play an important role in promoting real investment flows and economic growth, the implementation of the GMT makes it ever more relevant to recognize the existence of other levers available in the tax system that can be activated in pursuit of these goals.

First, the design of a country's tax mix can be more or less conducive to economic growth. There are taxes that are considered particularly distortive of economic activities and these could be targeted to achieve a tax system that is more conducive to investment and growth. The Mirrlees Review is particularly clear:

"Taxes levied on income without deducting the costs of generating that income, or levied on sales without deducting input costs, or levied directly on business expenditures, are in general grossly inefficient and have no place in a good tax system. This leads to a presumption against all kinds of transactions taxes, input taxes, and turnover taxes."[13]

In this context, a well-functioning VAT system could help achieve the right balance between raising revenues and imposing as few distortions as possible onto the economy, provided that the VAT system is "applied to all final consumption expenditure by households, but that expenditure on business inputs should be

10 B. Arnold (2019). The Evolution of Controlled Foreign Corporation Rules and Beyond. 73 *Bull. Intl. Taxn.* 12, https://research.ibfd.org/#/doc?url=/document/bit_2019_12_o2_2 (accessed 1 February 2024).

11 OECD (1998). *Harmful Tax Competition: An Emerging Global Issue*, https://doi.org/10.1787/9789264162945-en, p.15.

12 K. Vogel (1981). Wie geht es weiter? Die Zukunft des Oasenproblems, in Vogel/Ellis, Steueroasen und Außensteuergesetze. Also, G. Maffini & A. Zanardi (2023). *Un'aliquota minima che cambia la concorrenza tra paesi*, https://lavoce.info/archives/100446/unaliquota-minima-che-cambia-la-concorrenza-tra-paesi/ (accessed 1 February 2024).

13 Mirrlees et al.(2011). Conclusions and Recommendations for Reform, in Tax by Design — the Mirrlees Review, https://ifs.org.uk/books/tax-design#:~:text=Tax%20by%20Design%2C%20the%20final,how%20it%20might%20realistically%20be (accessed 1 February 2024), p.476.

untaxed".[14] Related distributional issues could be tackled through the personal income tax system and the wider benefit system.

As a result, countries can find in the design of the tax mix a viable option to support economic growth by softening the impact of the reduction or elimination of incentives.

2.4 Non-Fiscal Levers for Promoting FDI and Economic Growth

In addition to the role of the tax system in promoting foreign direct investment (FDI) and economic growth, it is also important to take a step back and acknowledge that there are many other important factors that have a significant influence.

According to a 2019/2020 survey conducted by the World Bank with more than 2,400 business executives representing FDI in 10 large middle-income countries, political stability, macroeconomic stability, the legal and regulatory environment and the pool of available talent/skills are more relevant for FDI decisions than low taxes.[15] Other factors that were considered relevant include market size, physical infrastructure, ability to export, intellectual property protections, investor protections, low labor and input costs, supply chain coordination, local input sourcing, resource endowments and local acquisition targets.

This backdrop serves as a reminder that tax is only one of many levers available for countries to attract FDI in pursuit of economic growth. In other words, even if Pillar Two may restrict the use of taxation as a viable lever for economic development, investment tends to be driven by the broader ecosystem of which tax is one of the important elements.

3. Challenging Re-Balance of Status Quo in Light of Pillar Two

3.1 Seeing Pillar Two as a Chance to Re-Balance Domestic Tax Incentives

The interlocked mechanism of the Pillar Two Rules has been defined as "devilish logic" by scholars[16] because no state and MNE can escape its logic once a critical mass is achieved (which appears to be the case if the EU Member States and some other States implement Pillar Two)[17] — if QDMTT does not top up tax up to 15% ETR, then IIR or UTPR will do. That is to say:

(1) <u>if</u> a state which can impose minimum 15% of global tax on an in-scope MNE fails to do so despite the ETR[18] of that MNE is below 15%, i.e. did not introduce QDMTT,

(2) <u>then</u> another state will apply IIR to tax the MNE's income up to 15% (in principle, a

14 Mirrlees et al., supra n. 13, p.476. See also Ormaechea & Morozumi (2019). *The Value Added Tax and Growth: Design Matters*, IMF Working Paper No. 2019/096, https://www.imf.org/en/Publications/WP/Issues/2019/05/07/The-Value-Added-Tax-and-Growth-Design-Matters-46836 (accessed 1 February 2024); and OECD (2010). *Tax Policy Reform and Economic Growth*, https://doi.org/10.1787/9789264091085-en.

15 World Bank (2019/2020). *Global Investment Competitiveness Report: Rebuilding Investor Confidence in Times of Uncertainty*, https://openknowledge.worldbank.org/server/api/core/bitstreams/736358db-40d6-5ad3-8571-45c89ee8a697/content (accessed 1 February 2024), p.16, figure O.12. The survey was conducted with more than 2,400 business executives representing FDI in 10 large developing countries: Brazil, China, India, Indonesia, Malaysia, Mexico, Nigeria, Thailand, Turkey, and Vietnam.

16 R. Mason (2022). *A Wrench in GloBE's Diabolical Machinery*, https://www.taxnotes.com/special-reports/digital-economy/wrench-globes-diabolical-machinery/2022/09/16/7f3pt (accessed 1 February 2024).

17 "The premise — and certainly hope — is that implementation by a couple of large economies, which capture a significant chunk of MNE activities, will spark a domino effect. This is about to be put to the test." See J. Dettoni & D. Myles (2023). *The 15% Global Corporate Minimum Tax Gamble*, https://www.fdiintelligence.com/content/feature/the-15-global-corporate-minimum-tax-gamble-83232 (accessed 1 February 2024).

18 The ETR under Pillar Two is Adjusted Covered Taxes divided by GloBE income or loss. For a practical explanation and numerical examples, see PwC (2023). *OECD Pillar Two: Time to Act on Global Minimum Tax*, https://viewpoint.pwc.com/dt/us/en/pwc/in_depths/2023/in-depth-2023-03/assets/id202303v2.pdf (accessed 1 February 2024), p.5.

state in which ultimate parent entity (UPE) has tax residence, or a state where the next intermediate parent entity in the ownership chain has tax residence), and if that state also fails to tax the MNE's income up to 15%,

(3) then another state (wherever there is any constituent entity (CE) in the MNE's group) will do so via UTPR in accordance with the politically agreed fixed formula based on the share of total employees and tangible assets.[19]

Notably, the IIR and the UTPR activate a pressure mechanism on states to implement QDMTTs in order to ensure that MNE Groups in the scope of Pillar Two pay at least 15% of global minimum tax somewhere in the world (wherever CEs of MNE Groups are located) under QDMTTs, IIRs or UTPRs,[20] irrespective of any risk of tax avoidance or harmful tax competition.[21] This "reflects a remarkable departure from the long-standing policy that countries

19 OECD. *Overview of the Key Operating Provisions of the GloBE Rules*, https://www.oecd.org/tax/beps/pillar-two-GloBE-rules-fact-sheets.pdf (accessed 1 February 2024).

20 In some instances, the OECD appears to pressure not only members of the IF but also other international organizations (the United Nations and specifically one of its groups — the African Group) to follow its lead in respect of Pillar Two. See from 1h 11 min. 54 sec. the recording from that meeting, https://media.un.org/en/asset/k1b/k1bummpe5z (accessed 1 February 2024). See also, the transcript: *Statement on the Explanation of Vote after the Vote on Resolution L.11 on Promotion of Inclusive and Effective International Tax Cooperation at the United Nations*, para.4, https://estatements.unmeetings.org/estatements/11.0020/20221123/XQ3sy5xSD6sb/7WhkQuYxnAzq_en.pdf (accessed 1 February 2024). See also UN (2023). *Inclusive International Tax Systems Crucial in Strengthening Developing Countries' Fiscal Policies, Green Transition, Speakers Tell Economic and Social Council*, https://press.un.org/en/2023/ecosoc7116.doc.htm (accessed 1 February 2024).

21 A reference to the "harmful race to the bottom on corporate taxes" and the need to set "a floor for tax competition among jurisdictions" was abandoned in the OECD Statement of January 2020 most likely due to the political sensitives caused by the acknowledged discontent among some countries on this issue. See OECD (2020). *Statement by the OECD/G20 Inclusive Framework on BEPS on the Two-Pillar Approach to Address the Tax Challenges Arising from the Digitalisation of the Economy*, https://www.oecd.org/tax/beps/statement-by-the-oecd-g20-inclusive-framework-on-beps.htm, para. 4 in appendix 2.

may compete over real economic activity (as opposed to 'artificially' shifted profits) without objection."[22]

The implementation and application of very complex Pillar Two Rules may be extremely burdensome, both financially and administratively.[23] Moreover, the risk that tax benefits get soaked-up by the top-up tax in other jurisdictions will force countries to revisit their tax incentive policies, potentially favoring a shift toward other fiscal and non-fiscal levers (see sections 2.3 and 2.4). Still, such transition is seen by many as a serious threat to attract FDI and tax sovereignty especially for developing countries.[24]

However, other perspectives see Pillar Two not just as a potential risk to attracting real investment flows through tax incentives. It can also be interpreted as an opportunity to establish a new equilibrium in global tax competition. This involves reassessing the extent to which a tax system can and should be utilized to draw in investments. In any case, however challenging, Pillar Two appears as an opportunity to evaluate tax incentives to understand whether they are still effective or not. In fact, systematic (regular) evaluation of tax incentives (tax expenditures (TEs))[25] is commendable in general, i.e. irrespective of Pillar Two. As put by the IMF, "systematic evaluations, as opposed to ad hoc discussions, are needed to guide informed decision-making and to avoid a situation where the narrative on TEs is primarily driven by profiting stakeholders."[26]

22 Ibid. *Cf.* OECD's observation in respect of then upcoming BEPS Project: "no or low taxation is not per se a cause of concern, but it becomes so when it is associated with practices that artificially segregate taxable income from the activities that generate it". See OECD (2013). *Action Plan on Base Erosion and Profit Shifting*, https://doi.org/10.1787/9789264202719-en, p.10.

23 German scholars calculated that the costs of implementation of Pillar Two in Germany will be very high while additional benefits close to zero, rendering it rather inefficient from the perspective of costs-benefits ratio. See C. Spengel, D. Klein, J. Müller, et al (2022). *Die globale Mindeststeuer — Kosten und Nutzen aus deutscher Sicht*, https://ftp.zew.de/pub/zew-docs/policybrief/de/pb07-22.pdf?_gl=1*cdn3zm*_ga*MjczMDk5NjgyLjE3MDIwNDkwNzA.*_ga_KFD4G5CY27*MTcwMjA0OTA2OS4xLjEuMTcwMjA0OTQxMy4wLjAuMA (accessed 1 February 2024).

24 For the list of developing countries (emerging economies) as well as developed countries (advanced economies), see IMF (2023). *World Economic Outlook Database: Groups and Aggregates Information*, https://www.imf.org/en/Publications/WEO/weo-database/2023/April/groups-and-aggregates (accessed 1 February 2024). For a more specific categorisation on low-income developing countries, emerging market and middle-income economies, and advanced economies, see IMF (2023). *Fiscal Monitor*, https://www.imf.org/external/datamapper/datasets/FM (accessed 1 February 2024). For the threat stemming from Pillar Two in respect of attracting FDIs by developing countries, see A. Titus (2022). Pillar Two and African Countries: What Should Their Response Be? The Case for a Regional One. 50 *Intertax* 10, p.711; Cf. E. Amungo (2020). *The Rise of the African Multinational Enterprise (AMNE): The Lions Accelerating the Development of Africa*. Springer, p.265; L. Parada (2024, upcoming). Global Minimum Taxation: A Strategic Approach for Developing Countries. 15 *Columbia Journal of Tax Law* 2. Pre-published online version: https://ssrn.com/abstract=4280669 (accessed 1 February 2024), p.9.

25 Tax expenditures are "provisions of tax law, regulation or practices that reduce or postpone revenue for a comparatively narrow population of taxpayers relative to a benchmark tax". They may take a number of various forms such as: allowances, exemptions, rate relief, tax deferral, and credits. See OECD (2010). *Tax Expenditures in OECD Countries*, https://doi.org/10.1787/9789264076907-en (accessed 1 February 2024), p.12. "Tax expenditures describe revenue losses attributable to provisions of Federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability. These exceptions are often viewed as alternatives to other policy instruments, such as spending or regulatory programs." See The US Department of the Treasury. *Tax Expenditures*, https://home.treasury.gov/policy-issues/tax-policy/tax-expenditures (accessed 1 February 2024). Tax incentives are therefore understood as tax expenditures.

26 See S. Beer, D. Benedek, B. Erard, et al (2022). *How to Evaluate Tax Expenditures*, https://www.imf.org/en/Publications/Fiscal-Affairs-Department-How-To-Notes/Issues/2022/11/How-to-Evaluate-Tax-Expenditures-525166 (accessed 1 February 2024), p.1.

3.2 Considering Major Challenges for Low-Income Developing Countries and Emerging Economies in Light of Pillar Two

Given that low-income developing countries and emerging economies constitute the vast majority of the BRI jurisdictions,[27] this article will further mainly focus on the future of tax and non-tax incentives under Pillar Two in such countries. The ambition of the next paragraphs is to highlight the key challenges in preparing and adopting a post-Pillar Two strategic plan on tax and non-tax incentives.[28]

First, the Substance-based Income Exclusion (SBIE) can at the maximum exclude from the taxation under Pillar Two Rules up to 37% of total profits in scope of Pillar Two in the first year of implementation of such Rules and 23% after ten years.[29] Hence, the vast majority of profits subject to ETR below 15% due to well-designed tax incentives (fully benefiting from the SBIE) can still be negatively affected by Pillar Two Rules. Attracting FDIs by tax incentives will be therefore significantly more difficult and complex for states, even if they have in force efficient tax incentives, due to the mechanism of Pillar Two Rules and the concept of "collateral benefits" (see more on this below).

Second, up to 70% of developing countries have at least one corporate income tax incentive offering long-term tax holidays (0% ETRs) within the scope of their special economic zones (SEZs).[30] Indeed, attracting FDIs via SEZs seems considerably more typical for developing than developed countries. The widespread implementation of Pillar Two directly undermines the logic of SEZs and entirely or almost entirely eliminates their attractiveness for all MNEs in scope of Pillar Two, thus the biggest investors worldwide.[31]

Third, Pillar Two Rules may lead to a new type of tax competition. Probably the major example is maintaining or lowering corporate income tax rates in some jurisdictions to 15%, or even lowering those rates below 15% in respect to entities outside the scope of those rules. In particular, such a path might be followed by countries that are capable of levying significant amounts of tax via the QDMTT, i.e. with a considerable presence of MNEs with local ETRs below 15% and substantial tax base in the scope of Pillar Two. They are able to simply offset low tax on entities outside the scope via the QDMTT, thereby creating a tax competition that appears unintended.[32]

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27 According to: www.yidaiyilu.gov.cn, and the research underpinning the publication at: https://greenfdc.org/countries-of-the-belt-and-road-initiative-bri/ (accessed 1 February 2024).

28 The World Bank and the OECD also enhance countries to properly prepare for the future of tax incentives in light of Pillar Two. See D. O'Sullivan & A. Cebreiro Gómez (2022). *Global Minimum Tax: From Agreement to Implementation*. Washington, D.C.: World Bank Group, pp.33-35; OECD (2022). *Tax Incentives and the Global Minimum Corporate Tax: Reconsidering Tax Incentives after the GloBE Rules*, https://doi.org/10.1787/25d30b96-en, pp.50-52.

29 See M. Devereux & J. Vella. The Impact of the Global Minimum Tax on Tax Competition. 15 *World Tax Journal* (version online: 20 April 2023), sec. 4.1.3.

30 See Dettoni & Myles, *supra* n. 17.

31 Cf. UNCTAD (2023). *The Impact of International Tax Reforms on Special Economic Zones*, UNCTAD/DIAE/INF/2023/1, https://unctad.org/publication/impact-international-tax-reforms-special-economic-zones (accessed 1 February 2024), p.10; A. Christians, T. Lassourd, K. Mataba, et al (2023). *A Guide for Developing Countries on How to Understand and Adapt to the Global Minimum Tax*, https://www.iisd.org/system/files/2023-06/guide-developing-countries-adapt-global-minimum-tax-final_0.pdf (accessed 1 February 2024), pp.45-46.

32 See M. Devereux & J. Vella, *supra* n. 29, sec. 4.2: "As the GloBE Rules strengthen the incentive for countries to compete through the corporation tax, it follows that there is an increased probability that some countries will compete down the corporation tax, perhaps even all the way to zero. The revenue costs to source countries of any such reductions will be at least partially offset by the adoption of a QDMTT (so long as states can adopt this approach only with respect to in-scope MNEs, see section 5.2.). Nevertheless, the intensification of competition over the corporation tax may not have been intended."

Fourth, a Qualified Refundable Tax Credit (QRTC) appears particularly challenging for developing countries in designing and granting non-tax related incentives because their budgetary position to pay investors for their activities or expenditures in the form of QRTCs — paid as cash within a limited period of time of four years — may not be strong enough.[33] Article 3.2.4 OECD Pillar Two Model Rules provides that QRTCs "shall be treated as income in the computation of GloBE Income or Loss of a Constituent Entity". When a QRTC is settled to reduce the tax payable in a year, it does not reduce the CE's covered taxes. Article 4.1.3(b) OECD Pillar Two Model Rules further provides that "any amount of credit or refund in respect of a Non-Qualified Refundable Tax Credit (Non-QRTC) that is not recorded as a reduction to the current tax expense" will be treated as a reduction to covered taxes of a CE. Clearly then, Pillar Two treats more favorably refundable tax credits than non-refundable tax credits insofar as only the former does not lead to a reduction of ETR for determination of CE's in-scope of Pillar Two and the amount of undertaxed income for 15% ETR top up tax purposes.

Fifth, Pillar Two may lead states to replace tax incentives with non-tax incentives, for instance grants or subsidies, to attract FDIs of largest MNEs.[34] Although it is possible to design non-tax subsidies that are economically equivalent to tax incentives and vice versa,[35] the ability of governments in various jurisdictions to replace tax benefits with equivalent subsidies might vary a lot, depending on political, institutional, economic or other constraints.[36] Moreover, this solution appears severely complicated and restricted by the concept of "collateral benefits" under Article 10.1.1 of the OECD Pillar Two Model Rules. It allows disregarding a domestic 15% minimum tax as a QDMTT (or an IIR as the case may be), if a state provides "any benefits that are related to such rules". In other words, even if a state implements and effectively levies 15% ETR via QDMTT (or an IIR) on the income of the local CE, another state will have a right to levy a top-up tax wholly or partly in respect of the local CEs in the same MNE Group either via an IIR or a UTPR, whenever the former state provides any non-tax incentives which would be related to taxation under Pillar Two Rules in whole or in part, substituting the tax incentive which led to ETR below 15%.

The main challenge with the concept of collateral benefits is that it appears to introduce a broad economic-factual rather than a narrow legal approach in determining Pillar Two compatible non-tax incentives.[37] Accordingly, the UNCTAD warns that even incentives "that an

33 Article 10.1.1 OECD Pillar Two Model Rules defines a QRTC as "a refundable tax credit designed in a way such that it must be paid as cash or available as cash equivalents within four years from when a Constituent Entity satisfies the conditions for receiving the credit under the laws of the jurisdiction granting the credit". Paragraph 110 of the Commentary on Article 3.2.4 OECD Pillar Two Model Rules clarifies that by providing a QRTC, "government effectively pays for the activity or expenditure in a similar manner to a grant".

34 In this article, subsidies (or non-tax subsidies) mean subsidies and incentives that are not corporate income tax benefits. However, other tax incentives that are unaffected by Pillar Two and other international tax reforms such as indirect taxes, employment taxes, are not considered as tax incentives in this part of the article. They shall be seen as subsidies (non-tax subsidies). Cf. N. Noked (2022). Designing Domestic Minimum Taxes in Response to the Global Minimum Tax. 50 *Intertax* 10, p.686.

35 See D. A. Weisbach & J. Nussim (2004). The Integration of Tax and Spending Programs. 113 *Yale L.J.*, pp.955, 961; J. Nussim & A. Sorek (2017). Theorizing Tax Incentives for Innovation. 36 *Virginia Tax Rev.* 1, pp. 25-58; N. Noked (2014). Integrated Tax Policy Approach to Designing Research & Development Tax Benefits. 34 *Virginia Tax Rev*, pp.109-143.

36 See N. Noked (2020). From Tax Competition to Subsidy Competition. 42 *U. Pa. J. Int'l L.*, pp.451-453.

37 See paras 116, 123-124 of the Commentary to a QDMTT and an IIR.

outside observer might not be able to link to a QDMTT", such as refunds of customs duties, export taxes, sales taxes, renegotiated production sharing or royalty agreements, and public spending on infrastructure, may not be entirely safe during the anticipated peer review and ongoing monitoring process for Pillar Two. It cannot be excluded that such non-tax incentives in certain circumstances will be seen as "artificial refunding of any QDMTT in this manner".[38] Thus, under an expansive interpretation of what the peer-review could scrutinize, it is unclear how developing countries will remain competitive in light of Pillar Two. An additional issue is the uncertainty and lack of transparency around what the peer review will be, triggering further difficulties for developing countries. How do they design and implement non-tax incentives to attract FDIs beyond collateral benefits? For instance, Vietnam announced the implementation of the Domestic Minimum Additional Tax (DMAT) framework. The money from DMAT will "assist enterprises with various expenses, such as research and development costs, investment in equipment, and high-tech production expenditures", providing that they comply with the Vietnamese Pillar Two Rules.[39] Will those subsidies pass the muster under the concept of collateral benefits in light of the Commentary to it and further developments during the peer reviews process? It remains unclear. But it is clear that many jurisdictions will struggle to remain or become competitive via their tax and non-tax incentives after Pillar Two unfolds globally.

Last but not least, states should carefully examine the compatibility of Pillar Two with their tax and investment treaties insofar as there is already a noticeable body of scholarship questioning that compatibility.[40] In a nutshell, four standards of investment treaty protection are most likely to cause tensions with Pillar Two: the fair and equitable treatment (FET), the umbrella clause, non-discrimination (national treatment), and the non-expropriation.[41] In the majority of international investment agreements

38 See UNCTAD (2023). *The Global Minimum Tax and Investment Treaties: Exploring Policy Options*, IIA Issues Note 4/2023, https://unctad.org/publication/global-minimum-tax-and-investment-treaties-exploring-policy-options (accessed 1 February 2024), p.14. For more tax and non-tax incentives as options for "reshaping investment policy for a global minimum tax environment", see UNCTAD (2022). *World Investment Report 2022: International Tax Reforms and Sustainable Investment*, https://unctad.org/system/files/official-document/wir2022_en.pdf (accessed 1 February 2024), pp.142-148.

39 See Vietnamnet (2023). *Vietnam Mitigates Global Minimum Tax Issues for Foreign Investors*, https://wtocenter.vn/chuyen-de/22227-vietnam-mitigates-global-minimum-tax-issues-for-foreign-investors (accessed 1 February 2024).

40 For alleged incompatibility of Pillar Two rules with tax treaties, see, for example: R. Szudoczky (2023). Does the Implementation of Pillar Two Require Changes to Tax Treaties?. 33 *SWI* 2, p.144; J. VanderWolk (2023). The UTPR, Treaties, and CFC Rules: A Reply to Avi-Yonah and Schler. *Tax Notes Int'l*, p.187; Michael Lebovitz, Gary B. Wilcox, Warren S. Payne, et al. (2022). If Pillar 1 Needs an MLI, Why Doesn't Pillar 2?. *Tax Notes Int'l*, p.1009; A. Nikolakakis & J. Li (2023). UTPR: Unprecedented (and Unprincipled?) Tax Policy Response. 109 *Tax Notes International*, p.750; J. Li (2022). The Pillar 2 Undertaxed Payments Rule Departs from International Consensus and Tax Treaties. 105 *Tax Notes Int'l*, p.1401; A. P. Dourado (2022). The Pillar Two Top-up Taxes: Interplay, Characterization, and Tax Treaties. 50 *Intertax* 5, p.395; J. Hey (2021) . The 2020 Pillar Two Blueprint: What Can the GloBE Income Inclusion Rule Do That CFC Legislation Can't Do?. 49 *Intertax* 1, pp.9–13; P. G. Lindenberg Shoueri & R. A. Galendi Júnior (2024). Tax in History: CFCs and Tax Treaties: Historical Elements for the IIR Debate. 52 *Intertax* 1, pp.72-82. For alleged incompatibility of Pillar Two rules with investment treaties, see, for example: B. Kuźniacki (2023). Pillar 2 and International Investment Agreements: "QDMTT Payable" Seals an Internationally Wrongful Act. *Tax Notes Int'l*, pp.159-177; P. Hongler, I Mosquera, F. Debelva, et al. (2023). UTPR — Potential Conflicts with International Law?. *Tax Notes Int'l*, pp.141-151; C. Brown & E. Whitsitt (2023). Implementing Pillar Two: Potential Conflicts with Investment Treaties. 71 *Canadian Tax Journal* 1, pp.189-207.

41 See UNCTAD, supra n. 38, p.1.

(IIAs), tax carve-outs will be of no or little relevance to eliminate investment protection under IIAs in respect of Pillar Two Rules.[42] In practice, the FET and the umbrella clause are of highest relevance to challenge taxation under Pillar Two. This typically regards premature revocation of promised tax incentives. These allegations may have the greatest chances to prevail whenever host states applying QDMTTs promised tax incentives in specific agreements with investors (constituencies of MNE Group) , such as tax stabilization agreements, investment agreements, or similar agreements, often constituting a part of the process of entering into SEZs.[43] It is therefore well justified that the UNCTAD urges governments to develop expertise on the interplay between Pillar Two and IIAs:

"Expert knowledge of international legal obligations across different fields of specialization is necessary for governments to assess whether and how to engage in the renegotiation of incentives. [(…)] Most tax administrations could develop technical expertise with respect to IIA disciplines through closer interaction with government departments in charge of the negotiation of IIAs and the defence of ISDS cases and vice versa."[44]

The interactions between Pillar Two and IIAs appear to be of major importance for emerging economies and low-income developing countries that attract FDIs via SEZs and other negotiated and contractually stabilized tax incentives. The more IIAs a country has in force, the more importance ought to be given to this issue. A large network of IIAs offers protection to investments from all corners of the globe, thus reducing price and risks related to investments.[45]

4. Conclusion: Tax, FDI and Economic Growth under Pillar Two

The political agreement around Pillar Two marks a decisive change in international tax policy. As discussed throughout this article, it shifts away from the notion of "harmful" tax competition and sets a floor to tax competition as such. By design, therefore, Pillar Two restricts the use of tax incentives.

This backdrop presents many challenges and opportunities. To the extent that certain tax incentives will not be soaked up by the Pillar Two top-up tax, it is possible that countries will continue to engage in tax competition. This implies, however, a need to redesign such incentives to ensure that they comply with the newly established framework. Seen from a glass half full perspective, countries have an opportunity to rethink their tax incentives and withdraw those that may not be effective.

In addition to that, and considering that tax incentives under Pillar Two are likely to be more limited and standardized, it is possible that countries will revisit other tools that they have available to promote FDI and economic growth. Within the tax system, the composition of the tax mix may offer solutions to increase the efficiency of tax systems without sacrificing revenues. Outside the tax systems, countries may revisit other policies that support economic growth, such as targeted subsidies (complying with the Pillar Two collateral benefits constraint) and other broader economic considerations such as the regulatory framework, legal stability and availability of a highly skilled talent pool.

42 UNCTAD, supra n. 38, p.5: "The vast majority of old-generation IIAs, which account for almost 90 per cent of all investment treaties that are currently in force, do not provide for any tax carve-outs that are relevant to the implementation of the global minimum tax."

43 Pillar Two in UNCTAD, supra n. 38, pp.10-13; Kuźniacki, supra n. 40, pp.167-172.

44 Ibidem, pp.15-16.

45 Cf. J. W. Salacuse (2021). *The Law of Investment Treaties* (3rd Edition). Oxford: Oxford University Press, p.161.

The United States Position on the Inclusive Framework's Two Pillars

Jefferson VanderWolk*

Jefferson VanderWolk
Senior Partner
Squire Patton Boggs (US) LLP

Abstract: The United States has not yet enacted, or even considered, any legislation designed to implement either of the two pillars in the OECD/G20's two-pillar global tax plan. This article discusses the reasons for this inaction and the prospects for any action by the United States in the future. After reviewing the events that have brought us to the current state of affairs, the discussion considers the Biden Administration's proposals regarding Pillar One and Pillar Two, both internationally (i.e., in negotiations with other members of the Inclusive Framework) and domestically (i.e., in the US political and legislative process). The article concludes that it should not be surprising that the US is going its own way in the multilateral tax process.

Keywords: Inclusive Framework; Pillar One; Pillar Two; Global minimum tax; US tax; GILTI

The two-pillar global tax plan (hereinafter referred to as "two-pillar plan") developed by the Organisation for Economic Co-operation and Development (OECD) and endorsed, at a high level, in October 2021 by the G20 countries and by more than 130 jurisdictions in the OECD-led Inclusive Framework on Base Erosion and Profit Shifting (BEPS)[1] has devolved into a protracted process of partial implementation and continued negotiation. As of the time of writing (April 2024, two and half years after the political endorsement of the plan), some countries are working on implementing part or all of the second pillar (Pillar Two, also known as the global minimum tax or the GloBE rules) in their domestic laws while, with respect to the first pillar (Pillar One), negotia-

* Jefferson VanderWolk, Senior Partner, Squire Patton Boggs (US) LLP. The views expressed in this article are personal to the author and should not be taken as representative of other members of his firm or its clients.

1 OECD (2021). *Statement on a Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy,* https://www.oecd.org/tax/beps/statement-on-a-two-pillar-solution-to-address-the-tax-challenges-arising-from-the-digitalisation-of-the-economy-october-2021.htm.

tions are ongoing in the Inclusive Framework on the terms of a multilateral convention that must be signed and ratified by a critical mass of countries, including the United States, before that part of the plan can be implemented. Significantly, the United States has not yet enacted, or even considered, any legislation designed to implement either of the two pillars. This article will discuss the reasons for this inaction and the prospects for any action by the United States in the future. The first section of the article reviews the events that have brought us to the current state of affairs. The second section discusses the Biden Administration's proposals regarding Pillar One and Pillar Two, both internationally (i.e., in negotiations with other members of the Inclusive Framework) and domestically (i.e., in the US political and legislative process). The third section contains concluding remarks.

1. How Did We Get Here?

The genesis of the two-pillar plan can be traced back to the G20 countries' call for action, in the wake of the global financial crisis of 2008-2009, against perceived tax avoidance facilitated by the use of entities formed in uncooperative low-tax jurisdictions.[2] The OECD Centre for Tax Policy and Administration became involved and gradually expanded the scope of the work beyond information exchange. In February 2013, the OECD released a policy paper on the problem of tax base erosion and profit shifting by multinational enterprises (MNEs).[3] In the paper, the OECD tax policy team recommended that an action plan be developed to address the various elements involved, through changes to tax treaties and to domestic legislation. By the summer of 2013, the OECD had produced such a plan, consisting of 15 action items dealing with topics such as the use of hybrid instruments and entities, related party financing, information reporting, and treaty shopping.[4] The non-OECD countries in the G20 were invited to join the OECD member countries in working on the production of reports on each of the 15 action items, to be completed within two years, i.e., by the end of 2015.[5]

The BEPS project of 2013-2015 established a new global tax policy forum (the OECD jurisdictions plus the non-OECD G20 jurisdictions) which effectively had a monopoly on multilateral discussion of how to tax cross-border business income. Other international organizations, such as the United Nations, the International Monetary Fund, and the World Bank, dabbled in tax policy-making but did not have significant technical capacity in the area. Ironically, the OECD-led BEPS project also promoted the idea that the existing international tax rules, which had been developed and promulgated by the OECD itself, were outdated and ineffective, enabling MNEs to arrange their affairs in a manner that resulted in the payment of less than their "fair share" of corporate income taxes, especially in the countries where their customers were.[6] This state of affairs was ascribed primarily to the adoption of new, digital technologies that facilitated the sale of goods and services to customers in jurisdictions where the seller might have little or no substantive business presence in the form of employees or tangible business assets.[7]

When the two-year period for the project came to an end in October 2015 with the publication of final reports on all 15 action

2 G20 (2009). *London Summit — Leaders' Statement*, https://g7g20-documents.org/database/document/2009-g20-united-kingdom-leaders-leaders-language-london-summit-leaders-statement.

3 OECD (2013). *Addressing Base Erosion and Profit Shifting*, https://doi.org/10.1787/9789264192744-en.

4 OECD (2013). *Action Plan on Base Erosion and Profit Shifting*, https://www.oecd.org/tax/action-plan-on-base-erosion-and-profit-shifting-9789264202719-en.htm.

5 *Id.* at p.25.

6 *Id.* at pp.9-11.

7 *Id.*

items, the participating jurisdictions agreed that it was impossible for them to make recommendations regarding the first action item — "Address the Tax Challenges of the Digital Economy" — because it appeared to be impossible to define "the digital economy" due to the fact that digital technology was being used in all kinds of businesses.[8] It was agreed that further work would be undertaken in an effort to understand new business models based on digital technologies, with a view to formulating tax policy proposals in due course.[9]

In addition, the participants agreed that for five years, i.e., until 2020, they would monitor the results arising from the implementation in countries' domestic laws of the project's various recommendations.[10] Soon after the two-year project ended in late 2015, the participating jurisdictions extended an open invitation to other jurisdictions to join the group that would be working on the issues going forward, subject to making a commitment to implement the four mandatory "minimum standards" established during the two-year project. The new, expanded group was called the Inclusive Framework on BEPS.

The Inclusive Framework immediately attracted a substantial number of jurisdictions from the non-OECD, non-G20 world, and the membership increased steadily during the next few years, motivated perhaps by the idea that "if you are not at the table, you will be on the menu."[11] The Inclusive Framework had plenary in-person meetings twice a year from mid-2016 through January 2020 — always at a location in Europe — and then switched to virtual meetings after the onset of the COVID-19.

During the two-year BEPS project, the United States, which had traditionally been a leader of the OECD's tax policy work, took a conservative position on many of the issues under discussion. The US Treasury team participating in the project consistently opposed any departure from well-established standards such as single-entity taxation (as opposed to group-based taxation) and the arm's length principle (ALP).

Nevertheless, in the latter part of 2017 the new United States Treasury delegate to the Inclusive Framework's Steering Group indicated that the US would not necessarily oppose proposals in the digital area that involved a departure from traditional approaches to taxable presence or arm's length pricing, provided that the proposals were "modest" and were appropriately targeted at situations in which the existing rules were not working well.[12] This opened the door for the OECD and the Inclusive Framework to develop new approaches, going well beyond the scope of the two-year BEPS project.

The Inclusive Framework's planned schedule of work was unexpectedly accelerated in the first quarter of 2018 by the European Commission's proposal to issue a draft directive for a digital services tax (DST) in all EU member states.[13] This prompted the OECD to begin working on a plan for

8 OECD (2015). *Addressing the Tax Challenges of the Digital Economy, Action 1 — Final Report*, https://www.oecd.org/tax/addressing-the-tax-challenges-of-the-digital-economy-action-1-2015-final-report-9789264241046-en.htm, p.11.

9 *Id.* at p.13.

10 OECD (2015). *OECD/G20 Base Erosion and Profit Shifting Project, Explanatory Statement*, https://www.oecd.org/ctp/beps-explanatory-statement-2015.pdf, p.11.

11 OECD (2024). *BEPS/Inclusive Framework on Base Erosion and Profit Shifting*, https://www.oecd.org/tax/beps/about/.

12 S. Soong-Johnston (2020). *BEPS 5 Years Later: Action 1 and the Quest to Tax Digital Activity*. *Tax Notes*, https://www.taxnotes.com/featured-news/beps-5-years-later-action-1-and-quest-tax-digital-activity/2020/10/02/2d0lg.

13 European Commission (2018). *Proposal for a Council Directive on the Common System of a Digital Services Tax on Revenues Resulting from the Provision of Certain Digital Services,* https://taxation-customs.ec.europa.eu/system/files/2018-03/proposal_common_system_digital_services_tax_21032018_en.pdf.

the Inclusive Framework that would address DSTs, which were generally viewed as an undesirable type of tax from an international policy perspective. In an interim report issued in March 2018, the Inclusive Framework noted that its members had diverging views on tax policy for the digital economy: some wanted to make special rules only for internet-based businesses that relied heavily on user contributions; others wanted to develop more broadly applicable rules that would address all types of businesses selling in jurisdictions where they had little or no presence; and still others wanted to wait and see whether the implementation of the recommendations in the 2015 final reports were effective in dealing with tax avoidance by MNEs.[14]

Later in 2018, Germany and France proposed the idea of a global minimum tax on MNEs to effectively make it impossible for a profitable MNE to arrange its affairs in a way that would result in a low global effective tax rate.[15] This proposal was politically driven, as the sitting governments in Germany, France, and elsewhere were being criticized for not doing enough to make multinationals pay their "fair share".[16] This proposal shortly thereafter became the Pillar Two workstream, with no indication that the Inclusive Framework was consciously departing from one of the agreed premises of the earlier BEPS project — namely, that countries should remain free to determine their own income tax rates.

Throughout this period, it was increasingly asserted by OECD policy officials and others that the international tax system had become unstable, and that chaos would arise if nothing were done, a note that was first sounded in the BEPS action plan document of 2013.[17] Countries were unilaterally enacting new types of taxes on nonresident MNEs, such as the UK's Diverted Profits Tax and DSTs or similar measures in a variety of jurisdictions worldwide, leading to retaliatory tariffs in the United States.[18] In addition, disputes between MNEs and governments regarding the taxation of marketing and distribution activities were seen to be increasing.[19]

In 2019, the OECD, on behalf of the Inclusive Framework, unveiled its two-pillar work plan for the first time.[20] The Pillar One workstream would focus on proposals to reallocate taxing rights in favor of market jurisdictions while prohibiting the use of DSTs or similar measures, and the Pillar Two workstream would focus on the possibility of a global minimum tax regime for MNEs. Notably, the policy rationale for Pillar Two was not clearly stated.[21]

Regarding Pillar One, three alternative approaches were described. The first was the narrow approach focused on internet-based businesses soliciting user contributions. The second approach was broader, looking at all types of businesses using market intangibles to make cross-border sales. The third approach, which was proposed at the last minute by a group of developing countries led by India, would use a global formulary apportionment

14 OECD (2018). *Tax Challenges Arising from Digitalisation — Interim Report 2018,* https://www.oecd.org/ctp/tax-challenges-arising-from-digitalisation-interim-report-9789264293083-en.htm.

15 J. Becker (2019). *The German Proposal for an Effective Minimum Tax on MNE Profits*, https://kluwertaxblog.com/2019/01/17/the-german-proposal-for-an-effective-minimum-tax-on-mne-profits/.

16 *Id.*

17 *Action Plan on Base Erosion and Profit Shifting, supra* n. 4, p.10.

18 S. Soong-Johnston, *supra* n. 12.

19 OECD (2019), *Programme of Work to Develop a Consensus Solution to the Tax Challenges Arising from the Digitalisation of the Economy*, https://www.oecd.org/tax/beps/programme-of-work-to-develop-a-consensus-solution-to-the-tax-challenges-arising-from-the-digitalisation-of-the-economy.pdf, p.15.

20 *Id.*

21 *Id.* at pp.25-26.

method to allocate the profits of MNEs to different countries for tax purposes.[22] In the fall of 2019, the OECD issued a Pillar One paper discussing a "proposed unified approach" that effectively used elements of the three methods mentioned above.[23] This was adopted by the Inclusive Framework in January 2020 as the basis for future work on Pillar One.

Meanwhile, in December 2019 the United States Treasury Secretary had expressed concerns about the idea of new tax rules being imposed on US MNEs as a result of the Inclusive Framework's efforts.[24] The proposal from the United States was, essentially, that any new rules should be a "safe harbor", i.e., optional, not mandatory.[25] This was immediately dismissed by certain European countries' finance ministers as unrealistic and unacceptable.[26]

Another new development in 2019 was that the United States launched a process of trade retaliation against France and other countries with DSTs that were allegedly aimed at US MNEs.[27] Although a standstill agreement was reached between the US and France in January 2020, deferring the imposition of either US tariffs or the French DST for a year, the political climate between the US and the larger European countries was worsening.[28]

The arrival of the global pandemic in 2020 created political pressure on governments to provide widespread economic relief, which in turn fed into policy arguments that more would need to be done to raise tax revenue from profitable MNEs. The United States, however, did not budge in its opposition to the idea of a mandatory new tax regime resulting from the Inclusive Framework, and an impasse in negotiations was reached in mid-2020.[29] The OECD carried on with its work on the two pillars, issuing lengthy and detailed "blueprint" documents for each pillar in the fall of 2020.[30]

In 2021, the United States, under the newly elected Biden Administration, breathed new life into the two-pillar process at the OECD, proposing a revamped and simplified version of Pillar One, to be accompanied by a robust Pillar Two with a minimum rate of at least 20%.[31] Pillar One would no longer include two different approaches, but rather would apply a profit reallocation formula to all MNEs, regardless of industry or business model, if their global sales and profit margins exceeded stated thresholds.[32] The optionality requirement that the US had previously demanded was dropped, and the Inclusive Framework adopted the new, revised propos-

22 *Id.*, chap. II.

23 OECD (2019). *Secretariat Proposal for a "Unified Approach" under Pillar One,* https://web-archive.oecd.org/2019-11-15/532559-oecd-invites-public-input-on-the-secretariat-proposal-for-a-unified-approach-under-pillar-one.htm

24 See S. Soong-Johnston, *supra* n. 12.

25 *Id.*

26 *Id.*

27 *Id.*

28 *Id.*

29 *Id.*

30 OECD (2020). *Tax Challenges Arising from Digitalisation — Report on the Pillar One Blueprint*, https://www.oecd.org/tax/beps/tax-challenges-arising-from-digitalisation-report-on-pillar-one-blueprint.pdf; OECD (2020). *Tax Challenges Arising from Digitalisation — Report on the Pillar Two Blueprint*, https://www.oecd.org/tax/beps/tax-challenges-arising-from-digitalisation-report-on-pillar-two-blueprint.pdf.

31 Covington (2021). *International Tax Update: U.S. Outlines Position on OECD BEPS 2.0 Project,* https://www.cov.com/en/news-and-insights/insights/2021/04/international-tax-update-us-outlines-position-on-oecd-beps-2-0-project.

32 *Id.*

als in mid-2021.[33]

The Biden Treasury team had also proposed legislative changes in the US early in 2021 that would raise taxes on multinational corporations under US law.[34] At the G7 leaders' meeting in June 2021, the US championed the global minimum tax proposal, and the G7 duly endorsed the revised two-pillar plan of the Inclusive Framework subject to further discussions on the rate of the global minimum tax.[35] This produced new political momentum, with the G20 leaders endorsing the plan in July 2021 on the same basis. By October, the Inclusive Framework had settled on a compromise over global minimum tax rate of 15%, and the endorsement of the two-pillar plan by 136 members of the Inclusive Framework was published in the form of a short letter summarizing the main features of each pillar and outlining the next steps in the process.[36] US Treasury officials portrayed the Inclusive Framework's endorsement as a momentous achievement and an indication of the US' renewed commitment to multilateral cooperation in economic matters.[37]

The Inclusive Framework moved very quickly to issue detailed Pillar Two model rules in final form, without consulting with outside stakeholders on the model rules.[38] At the same time, the European Commission immediately published a draft Pillar Two Directive based on the model rules.[39] However, in the United States the Biden Administration's proposal to increase taxes on multinationals was not enacted into law, despite the fact that both houses of Congress were controlled by the Democratic Party. The Congress did finally adopt a 15% minimum tax on large corporations as part of the Inflation Reduction Act of 2022, but it was very different from the Pillar Two model rules.[40] Then, in the US mid-term elections of 2022, the Republicans regained control of the House of Representatives, effectively ending any possibility that international corporate tax proposals of the Biden Treasury would become law.

During 2023, Republican members of the House Ways and Means Committee, which is responsible for tax legislation, have expressed strong opposition to both parts of the two-pillar plan, particularly Pillar Two. Particular resentment has been expressed against the Biden Treasury Department for allegedly negotiating and agreeing to the two-pillar plan, which would require new US legislation for its implementation, without first consulting with the tax-writing commit-

33 OECD (2021). *Statement on a Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy,* https://www.oecd.org/tax/beps/statement-on-a-two-pillar-solution-to-address-the-tax-challenges-arising-from-the-digitalisation-of-the-economy-july-2021.pdf.

34 Office of Management and Budget (2021). *Budget of the U.S. Government,* https://www.whitehouse.gov/wp-content/uploads/2021/05/budget_fy22.pdf.

35 Simmons & Simmons (2021). *G7 Agrees Minimum Global Tax Rate,* https://www.simmons-simmons.com/en/publications/ckpo7bi0d27gj0969m3mlgom4/g7-agrees-minimum-global-tax-rate.

36 *Supra* n. 2.

37 *E.g.*, U.S. Treasury Department (2021). *Statement from Secretary of the Treasury Janet L. Yellen on the Global Minimum Tax Agreement,* https://home.treasury.gov/news/press-releases/jy0447.

38 OECD (2021). *Tax Challenges Arising from Digitalisation of the Economy — Global Anti-Base Erosion Model Rules (Pillar Two),* https://www.oecd-ilibrary.org/taxation/tax-challenges-arising-from-digitalisation-of-the-economy-global-anti-base-erosion-model-rules-pillar-two_782bac33-en.

39 European Commission (2021). *Proposal for a Council Directive on Ensuring a Global Minimum Level of Taxation for Multinational Groups in the Union,* https://taxation-customs.ec.europa.eu/system/files/2021-12/COM_2021823_1_EN_ACT_part1_v11.pdf.

40 EY (2022). *Inflation Reduction Act Includes 15% Corporate Minimum Tax on Book Income*, https://taxnews.ey.com/news/2022-1237-inflation-reduction-act-includes-15-percent-corporate-minimum-tax-on-book-income.

tees in Congress.[41] In addition, a bill was introduced by Republican committee members in mid-2023 that would mandate retaliatory taxes to be levied by the US on residents of any country that taxes the profits of US resident companies under rules defined to include certain provisions of the Pillar One and Pillar Two rules.[42] Given that the Democrats control the Senate, this bill will not become law in 2024 but if the Republicans were to regain control of the Senate and retain control of the House in the 2024 elections, the bill might be revived. Adding to the House Republicans' determination to oppose the two pillars were two studies by the US Joint Committee on Taxation which estimated that the US could lose a substantial amount of tax revenue from both Pillar One and Pillar Two implementation.[43]

Elsewhere in the world, the EU member states and a number of other countries have moved ahead with implementation of part or all of the Pillar Two rules, with the result that in-scope MNEs will generally have to comply with the rules, to some degree, for taxable years beginning in 2024.[44] It appears that some countries are responding to the advent of the global minimum tax by enacting domestic minimum taxes designed to prevent the possibility that locally generated profits would be taxed in other countries under an Income Inclusion Rule (IIR) or Undertaxed Payment Rule (UTPR).[45] Countries will undoubtedly make changes to their laws to compete for investment by multinationals through measures other than reduced tax rates — for example, through offering subsidies such as qualified refundable tax credits that are not treated as tax reductions under the Pillar Two rules.[46]

In contrast, the Pillar One rules are not being implemented anywhere, because the Inclusive Framework is still trying to reach agreement on the terms of the multinational convention that is a necessary element of the plan.[47] According to the Pillar One documentation issued by the Inclusive Framework in October 2023, even if the final terms of the multilateral convention on Pillar One are agreed and the convention is signed by a critical mass of countries, it will not take effect until it has been ratified by countries where, in the aggregate, at least 60% of the parent companies of all in-scope MNEs are resident.[48] As the US accounts for more than 40% of such companies, it follows that Pillar

41 Deloitte (2023). *House Taxwriters Square off over Global Tax Pact*, https://www.taxathand.com/article/32222/United-States/2023/House-taxwriters-square-off-over-global-tax-pact-as-OECD-releases-new-guidance.

42 Committee on Ways and Means (2023). *Ways and Means Republicans Introduce Bill to Combat Biden's Global Tax Surrender,* https://gop-waysandmeans.house.gov/ways-and-means-republicans-introduce-bill-to-combat-bidens-global-tax-surrender/

43 Joint Committee on Taxation (2024). *Background and Analysis of the Taxation of Multinational Enterprises and the Potential Reallocation of Taxing Rights under the OECD's Pillar One*, https://www.jct.gov/publications/2024/jcx-7-24/; Joint Committee on Taxation (2023). *Possible Effects of Adopting the OECD's Pillar Two, Both Worldwide and in the United States*, https://www.jct.gov/publications/2023/oecd-pillar-two-report-june-2023/.

44 PwC (2024). *OECD Pillar Two Country Tracker*, https://www.pwc.com/gx/en/services/tax/pillar-two-readiness/country-tracker.html.

45 Harneys (2024). *Bermuda Introducing Corporate Income Tax for Multinational Enterprise Groups,* https://www.harneys.com/our-blogs/regulatory/bermuda-introducing-corporate-income-tax-for-multinational-enterprise-groups/.

46 *Id*.

47 Bloomberg Tax (2024). *OECD Misses Deadline for Deal on Final Global Tax Treaty,* https://news.bloombergtax.com/daily-tax-report-international/oecd-misses-march-deadline-for-deal-on-final-global-tax-treaty.

48 OECD (2023). *Outcome Statement on the Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy*, https://www.oecd.org/tax/beps/outcome-statement-on-the-two-pillar-solution-to-address-the-tax-challenges-arising-from-the-digitalisation-of-the-economy-july-2023.pdf.

One cannot be implemented anywhere without US ratification of the needed multilateral convention — unless countries were to ignore their agreement and attempt to implement Pillar One rules unilaterally or as part of a group of countries that did not include the United States.

2. Biden Administration Proposals

The United States is currently attempting to renegotiate with the rest of the Inclusive Framework over the question of whether the US tax credit for research and experimentation[49] should be treated for Pillar Two purposes as a tax reduction, as opposed to an amount of income. The credit is not refundable and therefore is not covered by the Pillar Two rules that treat qualified refundable tax credits as income. As it would not be politically feasible to change US law to make the credit refundable, the US Treasury negotiators are asking for the credit to be treated, under administrative guidance, as though it were refundable, as many research credits are under the laws of European countries.[50] Earlier, in 2023 the US was successful in obtaining certain concessions from the Inclusive Framework regarding the treatment of transferable tax credits that were enacted as part of the Inflation Reduction Act.[51] Further, the Inclusive Framework delayed the application of UTPRs to subsidiaries of US parent companies for two years, i.e., until 2026, under administrative guidance issued in 2023.[52]

With regard to Pillar One, the US Treasury negotiators are understood to be advocating for revisions to the definition, in the draft multilateral convention, of DSTs and relevant similar measures, on the basis that the draft definition is overly vague. In addition, the US, along with other countries, is at odds with India, Brazil, and Colombia over the treatment of withholding taxes in the draft multilateral convention.[53] The Inclusive Framework's self-imposed deadline of 31 March 2024 for agreement on all of these issues was not met. An OECD official was quoted in a press report in early April to the effect that negotiations are continuing.[54]

Domestically, the Biden Administration proposes to change the US international tax rules — in particular, the rules on global intangible low-taxed income (GILTI) — to bring the rules into at least partial alignment with the Pillar Two rules.[55] The proposed changes would:

- Require a country-by-country calculation of GILTI income and taxes, rather than the blended global calculation that applies under current law;
- Increase the tax rate on GILTI income to 21%, in contrast to the current rate which is less than 15%;
- Repeal the exemption in the GILTI rules for qualified business asset investments by controlled foreign corporations;
- Disallow only 5% of foreign tax credits with respect to GILTI income, as opposed to the 20% disallowance under current law; and
- Permit a 10-year carryforward of net op-

49 *U.S. Internal Revenue Code*, section 174.

50 Law 360 (2023). *US Scrambling to Save R&D Credit under Global Min. Tax,* https://www.law360.com/tax-authority/articles/1769507/us-scrambling-to-save-r-d-credit-under-global-min-tax.

51 OECD (2023). *Tax Challenges Arising from the Digitalisation of the Economy — Administrative Guidance on the Global Anti-Base Erosion Model Rules (Pillar Two), July 2023,* https://www.oecd.org/tax/beps/administrative-guidance-global-anti-base-erosion-rules-pillar-two-july-2023.pdf, section 2.

52 *Id.*, section 5.2.

53 OECD (2023). *The Multilateral Convention to Implement Amount A of Pillar One,* https://www.oecd.org/tax/beps/multilateral-convention-to-implement-amount-a-of-pillar-one.pdf, fn. 4 and 5.

54 Bloomberg, *supra* n. 47.

55 Office of Management and Budget (2024). *President's Budget,* https://www.whitehouse.gov/omb/budget/.

erating losses (within a single jurisdiction) and foreign tax credits (within a single jurisdiction) for GILTI purposes, in contrast to the lack of any carryforwards under current law.

Other international tax proposals of the Biden Administration include:

- Enactment of a UTPR as defined in the Pillar Two model rules;
- Repeal of the Base Erosion Anti-abuse Tax (BEAT); and
- Repeal of the foreign-derived intangible income (FDII) deduction, which results in a 10.5% tax rate under the current law.

These changes are unlikely to be made, unless Democratic control of both houses of Congress is regained in the upcoming elections in November 2024, and President Biden (or another Democrat) wins the presidential election. Current polling suggests that, although this is not impossible, it is certainly not probable.[56] It should be noted, however, that Congress will be under a great deal of pressure in 2025 to enact tax legislation that would prevent the expiration of tax cuts that were made by the Tax Cuts and Jobs Act of 2017.[57] It is conceivable that a bipartisan compromise on a tax bill that generally preserved current individual and corporate income tax rates might include a tax increase on large multinational corporations resulting from the Pillar Two-related proposals described above.

With respect to Pillar One, the Biden Administration has not proposed any legislative changes, since it remains unclear whether the Inclusive Framework will ever reach agreement on all of the details of a multilateral convention to implement Pillar One. Changes to the US international tax rules would be needed in order for the US to comply with its obligations under a Pillar One convention, should such a convention be ratified by a sufficient number of countries. For example, a new rule would be needed to allow the US to impose federal income tax on an allocation of Amount A income attributable to sales to US-based customers by a foreign company that is not engaged in the conduct of a trade or business in the United States.

3. Conclusion

It may seem peculiar, or even perplexing, that the United States, after taking the lead in the negotiations that culminated in the Inclusive Framework's endorsement of the two-pillar plan in October 2021, has not yet even considered any implementing legislation related to either Pillar One or Pillar Two. However, a review of the history of the two-pillar process and the US politics relating to it that have prevailed in Washington for the past few years leads to the conclusion that the inaction of the US should not be surprising.

First, the reluctance of the US during the Trump Administration to agree to any part of the two-pillar plan unless MNEs were able to opt out of the new rules indicated to observers that a significant amount of tension existed between the US and the rest of the Inclusive Framework, particularly the larger European countries. The US' conservative stance during the two-year BEPS project of 2013-2015 was also a sign of a certain level of skepticism on the part of the US regarding multilateral reforms aimed at extracting more tax revenue from MNEs, of which many of the largest and most profitable are US-parented groups.

Second, there is a history of US exceptionalism in international affairs going back to the time of the League of Nations, an organization championed by US President Woodrow Wilson but never joined by his country. A more recent example is the failure of the US to sign the Convention on Mutual Administrative Assistance in Tax Matters, which provides the legal basis for automatic exchange of bank account infor-

56 538 and ABC News (2024). *Polls,* https://projects.fivethirtyeight.com/polls/.

57 Tax Policy Center (2023). *Buckle up. 2025 Promises to Be an Historic Year in Tax and Budget Policy,* https://www.taxpolicycenter.org/taxvox/buckle-2025-promises-be-historic-year-tax-and-budget-policy.

mation under the Common Reporting Standard.[58] The US had pioneered the concept of obtaining foreign bank account information with the enactment of the Foreign Account Tax Compliance Act of 2010 (FATCA), but when a multilateral approach to information exchange was negotiated and agreed upon by most of the rest of the world, the US declined to participate.

Third, the US federal government operates under a system that divides the executive and legislative powers of government in an unusually effective way. The legislature — Congress — is itself divided between two chambers — the House of Representatives and the Senate — that must both approve proposed legislation before it is sent to the chief executive — the President — for his or her approval. As it is quite common for control of the House and Senate to be divided between the two major political parties, tax legislation is rarely enacted without bipartisan support. The spirit of bipartisanship in Congress on most economic issues, such as taxation, has dwindled to almost nothing over the past 20 years. Therefore, it should not be a surprise that the two-pillar plan, which was spearheaded by the Biden Administration but had not been acceptable to the Trump Administration, has not received the necessary bipartisan support in Congress for enactment of implementing legislation since the Republicans took control of the House in the 2022 elections.

Thus it is unclear whether the United States will enact any legislation to implement any part of the two-pillar plan in the foreseeable future, or, indeed, at any time in the future. Only time will tell.

58 OECD (2024). *International Framework for the CRS*, https://www.oecd.org/tax/automatic-exchange/international-framework-for-the-crs.

Treaty Compatibility of the IIR and the UTPR

Peter Hongler

Peter Hongler
Professor of Tax Law
University of St. Gallen
Switzerland

Abstract: This paper explores the compatibility of the Income Inclusion Rule (IIR) and the Undertaxed Profits Rule (UTPR) with existing tax treaties. The paper first assesses whether the taxes under IIR and UTPR meet the coverage criteria of Art. 2 of the OECD Model Convention (MC) and then analyses potential treaty infringements, focusing on Art. 7, 9, and 10(5), highlighting the inherent contradiction between tax treaties, which aim to limit taxing rights, and the global minimum tax, which allows taxation of global profits. Next, the paper reviews the historical development of IIR and UTPR, emphasising the OECD's initial recognition of the need for treaty amendments but noting the current lack of multilateral solutions, which poses potential dispute risks. In conclusion, the paper argues that the global minimum tax presents compliance challenges and legal uncertainties, questioning the binding effect of double taxation agreements. The article calls on the OECD to resolve these uncertainties through international agreements and advises countries to carefully consider the legal implications when implementing the IIR and the UTPR.

Keywords: Income Inclusion Rule; Undertaxed Profits Rule; OECD Model Convention; Global minimum tax

1. Introduction

We are currently in the midst of implementing the global minimum tax worldwide. Some countries have already introduced a Qualified Domestic Minimum Top-up Tax (QDMTT) and/or an Income Inclusion Rule (IIR).[1] The purpose of the former is to ensure that local profits are not taxed abroad, while the latter aims to ensure that other countries also implement a 15% minimum corporate income tax. Additionally, the Undertaxed Profits Rule (UTPR), another key element of the global minimum tax, serves as a backstop rule to the IIR in the case where undertaxed constituent entities of the MNEs are not subject to a QDMTT and/or an IIR. The UTPR has not yet been implemented in any country; however, EU countries are required to do so by 1 January 2025. Switzerland, my home country, has introduced a QDMTT as of 1

1 Some of the large accounting firms provide for overviews of the implementation stages in various jurisdictions. See e.g. https://www.pwc.com/gx/en/services/tax/pillar-two-readiness/country-tracker.html.

January 2024, but it has not yet decided whether to implement an IIR and/or a UTPR.

The purpose of this brief analysis is to assess whether both the IIR and the UTPR infringe tax treaties. There are already numerous articles on this topic[2] — particularly regarding the compatibility of the UTPR with tax treaties. In the following this article will refer to some of the existing arguments but of course we are unable to comprehensively discuss the topic and outline all facets of the existing discourse in detail.

The focus in the following is on the OECD Model Convention (MC), as usual with respect to questions of compatibility with tax treaties. However, it is necessary to look at the actual treaties signed to conclusively assess the question at hand.

2. An Example

To better illustrate the main arguments, the following example should help clarify the legal problem. Let's take a multinational enterprise with three constituent entities for example.[3]

The ultimate parent entity (UPE) is resident in Country A and subject to an effective tax rate of 20%. The UPE has one subsidiary in Country B subject to an effective tax rate of 16%. Moreover, the UPE has a permanent establishment in Country C subject to a tax rate of 10%.

If Country C does not implement a QDMTT, Country A will apply the IIR on the undertaxed profits of the permanent establishment in Country C based on the calculation in the Model Rules[4]. If Country A has not implemented an IIR (and Country C still not implemented a QDMTT), the undertaxed profits will be subject to the UTPR in Country B.

The question to be assessed below is whether both the IIR and the UTPR would infringe the obligations of tax treaties between Country A-C and Country B-C.

3. Infringement of Tax Treaties

3.1 Overview

The application of the IIR and the UTPR in a treaty context raises various questions. First, we need to assess whether the UTPR and the IIR, or to be more precise, the taxes levied through the application of these rules are covered by tax treaties. Art. 2 of the OECD MC generally provides that corporate income taxes are covered taxes and that *identical or substantially similar taxes* are also included.[5]

The tax base of the UTPR is the corporate income of a multinational enterprise, specifically the undertaxed corporate income in accordance with a jurisdictional blending approach (considering the substance-based income exclusion). It is a tax on the excess profits of undertaxed entities. Therefore, it seems persuasive to argue that the UTPR is a covered tax for tax treaty purposes.[6] The same is true for the IIR, which is also a tax on the excess profits of foreign entities whose effective tax rate is below 15%.

In the next step it needs to be reviewed whether a state infringes any of the treaty obligations (in particular any of the allocation rules in combination with the article of applicable double

2 See, for instance, Vikram Chand, Alessandro Turina & Kinga Romanovska (2022). Tax Treaty Obstacles in Implementing the Pillar Two Global Minimum Tax Rules and a Possible Solution for Eliminating the Various Challenges. 14 *World Tax Journal* 1, p.3 et seq.; Filip Debelva & Luc De Broe (2022). Pillar 2: An Analysis of the IIR and UTPR from an International Customary Law, Tax Treaty Law and European Union Law Perspective. *Intertax*, p,898 et seq.

3 The term "constituent entity" is used within the Model Rules to cover both companies and permanent establishments belonging to an multinational group subject to the global minimum tax (see Art. 1.3.1 of the Model Rules).

4 OECD (2021). *Tax Challenges Arising from Digitalisation of the Economy — Global Anti-Base Erosion Model Rules (Pillar Two): Inclusive Framework on BEPS*, https://doi.org/10.1787/782bac33-en.

5 Art. 2 para. 4 of the OECD MC.

6 This is also the majority view in literature see e.g., Angelo Nikolakakis & Jinyan Li. Unprecedented (and Unprincipled?) Tax Policy Response. *Tax Notes International*, 6 February 2023, p.743, et seq. For a minority view see Allison Christians & Stephen E. Shay. The Consistency of Pillar 2 UTPR with U.S. Bilateral Tax Treaties. *Tax Notes International*, 23 January 2023, p.445 et seq.

taxation alleviation method). Next we will focus on Art. 7, 9 and 10(5) of the OECD MC. Art. 24 of the OECD MC will not be discussed, though some argue that the application of the IIR and the UTPR may also trigger non-discrimination concerns.[7]

3.2 Allocation Rules

There is a systemic contradiction between tax treaties and the global minimum tax. The main purpose of tax treaties has been to limit taxing rights, primarily for source countries. This is the main reason why countries (still) sign tax treaties, i.e. they want to enhance cross-border trade and investment through ensuring lower or even no taxation in one or both of the contracting states.

However, the global minimum tax allows countries to tax global profits of multinationals, which seems per se to be an insurmountable contradiction. Therefore, by design it does not seem at all surprising that the global minimum tax creates friction and incompatibilities with tax treaties. If we hypothesise for a second what states would agree in tax treaties if they knew that a global minimum tax had already been introduced, it seems obvious that they would likely exclude the global minimum tax from the scope of tax treaties. In some treaties which have been signed or amended recently, countries have indeed included such a waiver.[8] The latter again demonstrates that countries are aware of the potential legal challenges triggered by the global minimum tax.

This brings us to the technical part. Several rules might prevent states from introducing the IIR and/or the UTPR. The first norm that could be infringed is Art. 7 of the OECD MC which limits the taxing rights of source countries to the profits attributable to permanent establishments in the source country. If a multinational enterprise has a permanent establishment in the source country and such a country applies the UTPR, the source country would not only tax the income attributable to the permanent establishment deemed as a separate entity but also the profits of entities resident in other jurisdictions. A similar logic applies to the IIR. In our example above the situation is as follows. Country A (through the IIR) will tax the profits of the undertaxed permanent establishment in Country C and by doing so Country A infringes its obligations according to the A-C tax treaty if Country A follows the exemption method.[9]

Another potential infringement could arise under Art. 9 of the OECD MC. The limitation that Art. 9 of the OECD MC provides for domestic tax law is not easy to grasp. Art. 9 of the OECD MC is the base for transfer pricing adjustments between related parties, but it does not contain a limiting rule on the basis of which, for instance, countries have to grant specific deductions or according to which countries can only tax certain kinds of income. For instance, Art. 9 of the OECD MC does not require from countries that interests are in general deductible or that intra-group services shall be subject to taxation if at arm's length. However, one way of looking at Art. 9 of the OECD MC is that it requires that domestic allocation rules are in line with the arm's length principle.[10] As the allocation under the UTPR and the IIR does obviously not follow the arm's length standard (and assuming both the UTPR and the IIR are considered to be allocation rules), it could be argued that they both infringe Art. 9 of the OECD MC. Similar problems

7 See on this topic Sjoerd Douma, Alexia Kardachaki, Georg Kofler, et al. The UTPR and International Law: Analysis from Three Angles. *Tax Notes International*, 15 May 2023, p.857 et seq. (p.873 et seq.).

8 See Art. 9 of the Protocol to the tax treaty between Switzerland and France as of 27 June 2023.

9 Of course, this is not the case in all treaties but, for instance, Switzerland follows the exemption method in case there is a foreign permanent establishment.

10 See a detailed overview of the various interpretations of Art. 9 of the OECD MC and its restrictive content, Vikram Chand, Alessandro Turina & Kinga Romanovska (2022). Tax Treaty Obstacles in Implementing the Pillar Two Global Minimum Tax Rules and a Possible Solution for Eliminating the Various Challenges. *World Tax Journal*, p.9 et seq.

arise in relation to CFC rules as pursuant to their design they might lead to an allocation of more profits to the parent company than allowed under the arm's length principle. Admittedly there is also a different reading according to which Art. 9 of the OECD MC does not provide for such a limitation. We will not delve into such dispute for the purpose of the present contribution.

Another dispute could arise in relation to Art. 10(5) of the OECD MC. Art. 10(5) of the OECD MC which is not as commonly used as Art. 7 and 9 of the OECD MC has the following wording:

"5. Where a company which is a resident of a Contracting State derives profits or income from the other Contracting State, that other State may not impose any tax on the dividends paid by the company […], nor subject the company's undistributed profits to a tax on the company's undistributed profits, even if the dividends paid or the undistributed profits consist wholly or partly of profits or income arising in such other State."

Such obligation does not, of course, apply if the dividends are paid to a company or a permanent establishment in the other contracting state. Again, the potential conflicts can arise with respect to both the UTPR and the IIR as both taxes are potentially levied on undistributed profits of the company.[11]

3.3 Fighting Tax Abuse as a Justification?

Once the legal position is that both the IIR and the UTPR infringe one, several or all above-mentioned provisions in a tax treaty, the question to be discussed is whether the application of both the IIR and the UTPR, nevertheless, is justified. This could be the case if a rule (such as the UTPR or the IIR) aims at fighting tax avoidance. To fight avoidance situations, countries might not be bound by treaty obligations. This is, inter alia, derived from the Preamble (at least since 2017):[12]

"Intending to conclude a Convention for the elimination of double taxation with respect to taxes on income and on capital without creating opportunities for non-taxation or reduced taxation through tax evasion or avoidance (including through treaty-shopping arrangements aimed at obtaining reliefs provided in this Convention for the indirect benefit of residents of third States),"

Therefore, one could argue that the above-mentioned conflicts will dissolve as they are justified by the purpose of the treaty. However, to sustain such a position it would need to be proven that both the IIR and the UTPR aim at fighting avoidance structures. Though, it is well known that both the IIR and the UTPR apply regardless of whether the multinational enterprise aims at tax savings or adopts tax planning schemes. Therefore, it might well be the case that both the IIR and the UTPR apply to situations in which multinational enterprises have set up their supply chain without any tax concerns but driven by business reasons only. Essentially the goal of the global minimum tax is to achieve a 15% effective tax rate regardless of how a business is structured. To sum up, it is rather challenging to argue that either the IIR or the UTPR is in line with tax treaties as these rules do not aim at fighting avoidance structures.

3.4 The Saving Clause

The saving clause has its origins in the US and has found its way into the OECD MC in 2017. Many treaties, such as the double tax treaty between Switzerland and China, however, do not yet contain such a provision. The saving clause in Art. 1(3) has the following wording:

"3. This Convention shall not affect the taxation, by a Contracting State, of its residents except with respect to the benefits granted under paragraph 3 of Article 7, paragraph 2 of Article 9 and Articles 19, 20, 23 [A] [B], 24, 25 and 28."

11 See with some examples Filip Debelva & Luc De Broe (2022). Pillar 2: An Analysis of the IIR and UTPR from an International Customary Law, Tax Treaty Law and European Union Law Perspective. *Intertax*, p.898 et seq. (p.899 et seq.).

12 We will not specifically address the question if even treaties based on the old Preamble contain an implicit norm according to which the treaty does aim at fighting tax avoidance.

It needs to be assessed whether the saving clause justifies the application of the UTPR and/or the IIR. The first obvious conclusion is that the saving clause does not permit the taxation of non-residents, which would be the case if the UTPR is applied in a permanent establishment situation, as outlined in the example above. Even though there would be a saving clause in the treaty, Country C might not be allowed to tax profits of foreign entities. Therefore, it would not help the country apply the UTPR if only a permanent establishment, and not a company resident in that country, exists. The question remains whether the saving clause mitigates potential friction between the IIR, the UTPR and tax treaties, however, in other situations.

One way of understanding the saving clause is to argue that its purpose is to allow top-down taxation in case of genuine economic activities in the resident state of the entity controlling other entities.[13] Therefore, countries are allowed to tax their residents on profits accrued at lower levels in the whole group structure as it is indeed the case with respect to the IIR. However, one could also argue that the primary goal of a saving clause is to guarantee the application of domestic anti-abuse rules in top-down situations,[14] which would again mean that the IIR is not protected by a saving clause as it is not an anti-abuse measure.

What seems persuasive is that the saving clause does not cover the UTPR, even if the entity subject to the UTPR is resident in a jurisdiction, as it will lead to taxation in any jurisdiction in the group structure rather than the parent jurisdiction and, therefore, not following a top-down approach. The latter, however, has been the main purpose of the saving clause.

4. How It Started?

To better understand the current potential friction between tax treaties and both the IIR and the UTPR, it is important to briefly look back on how these rules were developed. This is particularly interesting, as it seems quite astonishing that the current proposals stemming from the OECD do not foresee any solutions to the outlined legal problems.

Already since the beginning of the discussion about the introduction of a global minimum tax, it has been obvious that an IIR-like rule is necessary. By an IIR-like rule we mean a mechanism similar to a CFC rule. Moreover, the Blueprint published in 2020 contained a rule to enforce the implementation of an IIR in the source state. Such rule was originally called the Undertaxed Payments Rule.[15] The Undertaxed Payments Rule would have functioned similar to an interest-limitation rule, where the deduction of certain expenses is denied if another country does not sufficiently tax the operations of a multinational enterprise. It was only at a later stage when the current design of the UTPR became decisive and finally found its way into the Model Rules. The treaty problems mainly arise in relation to the new form of the UTPR as a tax on foreign profits and not just a denial of deductions. However, so far the OECD has not offered a solution.

On the other hand, at the early stage of the project the OECD was of the opinion that the implementation of the IIR indeed required a treaty amendment.[16] It was in particular highlighted that the IIR could lead to a situation in

13 On this topic, see Sjoerd Douma, Alexia Kardachaki, Georg Kofler, et al. The UTPR and International Law: Analysis from Three Angles. *Tax Notes International*, 15 May 2023, p.857 et seq. (p.870 et seq.).

14 For details see Sjoerd Douma, Alexia Kardachaki, Georg Kofler, et al. The UTPR and International Law: Analysis from Three Angles. *Tax Notes International*, 15 May 2023, p.857 et seq. (p.871).

15 OECD (2020). *Tax Challenges Arising from Digitalisation — Report on Pillar Two Blueprint: Inclusive Framework on BEPS*, https://doi.org/10.1787/abb4c3d1-en. See abbreviation "Blueprint".

16 See OECD (2020). *Tax Challenges Arising from Digitalisation — Report on Pillar Two Blueprint: Inclusive Framework on BEPS*, https://doi.org/10.1787/abb4c3d1-en, para. 9 and 455.

which the income of a foreign permanent establishment is subject to corporate income taxation in the jurisdiction of the head office although the treaty might contain the exemption method for the income of permanent establishments. This also reflects a long-standing opinion of the OECD; for instance, it was also argued in the final report on BEPS Action 3 that CFC rules — depending on the design — might require an amendment of tax treaties.[17] The OECD has not officially changed its opinion. Nevertheless, it seems that no efforts are currently being made to find a multilateral solution to facilitate the implementation of these switch-over rules into the global treaty network. Countries are left with significant risks of infringing treaty obligations triggering costly and yearlong disputes.

5. What Does That Mean for Countries?

Countries follow different approaches regarding the applicability of treaty-based rules in case there is an infringement through national law. In some countries treaty overrides are possible, meaning that the domestic law is applicable even if it infringes tax treaties. Therefore, the IIR and the UTPR would apply even if a treaty infringement is observed. In my own country Switzerland, however, treaties in general prevail. Therefore, Switzerland — although it might indeed implement the IIR and the UTPR — will not be able to apply either of them. Respectively, it might apply the IIR or the UTPR but it seems likely that some companies will appeal against both the IIR and the UTPR. This creates a lot of uncertainty in the next couple of years.

The situation is even more complex in the EU as the EU requires the implementation of the global minimum tax through an EU Directive.[18] Therefore, a conflict arises between an EU Directive (so-called secondary law) and tax treaties signed among EU member states or with third countries outside the EU. Such conflict is difficult to solve and depends on various parameters.[19]

6. Conclusion

The global minimum tax is not only a major compliance challenge for multinational enterprises, but also leads to legal uncertainty and calls into question the binding effect of double taxation agreements in general. We should not underestimate the latter effect.

The current Model Rules undermine the common and years-old understanding of tax treaties as an instrument limiting taxing rights mainly for the source state but in some instances also for the resident state. By implementing these rules, a Pandora's box has been opened and it will be difficult to argue in the future that double taxation agreements actually restrict some taxing rights. In the meantime, however, it seems very likely that several courts around the world will have to deal with the questions raised in the present contribution. The OECD on the other side would do well to eliminate this legal uncertainty by means of an international treaty enabling countries to apply both the IIR and the UTPR.

States on the other hand would do well not to sacrifice their rule of law through the narrow-minded introduction of both the IIR and the UTPR without solving the tax treaty concerns. Switzerland, a country with a long tradition of legislating in accordance with international obligations, is well-advised to carefully assess the benefits of introducing both the IIR and the UTPR, given the significant disadvantages that may arise from the resulting legal uncertainties.

17 See OECD (2015). *Designing Effective Controlled Foreign Company Rules, Action 3: 2015 Final Report*, https://doi.org/10.1787/9789264241152-en, para. 137.

18 See *Council Directive (EU) 2022/2523 of 14 December 2022 on Ensuring a Global Minimum Level of Taxation for Multinational Enterprise Groups and Large-Scale Domestic Groups in the Union*, https://eur-lex.europa.eu/eli/dir/2022/2523/oj.

19 For a detailed assessment both of the legal problem and the potential solution Mees Vergouwen (2024). Conflicts Between Directives and Tax Treaties: Which Obligation Takes Precedence? Three Perspectives. 33 *EC Tax Review* 4, p.1 et seq.

Serving High-Level Opening up with "TaxExpress"

International Taxation Department, State Taxation Administration,
the People's Republic of China

中国税务

State Taxation Administration
the People's Republic of China

Abstract: Over the past decade, the Chinese tax authorities have been actively supporting the development of the Belt and Road Initiative, by creating a unique cross-border tax and fee service model with Chinese characteristics, which has laid a solid foundation for the establishment of the "TaxExpress" cross-border service brand. In October 2023, the State Taxation Administration of China (STA) officially launched the "TaxExpress" brand, focusing on one service matrix, two service teams, three service mechanisms, and four knowledge products. The brand aims to enhance cooperation between ministries and commissions, promote international exchanges, and establish a framework for effective cross-border tax and fee services. Moving forward, the STA will continue to leverage existing resources to support high-level opening up, by enhancing brand value, improving measures for international tax and fee services, expanding cross-border tax and fee services, strengthening professional talent teams, so as to develop a cross-border tax and fee service system that combines Chinese characteristics with international best practices.

Keywords: TaxExpress; Cross-border tax and fee service; High-level opening up

Promoting high-level opening up and accelerating efforts to foster a new pattern of development that is focused on the domestic economy and features positive interplay between domestic and international economic flows, are major strategic decisions set out by China while advancing toward the Second Centenary Goal. To this end, the State Taxation Administration of China (STA), in full implementation of the *Opinions on Further Deepening the Reform of Tax Administration*, strives to innovate cross-border tax and fee services and launches the service brand of "TaxExpress" in response to demands and suggestions from taxpayers. "TaxExpress" lends fresh momentum to the building of a first-class business environment that is market-oriented, law-based and internationalized, and opens up a new chapter for high-quality pursuit of Chinese modernization in tax practices. This article is drafted on the basis of China's practices in this regard in the past decade[1] and seeks to examine "TaxExpress" through multiple lenses, including its objectives, achievements, and future.

1. Solid Foundation Laid from the Very Inception

Bearing in mind the most fundamental interests of the country throughout the past decade, Chinese tax authorities have given full rein to the role of tax in pursuing Belt and Road cooperation and chartered a course of cross-border taxpayer services with Chinese characteristics, laying a solid foundation for the service brand of "TaxExpress", an integration of past practices and innovation in a new stage.

1.1 Deepening International Tax Governance and Accumulating Beneficial Experience in Cross-border Tax and Fee Services

First, the STA is committed to serving major-country diplomacy and boosting confidence in the tax system. "China will work with its Belt and Road Initiative (BRI) partner countries to strengthen the building of multilateral cooperation platforms covering energy, taxation, finance, green development, disaster reduction, anti-corruption, think tank, media, culture and other fields," noted President Xi Jinping at the opening ceremony of the third Belt and Road Forum for International Cooperation.[2] This is yet another important guidance President Xi Jinping has given on strengthening cooperation in taxation by setting up the Belt and Road Initiative Tax Administration Cooperation Mechanism (BRITACOM) at the opening ceremony of the Second Belt and Road Forum for International Cooperation.[3]

Over the past 10 years, Chinese taxation continues to see increase in its global reach. The BRITACOM, the first multilateral cooperation platform in the field of taxation initiated by China, was officially established and four Belt and Road Initiative Tax Administration Cooperation Forums (BRITACOFs) have been successfully concluded. The STA has hosted major events such as the plenary meeting of the 10th Forum on Tax Administration (FTA) of the Organisation for Economic Co-operation and Development (OECD), the Meeting of the Heads of Tax Authorities of the BRICS Countries, and the 48th Annual Meeting of the Study Group on Asia-Pacific Tax Administration and Research (SGATAR); initiated and organized High-Level Symposium on the Digitalization and Digital Transformation of Tax Administration; and shared its practices through 19 cases included in the OECD's Tax Administration Comparative Information Series.

Second, the STA is devoted to serving high-level opening up and forging an internationalized business environment. "China has become a synonym of the best investment destination, and that the 'next China' is still China," pointed out President Xi Jinping at the APEC CEO Summit.[4] This statement demonstrates China's firm confidence and determination in deepening opening up.

Over the past 10 years, continual improvements have been made in our business environment, particularly taxation. The Spring Breeze Project facilitating taxpayers and fee payers has been carried out for 10 consecutive years. To benefit both businesses

1 The term "decade" in this article mainly refers to the time period from 2014 to 2023.

2 Xinhua (2023). *Text of Xi Jinping's Keynote Speech at 3rd Belt and Road Forum for Int'l Cooperation*, https://www.chinadaily.com.cn/a/202310/18/WS652fa59aa31090682a5e94e1.html.

3 Xinhua (2019). *Xi's Full Remarks at the Leaders' Roundtable Meeting of the Second Belt and Road Forum for International Cooperation*, https://www.chinadaily.com.cn/a/201904/27/WS5d9c5982a310cf3e3556f389.html.

4 State Council (2023). *Xi Jinping's Written Speech at the Asia-Pacific Economic Cooperation (APEC) CEO Summit*, https://www.gov.cn/gongbao/2023/issue_10846/202311/content_6917324.html.

and individuals, the STA has meticulously implemented support policies rolled out by the state, and introduced additional tax and fee relief measures such as cuts, refunds and deferrals, totaling over RMB14 trillion for taxpayers and fee payers, foreign-funded enterprises included.[5] It has established a tax treaty network involving 114 jurisdictions to provide robust legal assurance for double taxation elimination and tax dispute resolution;[6] issued and updated investment tax guides of 105 jurisdictions to equip enterprises with basics of the hosting jurisdictions' environments and tax systems, so as to prevent tax risks therein;[7] and concluded China's first collaborative management case of transfer pricing with customs by means of unilateral advance pricing arrangement (APA) for the STA's part and "advance ruling" for customs' part.

Third, the STA is dedicated to serving national governance and building digitalized and smart taxation. "We must grasp the trend of digitalization, expedite developments in digital economy, digital society and digital government, and promote digital upgrading in all sectors," said President Xi Jinping at the seventh meeting of the Central Committee for Financial and Economic Affairs on 10 April 2020.[8] To that end, the STA strives to enrich service options of digital taxation and launch an internationalized e-tax service portal to deliver preferential policies and risk notifications in a targeted way, and fulfill various demands of cross-border taxpayers and fee payers.

Over the past 10 years, major headways have been made in the upgrading, application and integration of information technologies. An e-tax service portal has been launched to serve all taxpayers and fee payers wherever they are, and the service options for offshore non-residents have been designed to address their most acute concerns and enhance their experiences. The STA has been dedicated to empower verification for outbound enterprises and foreign-funded enterprises with big data in taxation for further targeted services and communication. Service and management for cross-border tax sources have also been bolstered through the issuance of the *Announcement of the State Taxation Administration on Optimizing Taxpayer Services and Streamlining Relevant Statements on Resident Enterprises' Reporting of Overseas Investment and Income* (Announcement No.17 [2023] of the State Taxation Administration), which refines the system of reporting while alleviating the burden of filing for taxpayers and fee payers.

1.2 Assessing International and Domestic Dynamics and Well-Positioning TaxExpress

First, TaxExpress represents a crucial showcase of national governance. With various innovative practices integrated, the service brand of TaxExpress aims to provide a one-stop solution to cross-border taxpayers and fee payers. The initiative not only helps reduce compliance costs but also improves tax governance. For the world at large, as a commitment of China to be an active part in global tax governance, international cooperation, and joint responses to global tax challenges, the service brand contributes insights and solutions to a fair, just, and transparent international tax order.

Second, TaxExpress is a pragmatic response to adapt to the changing international landscape. In recent years, geopolitical tensions rise and

5 STA (2023). *Transcript of the State Taxation Administration's Press Conference on "Taxation in Service of High-Level Opening up"*, https://www.chinatax.gov.cn/chinatax/n810219/n810724/c5215162/content.html.

6 STA (2023). *Speech by Mr. Wang Jun at the Thematic Forum on Trade Connectivity of the Third Belt and Road Forum for International Cooperation*, https://www.chinatax.gov.cn/chinatax/n810219/n810724/c5215427/content.html.

7 See Footnote 5.

8 Xi Jinping (2020). *Some Major Issues in the Medium and Long-term Economic and Social Development Strategies of the Country,* https://www.gov.cn/xinwen/2020-10/31/content_5556349.htm.

various forms of protectionism and exclusionism have spread around the world, posing unprecedented challenges to the international economic and trade order. Meanwhile, technological and industrial transformation, including the burgeoning digital economy and artificial intelligence, inject fresh impetus into global economic growth. Seizing the trend to innovate taxpayer services will not only boost domestic economic vitality, but will also foster favorable conditions for global economic recovery and an enhanced global economic governance system.

Third, TaxExpress offers essential assurance for facilitating cross-border investment. TaxExpress provides inbound and outbound taxpayers and fee payers with professional, efficient, and user-friendly taxpayer services in a people-centric approach, thus improving tax certainty, smoothening the flow of capital, technology, and personnel. Furthermore, through optimized procedures and administrative efficiency, TaxExpress assists Chinese enterprises in swiftly adapting to local tax policies, mitigating tax risks in cases of cross-border investment, and enhancing their competitiveness in the international investment market.

Fourth, TaxExpress constitutes an integrated platform for taxpayer services. The inception of TaxExpress service brand depends on the robust partnerships that Chinese tax authorities have forged with other government departments, professional institutions, chambers of commerce and business associations. On that basis, Chinese tax authorities are enabled to follow up changes in tax policies at home and abroad, create a service ecosystem featuring resource sharing and mutual benefits, and thus provide precise and timely information for investors. This collaboration will further advance tax co-governance and underpin a fair, transparent and efficient tax business environment.

1.3 Identifying Objectives of the Brand and Essential Demands of Cross-border Tax and Fee Services

Firstly, we present overseas information through multiple perspectives. Chinese tax authorities provide a one-stop package of professional services including policy communication events, jurisdiction-specific investment tax guides, an overseas tax case repository, and FAQs to inform cross-border taxpayers and fee payers of overseas business environments and available legal remedies for tax dispute resolution, so that they could manage tax compliance and prevent risks with requisite knowledge in the new environments.

Secondly, we deliver policy support from various dimensions. Chinese tax authorities continue to improve international treaties, tax laws, and regulations related to cross-border investment, while reinforcing policy interpretation and guidance. An internationalized e-tax service portal is established to deliver information of preferential policies and potential risks to taxpayers. In particular, we provide tax certainty and legal assurance for taxpayers engaged in investment and operations in China, so that they could fully enjoy what they are entitled to with operational knowledge in tax laws and regulations.

Thirdly, we address taxpayer's demands through manifold channels. Chinese tax authorities set up expert teams and deliver prompt and professional responses to the requests of cross-border taxpayers and fee payers through inquiries service via the 12366 International Tax Hotline and consultations. Tax collection and administration procedures are improved to reduce compliance costs, and mechanisms such as APAs are employed to offer certainty for complex matters. Both domestic and international legal remedies are leveraged to resolve cross-border tax disputes in time. With these efforts, cross-border taxpayers and fee payers are assured of specific responses to their issues.

2. Systematic and Multifaceted Approach to Forging a Service Brand

In October 2023, on the basis of an overall review of the achievements made over the past decade, a scientific assessment of the international and domestic dynamics, and firm grips of the essential demands, the STA has officially launched TaxExpress cross-border taxpayer service brand. Characterized by "one service matrix, two service teams, three service mechanisms and four knowledge products", the TaxExpress service brand seeks collaborative governance through inter-departmental collaboration and international cooperation.

2.1 Building One Service Matrix to Generate Synergistic Effects

To promote overall coordination and resource integration between the STA headquarters and provincial offices, we established one service matrix with the headquarter brand as its core and sub-brands of provincial tax offices as matrix elements. With all 36 provincial tax authorities having established sub-brands within TaxExpress as in a "1+36" brand matrix,[9] the two-tiered service mechanism is now well-placed and starting to show results.

Myriad activities are launched successively along with these sub-brands. For example, Zhejiang Provincial Tax Service introduced the sub-brand of TaxExpress·*Right in Zhe* featuring service projects under the Belt and Road Initiative and a policy briefing session on ASEAN under the backdrop of Regional Comprehensive Economic Partnership (RCEP). Shandong Provincial Tax Service launched TaxExpress·*Home of Tax* and formed a service alliance with the Federation of Returned Overseas Chinese, the Department of Commerce, and the Foreign Affairs Office at the provincial level. Tax authorities in Jiangsu Province presented TaxExpress·*Su Swift Service* headlining a BRI taxpayer service symposium together with Myanmar tax officials to provide 14 companies investing in Myanmar with face-to-face guidance and answers.[10] Tax authorities in Shaanxi Province debuted TaxExpress·*Shaan Shines BRI*, under which it hosted a video-conference with the Chinese Embassy in the Kingdom of Bahrain for mutual learning and exchange.

2.2 Incorporating Two Service Teams to Deliver Full-Cycle Services

We set up two expert service teams across the central and provincial levels, with the localities providing personalized services to key cross-border taxpayers and fee payers, while the STA studies and addresses complex questions submitted by the provincial tax authorities. By the end of March 2024, more than 150 difficult cross-border tax issues had been resolved in two batches. At present, 36 issues fed back by the Big Four accounting firms and four major foreign chambers of commerce are being discussed.[11] Built upon the 12366 International Tax Hotline, a professional consulting team is set up to provide online services such as intelligent consultation, live chat, and visual Q&A for cross-border taxpayers and fee payers. This effort to streamline processes and raise efficiency and efficacy, ushers in an upgraded internationalized cross-border taxpayer service platform of 12366. In 2023, a total of 117,000 live enquiries in Chinese and English were addressed for outbound and inbound enterprises.[12]

The long-term mechanism for full-cycle services is improved. In pre-investment stage, cross-border investors are supported to build up awareness for tax compliance and risks in overseas investment and business operations, and look closely at the differences

9 Dong Bijuan (2024). *Continuously Upgrading Cross-border taxpayer Services*, https://www.gov.cn/lianbo/bumen/202402/content_6930252.htm.

10 *Brand of Jiangsu Cross-Border Taxation Service — Tax Express·Su Swift Service Launches*, https://jiangsu.chinatax.gov.cn/art/2023/12/8/art_8885_442605.html.

11 The four major foreign chambers of commerce referred to in this article are the China-United States Chamber of Commerce, the China-EU Chamber of Commerce, the China-Korea Chamber of Commerce, and the China-Japan Chamber of Commerce.

12 State Council (2024). *Press Conference of the State Council Information Office on "Taxation in Service of High-Quality Development"*, https://www.gov.cn/lianbo/fabu/202401/content_6926879.htm.

between domestic and overseas regulatory environments, so as to be well prepared. In peri-investment stage, cross-border investors are guided to claim eligible preferential policies provided under destination jurisdictions' laws, make good use of policy tools such as advance rulings and APAs to ensure tax certainty, as well as enhance awareness and capacity to enjoy benefits provided by tax treaties. In post-investment stage, cross-border investors are assisted in following up on the revisions to destination jurisdictions' tax laws and promptly tackle tax risks such as tax inspections and transfer pricing investigations as necessary.

2.3 Establishing Three Service Mechanisms to Enhance Tax Certainty

We instituted three service mechanisms, respectively for tax-related requests, cross-border taxpayer communication and policy support. On the one hand, the STA has held meetings with the Big Four accounting firms and four major foreign chambers of commerce in China to heed the requests of foreign-funded enterprises and find solutions. On the other hand, provincial tax authorities collect difficult cases through field research, symposiums with enterprises, questionnaire surveys, etc., and work with the STA afterwards to resolve them.

As a result, taxpayers have stronger sense of gain. Targeted delivery ensures policy benefits and knowledge products go to the eligible, evidenced by a total of over 130,000 cross-border taxpayers receiving jurisdiction-specific investment tax guides, as well as reports of tax benefits enjoyed in 2023.[13] Fundamentals of foreign trade and investment are further consolidated, with personalized policy communication and targeted guidance delivered to key foreign-funded enterprises (projects), and government departments mobilized to jointly see to specific needs of these enterprises (projects). Cross-border tax disputes are resolved by means of mutual negotiation, and enterprises are supported to harness tax policy tools such as APAs. More overseas investors now enjoy tax deferrals on their reinvested profits than before, and the process for accessing these tax incentives has gradually improved. Approaches such as pre-filled declaration forms have facilitated the procedures to enjoy policy benefits. Specifically, in 2023, foreign investors enjoyed preferential deferred tax policies for reinvestment of profits, involving more than RMB14.1 billion in taxes.[14] This promotes over RMB140 billion dividends reinvested domestically, effectively alleviating pressure of foreign capitals and fostering sustained growth in foreign investment in China.

2.4 Innovating Four Knowledge Products to Deliver Local-Specific Services

In addition to the release of four knowledge products, namely, the jurisdiction-specific investment tax guides, tax instructions, overseas tax case repository, and FAQs for cross-border taxpayers, we continuously innovate and introduce new offerings, such as the tax guide for "going global" individuals and global tax news, expanding the range of specialized knowledge products available. Among them, the investment tax guide can walk outbound taxpayers through the tax legal environments from both the domestic and international perspectives. Tax instructions and FAQs for cross-border taxpayers and fee payers respond to their main concerns from a practical perspective. The overseas tax case repository provides reference for cross-border taxpayers and fee payers in resolving tax disputes. Such knowledge products subject to dynamic updates as global tax news, with an aim to keep taxpayers up with the global tax business environment, provide reference for tax due diligence, preparation for compliance, and tax risk control. As of April 2024, we have successively updated and released investment tax guides on 105 jurisdictions, 4 tax instructions, 21 overseas tax cases, 46 FAQs for

13 Ibid.

14 Ibid.

cross-border taxpayers, and one issue of global tax news, receiving wide acclaim from taxpayers and fee payers.[15] Meanwhile, we integrate functions such as applying for certificates of Chinese tax residence and reporting overseas investment status on the new e-tax service portal, to provide one-stop service for outbound taxpayers.

Local specific products also abound. For example, tax authorities in Tianjin use WeChat public accounts to broadcast "Country-specific Tax Information", while those in Zhejiang offer "International Tax Learning in Zhe" and "Global Tax View". In Xiamen, tax authorities provide "Outbound Investment Tax Tips" via WeChat. In Henan, a WeChat public account offers the function of "International Tax Policy Service Platform", enabling taxpayers to categorically search for international tax policies on their mobile devices.

2.5 Advancing Inter-Departmental Collaboration to Forge Strong Momentum for High-Level Opening up

At the STA headquarter level, we leverage the advantages of inter-departmental cooperation, actively participate in inter-ministerial joint mechanisms, and advocate for institutionalized communication mechanism with foreign chambers of commerce in China. We enhance data sharing, communication and coordination with such departments as the National Development and Reform Commission (NDRC), Ministry of Commerce (MOFCOM), and General Administration of Customs, in an effort to reach consensus through cooperation and jointly optimize inter-departmental collaboration, thereby creating a more favorable environment for domestic and foreign enterprises. For instance, we hold regular meetings with organizations like the China Council for the Promotion of International Trade, the All-China Federation of Industry and Commerce, and foreign chambers of commerce in China, to heed appeals and requests of cross-border investors. We also conduct training sessions for private enterprises jointly organized by the NDRC and the All-China Federation of Industry and Commerce, host forums with the four major foreign chambers of commerce in China, and engage in mutual visits with relevant departments of the NDRC and the MOFCOM to exchange experiences in cross-border services. These efforts aim to establish long-term cooperative mechanisms and enhance the quality and efficiency of collaborative services.

Promising results have also been seen in provincial inter-departmental coordination. For instance, the Chongqing Municipal Tax Service, in collaboration with the Port and Logistics Office of the Chongqing Municipal People's Government, has established a dedicated section for tax on the Chongqing Digital Land-Sea New Channel Information Platform. This initiative enriches the tax-related functions of the China (Chongqing) International Trade Single Window, facilitates the ongoing digitization of filing documents, reduces processing time for export tax refunds, and expedites the flow of corporate funds. Similarly, the Qinghai Provincial Tax Service has joined a service mechanism targeting outbound and inbound enterprises. Led by the Qinghai Provincial Department of Commerce and participated by the Qinghai Provincial Development and Reform Commission, the Qinghai Provincial Department of Industry and Information Technology, as well as the Qinghai Branch of the State Administration of Foreign Exchange, the initiative brings together a team of personnel from commerce, taxation and other government departments .

3. Innovating for Steady Progress in Future

The 2024 National Taxation Work Conference made it clear that "more efforts should be made to promote the branding of 'TaxExpress' and create a tax business environment that is

15 *Tax Express in Service of Belt and Road Initiative*, https://www.chinatax.gov.cn/chinatax/n810219/n810744/n1671176/index.htm.

market-oriented, law-based and internationalized".[16] The STA, building on its commitment to facilitating high-level opening up and pursuing the Belt and Road cooperation, has made sustained efforts to refine its professional teams and enhance taxpayer services, in a bid to upgrade TaxExpress from inception to excellence, and to brand it as an internationally advanced taxpayer service system for cross-border investment with Chinese characteristics.

3.1 Pursuing High-Quality Development and Enriched Brand Value

Firstly, we strive to enhance the efficacy of tax governance. By optimizing service processes and improving service quality, we will enable online services of international taxation and establish an internationalized e-tax service portal to meet the diverse needs of cross-border taxpayers and fee payers. We will diversify the service options for cross-border scenarios, and present taxpayers and fee payers with more convenient and efficient services leveraging the nationwide introduction of the service options for cross-border non-residents and the new e-tax service portal. We will continue to build smart taxation, carry out targeted management and service of cross-border taxpayers and fee payers through the use of big data, deliver integrated online and offline services while advancing the digitalization of international taxpayer service.

Secondly, we seek to increase the brand influence. We will share our experience and achievements in cross-border taxpayer services through multiple channels and from plural perspectives, for instance the BRITACOM events, bilateral and multilateral meetings, and international conferences. We will introduce our practices to international organizations such as the OECD and BRICS countries to broaden their global reach. We will initiate more talks with relevant ministries, foreign chambers of commerce or associations in China, and overseas Chinese enterprises associations through seminars and other activities focusing on cross-border investment policies, so as to leverage their influence to present TaxExpress initiatives and products. We will provide more guidance on tax policies for stabilizing foreign trade and investment, and offer more targeted and profound services for foreign trade and investment.

3.2 Upgrading Service System and Enhancing Internationalized Support

Firstly, we endeavor to improve the service system. Focusing on high-frequency tax matters and prominent issues, we will prioritize efficiency in tax administration by promoting one-stop solution and introduce further measures to deepen cross-border services aligning with the Spring Breeze Project. We will delineate the scope of cross-border taxpayer and fee payer service, identify and categorize outbound and inbound enterprises in an accurate way, and update the list of the enterprises. For outbound enterprises, tailored tax policies and risk alerts are delivered based on where they operate, while for inbound enterprises, professional tax policy interpretations and consultation are readily available. By doing so, we will facilitate two-way flow of production factors, ensuring that outbound and inbound enterprises benefit from policy advantages to the fullest extent in a continually improved tax business environment.

Secondly, we work to refine the knowledge product mix. In addition to the existing four products under the framework of TaxExpress, we will develop a series of timely knowledge products catering to the needs of users, and more communication events on domestic and international tax policies. We will launch TaxExpress online learning series and develop specialized knowledge products, condensed guides, micro-courses, and other derivative products so that enterprises are informed of the latest of overseas investment environment, available legal remedies, and resolutions to tax disputes which will help them mitigate potential risks and man-

16 STA (2024). *National Taxation Work Conference Held in Beijing*, https://www.gov.cn/lianbo/bumen/202401/content_6928293.htm.

age tax compliance and risk control.

3.3 Mobilizing Internal and External Resources for Refined Service

Internally, we will enhance coordination among different levels of tax authorities. We will fortify the sub-brands of provincial authorities and urge municipal and county-level authorities to implement the measures enacted at the STA and provincial levels. Good practices from different localities will be adopted by the STA headquarter and promoted nationwide in due course. In terms of outbound enterprises, we will redouble efforts on studies of jurisdiction-specific tax policies and continuously expand and innovate professional service initiatives based on issues highlighted by cross-border taxpayers. Regarding inbound enterprises, we will see to it that preferential policies for foreign-invested enterprises are implemented and personalized services of higher quality are offered.

Externally, we will bring forward new collaborative services. Leveraging inter-ministerial joint mechanisms such as the Foreign-funded Enterprise Roundtable organized by the MOFCOM and the Ministerial Joint Conference on Promoting the Development of Private Enterprises convened by the NDRC, we will redouble efforts to present our cross-border service initiatives and tax policies to stabilize foreign trade and investment. Relying on major chambers of commerce and associations such as the Foreign Enterprise Chamber of Commerce in China and the China Council for the Promotion of International Trade, we will host symposiums for enterprises to provide professional services and responses to cross-border investors.

3.4 Empowering the Service Team

Firstly, we will optimize the service team. Leveraging the two-tiered service mechanism, we will mobilize legal and regulatory experts, large taxpayer specialists, and that of the 12366 International Tax Hotline to establish inter-departmental teams featuring professional services, foreign language services, and multilingual consultation. We will provide tailored services to key cross-border taxpayers and fee payers. We will also enhance the cultivation of international talents, elevate the caliber of personnel in cross-border services on all fronts, and nurture a group of talents knowledgeable about international tax laws and regulations to provide intellectual support for international services.

Secondly, we will strengthen the personnel training. We will reinforce the three-party collaboration involving tax experts, service agents and linguistic talents. In particular, with the help of professional tax agencies, we will identify the demands of cross-border taxpayers and fee payers and jointly develop more targeted and integrated services and products. We will cater to the diverse needs of taxpayers and fee payers and enhance the quality and efficiency of our services to new heights.

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[3] State Council (2023). *Xi Jinping's Written Speech at the Asia-Pacific Economic Cooperation (APEC) CEO Summit,* https://www.gov.cn/gongbao/2023/issue_10846/202311/content_6917324.html.

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How International Tax Rules Adapt to the Development of the Digital Economy:

The Perspective of the Republic of Azerbaijan

Lala Babayeva and Chingiz Musayev

Lala Babayeva
Tax Official
State Tax Service
Ministry of Economy
the Republic of Azerbaijan

Chingiz Musayev
Tax Official
State Tax Service
Ministry of Economy
the Republic of Azerbaijan

Abstract: This article outlines the significance of the digital economy, highlighting the challenges to taxation, and introducing the focus of the article on Azerbaijan's perspective. In recent decades, the digital revolution has transformed the global economy, reshaping industries, business models, and consumer behavior at an unprecedented pace. This transformation, commonly referred to as the digital economy, encompasses a broad spectrum of activities ranging from e-commerce and digital services to data analytics and cloud computing. As the digital economy continues to expand its influence, traditional tax systems face significant challenges in adapting to this new reality. This has ignited discussions worldwide across various legal and regulatory domains, and international taxation is no exception. The tax consequences are extensive, impacting both direct and indirect taxation, broader tax policy matters, and tax administration.

Keywords: Multinational enterprises; E-commerce; International taxation; Base Erosion and Profit Shifting; Digital services; Value-added tax

1. Introduction

The emergence of the digital economy has fundamentally altered the nature of economic activity, blurring the lines between physical and virtual transactions and challenging the traditional principles of taxation based on physical presence. Unlike traditional brick-and-mortar businesses, digital companies can operate across borders with minimal physical presence, making it difficult for tax authorities to effectively capture and tax their activities. Moreover, the digital economy is characterized by intangible assets and value creation, further complicating the determination of taxable profits and the allocation of taxing rights among jurisdictions.

Azerbaijan, like many other countries, grapples with the complexities of taxing the digital economy in an era of rapid technological change and globalization. As a dynamic and emerging economy in the South Caucasus region, Azerbaijan recognizes the importance of adapting its tax policies and regulations to the realities of the digital age while ensuring fairness, efficiency, and sustainability in its tax system.

This paper seeks to explore the challenges and opportunities that the digital economy presents to international tax rules, with a specific focus on Azerbaijan's perspective. By examining the evolving landscape of digital taxation at both the international and domestic levels, this paper aims to shed light on the strategies and initiatives undertaken globally and by Azerbaijan to address the tax challenges arising from the digital economy.

Through a comprehensive analysis of international efforts, policy debates, and practical experiences, this paper will elucidate the complexities of digital taxation and assess the implications for Azerbaijan's tax regime. By doing so, it will contribute to the ongoing discourse on how international tax rules can adapt to the development of the digital economy, providing valuable insights for policymakers, tax professionals, and stakeholders in Azerbaijan and beyond.

2. Challenges Posed by the Digital Economy to Taxation

The Internet has revolutionized global operations by transforming the exchange of information and conducting business. Traditional tax principles, once constrained by physical boundaries, are now obsolete. Applying international tax principles to the evolving landscape of digital transactions and business models often presents challenges and uncertainties.

From the viewpoint of many countries, it is essential for them to be able to appropriately exercise taxing rights on these transactions, such as e-commerce and digitalized business models. The effectiveness of utilizing the existing international taxation models for this purpose is subject to significant debate. Many have suggested the amendment of key existing concepts, such as permanent establishment, as well as the introduction of new concepts, such as equalization levies or digital services taxes, to include the virtual world and its workings in the ambit of international taxation. In many developing countries, the digital economy currently plays a role as a key growth driver of their economic engine and it is therefore imperative for tax authorities to tackle transfer pricing issues related to it.

Furthermore, the digital economy is characterized by the prevalence of intangible assets such as intellectual property, data, and software. Unlike tangible assets, which are relatively easy to assess and value for tax purposes, intangible assets pose challenges in terms of valuation and taxation. The mobility and ease of transfer of intangible assets across borders enable multinational digital companies to shift profits to low-tax jurisdictions, effectively minimizing their tax liabilities in high-tax jurisdictions.

In the past, multinational enterprises (MNEs) mostly operated in physical markets through presence in multiple jurisdictions. However, the current pace of digitalization of the economy enables some MNEs to conduct significant business in places where they do not have any physical presence. This makes addressing the taxing rights of the respective countries to avoid double or non-taxation particularly challenging.

MNEs are companies that operate integrated business activities across multiple countries. They typically share control, objectives, and resources among their various entities, including the parent or headquarters company, subsidiaries, affiliates, and branches, all of which are situated in different countries. Consequently, numerous MNEs function as fully integrated enterprises, devising and executing global strategies. However, the United Nations Conference on Trade and Development (UNCTAD) has observed that the integration of production within MNEs poses challenges for policymakers in adjusting the mechanisms for distributing the income and expenses of MNEs across jurisdictions for taxation purposes.

Another challenge also arises from the emergence of digital platforms and the gig economy, which have transformed traditional employment models and blurred the lines between employees and independent contractors. As individuals engage in digital work and earn income through online platforms, tax authorities face difficulties in enforcing compliance and collecting taxes from these decentralized and often transient sources of income.

3. Efforts and Initiatives at the International Level

The digital economy presents formidable challenges to taxation systems worldwide, requiring governments and international organizations to rethink and adapt existing tax rules. The borderless and intangible nature of digital transactions, combined with the mobility of digital businesses, necessitates innovative solutions to ensure fair and effective taxation in the digital age.

In response to these challenges, governments and international organizations have initiated various efforts to reform and adapt tax rules to the realities of the digital economy. The Organisation for Economic Co-operation and Development (OECD) has been at the forefront of this initiative through its Base Erosion and Profit Shifting (BEPS) project, which aims to address tax avoidance strategies used by multinational companies, including those operating in the digital economy.

The OECD's work on value-added taxes (VAT) has in recent years primarily focused on the development of internationally agreed standards and recommended approaches for the consistent, efficient and effective application of national VAT systems in the context of an increasingly digitalized and globalized economy.

These standards include the recommended rules and mechanisms to address the challenges of collecting the VAT on digital sales, which had been identified in the context of the OECD/G20 Project on BEPS. The report, The Role of Digital Platforms in the Collection of VAT/GST on Online Sales, is the latest addition to this work.

Digital platforms such as electronic marketplaces play a crucial role in driving the ongoing robust expansion of online commerce by facilitating transactions between buyers and sellers. Research indicates that approximately two-thirds of all cross-border e-commerce sales of goods occur through online marketplaces. It has become increasingly evident that this scenario presents significant opportunities for enhancing the collection of VAT on online transactions involving goods, services, and intangibles, especially those targeted at private consumers. Many jurisdictions have initiated efforts to explore potential measures for engaging digital platforms in VAT collection for online sales. Those jurisdictions that have successfully implemented such measures have reported positive outcomes, including enhanced compliance and increased tax revenue. In light of these developments, the OECD has been tasked with developing internationally agreed-upon guidance on strategies for the effective involvement of digital platforms in VAT collection for online sales, with the aim of ensuring consistency across jurisdictions.

Hence, this report offers actionable advice to tax authorities regarding the formulation and execution of diverse strategies for engaging e-commerce marketplaces and other digital platforms in the successful and streamlined collection of VAT on digital transactions involving goods, services, and intangible assets. It includes new measures to make digital platforms liable for the VAT on sales made by online traders through these platforms, along with other measures such as data sharing and enhanced cooperation between tax authorities and digital platforms. It builds further on the solutions for the effective collection of VAT on digital sales presented in International VAT/GST Guidelines and Addressing the Tax Challenges of the Digital Economy, Action 1 — 2015 Final Report. It also complements the report on the Mechanisms for the Effective Collection of VAT/GST, which was delivered in 2017.

The creation of this report has been a collaborative effort, incorporating input from representatives of OECD member nations and numerous partner countries, as well as active participation from the business community.

BEPS Action 1 refers to one of the 15 actions outlined in the OECD/G20 BEPS project which focuses on addressing the tax challenges of the digital economy. It was released in response to growing concerns about the ability of traditional international tax rules to cope with the digitalization of the economy. The rise of digital business models has made it increasingly difficult for tax authorities to determine where value is created and where profits should be taxed. Action 1 aims to develop measures that are consistent with existing international tax principles and do not undermine the integrity of the international tax framework.

One proposal gaining traction is the concept of digital services taxes (DSTs), which seek to tax revenues generated by digital companies in jurisdictions where they have significant user bases, regardless of their physical presence. DSTs are generally a tax on gross revenues derived from a variety of digital services occurring outside of any treaties.[1] DSTs are not income taxes, online sales tax or even VAT. These taxes apply to companies offering primarily digital services or goods; DSTs, however, apply not only to online sales, but also digital advertising, data usage, e-commerce, streaming/downloading, and more. The application of DST varies from country to country. Austria, for example, only applies a DST to digital advertising, whereas Poland imposes a DST only on streaming services. However, the implementation of DSTs has sparked controversy and raised concerns about potential trade tensions and double taxation.

Another approach is the development of new nexus and profit allocation rules to better capture digital activities and ensure a fair distribution of taxing rights among jurisdictions. Members of the OECD/G20 Inclusive Framework on BEPS (hereinafter referred to as "Inclusive Framework") have delivered a package to further implement the Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy. The OECD's work on the "Unified Approach" and "Pillar One" of its BEPS project aims to address these issues by redefining the nexus and profit allocation rules for taxing digital businesses.

The consensus-based Two-Pillar Solution plays an important role to ensure fairness and equity in our tax systems and to fortify the international tax framework in the face of new

1 William Morris & Pat Brown. *Digital Service Taxes: Are They Here to Stay?*, https://www.pwc.com/us/en/services/tax/library/digital-service-taxes.html.

and changing business models. The global minimum tax under Pillar Two establishes a floor on corporate tax competition which will ensure an MNE is subject to tax in each jurisdiction at a 15% effective minimum tax rate regardless of where it operates, thereby ensuring a level playing field. This global minimum tax framework under Pillar Two is already a reality, with over 50 jurisdictions taking steps toward implementation.

The Inclusive Framework is finalizing the work on Pillar One and has completed the work on the development of the Subject to Tax Rule (STTR) and its implementation framework. Amount A of Pillar One will establish a taxing right for market jurisdictions with respect to a defined portion of the residual profits of the largest and most profitable MNEs operating in their markets, prevent the proliferation of DSTs and relevant similar measures, avoid double taxation and excessive compliance burdens, and enhance stability and certainty in the international tax system.

4. Azerbaijan's Perspective and Position

The stimulation of national economies and markets, tax revenue and revenue mobilization, and non-taxation of income at the place where economic activity occurs and value is created have created the need for the formation of new and more advanced international tax standards for tax authorities related to international taxation.

Taking this into account, the Republic of Azerbaijan has taken measures to participate in the BEPS project consisting of 15 activities initiated by the G20 and the OECD. In order to ensure the participation of non-member countries in the BEPS project in addition to OECD member countries, the "Inclusive Framework on BEPS" was created.

Currently, 145 member jurisdictions are represented in the Inclusive Framework, and more than 60% of them are non-OECD jurisdictions. The jurisdictions that are members of this Framework are obliged to make proposals for the development of the BEPS project, to develop it, and to ensure a joint fight against tax evasion.

The Law of the Republic of Azerbaijan dated 11 October 2022 on approval of the Agreement between the Republic of Azerbaijan and the OECD on joining the Inclusive Framework as an associate member of the BEPS project was approved by the President of the Republic of Azerbaijan and Azerbaijan joined the Inclusive Framework as an associate member on 16 December 2022.

Ensuring the formation of a more competitive economic environment in terms of taxation by becoming a member of the said organization, increasing the country's international tax rating and gaining opportunities to increase its reputation as a reliable partner in the relevant field, preventing tax planning aimed at erosion of the tax base, ensuring that income is taxed in the place where real economic activity is carried out, taking into account the principles of international taxation, tax legislation between tax administrations and the possibility of creating a single coordination in relation to the administration is targeted.

As is known, it is necessary to carry out relevant work by implementing the following four basic Actions, which are considered as "minimum standard" at the current stage, by the states that have agreed to participate in the Inclusive Framework:

• Action 5 "Harmful tax practices" — Whether there are harmful tax practices in the participating states, preferential tax regimes that may affect the competitiveness of other states, including the exchange of decisions on tax obligations;

• Action 6 "Tax treaty abuse" — Consideration of anti-tax treaty abuse clauses in international agreements on elimination of double taxation;

• Action 13 "Documentation on transfer pricing" — The transfer pricing documentation of foreign enterprises' representative offices and subsidiaries is carried out in a uniform format by the tax authorities of all participating states and this information is submitted to the tax authority of the state where the parent company is located; and

• Action 14 "Resolution of disputes" — Commitment to resolve tax disputes and complaints of representative offices and subsidiaries of foreign enterprises as soon as possible by all possible methods, including international arbitration as the last stage.

One of the other non-major Actions to be phased in is Action 1.

Action 1 "Addressing the tax challenges of the digital economy" — Identification of the difficulties created by the digital economy for the application of existing international taxation rules and preparation of legislative provisions in the field of both direct and indirect taxation in order to solve them.

As mentioned at the beginning of the article adopted by the member jurisdictions on 8 October 2021, along with the minimum standards (4 Actions) that must be implemented by the Republic of Azerbaijan under the 15 Actions of BEPS within the mentioned project, the Republic of Azerbaijan agreed to consider measures relevant with the "Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy".

By joining the Inclusive Framework, the Republic of Azerbaijan will benefit from the following advantages:

• Creating a fair and transparent tax environment based on international taxation principles;

• Achieving an increase in the volume of foreign direct investments in the country, considering the fact that transnational companies prefer to operate in countries with tax legislation in accordance with international standards;

• Ensuring that transnational companies will be taxed on the basis of accepted international taxation principles, and ensuring the formation of a competitive favorable economic environment in terms of taxation in transactions between companies operating in the country; and

• Ensuring that the income is taxed in the country where the economic activity is carried out, taking into account the principles of international taxation.

In accordance with the requirements of Article 33.8-1 of the Tax Code, "The procedure for electronic tax registration, re-registration and de-registration of a non-resident carrying out electronic commerce through the Internet information resource" was approved by the decision of the Cabinet of Ministers No. 387 dated 30 October 2023. This document defines the organizational and legal basis for electronic tax accounting for VAT purposes of a non-resident who receives income from the provision of works and services to residents through e-commerce.

In this regard, Article 33.8-1 of the Tax Code, which came into force on 1 January 2024, added the norm of registering a non-resident conducting e-commerce as a VAT payer, submitting a VAT declaration and paying VAT.

During the preparation of the rule, the taxation mechanism of non-residents conducting e-commerce, existing in international practice, was analyzed. Thus, the tax authorities with the best practices applied in other countries were investigated and opinions were exchanged on similar practices. In international practice, it has been determined that the electronic tax accounting of transnational companies providing such work and services is carried out more in the direction of voluntary compliance.

In the aforementioned Regulation, the creation of a platform for the tax administration of e-commerce participants (hereinafter referred to as "the Platform") in the Internet Tax Department of the State Tax Service is provided, and the Platform was developed in accordance with the tax legislation and administration of the Republic of Azerbaijan.

The mentioned software increases the efficiency of taxation of entities operating in the field of digital economy without a physical presence in the internal market by providing innovative solutions that allow the State Tax Service to implement the recommendations defined in the guidelines of OECD. The platform includes registration, declaration, payment processes and other functions of a non-resident conducting electronic trade.

Figure 1 and 2 respectively show the turn-

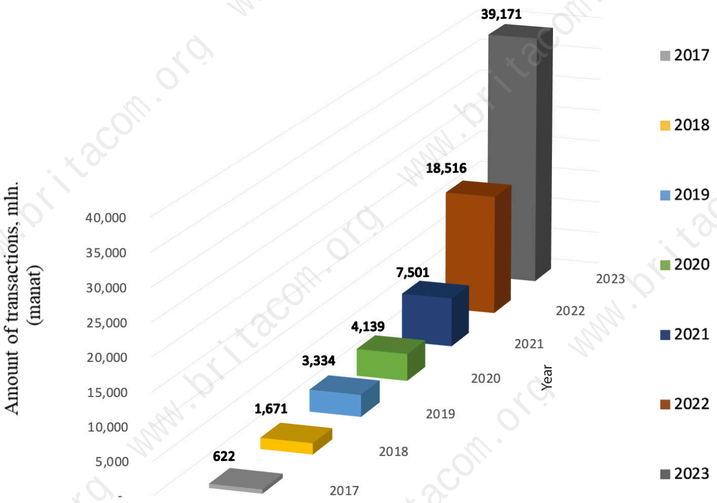

Figure 1. The turnover of e-commerce in Azerbaijan during 2017-2023
Source: The Central Bank of the Republic of Azerbaijan. *Payment System Indicators*, https://cbar.az/page-45/payment-system-indicators.

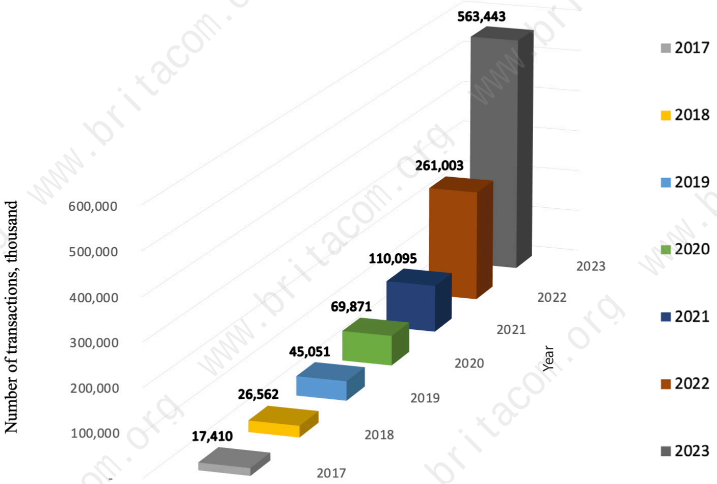

Figure 2. The number of transactions in Azerbaijan during 2017-2023
Source: The Central Bank of the Republic of Azerbaijan. *Payment System Indicators*, https://cbar.az/page-45/payment-system-indicators.

over of e-commerce and the number of transactions in Azerbaijan during 2017-2023.

According to the tax legislation of Azerbaijan, VAT obligation arises for foreign taxable persons, who are not established or have no habitual residence in Azerbaijan, nor have a fixed establishment in Azerbaijan, and who provide digital services and e-commerce to be used in the territory of Azerbaijan.

As part of recent VAT reform in Azerbaijan, foreign suppliers of digital services to non-entrepreneurial natural persons (consumers) in the territory of Azerbaijan are required to assess and pay VAT to the state budget of Azerbaijan.

In terms of the new regulation the digital services and e-commerce include the following:

• providing services and doing work through the Internet information resource;

• downloading electronic books, music, audio-video materials, graphic images, virtual games, software;

• placing advertisements; and

• other similar work and services.

Digital services are treated as rendered in the territory of Azerbaijan if any one of the following criteria is met:

• The bank account used by recipient is with a financial institution located in Azerbaijan;

• The recipient is physically located in Azerbaijan;

• The IP address of the device used by recipient is in Azerbaijan; and

• The telephone code used by the recipient belongs to Azerbaijan.

Assuming any of the above criteria is met, such foreign suppliers will undergo a simplified online registration procedure through the special platform created on the website of the State Tax Service. To complete the registration procedure, the foreign supplier will have to submit some basic information such as the legal name of the organization, the headquarters' address, its website, country of residence for tax purposes, tax ID, and minimum two contact persons, among others.

VAT returns can be submitted through the same online platform. The VAT reporting period is monthly. The deadline for submission of a VAT return is the 20th of the month following the reporting period.

As to the payment deadline, it is the 20th of the month following the reporting period. The tax declaration and payment currency can be either Azerbaijani manat (AZN), US Dollar

(USD), Euro (EUR) or pound sterling (GBP). Since foreign currency payments are accepted, a supplier can transfer the VAT amount from its regular foreign bank account. According to the regulations, the declaration and payment of VAT must be made in the payment currency selected on the registration form. The current VAT rate in Azerbaijan is 18%.

5. Conclusion

In conclusion, the advent of the digital economy has presented unprecedented challenges to taxation systems worldwide. The borderless nature of digital transactions, coupled with the intangible nature of digital goods and services, has made it difficult for traditional tax frameworks to keep pace. Efforts and initiatives at the international level, such as those led by the OECD and G20, have sought to address these challenges through the development of new tax principles and guidelines.

Azerbaijan, like many other countries, is not immune to the impact of the digital economy on taxation. As the digital economy continues to grow within Azerbaijan's borders, tax legislation must proactively adapt tax policies to ensure fairness, efficiency, and sustainability in revenue collection. This requires collaboration with international partners and participation in global initiatives aimed at reforming the taxation of digital transactions.

Countries' position should prioritize creating a regulatory environment that fosters innovation and investment while also ensuring that multinational digital corporations contribute their fair share to the country's tax revenue. This may involve implementing measures such as digital service taxes, updating transfer pricing rules, and enhancing international cooperation on tax information exchange.

Ultimately, addressing the challenges posed by the digital economy to taxation requires a multifaceted approach that balances the need for fiscal sovereignty with the realities of an increasingly interconnected global economy. By staying engaged with international efforts and tailoring domestic policies to the specific needs of its economy, countries can navigate the complexities of digital taxation and position itself for sustainable economic growth in the digital age.

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Transfer Pricing Regulations of Armenia:

Issues with Some of the Current Provisions and Their Possible Solutions

Andranik Hakobyan

Andranik Hakobyan
Head
Transfer Pricing and Application of Tax Treaties Unit
State Revenue Committee the Republic of Armenia

Abstract: Armenian transfer pricing (TP) regulations are still in the starting period of their application, as the provisions for conducting TP administration have been put into force only since 13 April 2022. Prior to that, the TP legislation was incomplete due to lack of provisions for effective tax administration. When the legislative amendments took effect, the TP became a separate type of tax audit with its specific features on procedure. Notwithstanding the fact that amendments solved many legislative issues, there were still many problems that emerged while applying the provisions in practice and hence needed to be tackled by further legislative amendments. This article explores some of the current major problems that the Armenian TP regulations face and the possible solutions that might be implemented in the near future.

Keywords: Transfer pricing; Amendment; Offshore jurisdiction; PE; Controlled transaction; TP documentation

1. Background on Current Transfer Pricing Regulations of Armenia

Armenian transfer pricing (TP) regulations initially came into force on 1 January 2020. But, the regulations were largely incomplete in terms of conducting efficient tax administration. For example, there was no provision related to effective sanction on non-compliance, as well as relevant administration procedures, etc.

Since 23 March 2022, the State Revenue Committee (SRC, Armenian Tax Authority) amended Armenian TP regulations and new provisions were added to the Tax Code, making the TP audit a separate type of tax audit with its separate procedures and peculiarities.

However, the 2022 amendments (hereinafter referred to as "Amendments") gave rise to several issues while implementing them in practice and hence needed to be revised. Currently, the State Revenue Committee of Armenia proposed draft revision that would solve the relevant issues.

This article will explore the major current issues that the Armenian TP regulations have and the new solutions that are suggested with the new draft proposal.

2. Overview of Current TP Regulations and Relevant Issues

The Armenian amended TP regulations came into force on 13 April 2022 and consist of many new provisions, which ensured the basis for conducting transfer pricing administration and tax compliance. However, there are still several provisions that need to be amended in order to tackle potential issues not only for taxpayers, but also for tax authority.

2.1 Issue No.1 — Application of the Term "Country (Geographical Area) Having Specific Liberal Tax Systems", i.e. "Offshore Jurisdiction"

Among the Amendments to the TP regulations was the amendment to the definition of "country (geographical area) having specific liberal tax systems", i.e. "offshore jurisdiction". In particular, according to the Armenian TP legislation, if a taxpayer conducts controlled transactions (which are transactions with related parties, mostly with non-resident persons, and in special cases with related resident persons, and with entities, which are residents of offshore jurisdictions[1]) exceeding overall AMD200 million (approx. USD500,000) annually, the taxpayer is subject to TP regulations and must submit a dedicated notification form to the tax authority on its controlled transactions. Before the Amendments, for identifying whether a country or a jurisdiction might be considered as an offshore jurisdiction or not, a corresponding Government decree was applied, which listed such countries and jurisdictions.

With the Amendments, a definition was included in the Tax Code, according to which a jurisdiction will be regarded as an offshore jurisdiction, if (1) the corporate income tax (CIT) rate in that jurisdiction is lower than 10%, or (2) the CIT rate in that jurisdiction is higher than 10%, but a taxpayer (the non-resident counterparty of the Armenian entity), which is a resident of such jurisdiction, is exempted from or pays CIT with a rate of less than 10%.

The issue with the above-mentioned definition is that it is difficult to apply the second point of the definition to taxpayers and also to the tax authority. In particular, when an Armenian entity conducts a transaction with a foreign non-related entity, it should find out whether that jurisdiction might be regarded as an offshore jurisdiction or not, in order to inform the tax authority of that transaction by filling it in the notification form on controlled transactions. Firstly, the Armenian taxpayer should figure out whether that jurisdiction's CIT rate is lower than 10% or not. If it is higher, which is the more challenging part, he/she has to find out whether the non-resident counterparty is exempted from CIT payment, or maybe pays CIT with a rate of lower than 10%. This information is usually hard to get for regular taxpayers, who are neither part of an multinational enterprise (MNE) nor related to their non-resident counterparties, rather are just working with that non-resident entity and are not able to know whether that foreign entity pays CIT with a tax rate lower than 10%, or are even exempted from CIT. The problem that might arise for taxpayers is that a failure to inform a controlled transaction to the SRC might result in high penalties which will be covered later in this article.

On the other hand, when conducting TP administration, the application of the above-mentioned definition raises issues to the SRC, as well. In particular, when tax auditors want to find out taxpayers who have conducted controlled transactions with offshore jurisdictions, tax auditors should firstly identify the jurisdictions which are regarded as offshore based on the definition of the Tax

1 In this case being related with the Armenian entity does not matter.

Code, and again here comes the difficult part, that is, the application of the second point of the definition. Moreover, as a result of applying the definition rather than the list issued by the Government decree, some jurisdictions became "out of scope", i.e. they were included in the list, but after the Amendments of TP regulations, identification of offshore jurisdictions should be based on the definition and as the CIT rate in some jurisdictions is higher than 10% and there are no preferential tax regimes in those jurisdictions in order for some taxpayers to benefit and pay less than 10% CIT rate, such jurisdictions are not considered as offshore anymore. Also, sometimes in such cases it is difficult for the SRC to identify a controlled transaction with an offshore jurisdiction which was not filled in a notification form. Because, it is challenging also for the SRC to find out whether the Armenian taxpayer's non-related counterparty, which is resident in a jurisdiction having a CIT rate of higher than 10%, benefits from special tax regimes or CIT exemptions or not, in order for that transaction to be considered as a controlled one.

2.2 Issue No.2 — Permanent Establishments and TP Regulations

According to the Armenian Tax Code, permanent establishments (PEs) are considered as non-resident entities, hence the TP regulations have less effect on them. Before the Amendments, the TP provisions did not refer to the PEs. With the Amendments, it was stated that PEs located in Armenia will be considered to have a controlled transaction (generally, types of controlled transactions are supply of goods, alienation of intangible assets, provision (acquiring) of the right to use an intangible asset, provision (getting) of borrowing, sale (acquiring) of a financial asset, assignment/transfer of the right to a monetary claim, performance of works and/or provision of services, and in case of PEs located in Armenia, also cost sharing arrangements), only if the transaction was conducted with the non-resident entity to which the PE belongs. Meanwhile, the PEs located in Armenia do not have an obligation to submit a notification form on controlled transactions. However, starting from 1 January 2024, the SRC has the right to ask an Armenian PE to provide a local file for their controlled transactions with the non-resident entity to which that PE belongs.

However, the above-mentioned regulation left out of scope the transactions that a PE located in Armenia conducts with its other non-resident related parties. This means that if such PE conducted a transaction with its several related non-resident entities, the SRC does not have any grounds to require a transfer pricing documentation and to analyse those transactions.

2.3 Issue No.3 — Deadline and Adjustment Opportunity for Submitting Notification Forms on Controlled Transactions

As mentioned above, according to Armenian TP regulations, taxpayers conducting controlled transactions exceeding annually AMD200 million in total should submit a dedicated notification form on their controlled transactions by 20 April of the following tax year.

Having a deadline of 20 April in TP regulations raised many concerns for the taxpayers, as this date is also a deadline for submitting CIT reports. Although taxpayers have a long period for submitting their reports and TP notifications forms (from 1 January to 20 April), most taxpayers submit them on the 19th and 20th of April. Also, as transfer pricing regulations are still not easily understandable for many taxpayers, they raised several times a suggestion to extend the deadline for submitting a notification form, in order for them not to be overloaded and to have time to identify their controlled transactions and then submit the notification forms after submitting the CIT reports.

It is noteworthy that before the Amendments to TP regulations, there was a symbolic penalty for not submitting the notification form — AMD20,000 (approx. USD50), which resulted in many taxpayers preferring to avoid their obligation to submit a notification form. This problem was fixed by the Amendments, by the implementation of a penalty system, which depends on taxpayers' annual turnover. The penalty has the following schema:

(1) If a taxpayer's annual turnover exceeds AMD2 billion (approx. USD5 million), the penalty would be AMD5 million (approx. USD12,000);

(2) If a taxpayer's annual turnover exceeds AMD1 billion (approx. USD2.5 million) and does not exceed AMD2 billion, the penalty would be AMD3 million (approx. USD7,500); and

(3) If a taxpayer's annual turnover is lower than AMD1 billion (approx. USD2.5 million), the penalty would be AMD1 million (approx. USD2,500).

The above-mentioned penalty system is unprecedented, taking into account the high penalties for not meeting a deadline, or not submitting tax-related information. Moreover, if the tax authority finds out that a taxpayer conducted a controlled transaction and did not mention it in the notification form, and after receiving a corresponding letter from the SRC would not include it in its notification form, i.e. would not adjust its notification form, there would be a penalty of AMD500,000 (approx. USD1,200).

The TP regulations provide that a taxpayer, after submitting the notification form by the deadline, can adjust it, e.g., add new transactions, and edit filled information, as much as possible, but if the SRC demands a transfer pricing documentation from that taxpayer, the latter is not allowed to adjust the notification form anymore. Here, in practice, an issue arises when a tax authority demands TP documentation from a taxpayer, and then finds out that the taxpayer made a controlled transaction, which is not included in the notification form. In this scenario, the taxpayer is not allowed to (the SRC's IT system would not allow the taxpayer to) adjust information in its already submitted notification form (because of a provision in the TP regulations), to add new information to that non-filled controlled transaction and submit that to the SRC.

Another issue, again related to the adjustments of notification forms, raises from the cases when a taxpayer decides to submit an almost "blank" form (with no information on controlled transactions) by the deadline, in order to avoid potential penalty and then to adjust it by filling the necessary transactions after the deadline. The problem here is that the corresponding provision states that the penalties refer to cases when a taxpayer does not submit the notification form by the dedicated deadline. Several taxpayers comment on this statement that this is a penalty for not submitting the form, and it does not require them to fill it before submission. On the other hand, part 1 of Article 375 of the Tax Code states that if a taxpayer conducts controlled transactions, the amount of which annually exceeds AMD200 million, the taxpayer must submit a notification form. This provision envisages filling the form only in cases when there is/are controlled transaction(s) exceeding the mentioned threshold. After 20 April 2023, the SRC found that around 10 taxpayers submitted "blank" forms in order to avoid the penalty. The SRC came up with a solution for this case which would be covered later in this article.

2.4 Issue No.4 — Legislative Consequences for Not Submitting TP Documentation

As of 1 January 2020, when the TP regulations became effective in Armenia, the legislation also includes provisions on TP documentation. However, before the Amendments, the TP legislation did not envisage any penalty for not presenting TP documentation to the SRC. When the draft of the Amendments was in the elaboration process, the SRC was hesitating whether to include a penalty for not presenting the documentation and for presenting it later than the deadline (30 working days after receiving the corresponding letter from the SRC) or not. The SRC held several consultation meetings with taxpayers, during which several taxpayers expressed that if there was no penalty for presenting the documentation, they would not present it. Under such circumstance, the SRC would have to find reliable comparables for their controlled transactions, make an arm's length range and present it to the taxpayer, after which the taxpayer would decide to whether agree with the SRC, or take the case to the court. Such "uncompliant" statements became the reason for the SRC to include in the draft an unprecedented high penalty for not submitting the documentation — 10% of the controlled transaction's amount, and for not meeting the 30 working days deadline — 0.04% penalty for each day.

Although the provision of a high penalty for not submitting the documentation had a positive impact — in terms of compliance, the application of such penalties became very controversial. The reason is that when the SRC sends a letter for submitting TP documentation in a 30 working days period, the letter is sent via SRC's internal system, which in some cases, because of some technical issues, is not visible to the recipient and he/she may miss the deadline. Moreover, the amount of the controlled transactions in the documentation requested by the SRC may be AMD300 million, AMD500 million, AMD1 billion or even more. If the documentation is not submitted, the penalty would be 10% of the amount of the transactions, i.e. AMD30 million, AMD50 million, or AMD100 million respectively for just not submitting the documentation, which may not include any potential CIT adjustment case. Therefore, the high amount of penalties had a positive impact in terms of compliance, but the practical application may be regarded as not "fair".

3. Possible Solutions to the Armenian TP Legislation's Issues and the New Effective Regulations

Now the SRC is circulating a legislative draft (hereinafter referred to as "the Draft") on amending several provisions of current TP regulations. The Draft will tackle the issues mentioned in this article, solutions of which are presented below.

3.1 For Issue No.1 — Application of the Term "Country (Geographical Area) Having Specific Liberal Tax Systems"

For the problem relating to the practical application of the term "country (geographical area) having specific liberal tax systems", a legislative draft was elaborated, which is under internal procedures for adoption. The Government decree was amended accordingly, which listed countries/jurisdictions regarded as "offshore". The list was applied before the Amendments, while there are two controversial conditions in the current definition. Hence, it was decided to amend the definition and state in the Draft that the list of "offshore jurisdictions" would be covered in the Government decree, and the corresponding decree would be amended to simplify the practical application of the term.

According to the legislative amendment draft to the decree, not only jurisdictions regarded as "offshore" are listed, but certain types of legal forms of foreign companies from certain countries (e.g. LLP, LP in the case of the United Kingdom), which would be regarded as "offshore", are listed as well. The decree could be considered as a simplified guidance to both taxpayers and the tax authority for the application of the 2nd point of the Tax Code's definition of "country (geographical area) having specific liberal tax systems".

3.2 For Issue No.2 — PE and TP Regulations

Permanent establishments, as mentioned earlier in this article, are considered as non-residents, according to Armenian tax legislation. Hence, the TP regulations apply to part of PE dealings (PE-Head office transaction and cost sharing arrangements). By covering only PE-Head dealings, TP legislation leaves the transactions between a PE and its resident and non-resident related parties out of scope. Therefore, the Draft covers the above-mentioned transactions within the scope of PE's attributable income amount. This amendment will give the tax authority a broader understanding of TP-related dealings conducted by non-resident entities' PEs located in Armenia.

3.3 For Issue No.3 — Deadline and Adjustment Opportunity for Submitting Notification Forms on Controlled Transactions

The Draft envisages prolonging the deadline for submitting the notification form on controlled transactions until 30 June. This amendment will be beneficial for taxpayers who have raised the issue of having less time for submitting the notification form, as the current deadline is also the same for submitting profit tax reports. So, prolonging the deadline will provide them more time to identify their related-party dealings and transactions with offshore jurisdictions.

The Draft also covers amendments relating to the provision of the taxpayer's opportunity to adjust the already submitted notification form. The amendments in this regard involve two important aspects. First, submitting a blank notification form before the deadline (some taxpayers understand the provision as a deadline for submitting a form, regardless of its content, and for this reason, several taxpayers present blank notification forms in order not to miss the deadline and not be liable for a penalty) and then submitting a fully filled one as an adjustment to the form will not be acceptable. The Draft states that a submitted blank notification form will not be considered as a submitted one.

Regarding the opportunities to adjust an already filled and submitted notification form, the Draft states that an adjustment is not possible regarding the information on a controlled transaction, if there is a notice from the SRC to submit TP documentation on that transaction. This statement means that if the SRC doesn't notify the taxpayer to present documentation, the taxpayer would be able to adjust the information on the transactions filled in an already submitted notification form at any time.

3.4 For Issue No.4 — Legislative Consequences for Not Submitting TP Documentation

Current provisions on penalties for non- or late submission of TP documentation, as mentioned earlier in this article, set 10% of the amount of the relevant controlled transaction, which is mentioned in the notification form. This provision has not yet been applied in practice as taxpayers, knowing that non-submission of TP documentation could be subject to high penalty, presented them within the deadline mentioned in the Tax Code. Anyway, the application of a 10% penalty (which in some cases might be hundreds of thousands of dollars, or even millions of dollars for larger transactions) seems unfair, as the analysis of TP documentation may not result in additional tax payment obligation for a taxpayer, and in the meantime for taxpayers who are not very large, such a high penalty may even have a negative impact on their business activities.

So, according to the Draft, for not submitting the requested TP documentation within the deadline of 30 working days, the penalty system will be similar to the one for non-submission of controlled transactions, i.e. either AMD1 million, or AMD3 million, or AMD5 million, depending on the turnover of the taxpayer. This suggested amendment is a better system as a compliance measure, for imposing penalties based on the size of different types of taxpayers, rather than a fixed percentage of the amount of the transaction under review.

4. Conclusion

Current Armenian TP legislation has several significant issues, which are covered in this article. The issues relate to the administrative and compliance areas of the legislation. The draft on amending TP regulations is currently under circulation among the Armenian state bodies and might take effect in the upcoming months.

Overall, this article highlights some of the most important issues relating to the Armenian TP legislation and the upcoming amendment provisions, which are intended to tackle them. The legislation is not perfect, and of course the practical application will again uncover new problematic provisions that will need to be further amended in the future. As the practical application of the Armenian TP legislation is in its starting era, the legislation will continue to be amended in order to increase the effectiveness of tax administration, tax compliance and application of the provisions not only for the taxpayers, but also for the tax authority.

25 January 2024
The BRITACEG and ATAF Online Meeting

The Belt and Road Initiative Tax Administration Capacity Enhancement Group (BRITACEG) and the African Tax Administration Forum (ATAF) held an online meeting discussing the operation of the Belt and Road Initiative Tax Administration Cooperation Mechanism (BRITACOM) and the enhancement of tax administration capacity, and exchanging possibilities for future cooperation. ATAF, a partner of the BRITACEG, has been actively participating in the activities of the Belt and Road Initiative Tax Administration Cooperation Forum (BRITACOF) and the BRITACEG, and contributing experience to the development of the BRITACOM. The two sides will further strengthen communication and cooperation, give full play to their respective advantages and resources to expand their influence, and contribute to the joint improvement of tax administration capacity.

28-29 February 2024
BRITACOM Secretariat Attended the 16th Annual Silk Road Tax Forum

The BRITACOM Secretariat sent officials to attend the 16th annual Silk Road Tax Forum, during which the Secretariat introduced the BRITACOM through a keynote speech themed "Building a Growth-Friendly Tax Environment: A Snapshot of the BRITACOM" to present the general picture and progress of the BRITACOM. The two-day meeting provided stakeholders an opportunity to share knowledge and discuss important tax issues for countries in the Silk Road region.

28 March 2024
The Task Force Meeting and the Virtual Seminar on Raising Tax Certainty

The Task Force Meeting on Raising Tax Certainty was held on 28 March 2024. The co-chairs and members of Raising Tax Certainty Task Force, and the BRITACOM Secretariat attended the meeting. The Virtual Seminar on Raising Tax Certainty was preceded by the Task Force Meeting, attracting more than 260 representatives from BRITACOM Member Tax Administrations, Observers, the Advisory Board and the businesses from over 20 jurisdictions.

The Task Force Meeting and the Virtual Seminar on Raising Tax Certainty facilitated the sharing of best practices among BRITACOM parties, helped to improve the outcome of the Raising Tax Certainty Task Force, which will be released at the fifth BRITACOF, and contribute to the building of a growth-friendly tax environment.

April 2024
The Improvement of the Course on "Introduction of Tax Systems"

In order to further improve the quality of the courses, the BRITACEG extensively solicited opinions from all relevant parties and organized experts to review and improve the courses, so as to ensure a more scientific structure, more reasonable settings and up-to-date contents. The improvement of the course on "Introduction of Tax Systems" was completed in March 2024, and all the revised videos were updated on the website of the BRITA·Yangzhou, and used in the new round of online training in early April of 2024.

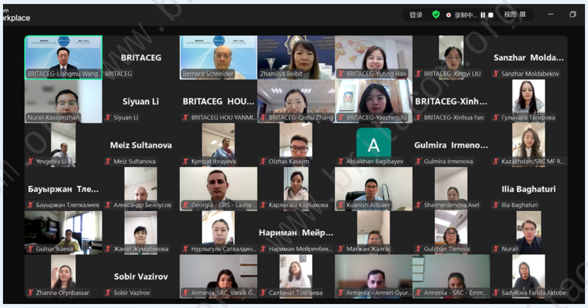
18 April 2024
Embassy Officials Visited the BRITACOM Secretariat

On 18 April, the BRITACOM hosted an event on "Strengthening Communication for Better Trust and Cooperation". At the invitation of the BRITACOM Secretariat, embassy officials in Beijing from the BRI jurisdictions including Kazakhstan, Algeria, Tajikistan, Mongolia, Ethiopia, D.R. Congo, Cameroon, Peru, and Azerbaijan, as well as representatives from international organizations such as the International Bureau of Fiscal Documentation (IBFD), paid a visit to the Secretariat and participated in a round-table meeting on the vision for tax administration cooperation among developing economies.

While marking the fifth anniversary of the BRITACOM, this event aimed to review the evolutionary development of the BRITACOM and embrace a better development vision to promote the building of a pragmatic and efficient tax cooperation mechanism, which would in turn contribute to the establishment of a growth-friendly tax environment.

20-23 May 2024
Online Training Programme Held by BRITA·Astana

The BRITA·Astana hosted a webinar on "International Experience in Tax Administration". This intensive three-day training programme covered a wide array of topics, including the OECD two-pillar solution and its impact on emerging and developing countries, the Mutual Agreement Procedure and Tax Arbitration, as well as the evolving Institutional Infrastructure of International Taxation. The event attracted participation of 125 tax officials from Kazakhstan, Armenia, Tajikistan, and Georgia. In support of this event, the BRITACEG provided an online training platform, ensuring seamless access and participation for all attendees and also invited Professor Bernard Schneider as the lecturer. Professor Schneider is a Senior Lecturer (Associate Professor) in International Tax Law, Academic Director of the Institute of Tax Law, and Director of the LLM in International Tax Law at the Centre for Commercial Law Studies, Queen Mary University of London. His expertise and insights enriched the learning experience for all participants.



May 2024
Visit to Inland Revenue Department of Hong Kong SAR, China and BRITA·Macao

The BRITACOM Secretariat visited AsiaWorld-Expo (AWE) in Hong Kong SAR, China, the venue for the upcoming fifth BRITACOF. During the visit, they engaged in comprehensive discussions with the Inland Revenue Department of Hong Kong SAR, China to discuss the preparation for the fifth BRITACOF. Additionally, the Secretariat made a trip to BRITA·Macao and held a meeting with their counterparts to discuss the advancements within the BRITACEG. Furthermore, the BRITACOM delegation participated in a seminar on "Tax Dispute Resolution" hosted by BRITA·Macao, where they interacted with attendees from Portuguese-speaking countries. They shared insights on the progress of the BRITACOM and the training initiatives of the BRITACEG, fostering a collaborative exchange of information and expertise.

Mid-May to Mid-June 2024
Seventh Tax Administration Theme Day Event

The seventh Theme Day Event of the BRITACOM from Mid-May to Mid-June, focusing on Tajikistan's tax policies, tax administration, taxpayer services, and tax incentives for attracting investment and optimizing business environment, is co-hosted by the Tax Committee under the Government of the Republic of Tajikistan and the BRITACOM Secretariat. The virtual seminar of the event was held on 29 May 2024 with speakers sharing their views and practices on the above-mentioned topics, attended by representatives from the BRITACOM Council Member Tax Administrations, Observers, the Advisory Board, and the businesses. More information about the theme day event could be found on the dedicated webpage of the BRITACOM website (https://www.britacom.org/zt/ThemeDay/SeventhEVENT/).

Contributions Invited

Dear readers and writers,

We highly appreciate your contribution to the *Belt and Road Initiative Tax Journal* (BRITJ), and look forward to your continuous support in the future.

As an official journal sponsored by China Taxation Magazine House in collaboration with the BRITACOM Secretariat, BRITJ is committed to serving as a platform for communication and cooperation among tax administrators, academia, tax practitioners and other stakeholders around the world, and providing strong theoretical support and international reference for tax reform and administration among the Belt and Road jurisdictions.

Given your expertise and reputation in the tax arena, we sincerely invite you to contribute papers to the journal on such themes as tax issues concerning the Belt and Road Initiative, the latest development and reform of tax system and tax administration as well as hot topics in the field of international taxation. Papers written in English with less than 5,000 words and sent in a WORD format would be highly appreciated.

Papers can be sent to britj@britacom.org. For more information, please visit our website: www.britacom.org.

Kind regards,

Editorial Department
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