The Impact of Technologies on Emerging Tax Policy Issues

Digital Economy Taxation Network (DET) Conference hosted by

WU Global Tax Policy Center at

Vienna University of Economics and Business (WU)

Informal summary of the discussions

December 12-13, 2022

Location: Ceremonial Hall 2, LC Building, Vienna University of Economics and Business

DET

Digital Economy Taxation Network Partners

IDB — Inter-American Development Bank

WORLD BANK GROUP

IOTA — Intra-European Organisation of Tax Administrations

CIAT

ADB

CATA

TAX — Institute for Austrian and International Tax Law Vienna — WU Global Tax Policy Center

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Sessions indicated in Central European Time [CET]

DECEMBER 12, 2022	
09:00 - 09:15	**Opening remarks**: Jeffrey Owens (WU GTPC) and Chiara Bronchi (WB)
09:15 – 10:45	**Session 1:** **New technologies and old tax systems: from adaption to transformation**	**Keynote Speaker:** Paul Brody (EY, Global Blockchain Leader) **Panel:** - Chiara Bronchi (WB) - Mike Williams (HM Treasury) - Marcio Verdi (CIAT) **Open debate** **Chair:** Jeffrey Owens (WU GTPC) **Reference document:** *Digital Economy Taxation Network: A Global Alliance to Promote Digital Tax Transformation* Owens, J., Sabina Hodžic´, S., *Blockchain Technology: Potential for Digital Tax Administration*

Issues for Discussion

- How industrial revolutions led to changes in the tax base of jurisdictions?
- How have policy makers in the past responded to this phenomenon in the past (e.g. from land to income taxation)?
- Should policy makers rethink the tax base in the context of ever increasing services that are provided for no monetary compensation (i.e. are 'free') but for compensation 'in kind' that is difficult to put a price-tag on (e.g. data)?
- How to deal with the fact that in the modern economy the marginal cost approaches zero?
- In such dramatically changed economic landscape, how can we apply the traditional concept of value creation and attribution of taxing rights between jurisdictions?
- Will this lead to shift in the balance of power between tax administrations and taxpayers as well as the balance of power between nations?
- How will the Fourth Industrial Revolution transform the way that tax administration approach compliance?

Context for discussion

Each industrial revolutions led to significant changes in economic activity and, therefore, to the tax base that countries can rely upon. The first and second industrial revolutions from the 19th century and the beginning of the 20th century led to new manufacturing processes by means of machine tools and factory processes that have greatly increased productivity per square meter of land used. Hence, there was a shift in relative productivity between land and capital, consequently resulting in profound shifts in domestic tax systems: from taxation of land to taxation of income. The third industrial revolution from the mid-20th century until around the first decade of the 21st century brought the increased

usage of computing power, the interconnectivity via the Internet, and the establishment of global value chains. This exacerbated the importance of intangible assets and posed significant difficulties in attributing taxing rights between the jurisdictions involved in the global value chain.

The Fourth Industrial revolutions is characterized by diminishing importance of the human factor with the wider-adoption of artificial intelligence, potential of radical and swift decentralization by means of the blockchain technology, and ever decreasing marginal costs allowing operators to offer services for no monetary compensation. All of these developments pose fundamental questions to the existing tax systems. Artificial intelligence questions the premise that value creation is ultimately related to people functions. The common endeavor in productive activity by what is ultimately unrelated and therefore decentralized private parties that the blockchain technology allows for is questioning not only the division of taxing rights but also the nature of those who are subject to tax. Finally, the decreasing marginal costs, lack of monetary compensation and the resulting difficulties in delimiting the transactional nature of things makes the accurate establishment of ability-to-pay as well as application of indirect taxes problematic. All of these developments require that tax policy makers rethink the existing tax systems and change the balance of power between tax authorities, taxpayers and between jurisdictions.

<u>Summary</u>

- Resistance often slows innovation, and technology can help speed up the process.

- The taxation system may slow innovation, especially when it needs to be harmonised globally.

- The wealth accumulation is increasing and creating artificial scarcity, leading to fragility and conflict.

- The COVID-19 pandemic has led to an increase in poverty and fragility.

- Taxation must be rethought to redistribute wealth and address these issues.

- The global nature of technology means that cooperation and coordination among different regions are necessary to benefit from technological advancement fully.

- Old technologies and their investors may resist disruption and new technologies.

- The power of technology can be used to track and address issues such as wealth inequality and tax evasion.

- There is a gap between developed and developing countries regarding technology adoption and infrastructure.

- In some developing countries, there are challenges in implementing new technologies, such as blockchain and electronic invoicing, due to a lack of capacity and resources.

- Cyber attacks can disrupt countries that are not prepared to defend against them.

- Taxation systems in developing countries may need more data or infrastructure to collect taxes effectively.

- The Global Forum on Transparency and Exchange of Information for Tax Purposes has established minimum standards for countries to follow, but implementing these standards can be difficult for developing countries.

- Developing countries need to adopt technology and improve their infrastructure to compete globally and address issues such as poverty and inequality.

- Adopting blockchain and artificial intelligence (AI) technologies can improve productivity and efficiency in manufacturing and the service sector.

- These technologies can help companies track their inventory and make better, faster decisions.

- In the future, there may be more significant changes as technology allows for entirely new ways of doing things.
- There are potential ethical considerations in the use of AI, such as the potential for job loss and bias in decision-making.
- Quantum computers may revolutionise specific industries, but their practical applications are still being explored.
- There is a need for regulation and governance in the use of technology, especially in the financial industry.
- There is resistance within the blockchain and cryptocurrency community to the idea of central bank digital currencies due to concerns about surveillance and privacy.
- It can be difficult and resource-intensive to utilise artificial intelligence (AI) and machine learning properly, and there is a potential bias in how these technologies are designed and implemented.
- Some governments have implemented standards for the use of AI, such as the requirement to explain decisions made by the technology in order to prevent discrimination.
- The use of AI and machine learning in the financial industry can lead to efficiencies and cost savings, but there is a need for appropriate regulation and oversight.
- Using AI and machine learning in the tax industry can help with data analysis and fraud detection, but there are also potential risks and ethical considerations to consider.
- There is a discussion about the potential future and popularity of the Metaverse, with some questioning whether it will catch on due to low levels of participation in recent events. There is also a discussion about the role of artificial intelligence in the future and the potential for temporary constraints on resources such as renewable energy and rare earth metals. However, these constraints are likely to be temporary, and humans have a history of increasing productivity and reducing costs in manufacturing. There is also a discussion about the need for international focus and the importance of considering the perspectives of developing countries in addressing global issues.

10:45-11:15	*Coffee Break*

11:15 – 13:00	**Session 2:** **Using digital payments to address the shadow economy**	**Speakers:** Marek Rozkrut (EY) **Panel**: - Philip Mader (ICTD) - Fredy Guayacan (ILO) - Christos Kotsogiannis (TARC) - Rajul Awasthi (WB) **Open debate** **Chair:** Chiara Bronchi (WB) **Reference document:** EY, *Reducing the Shadow Economy in Albania through Electronic Payments*. Dybka, P., Kowalczuk, M., Olesiński, B. et al. *Currency demand and MIMIC models: towards a structured hybrid method of measuring the shadow economy*, Int Tax Public Finance (2019). Dybka, P., Olesiński, B., Rozkrut, M. et al. *Measuring the model uncertainty of shadow economy estimates*, Int Tax Public Finance (2022).

Issues for discussion
- What is the nature of the shadow economy and what is the scale of the problem?
- How do cash payments affect the shadow economy?
- Is the effect of cash the same for all unreported transactions?
- What is the role of electronic payments when consumers act as unwilling 'accomplices' in the non-reporting?
- Would Central Bank Digital Currencies (CBDCs) have an impact on combating the shadow economy?
- How should governments create measures that tackle the shadow economy whilst protecting honest actors from undue burden and not jeopardizing employment?

Context for discussion

The shadow economy has significant economic and social implications. Its adverse consequences include: a reduced tax base leading to lower quantity and/or quality of public goods, distortions in market competition, the degradation of economic and social institutions. A very important common factor for most types of shadow economy is that cash payments allow the seller not to report the transaction. With only a few exceptions, if an electronic payment is used instead of cash, it is different to register a transaction.

The shadow economy can be divided into two main components – the 'passive shadow economy' and the 'committed shadow economy'. The 'passive shadow economy' (having also a significantly larger share between the two) relates to where the consumer is not benefiting from not reporting the transaction and might even be unaware of this fact. The source of the passive shadow economy are generally cash payments. The 'committed shadow economy', refers to instances where both parties to a transaction benefit from evading tax liabilities or engage in transactions to sell/buy illegal products or services. While cash payments still facilitate the committed shadow economy, they are not directly its source.

Understanding the nature and types of shadow economy is key to accurately delimiting the potential measures that may address it. In this sense, measures that restrict cash payments (e.g. mandatory possessing of a POS terminal for some businesses, making wage/social payments only via bank transfers/thresholds for consumer cash payments) are generally more effective in addressing the passive rather than the committed shadow economy. The committed shadow economy requires potentially a more comprehensive approach as it might circumvent some cash restrictions – e.g. have a cash payment above the threshold in another jurisdiction where no restriction exists, while in other instances does not require cash at all – e.g. utilizing offshore banks or perform transactions in cryptocurrencies on decentralized exchange platforms. In this context, it is important to understand how new technologies such as the Blockchain can contribute towards building tax systems that are based on the compliance by design principle thereby driving private parties in the formal economy.

Summary

- There are benefits of digital payments in addressing the shadow economy, which is defined as a non-observed economic activity that is often conducted to avoid paying taxes or official scrutiny. This includes unregistered and informal activities, as well as illegal activities. The speaker researched this topic for the past eight years, resulting in 50 studies in 35 countries. The speaker focused on using cash in shadow economy transactions and how digital payments can make it more difficult to hide these transactions. The speaker also discussed the potential benefits of digital payments in addressing the shadow economy, including increased tax collection and reduced tax evasion and money laundering opportunities.

- The concept of the shadow economy and how it can be addressed through digital payments. The shadow economy refers to unreported economic activity and includes legal and illegal transactions. It is often associated with using cash payments, making it easier for sellers to hide transactions and avoid paying taxes. The research showed that digital payments could be an effective policy measure for addressing the shadow economy, particularly in cases where the consumer is a passive participant in the transaction. The methods for estimating the size of the shadow economy and the importance of distinguishing between different types of non-monetary economic activity were discussed.

- The concept of the shadow economy refers to economic activity that is not reported or recorded officially. It was explained that the shadow economy could be broken down into two components: the active component, which refers to activities that are undertaken intentionally to avoid paying taxes or to hide the transaction, and the passive component, which refers to activities where one of the parties involved is not aware that they are participating in a shadow economy transaction. It was also discussed how digital payments can help to address the shadow economy by making it more challenging to hide transactions and how different policies, such as tax incentives and digital payment obligations, can be used to encourage the adoption of digital payments and reduce the shadow economy.

- Various measures can be taken to address the shadow economy, including tax incentives for consumers and merchants, enforcement mechanisms, and digital payments. The shadow economy, or the economic activities

outside the formal, tax-compliant economy, can negatively impact government revenues and fairness among businesses. The importance of considering policy measures' context and long-term effects and the potential for technological solutions such as QR codes and incentives for reporting fraudulent transactions were highlighted. Also, there is a role for good institutions and the need for flexibility in adapting to new technologies and learning from experiences in addressing the shadow economy.

- In summary, addressing the informal economy and increasing compliance with taxation and social protection measures is essential for governments, particularly in developing countries. Micro and small enterprises, which comprise a significant portion of the informal economy, often need help with compliance due to complex calculations and a lack of knowledge or means. Entry-level mechanisms, which combine tax and social protection contributions and adjust them based on actual revenues, can help simplify the process and incentivise compliance. It is also essential for governments to provide value-added services and advocacy to these enterprises to increase trust and make the formal economy more attractive. A sound inspection system is also necessary to ensure compliance and fairness.

- Several topics related to digital payments and the shadow economy, including the efficiency of policy measures, the role of central bank digital currencies and cryptocurrencies, and the challenges micro and small enterprises face in compliance with tax and social protection contributions, were discussed. It also touches on the issues of accessibility and privacy in digital payments and the increasing complexity and prevalence of online fraud. The use of fiscalization measures, such as digital cash registers and real-time data transmission, is also discussed to reduce the shadow economy. However, the compliance burden on businesses and the need for harmonisation among different countries' requirements are challenges. The importance of understanding the context and characteristics of different economies, the role of institutions and the need for flexibility in adapting to new technologies is also emphasised.

- Also, the use of cash versus digital payments, the challenges of online fraud for businesses, the issue of tax compliance for small and micro enterprises, and the difficulties of complying with multiple fiscalization requirements for businesses operating in different countries. It is mentioned that the COVID-19 pandemic has accelerated the shift towards digital payments but also highlighted the importance of ensuring accessibility and traceability in payment systems, particularly in developing countries where access to the internet may be limited. The role of mobile phone penetration in facilitating digital payments is also discussed. It is emphasised that simplifying and harmonising requirements can reduce businesses' burdens and encourage compliance with tax and social protection regulations. Building trust and providing value-added services to businesses can be a way to incentivise compliance.

- The importance of addressing inequality and providing social protection measures for workers in the formal and informal economy, especially in the wake of COVID-19.

- Some countries use entry-level mechanisms that combine tax and social protection contributions and are adjusted to micro and small enterprises' real-life situations and revenues rather than upfront payment based on expected revenues. These mechanisms aim to increase compliance, trust in the government, and the rule of law while providing enterprises with business development and social protection services.
- The increase in online fraud and the need for businesses to implement fraud prevention strategies and allocate resources towards detection.
- The burden of compliance for businesses due to the fragmentation and need for harmonisation of legal requirements for fiscalization measures such as digital cash registers and real-time data transmission to tax authorities.
- The importance of mobile phone penetration and communication networks in facilitating digital payments and tracking transactions.
- The negative impact of informality on Social Security collection as informal sector workers may not pay taxes or contribute to Social Security. However, it may still demand these services from the government.
- Using presumptive or base systems, such as the Brazilian "MEI" system, simplifies compliance and brings informal enterprises into the formal sector while avoiding the mistakes made with previous systems.
- The use of digital payments and the challenges and benefits of reducing the shadow economy, mainly regarding tax collection, was discussed. One challenge for businesses is the increasing complexity and prevalence of online fraud, which requires additional resources for prevention and detection. Another challenge is the fragmentation of fiscalization requirements across European countries, which places a significant compliance burden on businesses. Incentivising the use of digital payments and addressing the issue of accessibility and traceability can help reduce the shadow economy and increase government revenue. Mobile phone penetration and the ability to access digital and analogue networks can facilitate the use of digital payments and improve traceability. Presumptive tax systems and simplification of compliance requirements can also encourage formalisation. The impact of the shadow economy on social security collection and the importance of considering the specific context and characteristics of different sectors and businesses in the design of interventions were also discussed.

13:00 - 14:30	*Lunch Break*

14:30 - 16:30	**Session 3:** **The future of labour taxation, the brain drain phenomenon and alternative sources of revenue**	**Speaker:** Svetislav Kostic (University of Belgrade) **Panel:** - Jonathan Leigh-Pemberton - Ivan Lazarov (WU) - Joy Ndubai (WU) **Open debate** **Chair:** Jeffrey Owens (WU GTPC) **Reference documents:** Kostic, *In Search of the Digital Nomad – Rethinking the Taxation of Employment Income Under Tax Treaties*, WTJ (2019). Kostic, *A Plea for a Workforce Presence PE Concept in Post-Covid Digitalized World*, Intertax (2021). Jousten et al, *Labor Taxation in the Western Balkan: Looking Back and Forward*, IMF (2022).

Issues for discussion

- Taxes on labor can account for significant tax revenues especially in developed countries: does the changing nature of labor markets risk undermining this source of revenues? Does tax competition affect personal income taxes? Which countries are most affected?
- What alternative sources of revenue are available?
- What is the dividing line between employment and self-employment? How self-employed individuals' tax compliance can be increased?
- How does remote working affect the local labor markets and countries revenue objectives?
- Can there be 'harmful' tax competition when it comes to personal income taxes?
- Are the international tax rules that govern taxation of employment/self-employment income apt for the realities of the 21st century?

Context for discussion

Personal income and payroll taxes form one of the most significant proportions in countries' tax revenue. However, the ever increasing mobility of high-skilled labor and high-net-worth individuals poses challenges not only to the capabilities of jurisdictions to raise revenue but also to their overall economic development and possibilities to develop high-value-added sectors of the economy such as R&D. Besides, in regional economic blocks that guarantee the unimpeded movement of workers such as the European Union also low-skilled labor is increasingly more mobile further straining the domestic wage tax base. Moreover, the gig-economy has led to moving away from formal employment and into self-employment where tax compliance is more difficult to ensure.

The ever increasing mobility of labor increases the tax competition in attracting/retaining labor force between jurisdictions. When engaging in this competition, countries need to strike a balance between their revenue objectives and their long-term visions for economic development. This is especially true for less developed countries that are still struggling to provide public goods that are perceived as adequate to the tax 'price-tag' they impose. Moreover, the

increasing possibilities for remote working triggered by the Covid-19 pandemic, decrease on the one hand the competitiveness of local employers in developing countries (that now need to compete with foreign employers without a physical presence that engage the local labor force remotely), while at the same time decreasing the wages in developed countries (where the local labor force competes with the 'cheaper' foreign remote workers). This comes hand-in-hand with an increasingly blurred lines between employment and self-employment, making it difficult to distinguish between genuine self-employment, false self-employment (de facto employment relationship) and grey cases where for instance there is relative independence but heavy reliance on a single client.

The above issues pose questions not only to domestic tax policy but also to the attribution of taxing rights principle under Double Tax Treaties. In the context of remote working (where the wage costs will be deducted in a jurisdiction different from the one where the employee is resident) and mobile labor (where upon immigration the employee will be a resident but with very weak allegiance to the recipient country), the principle of taxation based on residence or significant physical presence by the employee seems outdated. Neither the benefit principle nor the political allegiance principle can unequivocally support the currently existing international tax rules.

Summary

- The concept of digital nomads is people who choose a lifestyle of travel and work remotely using modern technology. The emergence of the global employment market, driven by platforms, has changed the traditional understanding of employment and the concept of a fixed place of work. The panel addressed issues related to government policies, the impact on mobility and salaries, and the complex phenomenon of digital nomads and their various aspects. The impact of modern technology on the ability to work and travel and the changing concept of employment is enormous. Furthermore, there is the potential for another great migration of people and the need to ensure a feasible society in the face of climate change.

- There are benefits of using global technology platforms for employers to access a global talent pool and hire remotely, which can lower costs and increase profitability. These platforms allow businesses to hire people from abroad without bearing the burden of compliance or immigration obligations and do not require office space or additional expenses to meet specific standards. Remote work also allows businesses to hire on a delivery basis rather than a time basis and to make the most of location-specific advantages by hiring locally at lower wages in specific locations. However, there are also potential downsides to remote work, including tax avoidance and the potential for conflict over wages in different locations. The speaker also discussed the impact of COVID-19 on the prevalence of remote work and the potential for widespread adoption in the future.

- The impact of modern technology and platforms on the traditional categories of employees and independent contractors was discussed. The emergence of a third category of "intermediary workers" or "gig workers" has led to challenges in the application of labour and tax laws, as it is often unclear if an individual can be classified as an employee in situations where they do not have a traditional employment contract or office space and work exclusively for one client. The speaker discussed the potential for a business model with zero employees, in which all necessary services are provided through a platform and engage a global labour force, which can lead to issues with profit allocation and the withholding of salary tax and social security contributions in the countries where

the labour force is located. The speaker also discussed the impact of this business model on financing public goods and the potential for income inequality and social cohesion issues.

- The challenges and implications of globalisation, technology, and demographic changes on the global economy and tax systems were discussed. The speaker discussed the trend of declining birth rates and ageing populations in many countries and the potential for these factors to lead to changes in tax legislation to attract or retain talent. The speaker also discussed the potential impact of artificial intelligence on the global economy and the importance of considering the purpose of taxation in addressing global issues such as migration, demographics, and climate change. The speaker suggests that a multilateral approach may be necessary for addressing these issues and finding solutions that benefit humanity.

- The panel discussed the impact of remote work and global technology platforms on employment and tax compliance. The speaker discussed the potential for businesses to hire individuals from anywhere in the world as contractors, which can lead to tax avoidance as the employer may not be required to pay certain taxes or comply with immigration obligations. The speaker also mentions the potential for businesses to engage with workers through platforms, which can further complicate tax compliance and the employer's identification. The impact of demographic shifts, including declining fertility rates and ageing populations, on tax systems and the need for multilateral approaches to addressing these issues is also needs to be considered. Finally, the speaker discussed the importance of considering the purpose of taxation and the potential for tax laws to be sidestepped through the use of contractors or platform-based employment.

- The panel discussed the role of top management in making decisions about the tax treatment of a company moving to the UK. There is tax competition and the need for debate and analysis of the conditions that attract talent. The concept of "no taxation without representation" is also needs to reconsidered. The panel also touched on the idea of digitalisation, the potential for some activities to move away from physical ones, and the growth and potential danger of other continents, particularly Asia and Central and Eastern Europe. There is also mention of the need to consider the mood and logic of approaches and the impact of working-age populations on contracts.

- The relationship between taxes and the economy and the idea that taxes should be tailored to the reality of life rather than shaping the reality around taxation is crucial. There is mention of the influence of financial institutions and the need to consider tax as part of the solution once the issues at hand have been defined. The panel also touched on fiscal constraints and the need to think more critically about tax issues. Also the potential for debt to be eliminated through inflation and the importance of thinking about employment and self-employment concerning taxation were highlighted. The link between retirement and the need to ensure that pensioners are not living in poverty needs to reconsidered. There is a discussion of the importance of protecting the social state

and the idea that capitalism and ownership rights need to be viewed from a new perspective to ensure societies' survival.

- The panel discussed the potential for foreign workers to be favoured over locals in certain situations and the potential negative consequences of this dynamic. There is mention of the need to rethink the tax system and consider equalising the treatment of employment and self-employment, as well as the potential for technology to enable real-time payment of taxes by businesses. The panel also touched on the history of tax policy changes in response to civil unrest and the idea of rebalancing the taxation of labour and capital, particularly in the developed world. The potential for wealth and inheritance taxes could be problematic. The panel also discussed the potential for decision-making processes to be informed by data, particularly concerning the distribution of wealth.

- The panel discussed the challenges of compliance with tax laws, particularly in developing countries. There is mention of the need to simplify the tax system and create more certainty to facilitate compliance. The use of technology, such as mobile apps, is suggested as a way to improve accessibility to the tax system. The panel also touched on the idea of reducing the complexity of the tax system in order to make it more accessible and the importance of understanding one's tax liability to comply with tax laws. There is mention of the shadow economy and the potential for recycling schemes to reduce the size of the informal economy. The panel also discussed the importance of communication and transparency in the tax system and the potential for taxes to be used as a tool for social policy.

- This panel discussed tax systems and their effectiveness, particularly in developing countries. Some points mentioned include the importance of investing in administrative infrastructure and cultural integration to improve compliance with tax systems, the role of an independent judiciary in protecting taxpayers and providing fair resolution to tax disputes, and the potential for technology to facilitate simplicity and accessibility in tax systems. It is also mentioned that the tax systems of developed countries like the UK and Austria have functioned well due to their solid administrative infrastructure and independent judiciaries. The discussion also touched on the historical and cultural factors that can impact the effectiveness of tax systems and the challenges that developing countries may face in implementing and enforcing effective tax systems.

- The challenges and potential solutions for improving the efficiency and accessibility of tax systems, particularly in developing countries, are also crucial. One potential solution discussed is using digital technology, such as mobile apps, to facilitate tax payments and compliance. Another solution mentioned is simplifying tax policies and legislation and involving non-tax professionals in creating and interpreting these policies. The importance of a solid and independent judiciary in protecting taxpayers' rights and ensuring fair enforcement of tax laws is also noted. The conversation also touched on issues such as the shadow economy, the concentration of wealth among elderly populations, and the need for tax systems to be fair and equitable for all individuals and businesses.

	• The panel discussed the use of technology in taxation and the importance of simplifying the tax system to improve compliance and make it more accessible to taxpayers. It also touched on the issue of migration and the challenges of taxing cross-border activity. The importance of data governance in the tax system is also highlighted, with the need to ensure that tax authorities have access to the correct data to assess liabilities accurately and enforce compliance. The historical division between personal and corporate income taxes may no longer be relevant, and there is a need to adapt to changing models to tax cross-border activity effectively. Investing in the administrative infrastructure to support effective taxation is also emphasised. Finally, the panel discussed the challenges of dealing with tax evasion and the need for strong political will to tackle the issue.
19:00 – 22:00	**Social Event – Dinner at Fuhrgassl-Huber (Traditional Viennese Restaurant)** **Sponsored by the Mayor of Vienna** Pick up of transfer in front of Bassena Hotel

DECEMBER 13, 2022		
09:00 – 10:30	**Session 4:** **Evolution of existing tax systems – applying new technologies to existing processes in making them more efficient**	**Speakers:** Robert Risse (WU) **Panel:** - Peter Fettke (DFKI) - Paolo Valerio Barbantini (Revenue Agency, Italy) - Andrew Bohnet (Innovate Tax) **Open debate** **Chair:** Jeffrey Owens (WU GTPC) **Reference document:** Risse, *Innovative Systems: Blockchain Technology*, Lecture Charts

Issues for Discussion

- How to determine the appropriate technology to be applied by tax administrations, taking into account their maturity level?
- How tax authorities are applying AI in Europe?
- How to perform risk management by process mining?
- What is the importance of process mining as a newly invented technology to get a near real-time evaluating for tax compliance?
- What is the role of international and regional organizations in supporting or driving their Member States to evolve their tax systems in the digital age?
- Should there be a cost/benefit analysis taking into account the interest of businesses and how can data be obtained from the private sector more efficiently?

Context for discussion

Over the recent years, tax and customs administrations have incrementally adopted new technologies in their respective fields. While the approach has been mainly evolutionary rather than revolutionary, significant efficiency gains have been achieved by some jurisdictions.

At the same time, different countries are at a very stage of their digital maturity. Therefore, different technologies are being investigated and employed. Some jurisdictions have successfully deployed artificial intelligence or process mining for moving towards advanced risk based enforcement actions or even real-time evaluation for tax compliance. Other jurisdictions are at an early stage in the digitalization of tax processes. In this sense, there are significant lessons to be learned between jurisdictions (and even between different governmental authorities within the same jurisdiction). Such exchange will aid in determining the appropriate technologies to be applied by tax administrations, taking into account their digital maturity level.

Finally, the role of international organizations, such as the UN, OECD, WCO or regional organizations such as the EU, in aiding jurisdictions to deploy efficient and interoperable systems cannot be overstated. This role is especially prominent in areas of tax law with a cross-border element such as VAT, withholding taxation or custom duties. Same holds true for businesses that are eventually the source of data to be processed by tax administrations. In this sense, the increased

volume and data that businesses have to provide (and has its costs) needs to have a corresponding benefit at the level of governments that makes the whole exercise worth it.

Summary

- There are a number of relevant technologies that are currently utilized by tax administrations. Some of these include AI, Process Mining, Natural Language Processing, Big Data Analytics, and the Blockchain technology. The presentation focuses on AI and Process Mining as possible tools for tax administrations in assisting their functions.

- The AI is utilized by a number of jurisdictions – i.e. 17 EU Member States are currently using AI algorithms for tax processes in four main areas: (i) Taxpayers' assistance whereby Ai is substituting a human tax officer in replying to questions by taxpayers; (ii) Data collection whereby AI is assisting for collecting taxpayers' information from social media, e-commerce and e-sharing platforms in order to match it with the information available to the tax administrations; (iii) Tax Risk detection where AI is assisting in outlier and anomaly detections, and (iv) Risk Management where algorithms predict non-compliance.

- There are several issues related to application of AI by tax administrations: (i) the explainability of AI where tax authorities must be capable to ground their decisions and explain how a given outcome has been reached in view of future disputes, (ii) reliability, especially when the AI produces direct legal effect on individuals, (iii) responsibility, making it clear who bears the responsibility in case of failure, deciding between the person who employed the AI, the person who programmed it, or the one responsible for cleaning and checking the datasets, and (iv) quality of data, where it is important to differentiate between the two data sets – the one used for training the system and a second one used in actual processing.

- Another powerful tool is process mining where operational and tax processes are identified and permanently monitored in the regular course of business. The classic process mining generates process maps that create business insights for process improvement. An example of process mining technology that detect anomalies is for example a system that follows closely VAT compliance and can demonstrate any deviation from the most frequent turn of events – e.g. a mistake in the VAT Reg No. In this sense, process mining picks up instances where something was changed by mistake in a process as compared to (for example) the commercial terms of a contract.

- Thus, process mining allows converting tax laws into processes and then audit the processes that are put in place. This allows highlighting inefficiencies and their casues in the different steps.

- To successfully apply process mining tax authorities must have continuous access to taxpayer's data. However, under existing rules, tax authorities are rarely or even never allowed to have such real time access.

- During the discussion it was pointed out that the tax authorities and the taxpayer must work together in determining tax compliance which presupposes access to high quality data. Process mining might work only if your input information is correct.

- However, process mining would capture deviations in case of internal risk. External risk is affecting the business entirely and there is nothing you could discover by means of process mining. Moreover the idea works at the premise that the process is already compliant in the first place. Each new instance a business is exploring brings about a need to start from scratch and make the process compliant (e.g. having a new supplier). In this regard, an area of cooperation between the tax administration and taxpayer might be certifying the compliance of processes.
- The question arises who is to be held responsible in case of a mistake. In case we agree on a model between the tax administration and the taxpayer, there should be a safe harbor.
- Tax administrations need to cope with their ability to detect fraud and the prohibition to take decisions on making fully automated decisions which have a negative effect for the taxpayer.
- Some of the Big 4 use algorithms that analyse databases – it connects the topic you write on with all jurisprudence there is. This is the future of working in tax.
- There is a different level of speeds at tax authorities – e.g. German tax authorities are not allowed to plug-in their systems in a system of a taxpayer (unlike the Dutch authorities) – driven also by legal barriers.
- Italy: recently a completely new strategy was adopted. They have a hybrid model (some TA have centralized model/decentralized model) – in Italy there is a central structure for risk analysis (50-60 data scientists), while at a regional level there are simpler but less performing tech tools. Important to have a good data management approach – now they have a data lake and 3-4 tools. Sometimes the AI would provide a different risk profile based on race/sex/religion but they of course cannot use that. The false positives is below 0.53% and they managed to raise 2.8 billion EUR. Also, they have managed to block a significant proportion of fraudulent Covid benefits. Besides, they have used AI to estimate the VAT gap and use the findings to plan their activities (e.g. knowing in which sectors the gap is the biggest).
- How developing countries can utilize some of these? Smaller countries are capable because they don't have legacy systems. Many of the platforms are available and not expensive. Data collection must be formalized.

| 10:30-11:00 | *Coffee Break* |

11:00 – 13:00	**Session 5:** **Platforms: the new tax collectors in the European context**	**Speakers:** Nevia Cicin-Sain (WU) **Panel**: - Barbara Edelmann (Bitpanda) - Miglė Kučnerė (Vinted) - Jan Loeprick (IMF) - Aleksandra Bal (Stripe) **Open debate** **Chair:** Jeffrey Owens (WU GTPC) **Reference document:** J. M. Vázquez and N. Čičin-Šain, *Tax Reporting Obligations imposed on Platforms in relation to Sellers in the Sharing and Gig Economy* in 'The Implications of Online Platforms and Technology on Taxation', IBFD GREIT Series (forthcoming). VAT in a Digital Age: Proposal by the EC

Issues for discussion
- What is the European experience in the role of intermediaries in tax reporting and collecting?
- How does this fit in the global debate? Should platforms become collection agents also for direct taxes?
- Is there space for unilateral domestic action by the Member States or the matter should be exclusively regulated at EU level?
- Is the EU framework effectively enforced against intermediaries, established in third-countries?
- What are the next steps and are there further sectors that the EU legislator should look at?

Context for discussion

Europe is taking the regulatory lead when it comes to relying on third-parties for tax reporting purposes. Several consecutive amendments of the Directive on Administrative Cooperation (DAC), namely what is referred to as: DAC 6 (that targets tax intermediaries such as tax advisors), DAC 7 (that targets online market places), and the upcoming DAC 8 (that will target exchange platforms for crypto-assets), all look at utilizing third parties with sufficient information on taxable events for the purposes of delivering high-quality data of taxable events to tax authorities. In the area of VAT, the EU framework goes even further than mere collection and exchange of information by deeming e-commerce platforms as 'suppliers' in B2C transactions when EU customers are involved leading to profound VAT obligations for such platforms that stem from that.

While the increasing reporting obligations aim to ensure tax transparency, if misplaced, they might also unduly undermine Europe's competitive position on the global market. This would be especially the case if intermediaries that are not established in Europe but compete with European companies fail to comply with the same obligations, even if de jure the rules are equally applicable. Moreover, if harmonization measures provide multiple options for the different Member States when it comes to implementation, do not harmonize sufficiently data standards or lead to overflowing tax administrations with information they have no technical capacity to reasonably process, then the regulatory burden on the intermediaries might outweigh the benefit of the increased transparency. In this sense, the international alignment of standards, both legal and technical, might be the key component to creating a level-playing field, as opposed to unilateral action by jurisdictions.

Summary

- Tax policy relies on platforms for performing a number of tasks in ensuring tax compliance. This includes not only collecting relevant information about taxpayers who are operating on the platform but also education of taxpayers concerning tax compliance as well as direct revenue collection in some circumstances (e.g. where the platform is considered to act as a deemed supplier).

- The EU approach to platforms diverges depending on whether the matter relates to direct or indirect taxes. In VAT, platforms are not only obliged to comply with information collection obligations but also to act as tax collectors when the conditions for that are met. In direct taxation on the other hand, platforms act as mere information collectors under the DAC 7 regime. Moreover, while the VAT e-commerce package relates to information about transactions, DAC 7 relates to information about sellers and income. It seems unlikely that in the foreseeable future there would be a convergence of the two regimes.

- When it comes to VAT, 67% of the e-commerce in the EU is performed via only three platforms and specific rules apply. As long as the platform facilitates the transactions in a B2C scenario for VAT purposes two factious supplies are created – first one B2B (supplier to platform) and a second one B2C (platform to customer). It remains irrelevant whether the e-interface is established in the EU or not. Under a recent proposal the regime is expanded to further types of supplies – e.g. short-term rentals and passenger transport.

- DAC 7 relates to the income tax obligations arising for suppliers of goods/services via platforms and generally is similar to the OECD initiative in the area. However, in terms of substantive scope the EU measure is broader as it encompasses also sale of goods and rental of means of transport. Under both the OECD and EU initiatives, a Reporting Platform Operator is a platform that is either incorporated under the laws of or has its place of management (including effective management) in a country which is part of the agreement (in case of the EU - an EU Member State). Difference is that EU also includes non-EU platforms that have a permanent establishment in an EU Member State or, alternatively, where none of the aforementioned conditions have been met, platforms that facilitate the carrying out of a Relevant Activity by Reportable Sellers or the rental of immovable property located in a Member State. These non-EU Platform Operators must register in a Member State. It remains questionable how easy to enforce to third-country operators would be the EU DAC 7 obligations.

- There have been ideas to provide different rules for SMEs in order to reduce the bureaucratic burden on small platforms and allow non-monetary or non-remunerated activities to be left out of scope. Eventually the idea was disregarded to avoid 'bunching'.

- The ever increased amount of information exchanged between the tax authorities under DAC 7 creates increased risks of data breaches, especially in light of the fact that sensitive information is being processed – e.g. date of birth, place of birth, etc.). Further, automatic EoI increases the risks of data leaks from the weakest spot in the

chain. Hence, DAC 7 provides for a possibility to suspend EoI in case of data breaches, alongside an obligation for Member States to report such breaches.

- What is the US perspective on all that?
  - The US is quite different. The compliance environment of US is very different. The US has adopted rules – in the EU the platform is the deemed seller. In the US the platform is required to collect tax but the seller remains the seller. In the US the rules started from goods, with some states extending it to services, and quite some states also requiring accommodation platforms such as AirBnB to collect. Sales tax is levied not only by states but also by counties and districts. Therefore, many states are expanding beyond sales tax as this is a way to raise revenue at a regional level. This of course is a big problem for platforms that act across the entire country. Also, in terms of product liability – in some states the platform is liable for any defective products.
- Some platforms and sellers in the EU face practical problems as for example in some instances a personal item is sold and there is no profit. However, when one triggers the scope of DAC 7 it does not matter any more if there is any tax due at all. Moreover, as far as a transaction is facilitated by a platform a deemed supply rule would apply and VAT might be eventually due even if it would not have been due if the sale is done traditionally – e.g. garage sales. This raises concerns regarding potential double taxation regarding second hand items and the distortions this might entail. It is a way of going around high VAT thresholds but one might want to focus the discussion on whether VAT thresholds are necessary in the first place rather than how to go around them when already in place.
- It is also important to stress on the ways in which platforms can cooperate with tax administrations, especially with respect to technological interoperable tools that are not necessarily present in all cases. Furthermore, the question always remains what tax administrations are doing with all the information collected and if the answer is 'very little', it remains dubious whether the measure requiring collection was proportional in the first place.

13:00 - 14:30	*Lunch Break*

14:30 - 16:00	**Session 6:** **The role and future of tax governance in a digital tax environment**	**Speaker:** Irma Mosquera Valderrama (University of Leiden) **Panel:** - Nick Davies (ICC Centre for Digital Trade and Innovation); - Shakeel Khan(UK HMRC); - Edwin Visser(PwC) - Rajul Awasthi (WB) **Open debate** **Chair:** Jeffrey Owens (WU GTPC) **Reference documents:** OECD, *Tax Administration 3.0: The Digital Transformation of Tax Administration* Nogueira, *Tax Administration and Technology: From Enhanced to No-Cooperation?* in Digital Transformation of Tax Administrations.

Issues for discussion

- Which are the relevant stakeholders in establishing successful governance framework in a digital tax environment?
- Does the decentralized nature of Industry 4.0 change the relative influence of stakeholders?
- What are the center pillars of a potential governance framework?
- Should such a framework be pursued unilaterally, regionally or globally by countries?
- How can the tax community engage with the technology community in developing new governance frameworks?
- What might be the appropriate forum for a discussion between the stakeholders? What is the role of the DET in that?

Context for discussion

The question of the governance in a digital tax environment requires to establishing shared guiding principles, fundamental rules, procedures and technical standards that can be agreed upon by the relevant stakeholders. In the context of tax governance, these stakeholders are limited to the governments but also include the private sector, civil society organizations, as well as research and academic institutions. In this sense, and given the fact that the tax governance standards must deal also with substantive matters such as the self-restrained that public authorities should exercise in order to guarantee fundamental values such as protection of taxpayers' rights or the rule of law, it is not self-evident that inter-governmental organizations acting alone and without the active involvement of other stakeholders in designing the rules are best suited to provide the forum for such a discussion.

The digital tax governance requires the involvement of private actors and ecosystems for which it is not immediately obvious that the tax question matters. A good example in this regard is the cryptocurrencies and NFTs ecosystems. Therefore, engaging these communities requires finding an adequate and neutral forum. **Moreover, there is a need for a sound institutional framework in terms of the legitimacy of the outcomes.**

Summary

- The institutional framework on tax governance is potentially changing with the new role that the UN is trying to assume. This would potentially also have implications on the digital tax governance framework. Besides the international organizations involved also a number of supranational (EU) and regional organizations (e.g. ATAF, CIAT, etc) might play a role.

- The issues of governance revolves around the rules that apply when tax administrations benefit from new technologies, as well as the potential challenges and their resolution in this regard. This involves answering the questions of who owns the data, as well as how this data is processed and used in light of the right to privacy. The more general governance issues concern the issue of how tax administrators benefit from the data that is collected and whether there is a difference in this benefit between developing and developed countries. In general, the issues requires striking a balance between promoting transparency and compliance vs the privacy and data protection.

- The pillars of the digital governance framework contains: (i) sound institutional framework; (ii) the process of decision making by tax administrations and its transparency accountability and security; and (iii) utilizing the transforming capabilities of digitalization leading to improved services and implementation tools via modernization.

- Another issue concerns whether the governance standards must be set at a domestic, regional or global level. For example, many of the data protection standards around the world are modelled on the 1995 Data Protection Directive which is regionally in the EU currently out of date. It remains to be seen whether the GDPR could take its place as a global standard and what would be the implications of this for developing countries.

- As long as global standards are concerned, one needs to be aware of the Council of Europe Convention for the Automatic Processing of Data including Big Data. It is a binding instrument from 1981 which since 2001 contains a protocol allowing access to third countries (e.g. non Council of Europe members) – it is currently in force also for Argentina, Cabo Verde, Mauritius, Mexico, Morocco, Senegal, Tunisia and Uruguay. The instrument provides definition for both personal data and automated data file. Another instrument in this respect are the soft-law 2017 Guidelines on data procession and personal data flows. The guidelines require that a privacy by design and privacy by default principles are applied in the sense that standard configurations are set in a privacy friendly manner.

- The role of the DET in this process can have several dimensions: (i) discuss how to apply the Council of Europe convention in the area of tax; (ii) address the implementation of GDPR standards by non-EU countries; (iii) alongside other stakeholders work on what is needed by developing countries in utilizing new technologies.

- It was once again discussed that the new rules on EoI and domestic regimes provide for an abundance of data that is however not properly used without the necessary technological tools.

	• Especially in developing countries this increases the risk of data theft and misuse. Many countries are looking for tech service providers to solve these issues. Sometimes the potential solutions might entail additional costs. • Costs might be mitigated by utilizing cloud servers but different countries have different approaches. For example, while some EU countries are progressive in this regard, others see using such services as a danger to their tax sovereignty and governmental control over privacy.	
16:00 – 16:30	**Coffee Break**	
16:30 - 17:45	**Session 7:** **The new balance in the relationship between taxpayers and tax administration**	**Speaker:** Christina Dimitropoulou (WU) **Panel:** - Luisa Scarcella (ICC Centre for Digital Trade and Innovation) - Alix Perrignon de Troyes (IOTA) - Paolo Valerio Barbantini (Revenue Agency, Italy) **Open debate** **Chair:** Chiara Bronchi (WB) **Reference document:** Kuźniacki et al, *Towards eXplainable Artificial Intelligence (XAI) in Tax Law: The Need for a Minimum Legal Standard*, WTJ (2022).

Issues for discussion

- How automated tax enforcement changes the relationships between tax administration, taxpayers and the state and what does that mean for the tax governance model of the future?
- What is the key difference of a blockchain based automated decision making in tax processes and other AI-based automated decision making in the public sphere?
- How could automated tax enforcement be practically implemented in light of the nature of law and legal principles? What are the limits of transposing legal reasoning into computational logic?
- Is it possible/desirable to standardize legal rules? Would that mean the end of rules and standards and the introduction of the concept of formalization of law?
- How tax discretion is affected in a blockchain based automated tax enforcement and is there anything worrisome about it? How the Rule of Law would apply when tax assessment is issued by machines? What is the consequence of that in respect of taxpayers' procedural guarantees?
- What is the importance of tax coordination of tax administration's functions in the case of automated tax compliance at a cross border level and between tax and customs authorities within the same jurisdiction?

Context for discussion

The role of tax administration has been changing dramatically owing to the implementation of new technologies in almost every function and tax administrative process. Such transformation, especially in light of the automation possibilities it entails for the tax administration, requires a rethink of how the state will interact with taxpayers and whether traditional constitutional principles are still adequate to regulate those interactions. From the technologies that are likely to have the greater impact on the above relations, Blockchain ranks first when applying in use tax cases due its capability to automatically attribute tax consequences to the tax events recorded by it. Automatic self-execution of tax liability presupposes the subsumption of legal facts to the tax rules made by the Blockchain and not the tax administration. This raises significant issues firstly, at a conceptual level and secondly at a normative constitutional level. Conceptually, there is skepticism as to whether legal reasoning can be fully substituted by computational logic and whether law can be formalized to such an extent that it would be transposed into computer code for automating tax enforcement. Assuming that such a scenario is feasible, further issues arise from a constitutional point of view and specifically, the legality principle that governs tax administrations actions in most countries, namely the compliance of a blockchain based automated decision making with the rule of law (ROL).

The radical changes in the conception of law as we currently know it, have been already observed in the field of more general rule-making automation which has been considered to be the end of the distinction between rules and standards. However, choosing rules over standards that is thought to limit discretion promotes certainty and enforcement efficiency and leads to a healthier self-governance. But this does not translate into that any rule must be preferred over any standard. It is arguable whether for example, a GAAR can be replaced (or it is rather desirable to do so) by a list of economic arrangements that fall under what the GAAR aims to prevent and regulate. Such a choice is reflective of the general motives and goals of the tax legislature that do not exhaust themselves in revenue production but often aim at regulating behavior and mitigating economic inequality. Lastly, procedural guarantees and taxpayers' rights must be respected, namely a Blockchain based automated tax assessment must still be subject to the requirements of explainability so that it could be effectively contested in courts which further ensures transparency in the new governance model introduced by a blockchain based automated tax enforcement.

Summary

- The Blockchain technology is apt for tax automation by facilitating both information flows and tax enforcement in a self-executing system without a need for an intermediary. The main question asked in this session is whether self-executing compliance is possible based on public law rules.

- Modelling law in computational logic is intrinsically intuitive but complicated. It is intuitive since the law and computer code follow a similar if-then logic. However, while computer code is hyper literal when it comes down to executing smart contracts on the blockchain, there is an inherent ambiguity of legal terminology which makes the law difficult to model in computer code. Therefore, the question arises must we change the way we draft laws?

- Moreover, any automation by means of smart contracts must meet a number of constitutional requirements, more specifically the legality and rule of lar principles stating that any administrative decisions must be conferred by law and bound to that law (beyond any substantive fundamental rights requirements that this law itself must meet). Hence, multiple issues arise, most importantly is a tax decision imposing a tax burden on taxpayers that has been issued by a machine legal and can a power conferring rule authorize a machine? The answer depends

on the constitutional context and the very function performed by the machine – it might be different depending on whether the automation assists or substitutes human decision making.

- Blockchain automation poses further challenges due to the decentralized nature of the system as well as in cross-border cases where the two jurisdictions involved might be subject to different constitutional requirements.

- It seems unavoidable that a human driven system applies in parallel, albeit scaled back to instances of disputes and review of the tax outcomes produced by the blockchain. However, the very utilization of the blockchain requires scaling back interpretative discretion in the majority of rules and further distinguishing between rules and standards. In this sense while computer driven regulation is deterministic and implies absence of discretion, there are number of individual rights that must be protected and the executive must be held accountable. Hence, a parallel system – human driven system - can ensure that.

- This brings us to the first suggestion to overcome the legal issues, namely by objectifying abstract concepts in a detailed lists of rebuttable presumptions that trigger consequences but with the possibility to challenge these consequences on the basis of applicable law within a human-driven system. This would result in a two-gear system with an automated tax model producing results on the basis of rebuttable presumptions and a standard legal text accessible to taxpayers.

- The second possibility is that computer code is not used as far as having it subsume facts under legal rules but rather rely on third parties to perform the evaluation – for example, by having financial institutions which facilitate transactions to make evaluation of legal criteria such as who is the beneficial owner of a given income. While this approach is less intrusive in terms of the legal reform necessary it also creates issues regarding the legal responsibility in case of false interpretations.

17:45-18:00	**Closing remarks:**	Jeffrey Owens (WU GTPC) Chiara Bronchi (WB)

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