



As a young child in the 1980s, I recall sitting in my home in the suburbs of Sydney, Australia, watching a TV show called 'The Jetsons'. This show had a transformative impact on my life. While my mother may have felt that I was wasting my time, the Smithsonian Magazine has noted that 'The Jetsons' stands as the most important piece of 20th-century futurism, shaping how we think and talk about the future.1

For those unfamiliar, 'The Jetsons' was a science fiction animated cartoon featuring a family of four — George, Jane, Judy and Elroy, together with their dog, Astro. Although it only lasted a single season, the show predicted various innovations, including smart homes and appliances, robotic assistants, video meetings, 3D printed food, flat-screen televisions, jet packs, smart bathrooms and, despite not yet reaching mass appeal, concepts like vertical cities and flying cars.

So, what's the significance of 'The Jetsons' to the future of indirect taxes? The answer lies in that predicting the future of indirect taxes is influenced by the technological advancements occurring around us daily. In other words, to accurately predict the future of indirect taxes, one should observe how different products and services are developed, how consumer behavior evolves and how people interact with businesses and government every day.

Take, for example, the indirect tax issues relating to cryptocurrencies, the activities of social media influencers or even electronic invoicing (e-invoicing) — the indirect tax issues associated with these products, processes and services derive

from and are influenced by broader societal changes happening around us. However, that's not the end of the story. Indirect taxes can and do influence societal behavior too.

Over the past 12 months, I've been fortunate to travel to around 12 countries, and I've gained just as much knowledge about indirect taxes outside the office as I have in boardrooms or conference calls. Consider this — on a recent trip to one European country, I observed a number of businesspeople engaging in their morning routine of standing at the counter to enjoy their coffee; I received a digital invoice by email in a Latin American country; I was offered a discount to pay in cash (in many countries); I watched many travelers nearly missing their flights while waiting in line for tourist refunds in Australia; I was asked for my company's tax registration information when checking out of my hotel in China; and I watched how a tax-free holiday influenced the buying habits of consumers in Canada.

The common thread in all these actions value-added tax (VAT).2

The point here is simple — VAT is a very special form of taxation with strong economic and policy foundations. It collects tax based on the value added at each stage of a supply chain. It relieves the tax burden on business through the credit-offset mechanism and ultimately imposes the tax on final consumption by households.3 So, by its very nature, the future of indirect taxes is inextricably linked to the future of our economies, including how goods and services are produced, distributed and consumed, as well as how they are exchanged for

⁵⁰ Years of the Jetsons: Why The Show Still Matters | Smithsonian accessed on 3 December 2024.
In this publication, we use the term 'VAT' to refer to value added taxes by whatever name they take, including a GST (or Goods and Services Tax).

³ OECD (2017) International VAT/GST Guidelines, OECD Publishing, Paris at paragraphs 1.2 to 1.7.

valuable consideration. It's why most indirect tax experts, when seeing a store sign offering 'BOGO' (Buy One Get One) or when joining an airline rewards program, will immediately think of the indirect tax complexities rather than the discounts or benefits they receive as consumers.

The Future of Indirect Taxes report originated at a conference held by KPMG in Hampshire, UK, on 24-25 February 2014. We embraced the idea of developing a series of intentionally provocative propositions around the future of indirect taxes. Our goal was not necessarily to predict the future accurately but to encourage thoughtful consideration of what it might look like and to help our clients adapt and transform to thrive in that future.

In 2019, we reconstituted a leadership group to focus on the future leading up to 2025. This effort culminated in the report Indirect Taxes — Looking back and looking ahead. Today, we have the opportunity to evaluate those predictions, and the results are surprising. Importantly, we don't shy away from saying when we got it wrong. What matters most is that we reflect on change, evaluate the evidence around us, and use this information to make informed predictions, plan for the future and invest our time and energy in the changes that matter.

Now, we reach the next chapter. The year 2025 has arrived, presenting us with the opportunity to consider the future of indirect taxes as we look ahead to 2030.

In this report, I'm joined by Professor Wei Cui. Our paths have coincidentally followed similar trajectories. We first met back in Australia in 2010 when Professor Cui was a visiting academic. We then spent several years together in China, where Professor Cui taught at the China University of Political Science and Law in Beijing, becoming one of the foremost writers on Chinese tax policy and administration. Later, Professor Cui relocated to Canada, where he was appointed Professor of Law at the Peter A. Allard School of Law at the University of British Columbia. In 2024, I also relocated to Canada, providing us with an opportunity to continue this journey.

I've always admired Professor Cui's academic courage in his writing the willingness to take positions on controversial issues and support his convictions with solid evidence and analysis. This is best demonstrated by his defense of digital services taxes (DSTs), contrary to many tax professionals and academic writers. Regardless of one's stance on these taxes, Professor Cui's contribution to the debate is both interesting and informative. We thank Professor Cui for his contribution to this report.

I am also joined by Philippe Stephanny, a Managing Director of Indirect Taxes at KPMG in the US and an Adjunct Professor at the Georgetown University Law Center. Philippe is a remarkable talent — he is a virtual encyclopedia of indirect taxes around the world. He is humble yet passionate, detail-oriented yet able to see the big picture, and in my experience, yet to get a single footnote wrong!

Together, we are proud to present the Future of Indirect Taxes to 2030.



KPMG International

Lachlan Wolfers Global Head of Indirect Taxes









Past indirect tax predictions from 2020-2024



We begin by evaluating KPMG's past predictions for 2020-2024. Those predictions and the rationale behind them are outlined in the report, Indirect taxes — looking back and looking ahead.4

So, how did we fare?

Overall, our predictions were largely accurate, with some spectacularly so and others only just. However, one constant is that the pace of change over the past five years has not been as rapid as anticipated. It's important to note that for approximately 2-3 years, many tax authorities were working remotely due to the COVID-19 pandemic, making

the implementation of substantial reforms during this time challenging.

Additionally, starting in 2020, we witnessed a shift from a few countries adopting indirect tax measures to address the digital economy to a rapid increase in such measures. While these VAT measures for taxing the digital economy were not new or unexpected back in 2020, the pandemic greatly accelerated the shift to online commerce and the subsequent need for these measures.

We have restated our ten predictions below, along with our assessment of their accuracy.

Prediction 1	Assessment
Consumption taxes will be the dominant form of taxation around the world.	It's complex.

Comments

There are two stories here. First, VAT is on the rise as a form of taxation. Second, consumption taxes overall are declining as a percentage of total tax revenues. Let's examine this further.

According to the Organization for Economic Cooperation and Development (OECD),⁵ in 2022, consumption taxes accounted for 29.6 percent of total tax revenues in OECD countries, a decrease from 32.1 percent in 2010. Taxes on income and profits remain the dominant form of taxation around the world.

However, it's important to note that the average VAT rate among OECD countries has been rising, reaching 19.3 percent. The relative importance of VAT has also grown, accounting for 21.4 percent of total tax revenues in 2022, compared to only 11.9 percent in 1965. In contrast, excise and environmental taxes and other specific taxes on goods and services have halved as a percentage of total tax revenues from 1975 to 2022. In short, taxes aimed at changing consumer behavior appear to have successfully influenced consumer behavior!6

Prediction 2	Assessment
Government regulated invoicing systems will grow significantly.	Absolutely correct.

Comments

In 2019, this prediction was ahead of its time, but it has perhaps become a dominant theme for reforms expected globally over the next five years.

See KPMG International, <u>Indirect taxes — looking back and</u>
 OECD, Consumption Tax Trends 2024 (21 November 2024). looking back and looking ahead, October 2019.

⁶ Source: OECD (2024), Consumption Tax Trends 2024: VAT/GST and Excise, Core Design Features and Trends, OECD Publishing, Paris.



Prediction 3	Assessment
VAT refunds will largely end (except for a few small categories).	Reasonably accurate, but now trending in the other direction.

Comments

Over the past five years, various measures have been adopted to mitigate the incidence of VAT refunds. These include simplified VAT registrations for non-established businesses that may have otherwise claimed refunds, the growing use of reverse charge measures and B2B zero rating in certain higher refund integrity risk areas (e.g. New Zealand with land sales), and the cessation of tourist refund schemes in key geographies (e.g. the UK).

However, a range of measures on the horizon may reverse this trend. For example, Brazil's tax reforms are expected to introduce refund mechanisms in line with OECD practices. Similarly, the European Union (EU) VAT in the Digital Age (ViDA) proposals could result in more businesses filing non-resident refund claims, arising from measures such as the expansion of the One-Stop-Shop mechanism for intra-EU movement of own goods and the expansion of the domestic reverse charge.

Prediction 4	Assessment
VAT (or equivalent) will be applied to financial services as the default model.	Substantially off track.

Comments

Interestingly, when this prediction was made in 2019, the EU Commission had just announced a review into the VAT exemption for financial services. However, it appears that yet another review has been squandered in the quest for policy perfection, leading to an increasing strain on the scope of exemption.

The lesson learned is that this prediction will not be made again in 2025, as the case for removing VAT exemptions for financial services grows stronger by the day.

Prediction 5	Assessment
VAT returns (as we know them) will die.	On track, but ahead of its time.

Comments

The opportunity to eliminate periodic VAT returns is directly linked to the advent of e-invoicing and similar real-time reporting mechanisms. Several countries have foreshadowed their demise, including Italy, Portugal, Spain, Chile and Indonesia. However, some of these measures are still in their early stages of implementation.

Importantly, the end of the traditional VAT return — where data is transformed from source enterprise resource planning (ERP) systems and used to prepare and file returns — will usher in a new era of the 'Reverse VAT return.' Here data is reconciled from a return back to the source.

⁷ See VAT Gap Report 2023 accessed on 4 December 2024.





Comments

The cost of large multinational companies internally managing their indirect tax compliance obligations has grown substantially. This rise is due to the significant new technology obligations imposed by external factors such as e-invoicing, digital reporting and tax authority information requests, but also as a consequence of internal factors such as the growth in complexity of ERP systems, data warehouses, and the day-to-day interplay between finance and tax teams which are required to manage compliance.

In simple terms, many large corporates view the economics of outsourcing as being akin to the business case for cloud computing — that is, why invest internally in the infrastructure which will often remain idle when you can effectively 'rent' the infrastructure of an external provider at a fraction of the cost.

Having said that, as many large corporates have grown to understand, outsourcing isn't a panacea. The outsourcing of compliance needs to go hand-in-hand with enhanced data management.

Prediction 7	Assessment
Simplifications that reduce the risk of fraud or that prevent the risk of errors or eliminate disputes will grow.	Correct outcome, but wrong method.

Comments

Certain areas of VAT are highly susceptible to different interpretations and, worse still, abuse. These often relate to distinctions between business versus personal use, entertainment versus marketing expenses, and partial exemption methods.

In our 2019 report, we predicted the introduction of simplifications that would help reduce the risk of fraud or errors. In truth, it has not been these simplifications that have led to a significant reduction in fraud; instead, it has been measures such as e-invoicing.

In fact, the past five years have likely seen the single biggest decline in VAT fraud. Among others, the EU recorded a reduction in the VAT gap from €99 billion to €61 billion in a single year, a change largely attributed to the 'big brother' of e-invoicing and real-time reporting, together with the accelerated shift towards online shopping.⁷

Prediction 8	Assessment
The in-house tax department and tax advisors, will be disintermediated by tax authorities.	Absolutely.

Comments

While this was more of a warning than a prediction, disintermediation is now occurring at pace. Measures such as realtime reporting — including Immediate Supply of Information (SII), Standard Audit File for Tax (SAF-T) and the seventh amendment to the Directive on Administrative Cooperation (DAC7) reporting — along with the rise of e-invoicing, provide the tax authorities with a window into any organization. They no longer depend on you to report your activities; tax authorities can now obtain, analyze and evaluate data before a single VAT return is filed.

However, that's not the end of the story. Disintermediation is also being accelerated by broader technology factors, particularly the impact of artificial intelligence (AI). We will explore this topic further in our next round of predictions. Introduction

Prediction 9	Assessment
VAT will more closely resemble sales tax (through the use of blockchain technology).	Not yet.

Comments

At some point, blockchain technology lost its appeal — the hype cycle fading into oblivion, replaced by the rise of AI.

While VAT remains firmly a multi-stage credit offset tax in most jurisdictions, in this report, we anticipate its next stage of evolution, which aligns more closely with the features of a sales tax. Our US colleagues can finally rest easy in the knowledge that a US VAT is unlikely to materialize.

Prediction 10	Assessment
Unless tax professionals and the organizations they serve transform urgently, they risk falling down the value chain.	Highly accurate.

Comments

This prediction was more of a call to action, and we're pleased to report that most tax professionals have heeded the warning. They are no longer passive recipients of poor quality data; instead, they have a seat at the table in most finance transformation projects. Many tax functions now employ specialist data and technology experts, and discussions about data warehouses and alteryx workflows have become standard practice.

In short, tax professionals are taking proactive steps to assume control, reducing manual and repetitive tasks through automation and are committed to adding value to the business.



Predictions from 2020–2024





Indirect tax predictions to 2030



Click on each prediction to learn more.

- The tax base for a VAT does not need to change — it can handle the modern challenges of our economy
- Indirect taxes will not be governed by laws — they will be governed by systems

- The world is yet to find the right way to price carbon
- Al gives tax authorities virtually unlimited power. They could operate like a cartel and win the technology race, but they need to be wary of what they are creating right now
- Farewell to the corporate income tax — the world will move to a 'model DST'
- There should be a shift towards a technology-driven retail sales tax system

- Tariffs are among the worst of tax policies, and sadly they will proliferate
- The ideal form of indirect taxes is a more progressive VAT, which seems both easily achievable and yet elusive
- All taxes will benefit from e-invoicing, but e-invoicing is merely a transitory step in a longer-term journey; it's not the ultimate destination
- Just as the digital economy is dominated by platforms, so too will the tax profession



















The tax base for a VAT does not need to change — it can handle the modern challenges of our economy

The global economy is constantly changing, bringing fresh innovations and new business models. As a result, a resilient, adaptable and trustworthy tax system is crucial. For VAT, this system is built on three core principles: broad-based taxation, neutrality and taxation where consumption occurs.8 Unlike the ongoing discussions for income taxes,9 these VAT principles have proven well-suited to handle these challenges.

Consider this: regardless of whether a music album is sold on vinyl, cassette, CD, downloaded or streamed, VAT should apply where the consumption occurs. Initial problems arose when economies transitioned from tangible goods like CDs to digital products. This was because VAT was typically applied at the delivery location for physical goods, while for digital services, taxation occurred where the provider was located. This discrepancy was not due to a flaw in the principles but rather in their application. The digitalization of the economy challenged this approach, prompting jurisdictions to reevaluate their application of these principles.10

Specific changes may be needed in response if there are new business models for which the application of existing rules results in an illogical outcome. This is, for instance, the case for virtual goods such as in-game items. Their initial sale should be subject to VAT following the core principles. As there's no specific exception, their resale should thus also be subject to VAT. If the reseller isn't an 'economic operator,' this would mean that the same item is subject to a cascading tax because the individual reselling the virtual good could not recover the VAT incurred on the initial purchase.

An alternative would be to consider that if the reseller isn't an 'economic operator,' the resale should also not be subject to VAT. However, this would result in a competitive advantage for second-hand virtual goods over their 'original' versions. The only reason such a conundrum exists is that when VAT laws were initially designed, the average person could not imagine that private individuals could resell intangibles or that such activities would be a growing segment of the digital economy.¹¹ However, some jurisdictions already have special rules in place for the resale of tangible goods by private individuals, like second-hand clothing.12 Therefore, policymakers could simply expand the principles for second-hand goods to second-hand intangibles to ensure a level playing field between the tangible and intangible economy.

Finally, while core VAT principles don't allow for exceptions such

as exemptions or reduced rates, the reality is that jurisdictions often leverage these exceptions for socio-economic reasons with mixed results. Unfortunately, there's a tendency to expand existing exceptions to new business models based on economic equivalence rather than challenge the underlying basis of the exception. For instance, the crypto and FinTech space often seek the same exemptions as traditional financial institutions.13 This again isn't a flaw in the principles but rather their application. As new business models often challenge the status quo of traditional businesses, policymakers should leverage the opportunity brought by new business models to question the exception rather than create new rules targeting these new business models and/or extend exceptions.

Recent developments have shown that the VAT system's core principles are sufficiently robust to adapt to the evolving global economy and its emerging business models. Whenever the VAT system faces new challenges caused by new business models, policymakers shouldn't be quick to create new rules or extend exceptions for new business models. Instead, they should revisit the application of VAT principles, ensuring that they are applied logically and fairly across all sectors, whether traditional or digital.

⁸ See e.g., OECD, Consumption Tax Trends 2024 (21 November 2024).; OECD, International VAT/GST Guidelines, available at https://www.oecd.org/en/

⁹ See e.g., Tax Foundation, Global Tax Tug of War: Comparing the UN and OECD Approaches (18 August 2023), available at https://taxfoundation.org/blog/

OECD, International VAT/GST Guidelines, available at https://www.oecd.org/en/publications/international-vat-gst-guidelines_9789264271401-en.html.
 Credence Research, Virtual Goods Market (Nov. 2, 2022), available at https://www.oecd.org/en/publications/international-vat-gst-guidelines_9789264271401-en.html.

See e.g., Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax, Articles 311 — 343.

¹³ See e.g., Court of Justice of the European Union, Case C-264/14, David Hedqvist (22 October 2015), ECLI:EU:C:2015:718



















The world is yet to find the right way to price carbon

Numerous traditional excise taxes, such as those on gasoline and diesel, target behaviors with negative externalities and force private actors to internalize the higher social cost of their decisions. Behavior-correcting taxes — 'Pigouvian taxes' — are thus no stranger to indirect tax specialists. In our time, overwhelmingly, the most important negative externality of our daily activities arises from greenhouse gas (GHG) emissions.¹⁴ As the threat of global warming intensifies each year, experts have converged on the view that humanity needs to make a rapid transition away from fossil fuel use and other high-emission activities and that the best way to coordinate such rapid transition — on a giant scale — is to put a price on carbon and other GHG emissions.

However, even in jurisdictions that have implemented some carbon pricing, it does not yet command a prominent presence in people's lives or in indirect tax practice. This is often due to the nature of the carbon pricing instruments chosen. According to the World Bank,15 the bulk of carbon pricing revenue around the world comes from emission trading systems (ETSs), in which businesses that emit GHG in their operations receive permits for emission either through auctions or free allocations. They then trade such permits, with businesses that are more successful at reducing emissions selling their permits to others less efficient in achieving

reductions. Although the costs of such permits are ultimately reflected in product prices and business profits, they are much more hidden than excise taxes. In fact, businesses trade emission permits like commodities, and most tax specialists don't aspire to be commodity traders!

Despite the historical dominance of ETSs — implemented, for example, in the European Union (EU), China and California the future dominance of these systems among carbon pricing instruments is uncertain. Many national governments in Europe have introduced carbon taxes for sectors not covered by the EU ETS. The UK has implemented a carbon tax in addition to its ETS, while Canada has introduced fossil fuel taxes. These carbon taxes on fossil fuels resemble traditional excise taxes and may, in some places, replace previous motor fuel taxes. Furthermore, they are directly affecting VAT collection, as the carbon tax is often included in the price of taxable supply, generating revenue for the government both by itself and through the VAT.

Governments are also adopting hybrid instruments. In an 'outputbased pricing system' (OBPS), a facility may be held to a certain standard of emission intensity for its products: emissions above that intensity would attract a carbon price while emitting below that intensity would earn the facility

¹⁴ Indeed, many of the technological advances that form the background of our predictions — such as the wide use of Al—imply high energy consumption and, at least in the short term, high emissions.

¹⁵ World Bank, "State and Trends of Carbon Pricing 2024" (Washington: World Bank, 2024), online at: https://openknowledge.worldbank.org/entities/

a credit that it can sell to others. Unlike traditional ETSs, facilities regulated by OBPS can emit more if they produce more. Further, the regulator of an OBPS may limit the extent to which facilities can pay for excess emissions through purchased credits, forcing them to pay the policy carbon price instead.

Theoretically, a single carbon pricing regime can deal with most GHG emissions. However, the World Bank notes that, in practice, governments "are increasingly using multiple carbon pricing instruments in parallel to expand coverage or price levels." This trend may arise because existing carbon pricing regimes are incomplete or underperforming, prompting the adoption of new instruments to codify new regulatory negotiations. Further contributing to this patchwork quality of carbon pricing is the fact that many perhaps even most, if counting by numbers — of these carbon pricing regimes are subnational.

One critical development, however, promises to bring the world's diverse carbon pricing regimes into a single policy discussion while simultaneously spawning even more such regimes. This is the EU and the UK's implementation of the carbon border adjustment mechanism (CBAM). The EU CBAM will require that products imported into the EU bear a price equal to the average price at which emission allowances are traded on the EU ETS on the products' embodied carbon content. CBAM reporting has already begun

in 2023 for aluminum, cement, electricity, fertilizers, hydrogen, and iron and steel. The actual carbon price will take effect in 2026 for these sectors, and CBAM may expand to cover all sectors regulated by the EU ETS by 2030. Critically, unlike border adjustment under the destination-based VAT, CBAM will refrain from imposing the carbon price on imports from exporting countries that impose comparable carbon pricing at the EU. For these countries, carbon pricing will remain 'origin-based.' In this spirit, the currently designed EU CBAM does not offer rebates for carbon prices borne by exported products.

The implementation of the EU CBAM directly requires the comparison of emission reduction regimes elsewhere with the EU ETS.16 Such comparisons will inevitably be contentious: jurisdictions that export to the EU, whether they already impose or plan to introduce carbon pricing, or if instead they opt to use regulatory instruments to achieve emissions reductions, will all want to argue that they enforce equivalents of the EU ETS carbon price. The complexity of the analyses required, as well as the difficulty of accurately measuring embodied carbon content, suggest that the likelihood of disagreements and consequent trade disputes is very high. However, it's safe to predict that carbon pricing regimes will further proliferate in the coming years, making carbon pricing an unavoidable topic in indirect tax practice.

...existing carbon pricing regimes are incomplete or underperforming, prompting the adoption of new instruments to codify new regulatory negotiations. 77

¹⁶ Keen M., Parry I., & Roaf J. (2022), Border carbon adjustments: rationale, design and impact. Fiscal Studies, 43, 209–234.





















Farewell to the corporate income tax — the world will move to a 'model DST'

Six years after its first proposal by the UK and the EU, the digital services tax (DST) is advancing again, notwithstanding resistance from both the US and the OECD. In October 2024, Italy announced a plan to expand its DST by removing global and domestic revenue thresholds, and French lawmakers proposed increasing the French DST rate from three percent to six percent. Earlier in 2024, Canada enacted its longawaited DST Act. This legislation, even in its proposal stage, was seen by critics as an act of defiance since Canada announced it after the OECD claimed there would be a global agreement to ban DSTs and implement its own 'Pillar One' proposal. Canada conditioned the DST's implementation on a Pillar One agreement not being achieved. To many observers, this seemed like a public challenge to Pillar One, a stance that now appears wellcalibrated in 2024.

For the last few years, most journalistic reporting and professional discussions regarding the DST have primarily been about Pillar One. This pillar aims to allocate taxing rights over the residual profits of fewer than 100 multinational groups based on their sales figures rather than the DST. This arguably reflects a biased view within the tax profession that taxes on gross revenue, including the DST, are inherently inferior to the income tax for taxing corporate profits.

In this view, if countries could agree on a new profit allocation rule for the income tax, the result would be unquestionably better.

This bias may have led to the profession's systematic underestimation of the DST's strengths. For a long time, accounting and finance experts have argued that when intangibles contribute critically to the value of large companies, traditional accounting rules — and the income tax rules that spring from them — are woefully inadequate for measuring firm profitability.

This inadequacy arises because many expenses creating intangible assets — from research and development (R&D) expenditures to sales, general and administrative expenses — are immediately deducted instead of capitalized, and firms' intangible assets are thereby systematically undermeasured.¹⁷ Consequently, for intangibles-intensive companies, reported earnings are especially poor predictors for stock price, making the traditional goal of matching income and expenses increasingly beyond reach.18

Compare these serious inadequacies of traditional income accounting measures with the informativeness of the simple revenue measure. The DST can be designed to target digital revenue generated with zero marginal cost — and it has been so

designed, for the most part, at least in Europe, the UK and Canada.19 This means that revenue captures marginal profit.

While the DST may seem flawed by not accounting for fixed costs, it's important to recognize that the income tax is doing a poor job of measuring and timing those fixed costs for digital companies anyway. The DST compensates for its neglect of fixed costs by maintaining a low tax rate. Such trade-offs are well-known in tax design. The inferiority of a gross-revenue tax, therefore, is far from obvious — just ask investors (and corporate executives) what measures of profit they prefer when betting on their returns.

The fact that the tax profession may have underestimated the DST's strengths, however, does not imply that the future deployment of DSTs will be free of uncertainties or controversies. A key indicator to watch is whether the DST expands to cover new lines of business.

In Europe, the UK, and Canada, the DST was initially designed to apply to online platforms operating within two-sided business models, such as online advertising, online marketplaces and social media. For instance, an online platform that matches buyers with third-party sellers is subject to the DST on the commissions paid by merchants. In contrast, an online retailer selling its own products, as a streamer of

¹⁷ N. Crouzet and J. Eberly (2023), "Rents and Intangible Capital: A Q+ Framework." Journal of Finance, 78: 1873–1916.

[&]quot;Ending the Accounting-for-Intangibles Status Quo," European Accounting Review, 2019, vol. 28, issue 4, 713-736.

To ensure such targeting, the DST as applied to a marketplace for merchandise, for example, would need to carve out shipping and storage fees paid by sellers to the online platform; the DST as applied to a lodging booking platform may need to carve out cleaning fees charged to guests; and so on.

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proprietary content, and as a provider of cloud computing services isn't subject to the DST. This distinction is often overlooked in casual journalism.

The reason for focusing on twosided business models stems from governments' discontent with how 'user value creation' on digital platforms isn't well-captured by patterns of payment. Consider a search engine earning advertising fees from German carmakers targeting French car buyers: the fact that French consumers need to be using a search engine for this business model to work means that they *create value* for the search engine. Yet, this value creation isn't reflected in any payment coming into or out of France.

The DSTs in Europe, the UK and Canada address this challenge posed by platforms to traditional rules.20 However, in the policy discussions since the DST's initial proposal, both by design and by inadvertent confusion, the potential scope of DST has expanded. For example, the United Nations (UN) amended its model tax convention in 2021 to allow a withholding tax on all automated digital services. If such a 'digital services tax' is domestically implemented,²¹ it would no longer focus on two-sided business models. Instead, emphasizing the zero-marginal-cost feature of digital services could capture online streaming, cloud computer services, and much more.

There's a sizeable divide among those who see a future for DTSs. Should the DST retain its relatively narrow scope or aspire to a wider scope? Moreover, should it maintain a distinct identity separate from corporate income tax, or should it follow the UN model convention's suggestion and (claim to) assimilate itself to the income tax? Would this attempt to assimilate the DST into the income tax enhance its legitimacy, and if so, why? Alternatively, could this assimilation trigger greater opposition?

One possible direction for moving forward is for the international community to develop a model (or models) for DSTs.²² Such a model would clarify the purposes and design options of DSTs, their relationship to the income tax (and existing broad-based consumption taxes), and how the need for international cooperation may arise. The goal of developing such a model would be much less ambitious than brokering a broad agreement that requires nations to abdicate their sovereignty. It can be carried out by the OECD, the UN, or even other international organizations such as the International Monetary Fund.

Meanwhile, where the implementation of DSTs may significantly impact trade relations, one might expect countries to enter into bilateral trade negotiations. Recently, for example, the US requested dispute settlement consultations with Canada under the United States-Mexico-Canada Agreement concerning the Canadian DST.

²⁰ Wei Cui, "The Digital Services Tax: A Conceptual Defense," 73(1) Tax Law Review 69–111 (2020).

Domestic implementation of the idea has arguably already taken place in countries like Tanzania and Nepal.

The African Tax Administration Forum suggested such a model in 2020, but it has received little discussion outside of Africa and may not appeal to many DST-adopting countries.





















Tariffs are among the worst of tax policies, and sadly they will proliferate

When we last made predictions about the future of indirect taxes in 2019, the US-China trade war was already fullblown. Close to US\$300 billion of US imports — about 12 percent of the US total — had been subject to an average tariff increase of 24 percentage points. In response, China had imposed retaliatory tariffs on over US\$100 billion of US exports. However, at the time, both countries appeared close to reaching an agreement to end tit-for-tat tariffs. Many believed that the eagerness to deploy tariffs was primarily associated with a particular US presidential administration. Additionally, many hoped that the rules and norms established by the World Trade Organization (WTO) would continue to constrain most countries' trade policies.

In no other area of tax policy have expectations shifted as dramatically in the past five years. The Biden administration not only maintained all Trump-era tariff increases on Chinese goods, but it also sponsored additional tariffs, such as the 2024 tariff hikes on solar cells, electric vehicles (EVs) and batteries. Furthermore, it more broadly embraced a protectionist policy, for example, by incorporating 'made in North America' requirements into the unprecedented industrial subsidies of the Inflation Reduction Act.

Most critically, trade policy is now unambiguously at the service of geopolitics: tariffs, domestic subsidies and export restrictions now serve the explicit purposes of 'de-coupling' and 'de-risking.' These measures are deployed jointly with sanctions and a wide range of other tools to target foreign rivals and forge alliances. As a result, trade wars and military conflicts (actual or projected) increasingly overlap in news headlines. In contrast, WTO panel reports against tariffs barely receive media coverage.²³

There's no question that tariffs are on the rise, and institutional constraints on them are only sometimes present. The tariffs on Chinese EVs introduced by the EU in October 2024, for example, drew a divided vote among EU members. These tariffs were tailored to specific carmakers and were less severe in comparison to the 100 percent tariffs imposed by the US and Canada on Chinese EVs. They were also accompanied by ongoing negotiations with China with the aim of eventually lifting these tariffs.

By contrast, when, in the same month, Canada imposed new tariffs on Chinese EVs, steel and aluminum and proposed additional tariffs on Chinese solar panels, batteries, and critical minerals, no reference was made to WTO rules. Instead, it made

²² See WTO, "WTO Panel Issues Report Regarding US Tariffs on Chinese Goods" (15 September 2020), online: WTO wto.org/english/news_e/news20_e/543r_e.htm; "WTO Circulates Dispute Panel Reports Regarding US Measures on Steel and Aluminum Products" (9 December 2022), online: WTO <wto.org/english/news_e/news22_e/544_552_556_564r_e.htm>; United States — Origin Marking Requirement (2022), WTO Doc WT/DS597/R (Panel Report), online: WTO <docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/DS/597R.pdf&Open=True>.

its unilateral determination against China's 'non-market' and 'unfair' practices, drawing inspiration from the US 'Section 301' investigations.

Fairness can be in the eyes of the beholder, as suggested by China's response to anti-dumping investigations concerning Canadian canola seed exports. As the institutions supporting trade liberalization rapidly erode, novel justifications for tariffs — such as preserving the 'dignity' of Italian tomatoes — may soon sound not too far-fetched.24

The recent large-scale adoption of tariffs in the US has provided economists unprecedented opportunities to analyze their effects. Multiple studies have concluded that US consumers and importers bore the brunt of US tariffs on Chinese goods through higher prices. 25 The same tariffs also reduced US export growth, with effects "equivalent to an ad valorem tariff on US exports of two percent to four percent."26 They have also contributed to a decline in domestic employment.27

While these findings support free trade orthodoxy, they offer little comfort to those who oppose

protectionism, as they are more likely to be overlooked. It may be predicted that in the next five to eight years, a new wave of studies employing state-of-theart econometric techniques will evaluate the effectiveness of tariffs as industrial policy tools, e.g., for nurturing domestic solar, EV and battery manufacturing. Currently, there's little theoretical or empirical evidence to support the expectation that such policies will succeed.

The rise of tariffs may offer one silver lining for tax practitioners: tariffs are reshaping global supply chains. US tariffs on Chinese exports, for example, have increased exports to the US from Canada and Mexico, as well as from more distant countries such as India, Vietnam, Thailand and South Korea. In turn, many of these countries are intensifying their trade with China. 28 The EU's tariffs may have similar effects. New contractual relations are forged, new plants constructed, and new foreign affiliates established — all offering new opportunities to service providers. Trade linkages may strengthen, just in different places.

Most critically, trade policy is now unambiguously at the service of geopolitics... 77

²⁴ Amy Kazmin, "Chinese imports damage 'dignity' of Italian tomato, says Mutti chief," Financial Times, October 24, 2024.

Pablo D Fajgelbaum, Pinelopi K Goldberg, Patrick J Kennedy, Amit K Khandelwal, The Return to Protectionism, The Quarterly Journal of Economics,
 Volume 135, Issue 1, February 2020, 1–55; Mary Amit, Stephen J. Redding, and David E. Weinstein. 2020. "Who's Paying for the US Tariffs? A Longer-Term Perspective." AEA Papers and Proceedings, 110: 541–46.
 Kyle Handley, Fariha Kamal and Ryan Monarch, "Rising Import Tariffs, Falling Exports: When Modern Supply Chains Meet Old-Style Protectionism,"

American Economic Journal: Applied Economics (forthcoming)

Aaron Flaaen & Justin R. Pierce, 2019. "Disentangling the Effects of the 2018–2019 Tariffs on a Globally Connected US Manufacturing Sector," Finance and Economics Discussion Series 2019–086, Board of Governors of the Federal Reserve System (US).

²⁸ Caroline Freund, Aaditya Mattoo, Alen Mulabdic, and Michele Ruta, "Is US trade policy reshaping global supply chains?" Journal of International Economics 152 (2024) 104011.





















All taxes will benefit from e-invoicing, but e-invoicing is merely a transitory step in a longer-term journey; it's not the ultimate destination

In KPMG's previous predictions report for 2020 to 2024, we correctly predicted, though perhaps understated, the impact of government regulated e-invoicing systems. Predicting the further global expansion of e-invoicing through to 2030 isn't very brave at all, especially considering that the 'VAT in the Digital Age' proposals are forecasted to result in the implementation of e-invoicing across the EU by 2030.

Currently, the rise of e-invoicing is in such ascendancy around the world that it almost feels like tax authorities are selecting a 'onesize-fits-all' e-invoicing system, similar to selecting a massproduced item from a popular hamburger restaurant's menu. Therein lies the problem. Many tax authorities are being sold on the idea that e-invoicing is a panacea for addressing the VAT gap without understanding the broader business context in which it needs to exist. It's time to anchor this discussion on foundational principles.

Firstly, an invoice isn't a document created for tax purposes and should never be treated as such. It's a document typically issued by a supplier to a customer to confirm the goods or services being ordered or purchased, the price of those

goods or services, and to inform the customer of their obligation to make a payment.29

Consequently, any requirement for an invoice to adopt a particular form to meet a VAT obligation or to be transmitted in a certain way that interfaces with a tax authority system represents a form of intervention or intrusion into business processes. In other words, tax authorities need to recognize that invoicing serves a business purpose, and any tax requirements should be imposed in a way that's consistent with the fulfilment of that business purpose.

Unfortunately, we too often see tax authorities viewing e-invoicing as a tax-centric or standalone tax process, with the commercial objective of the supplier notifying the customer of its obligation to pay as almost an afterthought. It's not. It needs to work in reverse. Tax needs to find ways to work within commercial processes.

Secondly, the shift to e-invoicing merely represents the digitalization of an invoicing process. Just as many other parts of the economy are digitizing, the traditional process of rendering an invoice for work performed (or to be performed) is being automated and digitized. For many large companies, this

will become a system-to-system process. The concept of exchanging digitized information instead of printed documents isn't new or groundbreaking. Tax authorities need to recognize that, in many cases, they are the root cause of the complexity in their bid to extract the maximum tax relevant content from those invoices as they pass through. This observation isn't a criticism but an acknowledgment of their role in this system.

Thirdly, the scope of tax-driven e-invoicing regimes and how they are phased for implementation appear disjointed. Specifically, the issue of whether e-invoicing should be applied to B2C transactions as well as B2B transactions is inconsistent around the world.30 Additionally, the use of multiple phasing methods to avoid a 'big bang' impact continues to evolve. The result has seen a number of missteps, with several countries needing to delay or reconsider such a substantial IT undertaking.31 This situation creates the impression that tax authorities may have taken on more than they can handle. By choosing to act as intermediaries in the e-invoicing process, many tax authorities seem to have underestimated the challenges involved.

²⁹ Cambridge Dictionary defines it as a list of things provided or work done together with their cost, for payment at a later time: INVOICE | English meaning accessed on 8 October 2024

See for example the scope of e-invoicing in France, which will apply to B2B transactions only, whereas in Malaysia it applies to B2C transactions too. Poland and India initially proposed e-invoicing for B2B transactions, and both are now considering expanding the regimes to B2C transactions too. Several other EU countries have applied a form of digital reporting to B2C transactions (rather than e-invoicing) — for example, Spain (SII), Hungary

³¹ For example, France and Poland have delayed their e-invoicing mandates. Spain is doing likewise. Malaysia implemented a short delay but then made substantial simplifications/modifications to achieve their intended timeframes.

Finally, and perhaps most fundamentally, tax authorities should develop a roadmap for utilizing the immense amount of data collected from e-invoicing. Generally speaking, tax authorities have remained silent about how they plan to use this data. While the implementation of e-invoicing may trigger a reduction in the VAT gap due to the perception of increased oversight, this effect may not last for long. The enormous compliance costs of implementing e-invoicing cannot be justified unless the collected data is put to productive use.

Where tax authorities are currently falling short is in the preparation and publication of detailed compliance programs; as well as data analytics testing and benchmarking to show how the data is, or will be, used. If the objective of e-invoicing isn't merely to reduce the VAT gap but also to improve the accuracy and timeliness of tax reporting and to drive greater transparency, then tax authorities have not fulfilled their responsibilities to citizens.

The promise of e-invoicing is immense. However, if the reality proves to be that compliance costs have been imposed on 99 percent of the population in an effort to eliminate evasion by the one percent, then we have collectively failed in our objectives.

While the current focus of e-invoicing by tax authorities is on enhancing VAT compliance and reducing the VAT gap, that's not the end of the story. There will be a progression around its broader usage, loosely following a four-phase approach:

Phase 1: Utilize collected data to enhance VAT compliance through data matching, which ensures that the VAT output tax matches the VAT input tax of the business customer.

- Phase 2: Leverage the data collected through e-invoicing and require taxpayers to reconcile their VAT returns (and be able to explain deviations).
- Phase 3: Use data gathered through e-invoicing to pre-fill VAT returns.
- Phase 4: Employ the data collected through e-invoicing to enhance compliance across other taxes, including transfer pricing and corporate income tax.

Let's jump to the last phase. We already see jurisdictions like Malaysia linking their e-invoicing regime to corporate income tax compliance, with an e-invoice generally serving as proof of the supplier's income and proof of deduction for the recipient. Similarly, it's not difficult to foresee e-invoicing data also being used in the context of operational transfer pricing or in providing real-time benchmarking data for tax authorities for transfer pricing purposes. However, from a tax authority perspective, the key is that the scope of the e-invoicing system needs to be cast widely — otherwise, transactions that do not require an e-invoice under a VAT system may not help to secure compliance with other tax forms, such as transfer pricing or corporate income tax.

Three recent developments indicate the future direction of e-invoicing.

The ViDA proposals aim to introduce mandatory e-invoicing and digital reporting for crossborder transactions within the EU, effective 1 July 2030. While this is a relatively narrow approach, it's highly likely that many EU member states will supplement these requirements with mandatory e-invoicing for domestic transactions. This would create a reporting regime covering inbound, outbound and domestic transactions.

- 2. The Malaysian e-invoicing example is relevant again here due to its link to corporate income tax. This example contains very few exemptions or exclusions from e-invoicing. Indeed, the scope of e-invoicing in Malaysia includes areas traditionally outside the scope of a VAT, e.g. financial services. Cross-border transactions are also captured through the combined mechanisms of selfbilled e-invoicing (principally for imported services) and consolidated e-invoices (when the counterparty doesn't require an e-invoice, such as in an export transaction).
- India's GST Council recently recommended the implementation of B2C e-invoicing, starting with a voluntary pilot program.32 Alongside countries like Malaysia that have adopted B2C e-invoicing, as well as countries with digital reporting measures like Spain's SII and SAF-T reporting³³, we are quickly moving to an environment where B2G, B2B and B2C transactions are reported in real-time or near real-time. Including B2C transactions potentially allows tax authorities to use e-invoicing to secure compliance not only with corporate income tax but also with certain aspects of personal income tax (at least from a deductibility perspective).

In short, using e-invoicing to secure VAT compliance is just the beginning. If jurisdictions proliferate taxes with an indirect tax aspect (predictions 2, 3 and 4), their success will undoubtedly be built on the backbone of the e-invoicing transformation.

³² GST Council meeting of 9 September 2024, see <u>Press Release: Press Information Bureau</u>.

³³ Standard Audit File for Tax reporting.





















Indirect taxes will not be governed by laws — they will be governed by systems

The idea that laws will not govern indirect taxes isn't intended as a literal statement — thankfully, the rule of law prevails in many countries around the world — rather, it's a statement of how indirect taxes will be determined, declared, administered and audited in practice and reality.

There are several dimensions to this.

Firstly, indirect taxes are inherently transaction-based. As a result, there has always been (and shall continue to be) an air of fiction about laws that assume a person directly determines whether a transaction is subject to output tax or whether a purchase qualifies for input tax.

Leaving aside micro-businesses or large, complex transactions, compliance is often practically achieved without human intervention in the specific transaction. This is accomplished through a combination of:

- Systems which determine whether indirect taxes apply and, if so, what the appropriate indirect tax rate is (e.g. tax engines).
- b. Processes which are designed to both streamline the orderto-cash and procure-to-pay functions within organizations, with built-in risk controls.

c. People, carrying out oversight roles, testing and resolving anomalies.

The assumption that a person determines the taxability of a given transaction under the law has made way for risk-based approaches to manage compliance obligations. Perhaps both tax authorities and taxpavers need to better acknowledge this reality — let's explore this theme further.

Self-review processes (sometimes called 'reverse audits') and audits carried out by tax authorities typically rely on a combination of data and analytics testing or traditional sampling techniques. While these forms of testing are likely to evolve substantially through AI use (see prediction seven), much of what we do as indirect tax professionals is based on techniques in manipulating data coming through systems.

It's consistently surprising how few tax authorities³⁴ or taxpayers publish guidance on statistical sampling methods or techniques, given that they underpin how indirect taxes are currently risk managed in many organizations. For example, auditors have yet to recognize or endorse the use of mathematical formulas that allow a business to determine the number of transactions they need to sample check compared

to the population of transactions as a means of gaining comfort on the organization's general compliance within an agreed margin of error and confidence level.35 When exposed to such mathematical formulas, tax professionals are often surprised to discover how few transactions need to be sampled to achieve very high levels of confidence in the accuracy of the population as a whole.

These misconceptions may exist because many tax authorities are either unwilling or not empowered to accept anything less than the assumption of perfect compliance. This needs to change.

Secondly, over the past 20 years, there has been a proliferation of business systems, particularly ERP systems, to manage an organization's finance and business functions. Furthermore, in the retail sector, we continue to move away from the traditional cash register to record the transactions entered into by a business with its customers. Indeed, the digitization of payments is becoming the norm to such an extent that a near cashless society is anticipated in many countries by 2030.36

From an indirect tax perspective, this means that systems now govern how we determine indirect tax liabilities, even for many microbusinesses. Yet, we continue

³⁴ Interestingly, the use of statistical sampling methods appears to be more evolved amongst certain US states — see for example ,the Multistate Tax Commission's non-binding manual, which may be accessed here — https://www.mtc.gov/wp-content/uploads/2023/05/MTC-Sampling-Manual Audit-

See for example, Sample Size Calculator | SurveyMonkey, accessed on 12 December 2024.
 For example, Sweden, which is tipped to be cashless by 2025, together with other countries like Finland and China, where the use of cash is diminishing by the year. See Cashless Societies: Which Countries Are Making The Switch? | Corepay accessed on 14 December 2024

to cling to this fiction that VAT is determined and accounted for through the application of laws to each transaction. Time and time again, indirect tax professionals face the challenge of aligning the outputs of their systems with regulatory obligations. Often, the process involves identifying appropriate proxies in business systems for those regulatory obligations, aiming to most closely approximate those obligations. But is this the right outcome? What if our VAT laws were written with systems in mind rather than requiring our systems to adhere to those VAT laws?

Regulators would likely argue that since each ERP system is unique, VAT laws cannot be written to accommodate a multitude of different systems. This argument is both true and false. It's true that ERP systems do differ; however, it's also false because, at a macro level, these systems seek to achieve substantially the same things by capturing common transaction data points.

We suggest that VAT laws should be written from the perspective of understanding the systems businesses have in place. That means starting with the data points that are collected through these systems and then working toward fulfilling policy objectives. This concept isn't revolutionary; rather, it's a natural extension of the OECD's Tax Administration 3.0 report, which states:

"Paying taxes will become a more seamless experience over time, integrated into daily life and business activities as much as possible. Natural citizen and

business behaviors and systems will increasingly be the starting point of taxation processes. Tax administrations and private sector organizations will increasingly collaborate in creating innovative and joined-up services, adding value to the taxpayer, reducing administrative burdens and assuring secure, transparent and highly reliable outcomes. Adapting taxation processes to fit in with taxpayers' natural systems will facilitate compliance by design and "tax just happening." Free-riding and being non-compliant will increasingly require deliberate and burdensome additional activities."37

Let's examine two examples to illustrate different ends of the spectrum.

On the positive side, steps are being taken to recognize, in our VAT laws, that systems and the data points they capture need to be the foundation for imposing VAT obligations. For instance, in the realm of digital services, many countries have adopted the presumption initially used by the EU, which allows the location of the customer to be determined based on two items of non-contradictory evidence.³⁸ To be fair, though, the use of a presumptive rule is effectively forced on tax authorities because it's typically the only information on the customer held by the digital supplier.

On the negative side, we consider the ongoing challenge of noncompliance with reverse charge VAT rules. For those unfamiliar with these rules, they typically impose the responsibility of accounting for VAT obligations on the recipient of a supply instead of the supplier.

This is most commonly applied in circumstances where the supplier is a non-resident business, although it's increasingly being applied in situations where there's a heightened risk of fraud by the supplier.

The challenge in complying with reverse charge obligations is entirely systems-based. The recipient of a supply will often receive an invoice that doesn't include any reference to VAT. The recipient must then identify the need to self-account for the VAT in their systems when there's no natural trigger. This step runs counter to the established business process that treats the assessment of output VAT as an accounts receivable (AR) function, not an accounts payable (AP) function. In other words, noncompliance with reverse charge VAT obligations is largely a result of the disconnect between these rules and the way our systems and processes operate.

Looking ahead to the next five years, a recent development in Australia provides insight into what may lie ahead. A new measure being implemented requires large businesses that have undergone a goods and services tax (GST) assurance review to file a 'supplementary annual GST return'. It's worth summarizing the content of these supplementary GST returns:

"The return covers:

How you've actioned recommendations, areas of low assurance or red flags outlined by us in your most recent GST assurance review (including subsequent interactions with us)

³⁷ OECD (2020), Tax Administration 3.0: The Digital Transformation of Tax Administration, OECD, Paris. http://www.oecd.org/tax/forum-on-taxadministration/publications-and-products/tax-administration-3-0-the-digital-transformation-of-tax-administration.htm at p.12.

³⁸ See for example, the EU's guidance for electronically supplied services — information_microbusinesses_euvat_2015_en.pdf.

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...we continue to cling to this fiction that VAT is determined and accounted for through the application of laws to each transaction.

- Whether you've maintained or increased your level of GST governance and if you've had any material business or systems changes that impact your GST control framework since your last GST assurance
- The reconciliation between your audited financial statements and vour annualized business activity statements
- Whether you've taken any material uncertain GST positions in the period
- Whether you've identified any material GST errors in the period and how these have been rectified, and whether you claimed any material amounts of credits in the period that were referable to earlier periods."39

The use of risk-based questionnaires by tax authorities is nothing new. Likewise, the inclusion of statistical data points in indirect tax returns as a means of identifying risks is also not uncommon. However,

what feels different about this is the embedding of these substantial risk-based controls and testing frameworks as a standard part of an indirect tax compliance process. Importantly, though, this needs to be cut both ways. If taxpayers are obligated to provide evidence of riskbased controls, tax authorities (and even legislators) should apply more risk-based methods in designing and implementing laws and auditing taxpayers who apply those laws.

Going forward, compliance will not be achieved merely through the traditional inclusion of sale and purchase data but also by the corresponding output taxes collected and input taxes claimed. Instead, it's to recognize that these figures are simply amounts — the product of systems, processes and people. Tax authorities want to know the methodologies behind these figures, not just the reported amounts. It remains to be seen whether tax authorities will adopt less binary approaches in their auditing practices.

³⁹ Source: Supplementary annual GST return | Australian Taxation Office, accessed on 12 December 2024.





















Al gives tax authorities virtually unlimited power. They could operate like a cartel and win the technology race, but they need to be wary of what they are creating right now

It may seem counterintuitive that we have waited until prediction seven before the focus shifts to Al. However, this is intentional. In prediction five, we examined the inexorable rise of e-invoicing, not just in the context of indirect tax compliance but across all taxes. In prediction six, we anticipated the growing role of systems over laws in determining indirect tax obligations. Arriving at prediction seven, it should be clear that a key foundation for the effective deployment of AI has been established — quality data.40

Importantly, prediction seven focuses on the role of tax authorities in deploying Al rather than on taxpayers.41 This emphasis should be self-evident — with measures such as e-invoicing, a further precondition for the powerful deployment of Al by government has been met population-wide data. In other words, tax authorities will soon have data on virtually every transaction occurring within their economies in a readily analyzable form.

Imagine how that data could be used. Governments could track the health of their economies in realtime. Fiscal and monetary policy impacts could be managed, not with a traditional lag effect, but almost instantly. Taxes can be collected, in many cases, almost at the point of

sale. Instances of non-compliance, errors or anomalies could be addressed and rectified immediately. Missing trader and carousel fraud could be eliminated. The possibilities are nearly endless.

Yet, when we conceptualize the use of Al by tax authorities, we often think about this in silos. We envision a single country's tax authority operating its e-invoicing system and deploying AI solutions over its datasets. But what if that data were shared between regulatory authorities within a jurisdiction or even across borders? Instances of multinational tax avoidance or evasion could then be swiftly addressed, and excessive profit shifting through transfer pricing could be met by powerful resistance. Again, the possibilities are nearly limitless.

Over the past few years, we have witnessed both a growing trend of increased cooperation between tax authorities and enhanced standardized data reporting tools at their disposal. Examples include the implementation of country-bycountry reporting (for transfer pricing purposes), DAC 7 (for platform reporting), DAC 8 (for reporting and exchange of information on cryptoassets), and supplemented by measures such as Pillar 2 of BEPS 2.0 (which should reduce tax competition through the implementation of a global minimum tax).

While these developments indicate a world in which information is exchanged freely and efficiently between tax authorities around the world and where cooperation is enhanced to combat the evils of avoidance and evasion, there's a risk that this tax authority equivalent of the famous 1969 Woodstock music festival may come to a crashing halt. At the time of writing, Pillar 1 of BEPS 2.0 is struggling to survive. Countries appear poised to unilaterally implement DSTs, and there's a distinct possibility of an all-out trade war fueled by tariffs and retaliatory measures.

Let's consider a further dimension. With the implementation of broad-based B2G, B2B and B2C e-invoicing, the prospect of tax authorities engaging in the wholesale sharing of information across borders becomes equally problematic. After all, the transactional level data collected from citizens almost takes on an aspect of national significance and security.

One thing is clear — tax authorities operating within their borders will have virtually unlimited power, and they will win the technology race purely because they have the core

⁴⁰ See "Artificial Intelligence Without the Right Data is Just... Artificial", Forbes, 23 January 2023, accessed at Artificial Intelligence Without The Right Data

For a detailed examination of the role that generative AI in the tax profession generally, see "The use of generative AI tools in the tax profession", in British Tax Review in Issue 4, November 2023, published by Thomson Reuters Sweet & Maxwell. See https://www.sweetandmaxwell.co.uk/british-taxreview/index.aspx.

ingredients that no other entity will have — they will have quality data in endless volumes.

This brings us to the denouement of Al. There's no shortage of literature and powerful examples to illustrate how AI can revolutionize many aspects of our daily lives as consumers and its transformational impact on business and government, including tax authorities. In the hands of the tax authorities, Al is an irresistible force. However, when compared to the need for ethical and responsible frameworks for Al use by tax authorities, we worry that it's hardly an immovable object. We have already seen instances where automated decision-making by governments has gone astray, as demonstrated by the Australian 'Robodebt scandal' and the Dutch childcare benefits scandal, both salutary lessons to other authorities of the limits of automated decisionmaking in tax administration.42

While responsible AI frameworks in government are quickly being developed,43 to date these have mostly taken the form of guidelines. There has been limited consideration of how laws should evolve, including the need for legal constraints on the power of tax administrations. A recent paper by Kunal Nathwani⁴⁴ makes the case for imposing legislative safeguards on the use of Al in tax administration. For example, where decisions by tax authorities have typically required an officer to have formed a view based on certain facts and criteria, the opportunity to deploy AI to augment those decisions is fairly obvious. But the temptation to replace the human in the loop may prove irresistible. It's not difficult to conceive of this happening initially in more mundane

or routine cases and then gradually extending to more complex decisionmaking.

This shift raises a range of moral, ethical and legal issues. Key concerns include the risk of data privacy breaches, the reinforcement of certain biases in decision-making, potential hallucinations in the Al itself, confusion around the concepts of causation and correlation, and, perhaps most fundamentally, the risk of decisions being made by 'the system' rather than the transparency and humanity that are needed in dealing with outcomes that affect real people. After all, tax authorities exist to serve the community, and we should expect tax officials to act as the voice of the community's standards.

As Nathwani points out,45 even when a tax official explains why a particular decision was made using AI, in a black-box model, that explanation is merely the officer's understanding of why the decision was made rather than the actual logic and reasoning used by the model itself. Nathwani makes the case that "non-binding guidelines and principles do not go far enough to protect taxpayer rights as these are non-justiciable." We

While it's inevitable that new laws will be enacted to regulate Al use by businesses, the potential impact of AI on the work of tax authorities and the rights of taxpayers is too important to be left to mere guidelines. The era of AI has arrived, and it would be timely for the OECD (or a similar body) to take the mantle and examine how tax legislation and its administration need to be regulated in an AI era.

One thing is clear — tax authorities operating within their borders will have virtually unlimited power, and they will win the technology race...

⁴² See Royal Commission into the Robodebt Scheme, Australian Government, 2023 see: Royal Commission into the Robodebt Scheme, accessed on 26

⁴³ See for example, the OECD's 'Principles for Responsible Stewardship of Trustworthy Al', https://oecd.ai/en/ai-principles.

⁴⁴ Nathwani, K, "Artificial Intelligence in automated decision-making in tax administration: the case for legal, justiciable and enforceable safeguards", The Institute for Fiscal Studies, September 2024 — see

⁴⁵ Nathwani, K, "Artificial Intelligence in automated decision-making in tax administration: the case for legal, justiciable and enforceable safeguards", The $Institute \ for \ Fiscal \ Studies, \ September \ 2024 --- see \ \underline{Artificial-intelligence-in-automated-decision-making-in-tax-administration.pdf} \ at \ p.29$





















There should be a shift towards a technology-driven retail sales tax system

VAT has long been a reliable source of revenue for governments worldwide due to its multi-stage collection process and self-enforcing nature.46 Unlike the single-stage sales taxes adopted by US states, VAT ensures that if one stage of the supply chain fails to collect taxes, the government's lost revenue is limited to the markup at that stage.

In B2B transactions, a purchaser should not be allowed to claim a credit of the tax charged without a valid VAT invoice. This incentivizes purchasers to request such invoices and verify their validity before paying vendors. These invoices generate an auditable paper trail.

Additionally, due to the invoice credit nature of the tax, the VAT amounts relating to these transactions (whether as totals or in a more granular form) should appear on both the vendor's and the purchaser's tax returns and/or supplemental reports. This enhances the opportunities to detect tax evasion. Tax authorities can maintain records of taxpayer purchases through the credit mechanism, enabling them to estimate reasonable sales levels. This is particularly useful at the retail level, where there may not be a purchaser claiming a credit that would allow the potential matching of transactions.

Despite its theoretical advantages, the VAT system has several downsides, including the risk of tax evasion caused by fraudulent invoices.47 From a business perspective, the most notable issue is likely the cash flow cost.48 In most jurisdictions, VAT invoiced is due to the government even if no payment is received at that time, essentially requiring businesses to prepay VAT. This can pose a significant cash flow challenge for businesses, especially if the customer fails to pay for the transaction (and the related VAT).

Moreover, the process of reclaiming VAT can be slow, tying up funds that could otherwise be used for operational expenses. 49 Businesses also face high VAT compliance costs,⁵⁰ including high penalties in cases of errors that may arise from an overly complex system.

Advances in technology, specifically e-invoicing and AI, offer an opportunity to rethink the traditional VAT system. These technologies enable tax authorities to determine in quasi-real-time which economic operators are performing certain types of transactions and whether they are susceptible to fraud. For now, these tools are considered invaluable for tax authorities to ensure they collect the right amount However, implementing e-invoicing and other technology-driven government mandates can be costly for businesses. Tax authorities may consider leveraging the introduction of these mandates as a trade-off with businesses to alleviate the issues posed by traditional VAT systems. In such a proposed technology-enhanced VAT system, transactions between operators certified in the e-invoicing system would be zero-rated. Only transactions with economic operators not 'certified' in the tax system — such as private individuals and small businesses⁵¹ — would be taxed. This would relieve most businesses from the requirement to prepay VAT as well as most VAT refund claims.

The efficacy of this system would be dependent on its design. It would require a VAT system fully embracing the core principles mentioned above in prediction one and laws driven by systems as suggested in prediction six. To minimize friction and avoid abuse, special rules may have to be introduced. For instance, transactions involving economic operators performing VAT-exempt activities (e.g., financial services), may necessitate implementing a general reverse charge mechanism, allowing customers to self-assess any VAT owed to the government.

See e.g., Ramon Frias & Philippe Stephanny, The Death of the Indirect Tax Return, Tax Notes International, Vol. 112, No. 2, 2023.
 See e.g., Stephen C. Smith & Michael Keen, VAT Fraud and Evasion: What Do We Know, and What Can be Done? (Feb. 1, 2007), available at <a href="https://break.org/h

⁴⁸ See e.g., KPMG Ireland, Covid-19 Cashflow management (2020) available at https://assets.kpmg.com/content/dam/kpmg/ie/pdf/2020/06/ie-vat-cashflow-

⁴⁹ See e.g., Mr. Graham Harrison and Russell Krelove, VAT Refunds: A Review of Country Experience (1 November 2005).

Virtues and Fallacies of VAT — An Evaluation after 50 Years; Chapter 6: Counting the Costs of VAT Compliance (2021).

⁵¹ Such a system would not be unlike the Integrated Sales Tax proposed by Charles Mclure, which offers already some essential design ideas. Charles E, Mclure, How to Coordinate State and Local Taxes With a Federal Value Added Tax, Tax Law Review, Vol. 63, No. 3, 2010.

Advances in technology, specifically e-invoicing and AI, offer an opportunity to rethink the traditional VAT system.

For dual-use goods and services those with business and personal use characteristics, such as travel and entertainment expenses — a reverse charge may also be applied by leveraging the customer's VAT ID in the e-invoicing system.

Alternatively, the law could consider such transactions as always taxable. given that such goods and services include private consumption. Business customers would then have to file a refund claim with the tax authorities. Since the system would be highly dependent on the e-invoicing system, the tax authorities would also be able to quickly determine any potential abuse, such as individuals leveraging their business IDs for private purchases. Any non-compliant economic operator would lose their 'certified' status, reverting them to the standard VAT collection and deduction mechanism.

The system could be implemented in phases, based on the trustworthiness of economic operators and/or be made optional for those who want to achieve a cash flow advantage. It should be noted that such a system isn't unprecedented, as certain US states already allow eligible businesses to pay sales tax directly to tax authorities instead of the seller.52

Shifting to a technology-driven VAT would not be without its challenges. Taxpayers would, for instance, have

to monitor if their counterparts are 'certified taxpayers,' although this could be managed through real-time government feedback provided by an e-invoicing system. Moreover, for taxpayers performing mixed transactions (B2B and B2C), implementing a dual system where VAT is only collected from B2C customers could be more complex and costly. This complexity would depend on the data requirements set by the jurisdiction and the feedback received by the e-invoicing system. This downside could be mitigated by making the system optional for businesses wishing to benefit from cash flow savings and/or meet specific requirements set by the tax authorities.

Nonetheless, the most significant hurdle for such a trade-off doesn't seem to be the requirement to revise the tax law or specific business impacts but rather political unwillingness. For instance, governments have so far not demonstrated a willingness to fundamentally rethink their VAT systems when introducing an e-invoicing mandate, despite these mandates being promoted as a panacea to reduce tax evasion and improve tax compliance.53 Therefore, it's doubtful that governments would embrace such a fundamental shift that would also result in them losing their cash flow advantages in the current system.

⁵² See e.g., Direct Payment Permits — tax.NY.gov, available at https://www.tax.ny.gov/pubs_and_bulls/tg_bulletins/st/direct_payment_permits. ~:text=A%20direct%20payment%20permit%20allows,paying%20tax%20to%20a%20seller

⁵³ All EU jurisdictions that implemented or are proposing to introduce e-invoicing mandates have kept exceptions to the basic principles such as the application of a domestic reverse charge mechanism to fraud-prone products or VAT split payment mechanisms.





















The ideal form of indirect taxes is a more progressive VAT, which seems both easily achievable and yet elusive

Since its inception, VAT has been considered inherently a regressive tax.⁵⁴ Jurisdictions have long attempted to mitigate the regressivity through different means.55 Traditionally, these attempts have been carried out through the application of lower VAT rates, while a more modern approach addresses regressivity with welfare assistance to lower-income households through the entire tax transfer system. The former attempts have long been criticized as a poor tool for targeting support to lower-income households.56

In Designing a Progressive VAT, Rita de la Feria and Artur Swistak propose a 'novel' approach to addressing the regressivity of VAT by introducing a single-rate, broad-base VAT system that compensates lower-income households in real-time at the point of purchase. This progressive VAT aims to eliminate regressivity while avoiding the political, cash flow and welfare stigma challenges⁵⁷ associated with traditional and modern VAT approaches. The paper highlights the significant advantages of this system, including improved compliance incentives and eliminating efficiency-equity trade-offs. The proposal leverages

advances in digital tax technology, like those outlined in prediction five, to ensure real-time compensation, making the tax feel progressive to consumers. The authors argue that this approach not only improves equity without significant efficiency losses but also offers potential revenue gains and reduced inequality, making it a viable solution for enhancing VAT systems globally.

There is, however, little evidence that such a proposal (or an alternative) is close to being introduced. In the past few years, governments have leveraged special regimes as social policy tools. For instance, governments have used reduced VAT rates and exemptions for products to combat the COVID-19 pandemic, to alleviate higher utility and/or basic food product costs because of higher inflation, or as a tool to incentivize products and services to support the transition to a lower carbon economy.⁵⁸

These changes are often implemented as very malleable measures (short implementation and limited-time application). This does not mean that these measures have become better than the initial assessments by economists. From a public communications perspective, it may be easier to showcase that a government is addressing the population's needs by introducing specific 'targeted' measures rather than explaining that price increases are caused by external and internal factors and fixing these will take time. Moreover, the United Nations' analysis of VAT in developing nations on policy considerations to address equity concerns mainly recommends leveraging rates rather than a direct VAT recovery system.59

The implementation of the proposed progressive VAT would likely, at least in the near to medium future, face an uphill battle while jurisdictions are grappling with a desire by governments to improve their tax revenues in the face of increasing budget deficits and public debt. 60 In this respect, governments appear to be somewhat willing to leverage the technological improvements to implement e-invoicing and similar mandates as the high investment cost is linked to higher revenues.⁶¹

Moreover, while the authors highlight the political dynamics such as information asymmetry, trust issues, loss aversion and status quo bias — that prevent

See e.g., Alastair Thomas, Reassessing the regressivity of the VAT, OECD Taxation Working Papers No. 49 (2020).

⁵⁵ See e.g., Rita de la Feira and Artur Swistak, Designing a Progressive VAT, IMF Working Papers WP/24/78 (2024).

OECD, The Distributional Effects of Consumption Taxes in OECD Countries (2014).

While their paper references the use of digital cards (and similar) methods to minimize welfare stigma challenges, it is difficult to see how the presentation of a digitized form of payment to the merchant is substantially different from food stamps.
 See e.g., OECD (2021), Tax Policy Reforms 2021: Special Edition on Tax Policy during the COVID-19 Pandemic, OECD Publishing, Paris, https://doi.org/10.1787/427d2616-en; OECD (2024), Tax Policy Reforms 2024: OECD and Selected Partner Economies, OECD Publishing, Paris, https://doi.org/10.1787/427d2616-en; OECD (2024), Tax Policy Reforms 2024: OECD and Selected Partner Economies, OECD Publishing, Paris, https://doi.org/10.1787/427d2616-en; OECD (2024), Tax Policy Reforms 2024: OECD and Selected Partner Economies, OECD Publishing, Paris, https://doi.org/10.1787/427d2616-en; OECD (2024), Tax Policy Reforms 2024: OECD and Selected Partner Economies, OECD Publishing, Paris, https://doi.org/10.1787/427d2616-en; OECD (2024), Tax Policy Reforms 2024: OECD and Selected Partner Economies, OECD Publishing, Paris, https://doi.org/10.1787/427d2616-en; OECD (2024), Tax Policy Reforms 2024: OECD and Selected Partner Economies, OECD Publishing, Paris, https://doi.org/10.1787/427d2616-en; OECD (2024), Tax Policy Reforms 2024: OECD and Selected Partner Economies, OECD (2024). ; Government of Canada, GST/HST break, available at https://www.canada.ca/en/services/taxes/child-and-family-benefits/gst-hst-

United Nations, Overview of VAT/GST in Developing Countries, ANNEX A to E/C.18/2024/CRP.21 (2024).

See e.g., Politico, France plans to tax big business and the rich, while slashing public spending (10 October 2024); BBC, Why Kenya's president wants people to love the taxman (7 June 2024)

⁶¹ OECD FORUM ON TAX ADMINISTRATION, Tax Administration 3.0 and Electronic Invoicing (2022).

governments from adopting more modern approaches to addressing the regressivity of VAT, the authors do not address how the progressive VAT would circumvent these issues. Implementing the progressive VAT would be complex and require significant amounts of information to be gathered by governments on its citizens.

Such a system would likely face the same, if not increase, information asymmetry and trust issues that already exist under the more modern approach. It's also questionable whether the loss aversion and status quo bias would be minimized as citizens may prefer a larger payment from the government rather than a real-time cashback that may appear less generous. Finally, because progressive VAT relies on a compensation mechanism, it could still have a cash flow impact if the VAT amount isn't refunded instantly to the consumer's bank account. This would particularly affect lowincome households, especially if they make purchases in cash.

Does this mean that the long-held aspiration for a progressive VAT is doomed? Not necessarily. If all taxes can benefit from e-invoicing and tax laws are driven by technology, there's a decent chance that a progressive, technology-driven VAT will be the future of consumption taxes. For instance, one variation to the progressive VAT could involve zero-rate payments (or applying a progressive rate scale) for individuals who qualify for relief under the progressive VAT instead of using a compensation mechanism. Such a mechanism would be based on the same technological requirements as the progressive VAT but could reduce investment costs for the government, potential cash flow and distrust issues. Perhaps Uruguay will, in near future, be the first jurisdiction implementing such a system.62

implementation of the proposed progressive VAT would likely, at least in the near to medium future, face an uphill battle... 77

⁶² In an interview, Uruguay's incoming finance minister stated that the government has enough information to adopt a VAT tailored to each person. See e.g., Bloomberg Tax, Uruguay Future Finance Minister Oddone Flags Tailored VAT: Azul (16 December 2024)





















Just as the digital economy is dominated by platforms, so too will the tax profession

In prediction seven, we examined the impact of AI on the tax authorities, and it would be remiss of us not to address the powerful impact it will have on the tax profession itself — whether we are considering professionals working in firms or those within in-house tax functions.

At the time of writing, there is considerable hype surrounding the use of Gen Al tools, along with a recognition of their potential transformational impact. This often leads to mixed feelings among tax professionals of both excitement about its power and fear of how it could replace jobs. However, within many organizations right now, there's also a gap between Al's potential and its day-today usage by tax professionals. Many are in the process of adapting AI to augment their existing systems and processes. Many are also in the process of putting in place guidelines and training to mitigate risks around data privacy and confidentiality, potential inaccuracies, biases and hallucinations. This takes time.

The current use and misuse of the term 'AI' as a feature in nearly every new technology solution should soon decline, allowing buzzwords to give way to real action. Al will become just another feature within the technology landscape rather than a differentiator, but the real unknown is its impact from an organizational and skills transformation

perspective. As Hadi Partovi, Founder and CEO of Code.org, expressed, the risk isn't so much about people losing their jobs to Al:



It's losing their job to somebody else who knows how to use AI. That is going to be a much greater displacement. It's not that the worker gets replaced by just a robot or a machine in most cases, especially for desk jobs, it's that some better educated or more modernly educated worker can do that job because they can be twice as productive or three times as productive. The imperative is to teach how AI tools work to every citizen, and especially to our young people.63

ga Speech given at a session on Education meets Al at the World Economic Forum, 2024 — see From Sam Altman to António Guterres: Here's what 10

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The challenge with Al lies... in understanding how it will transform organizations, roles, processes and business models.

The challenge with AI for tax professionals isn't with the power of the technology. Instead, it lies in understanding how it will transform organizations, roles, processes and business models. In this final prediction, we explore how that transformation will impact the tax profession, leveraging the work carried out in KPMG's report *The* use of generative AI in the tax profession.64

Here are four sub-predictions to consider:

- The benefits of AI will be greatest in those organizations that can industrialize their data and experiences from their tax functions, linking them to broader business processes and functions.
- In the coming years, significant consolidation within the tax profession is expected as organizations seek to match their workforce's skills with platform-like providers that can support technology enablement across a range of areas — from establishing central tax data warehousing to compliance automation and providing advisory-driven insights.
- 3. The real value of AI tools will arise from their scale, enabling organizations to replicate tax authorities' processes through a focus on real-time checks and benchmarking.

4. The role of many tax professionals will become polarized, resulting in fewer generalists and a rise in deeper subject matter experts working with the broader business, supported and augmented by data, technology and transformation experts equipped with sufficient tax knowledge to enable the tax function.

In many respects, the role of tax professionals will evolve to be major consumers of extensive data and insights-driven platforms that can centrally support their needs across tax advisory, compliance, dispute resolution and related tax services. The core skills of tax professionals, which we need to draw upon, include empathy, experience, judgment, prediction, strategy, action and implementation — skills often associated with the term 'know-how.'

We are entering a period of disruption and consolidation within the tax profession, characterized by a shift from knowledge-driven tax professionals to the emergence of 'know-how driven' tax professionals.

⁶⁴ Wolfers & Roark, "The use of generative Al in the tax profession — after the initial hype, fear, foe or friend", KPMG International, August 2023, accessed

Predictions from 2020–2024









Conclusion





While VAT is future-proof, the same cannot be said for other taxes.

Predicting the future is inherently challenging, even for the brightest minds.65 However, just as taxes are a certainty, so is their evolution in response to business and technological developments, particularly in the realm of indirect taxes. While VAT, as a broad destination-based tax, is well-suited to address modern economic challenges, technology advancements are already, and even more significantly, transforming its operation.

E-invoicing is spreading rapidly and is already enhancing VAT compliance and reducing the VAT gap. It's expected to expand its applications to include pre-filling VAT returns and improve compliance across other taxes like corporate income tax and transfer pricing. As tax authorities gather more information, they will be able to leverage AI with increased precision to perform real-time audits, which could virtually eliminate tax fraud and provide opportunities for targeted relief measures. While AI offers significant potential, it also raises ethical, legal and privacy concerns that necessitate the development of responsible Al frameworks and legislative safeguards to protect taxpayer rights and ensure transparency in tax administration.

This technological indirect tax revolution will also force tax laws — especially indirect taxes — to be designed primarily based on data and system requirements, adhering to basic core principles in the case of VAT. It also promises more efficient VAT laws, potentially taking the form of a technology-driven retail sales tax system that could alleviate cash flow and compliance burdens on businesses. In addition, the same technological advances may finally enable a working and efficient progressive form of VAT.

While VAT is future-proof, the same cannot be said for other taxes. Business and technological developments have shown the shortcomings of current corporate income taxes, potentially leading to the decline of traditional income taxes and the rise of new forms of taxation, such as DSTs, which incorporate indirect tax elements. As history often rhymes, the near future will be marked by a resurgence of tariffs, leading to widespread economic consequences and reshaping global supply chains.

Jurisdictions will likely continue developing innovative methods to address externalities resulting from business and technological advancements, often leveraging indirect taxes as an effective tool. For instance, global carbon pricing regimes are expected to proliferate, leading to complex regulatory comparisons and potential trade disputes, as they could be considered alternatives to more traditional customs duties. Moreover, as economies continue to digitize, it's plausible that jurisdictions will be pushed not to reinstate the WTO moratorium on not imposing duties on electronic commerce, which expired on 31 March 2024.66

Whether our predictions will become reality is not certain, but they may inspire policymakers, much like 'The Jetsons' have inspired some of the brightest minds in Silicon Valley today. Regardless, the future of indirect taxes is bright and full of opportunities for innovation that could redefine how businesses and economies operate. This is equally true for the tax profession, with professionals becoming major consumers of extensive data and insights-driven platforms, shifting from a knowledgedriven to a 'know-how' driven role.

66 See e.g., World Trade Organization, WORK PROGRAMME ON ELECTRONIC COMMERCE, WT/MIN(24)/38 (4 March 2024).

⁶⁵ On 29 December 1934, Albert Einstein was quoted in the Pittsburgh Post-Gazette as saying, "There is not the slightest indication that [nuclear energy] will ever be obtainable. It would mean that the atom would have to be shattered at will." New Scientist, 10 impossibilities conquered by science (3 April 2008), available at https://www.newscientist.com/article/dn13556-10-impossibilities-conquered-by-science/#:~:text=On%2029%20December%201934%2C%20Albert%20Einstein%20 was%20quoted,atom%20would%20have%20to%20be%20shattered%20at%20will.%E2%80%9D.





Meet the authors



Lachlan Wolfers Global Head of Indirect Taxes. **KPMG** International

Lachlan has over 25 years of experience advising multinational companies on indirect taxes, tax transformation, data management and technology. He is passionate about the role of indirect taxes in driving developments in the digitalization of the tax function. His publications, Transforming the in-house tax function through Technology, The Future of VAT in a Digital World and The use of generative AI tools in the tax profession, provide insights into indirect taxes and technology developments.

With a focus on the digital economy and financial services, Lachlan advises many of the largest companies and leads KPMG's BEPS 2.0 technology solution development. In 2020, he was named the Indirect Tax Advisor of the Year for the Asia Pacific region by the International Tax Review. Lachlan also advises policymakers, finance ministries and tax authorities around the world, including China, Australia, the UK, and the OECD.



Wei Cui Professor of Law, Peter A. Allard School of Law, University of British Columbia

Professor Wei Cui joined the law faculty at the University of British Columbia in 2013. His research and writing span a wide range of topics in tax law and policy, including international taxation, tax administration and compliance, tax and development, valueadded tax, and tax and spending policies targeted at the labor market. His current research projects examine the design of international taxation in light of the evolution of international trade and compare redistributive policies in democratic vs. authoritarian countries.

Wei also has secondary research interests in the modern administrative state, especially analyzing interactions among the legislative, executive, and judicial branches of government in parliamentary polities and non-democratic regimes. Before becoming a full-time academic, Wei practiced tax law for over 10 years in New York and Beijing. From 2009 to 2010, he was Senior Tax Counsel at the China Investment Corporation. He has also served as a consultant to China's National People's Congress, the Ministry of Finance and the State Administration of Taxation and the United Nations.



Philippe Stephanny Managing Director, Indirect Taxes,

KPMG in the US

Philippe is a Managing Director at the Washington National Tax — State and Local Tax (SALT) practice at KPMG in the US. He advises US and multinational corporations on global indirect tax, including planning, supply chain restructuring, reorganizations, mergers and acquisitions and tax engine implementations. Philippe has provided indirect tax consulting and compliance services for clients in various industries, including automotive, manufacturing, healthcare, IT, telecommunications, retail, finance, insurance and property development.

Philippe also develops indirect tax training for the SALT practice, tracks global indirect tax administrative and legislative developments, and contributes to Inside Indirect Tax, a global indirect tax monthly publication. Additionally, he is the KPMG Global Indirect Tax Services (GITS) representative at the Tax Advisory Group (TAG) of the Business at OECD (BIAC) indirect tax working group and is a member of the GITS Indirect Tax Policy Group, Digital Economy Group and Knowledge Management Group.



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Lachlan Wolfers

Global Head of Indirect Taxes **KPMG** International lachlanwolfers@kpmg.ca

Wei Cui

Professor of Law Peter A. Allard School of Law University of British Columbia cui@allard.ubc.ca

Philippe Stephanny

Managing Director, **Indirect Taxes** KPMG in the US philippestephanny@kpmg.com



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