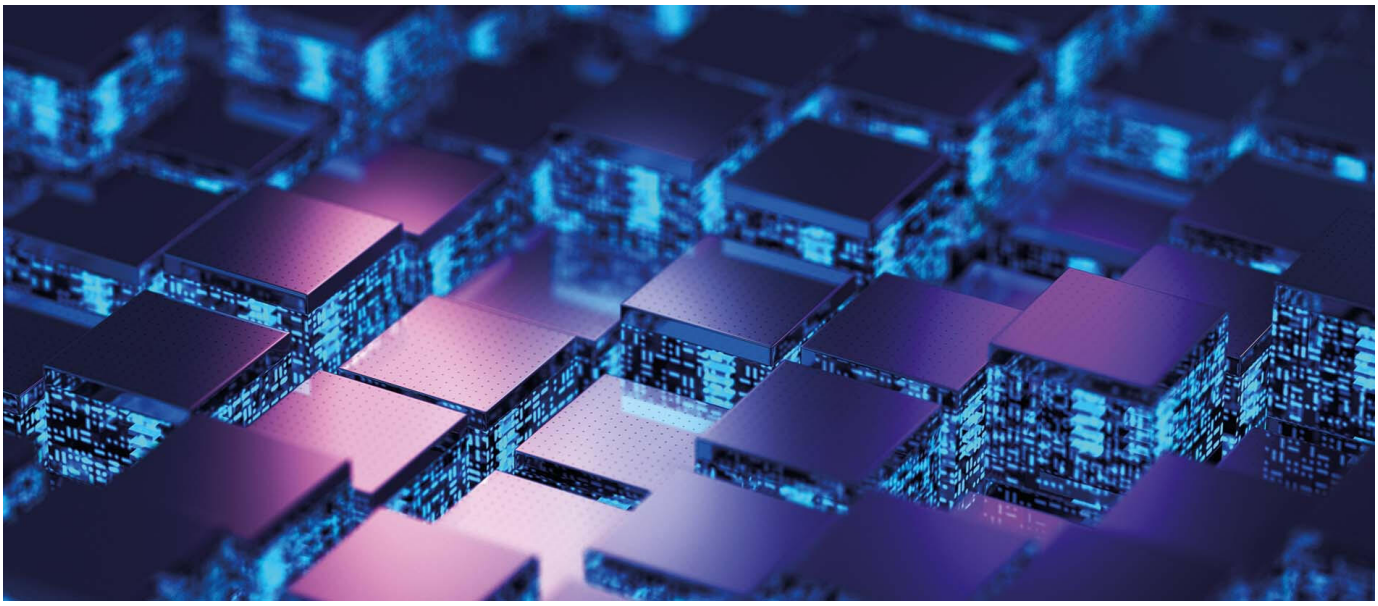
Artificial intelligence: transforming the world of indirect tax

General Features | Large Corporate | Indirect Tax



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We ask how artificial intelligence is transforming the indirect tax function and how that influence might evolve further.

Key Points

What is the issue?

When programmed with vast amounts of accurate tax data, and the relevant laws, regulations and policies, artificial intelligence technologies could have the capability to perform rapid analysis and provide real-time tax advice and guidance on routine issues.

What does it mean to me?

Forward-thinking organisations are increasingly employing AI to play the role of a junior team member, using this transformative technology to get better and faster results.

What can I take away?

The first step is to better understand the nature of the technology, and to consider what it can do, as well as its limitations.

The recent wave of media coverage on artificial intelligence (AI) following the launch of ChatGPT and other ‘generative AI’ programs poses some interesting questions for the future of indirect tax.

The large language model technology which underpins these generative AI tools has the potential to disrupt many industries, including the indirect tax profession, by automating a number of tasks which are currently performed by humans. A Goldman Sachs study, ‘The potentially large effects of artificial intelligence on economic growth’ by economists Joseph Briggs and Devesh Kodnani, published in March 2023, found that generative AI could substitute up to one quarter of current work activities in the US and European economies.

Large language models, like ChatGPT, are trained on massive amounts of data and have the ability to understand and respond to natural language. When programmed with vast amounts of accurate tax data, and the relevant laws, regulations and policies, these models could have the capability to perform rapid analysis and provide real-time tax advice and guidance on routine issues.

Although these tools aren’t yet being used widely in place of more traditional means of tax advisory work, forward-thinking organisations are increasingly employing AI to play the role of a junior team member in other areas, using this transformative technology to carry out the heavy lifting required to get better results, faster. In an increasingly complex, competitive and fast-moving tax environment, how can AI be deployed to transform outcomes for indirect tax teams? We’ve outlined four leading use cases below.

1. Accessing critical information at speed using chatbot technology

Indirect tax professionals spend too much of their working lives looking for the answers to routine questions. For example, typical checks include whether a VAT return has been filed for a specific jurisdiction this month, or how much VAT should be charged on a particular transaction. This continuous research is time consuming, saps resources and prevents tax practitioners from leveraging their skills in more valuable ways, such as working with the business on tasks that may require more nuance or judgment.

In an ideal world, every tax department would have additional team members whose sole job would be to research and accurately answer high volumes of routine queries every day. Unfortunately, conventional manual processes make this approach far too costly. However, the advent of chatbot technology is turning this aspiration into a reality. New AI models are more advanced than previous generation chatbots in their ability to understand requests for information, automatically interrogate data-rich information sources and reply within seconds to a human operator, with an answer they can understand and use.

While the application of chatbots to indirect tax is currently more theoretical than common practice, the concept has the potential to transform the industry. The public release of these AI models may accelerate the wider adoption of chatbots across the profession. The indirect tax function has so far identified two main use cases for AI-powered chatbots.

Routine transactional inquiries: The first use is to expedite routine transactional inquiries as described above, liberating skilled tax professionals so they can add greater value. In the very near future, this process could involve a spoken request, but at the moment it is more likely to be a query typed into a chat screen. The chatbot then connects with the underlying data source via an API (or application programming interface), the data source is interrogated, and the tax practitioner is given the information they need in plain language.

Information retrieval: The second use is to recruit chatbots to help tax professionals access critical information faster than ever before. Rather than focusing on transactional detail, chatbots can be programmed to zero-in on matters of jurisprudence. For example, companies operating in multiple jurisdictions often contend with significant differences in VAT return obligations, deadlines and reporting requirements. Chatbots can be programmed to hold all this information, and answer queries quickly and accurately.

It is also possible to fast-track this information-retrieval process by preparing a bank of frequently asked questions, rather than instructing the chatbot to interrogate primary sources every time it receives a query. The AI can also be programmed to add new questions and answers to this bank if certain queries arise a number of times.

The application of this technology becomes particularly exciting for the profession when you consider that Excel spreadsheets and PDFs can be turned into chatbots. For example, an indirect team may have a 300 page PDF, which acts as a script explaining how a quarterly process should be carried out. Once the document has been transformed into a chatbot the tax team can interact with it, asking the best ways to proceed. For instance, they could tell the chatbot they have completed one step in the process and the outcome, and based on this information ask what they should they do next.

Of course, the successful configuration and deployment of chatbots requires human input both to ensure the technology is set up correctly and to efficiently apply this to meaningful indirect tax use cases. The technology should augment the human service, rather than replace it – there will always be areas of the profession that call for human nuance. The ultimate aim is to use chatbots to efficiently share knowledge across an organisation – giving authorised tax professionals swift access to key information, whenever or wherever they need it.

2. Extracting and posting invoices at speed and scale

Businesses arguably spend far too much of their time currently reviewing account payables data. This process generally involves interrogating invoices to ensure that the correct amount of tax is recorded, as well as that compliance requirements and the liability to the vendor is met.

While this may sound like a straightforward task, the sheer volume of invoices that some organisations process means this can become a significant undertaking.

An experienced accountant working 220 days a year and requiring two minutes to enter a simple incoming invoice can theoretically manage around 30,000 invoices a year. If the cases are more complex, and the accountant takes four minutes per document, that number falls to 15,000 invoices processed a year. In contrast, an AI-based solution has the capability to process between five and six million incoming

invoices annually, a 300-fold increase in productivity.

Developments in cloud computing remove the need for extra capital expenditure costs for new IT infrastructure, which is often a major challenge for budget-sensitive indirect tax teams. By investing in a cloud AI solution, organisations are able to keep accounting activities in-house, alongside the expertise needed to handle invoice processes and data.

3. Using AI as an enabler of a strong data strategy

For any business, data management is crucial but is often time and labour intensive. The quality and accessibility of data are important to a company’s ability to shift from ‘guessing’ to ‘knowing’, as it takes strategic business decisions to identify value and manage risk.

From a tax perspective, access to quality data in a timely manner can be the difference between being compliant and being subject to penalties from the tax authorities as a result of errors. With the advancement of AI and its application by tax technology experts, the data management process can be greatly enhanced and expedited. This can drive improvements across a range of tasks, from cataloguing and merging data to error correction and classification of the data for specific purposes.

AI is now particularly powerful at data classification and from an indirect tax perspective can support the classification of large datasets such as assessing the recoverability of travel expenses. The use of AI to sort through large amounts of data, identify key data points and group the information can not only accelerate the data management process but also improve the accuracy of the data over time.

4. Leveraging AI to make sense of the complex global tax landscape

With around 200 jurisdictions across the globe, and each regularly changing its indirect tax laws, keeping up to date with regulation can be a daunting prospect for global tax functions. Latin America, for example, is a particular hotspot when it comes to tax change, with Brazil introducing approximately 3,000 tax updates and amendments during the first three months of the Covid-19 pandemic alone.

Large multinational companies can no longer rely on manual ways of identifying and making sense of the latest developments across the globe.

When the stakes are so high, manual processes can be too slow and prone to inaccuracy. Companies that fail to keep up to date face multiple risks, not least of which is failure to pay appropriate tax, and the fines, controversy and damage to corporate reputation that result.

Conventional processes typically involve regional indirect tax teams scouring local information sources. Whenever they identify relevant details – for example, a new law, court case or tribunal that sets a precedent – they write up a report and, if necessary, the document is translated before it is sent to company HQ.

This process is obviously very time consuming and resource heavy. It could take one tax practitioner several days or weeks to process a significant report just to understand what the tax implications may be. New generative AI models, however, have the potential to read, translate and accurately summarise a similar document in seconds, giving tax practitioners actionable information at speed, without having to routinely work through lengthy documents themselves.

However, regardless of the capability of these models, it’s vital that AI solutions draw on high quality, verifiable information and websites when looking for relevant information. To be effective, web crawlers must be guided by a carefully designed governance layer to ensure that the software respects website copyright and abides by website rules. This should specify what information can be captured, how it can be used, and when and how often information can be captured. For these tools to be used more effectively, it is crucial that indirect tax professionals carefully curate the reference sources and manage the information gathering process.

Once the AI algorithm has identified and captured relevant information, it can be automatically translated, if necessary, and a short user-friendly summary can be automatically produced.

All of this functionality and governance can be baked into AI models and solutions to take into account the copyright law for every country in the world. For example, to build the solution which EY offers, a comprehensive list of around 1,500 individual official tax information sources was identified covering 196 countries, and all the sources vetted for quality and use of the information.

Getting prepared and taking the first step

These examples show that AI is already more widely adopted than many realise. There are several key steps that indirect tax leaders and their teams should take to get prepared for its growing influence. The first is to better understand the nature of the technology, and to consider what it can do, as well as its limitations.

The second step is to start to experiment. Get your hands on the tech and start testing it out. Does it work from theory to practice?

The third step is to pick something relatively small, a quick win, that is a sweet spot for AI and implement it. It might only save 2% of effort but that can build confidence, and start to develop skills in a team. Small steps can start to show people that the technology is approachable and practical, and could settle some of the doubts that people may have about it.

Once you build that confidence, it’s worth taking a step back to address the strategy. You’re now generally aware of the technology’s capabilities. You know you can apply it and have use cases you want to apply it to. You now must decide to what extent it should be applied, and the fundamental goal of using it. A strategy can then be developed, to be used as a guardrail, and work can progress in pursuit of that end objective.

Alongside the skills, expertise and judgment of tax professionals, generative AI tools show tremendous potential. By harnessing the power of AI and other disruptive technologies, tax leaders can be even bolder in their plans to transform tax operations in the years to come.

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