

ChatGPT for Writing and Teaching about Tax

ChatGPT has become a part of common culture for more than a year, and it now seems to be the right time to reflect on how it can function as a valuable resource for those who write and teach about tax. To that end, this editorial includes sentences that have been generated by ChatGPT. They are emphasized in italics, and their generation process is explained in the text or in footnotes. Note that, since ChatGPT contains a stochastic element, it is usually not possible to exactly reproduce the output shown here by retyping the prompts into ChatGPT. The remainder of this editorial discusses three situations in which ChatGPT can assist tax law scholars. Experimenting with research ideas, editing papers, and teaching tax courses.

I EXPERIMENTING WITH RESEARCH IDEAS

Searching for new research ideas on ChatGPT is unlikely to be very successful. Research is a time-consuming activity that requires imagination and creativity,¹ which seems to be the antithesis of ChatGPT. The chatbot seems to consider that it *'can certainly be imaginative'* and that *'it can generate creative and imaginative responses based on the prompts and questions it receives'*, however, it is likely to struggle to establish genuinely new connections between separate legal concepts and legal fields.² Good legal scholarship illuminates what was previously unobserved or unnoticed which ChatGPT might feasibly be able to do but only in response to prompts developed by its user. When I requested ChatGPT to 'formulate a good research question for a tax law article to be published in Intertax', it suggested a question related to *'the Implications of Digital Taxation Reforms on Cross-Border E-Commerce Transactions in the Post-BEPS (Base Erosion and Profit Shifting) Era'*, which is not a topic that I would want to discuss.

A more precise prompt, however, led ChatGPT to suggest questions that were more useful. When asked if it could

provide me with ideas for research questions concerning carbon border adjustment measures (CBAMs) – a topic that I have analysed at length in my research –, ChatGPT proposed twelve research questions. As some of them were primarily focused on economic aspects of CBAMs, I asked for more inputs with a focus on legal aspects. The questions generated were of different quality. Unsurprisingly, some of them had already been largely discussed in the literature while others made no sense at all. More interestingly, a number of them pertained to legal issues that have served as the starting point of journal articles published by legal scholars after January 2022 which corresponded to the last knowledge update of ChatGPT (for the version GPT-3.5) at the time I used it. ChatGPT was thus able to formulate a research question considered as sufficiently new to be publishable in an academic journal. Yet, as it also produced many questions that were irrelevant, this demonstrates that ChatGPT requires a knowledgeable user not only to generate prompts but also to process the output that it produces.

Under those conditions, ChatGPT can support researchers by helping them to freely experiment with ideas and topics of relevance in tax law. I explored how this creative process could develop by using ChatGPT to reflect on the policy and scholarly discourse surrounding the global minimum tax. Pillar Two has been described as being based on a 'devilish logic' and 'diabolical engineering'.³ Given that these terms are all but neutral, could something be learned from this narrative? Was the devilish logic a mere description of the Global Anti-Base Erosion (GloBE) rules, or was there something more to it? I asked ChatGPT for ideas by first experimenting with the terminology surrounding Pillar Two. Could Pillar Two be described in terms that were more positive? *'Pillar Two is based on a sophisticated and innovative approach'*, ChatGPT stated.⁴ This response seemed to echo the words of Peters who wrote that the 'devilish logic' of Pillar Two 'basically implies that the institutional

Notes

¹ James Boyd White, *The Legal Imagination* (The University of Chicago Press 1985). As will be shown later, however, ChatGPT is capable of creative activities as it can generate poems.

² This sentence has been generated as a response to the following question: 'Can ChatGPT be imaginative?.'

³ Ruth Mason, *A Wrench in GLOBE's Diabolical Machinery*, 107 *Tax Notes Int'l* 1391–1395 (19 Sep. 2022); Danish Mehboob, *IFA 2022: Leaders Warn DST's are Tip of Iceberg in World Fractures* (7 Sep. 2022), *International Tax Review*; Cees Peters, *The Legitimacy of the OECD's Work on Pillar Two: An Analysis of the Overconfidence in a 'Devilish Logic'*, 51 (8&9) *Intertax*, 554–571 (2023), doi: 10.54648/TAXI2023057.

⁴ The question asked was 'Can you replace the term "devilish logic" by more positive terms in this sentence: "Pillar Two is based on a devilish logic".'

design of Pillar Two serves as an *intelligent* legal instrument to establish a minimum amount of taxation as such'.⁵ If Pillar Two was an intelligent legal instrument, why were authors referring to it as 'devilish'? My idea was that authors used the term 'devilish' because the GloBE Rules – precisely due to their intelligent design – could serve as a coercive mechanism that infringes upon the sovereignty of states that disagree with its logic.⁶ Thus, when describing Pillar Two as 'devilish', authors were speaking about the OECD's role more generally. I used ChatGPT to play around this idea.

The terms 'devilish logic' belongs to the same semantic category as that used by Guzman to describe the interaction between states and international organizations.⁷ States fear that international organizations might turn into 'monsters' that will undermine their interests, which he calls the 'Frankenstein problem'.⁸ Similarly, tax experts seem to be apprehensive that Pillar Two might become an uncontrollable mechanism.⁹ Could the fact that Pillar Two is described as being based on a 'devilish logic' be associated with what Guzman calls the 'Frankenstein problem' in international law? *'The intricate rules and mechanisms proposed in Pillar Two could lead to unintended consequences, creating a Frankenstein-like situation where the solution creates new problems or exacerbates existing ones within the international tax system'*.¹⁰ ChatGPT did not seem to fully comprehend what I meant by 'Frankenstein problem in international law', however, it allowed me to further explore the idea that the OECD inclusive framework had operated as a de facto international tax organization that had gone out of control and created a little monster with the sweet name of Pillar Two.

Through the perspective of the 'Frankenstein problem', the recent efforts to strengthen the role of the United Nations (UN) in international tax matters also appears as a way to dilute the role of the OECD inclusive framework: one way to 'protect against the possibility of wayward IOs [international organisations]' is to create many of them.¹¹ My questions to ChatGPT regarding the role of the UN in international tax matters as an institution to counterbalance that of the OECD led to many responses that were relatively commonplace and uninspiring. The chatbot

emphasized the global perspective of the UN, the relevance of the UN Sustainable Development Goals, and the role of the Committee of Experts on International Cooperation in Tax Matters. However, one of the responses was potentially more controversial and, thus more interesting in the context of a creative thinking process: *'While the UN and the OECD have their respective roles, they can be complementary'*.¹² I asked: 'Would it not be more accurate to say that the UN and OECD are in a competitive – rather than a collaborative – relationship?' ChatGPT replied: *'While the UN and the OECD do have distinct roles and sometimes different approaches in the field of international taxation, it would not be accurate to describe them as competitors'*.¹³ This brief dialogue illustrates how ChatGPT could become – at least for some – a useful tool to initiate a research process in a playful manner. Although it will not provide tax law scholars with content that can immediately be transformed into an article, ChatGPT can be helpful for experimenting with new research ideas.¹⁴

2 THINKING ABOUT HOW AND WHAT WE WRITE

In addition to providing its users with the opportunity to experiment with new research ideas, ChatGPT can serve as a helpful linguistic editor. The sentences that it generates might not always perfectly match the style of its users, but they are beneficial for testing the clarity and meaning of ideas that an author attempts to express. Instead of asking oneself (or a patient colleague, friend, or relative), 'Is this sentence clear?', a discussion can be simulated with ChatGPT. When the sentence is unclear, ChatGPT tells its users why: *'It is a bit complex and might benefit from some rephrasing to enhance clarity'*.¹⁵ ChatGPT then rephrases the sentence and explains the reasons for the proposed changes. For example, it will separate an overly long sentence into two in order to distinguish between *'two key points for greater clarity'*.¹⁶ ChatGPT can thus be very helpful to convey a message more clearly. This benefit also raises questions: Is it plagiarism when scholars or students use ChatGPT to slightly reformulate a sentence? Should

Notes

⁵ Peters, *supra* n. 3, at 555 (own emphasis added).

⁶ Tsilly Dagan, *Globe: The Potential Costs of Cooperation*, 51(10) Intertax 638–649 (2023), doi: 10.54648/TAXI2023059.

⁷ Andrew Guzman, *International Organizations and the Frankenstein Problem*, 24(4) Eur. J. Int'l L. 999–1025 (2013), doi: 10.1093/ejil/cht061.

⁸ *Ibid.*

⁹ See Dagan, *supra* n. 6, mentioning risks associated with the lock-in effect.

¹⁰ This sentence was part of a longer answer from ChatGPT.

¹¹ Guzman, *supra* n. 7, at 1004.

¹² This sentence was part of a longer response to the following question: 'Can the role of the UN in tax be seen as a way to counterbalance the role of the OECD?'.

¹³ This sentence is the first sentence as part of a longer response to the following question: 'Could we not say that the UN and OECD compete instead of collaborate?'.

¹⁴ This is good news for tax law scholars who would otherwise have to fully reinvent themselves.

¹⁵ This is ChatGPT's response to a question as to whether a sentence written by one of my students was clear.

¹⁶ *Ibid.*

tax law scholars acknowledge the help of ChatGPT as they sometimes acknowledge the help of (human) linguistic editors who, in some cases, significantly contribute to the quality of their work? My personal view is that scholars using ChatGPT or other chatbots for writing an article should acknowledge their use. At Intertax, we also urge prospective authors to recognize the use of AI when submitting articles for peer-review.

3 DEVELOPING TAX LAW COURSES AND NEW TEACHING METHODS

Next to its use in the context of tax law research, ChatGPT can be of help for developing tax law courses and new teaching methods. The chatbot cannot (at least not yet) replace tax law professors, but it can assist them in rethinking their course materials. I will attempt to illustrate how this can be accomplished by using the example of a new course I have recently developed on the global governance of carbon pricing, including carbon taxation.

Using ChatGPT made me reflect on my outline and the questions that I was planning to discuss with my students. I asked ChatGPT to produce an outline of the course that I was planning to teach. I gave clear instructions regarding the title of the course ('the global governance of carbon pricing'), the number of sessions (fourteen), the level of the students (graduate students) and their background (law, economics, political sciences and other social sciences) but I remained relatively vague regarding the specific topics to be addressed in the course. The comparison between my outline and the outline created by ChatGPT was illuminating. There were clear similarities: both outlines include a session on *policy instruments for carbon pricing* and references to the work of Parry and Milne who have respectively contributed to the understanding of the economic and legal effects of carbon taxation. Yet there were also differences: some sessions in the ChatGPT's outline were organized around topics (e.g., *compliance and enforcement, carbon pricing and business, carbon pricing and social equity*) that I plan to address across different sessions. This encouraged me to further reflect on the approach of the course and the time allocated to different topics. Finally, there were mistakes in the outline generated by ChatGPT (e.g., incorrect references) which was somewhat comforting as it meant that the hours spent on a human-generated outline were not completely wasted.

Besides helping to develop new course materials, ChatGPT also allows testing essay questions and topics for reaction papers: Are they too simple and obvious or, to

the contrary, unclear or insufficiently straightforward? By asking ChatGPT the questions I planned to ask students, I could gain some insight into possible answers and refine the way I frame my questions. ChatGPT can thus also be a useful tool for reflecting about the extent to which a question will allow students to think deeply about some tax law issues. If ChatGPT could have given a perfect answer to an essay question, it could be wondered if it is of value to ask it to students. Finally, ChatGPT can also be used to add originality to a course, for example by creating an amusing poem on 'Pillar Two' in order encourage class discussion.¹⁷

4 CONCLUSION

Tax law scholars might not need ChatGPT to fulfil their duties. Yet, as I have attempted to illustrate in this editorial, it might have applications that are beneficial for tax law scholars. In that case, *it is important to use it judiciously*.¹⁸ I conclude this editorial with a poem that summarizes the main points of this editorial and (over)emphasizes the quality of ChatGPT. Unsurprisingly, maybe, as the chatbot has generated it.

*In realms of tax law, scholars seek their way,
Through codes and statutes, complex night and day,
Yet ChatGPT, a beacon in this quest,
Illuminates their path, a welcomed guest.
With wisdom vast, it aids them as they think,
In crafting words, it guides them to the brink,
To ponder how and what they ought to write,
Ensuring clarity and laws held tight
For scholars bold, who yearn to boldly dare,
To test new notions, breathe in novel air,
ChatGPT stands as muse, a source of light,
To help them innovate, explore their might
In courses formed, with teaching methods new,
ChatGPT assists, in every task it's true,
Designing curricula with pedagogic grace,
It helps scholars lead, inspire the learning space
In tax law's realm, where complexities abound,
ChatGPT stands as a partner truly sound,
To help scholars thrive, their insights to share,
In this enduring quest, it's always there.*¹⁹

Alice Pirlot

Assistant professor at the Geneva Graduate Institute
(with the support of ChatGPT and some real colleagues
and friends who reread this editorial²⁰)
Email: alice.pirlot@graduateinstitute.ch.

Notes

¹⁷ I should acknowledge that this idea was the result of an exchange with John Vella.

¹⁸ This sentence is part of a ChatGPT response generated based on the following question: 'Should tax law scholars use ChatGPT?'.
¹⁹ This poem was generated based on the following prompt: 'Could you write a sonnet about how ChatGPT can be helpful to tax law scholars? I would like you to highlight three aspects: (1) how ChatGPT helps tax law scholars to think about how and what they write; (2) to help tax law scholars experiment with ideas; (3) to help tax law scholars develop tax law courses and new teaching methods'. Again, ChatGPT's response was misleading in that it did not follow the typical sonnet form.

²⁰ In particular, I would like to express my sincere thanks to Jonathan Edge and Sophia Piotrowski.