

Using AI to Support the Core Functions of the WTO of the Future

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Discussion Paper

WTO Public Forum

Geneva

September 17, 2025

■ INTRODUCTION

AI is going to fundamentally change world trade. For this, if for no other reason, consideration must be given to updating the organization that oversees the system that governs world trade, the World Trade Organization (WTO). There will be major efforts to improve the trading systems rules and procedures to take into account the vast changes that are likely with the introduction of AI. Those changes in the administration of the agreements dealing with standards (TBT and SPS), the Trade Related Intellectual Property Agreement (TRIPS), and the services agreement (GATS) will be dealt with separately as conditions warrant. Taking an introspective look at the operations of the WTO, discussed here is the application of AI to the three core functions of the WTO—transparency, dispute settlement and negotiation.

My baseline for consideration of what changes are needed or appropriate was the system we have, its net value and its values. These are set out in the WTO guide book that I wrote, published in 2023 by Cambridge University Press, entitled “Revitalizing the World Trading System”¹. It is a good source for use as background for this discussion.

When I set about the task of considering how the WTO might be changed to take into account the advent of AI, I naturally, or more literally, unnaturally, consulted AI itself. Google AI provided its own view of the relationship of the WTO to the world of AI-enabled trade. It told me that “*AI presents a transformative force for international trade, offering both significant opportunities and complex challenges.*” It proceeded to opine that “*The WTO has a crucial role*

¹ It is available through principal online [booksellers](#), in paperback, electronic form, or the prohibitively-priced hardcover edition.

to play in navigating this new landscape by facilitating dialogue, developing appropriate rules, and ensuring that the benefits of AI are shared globally.”

This is a bit general, but before using AI to delve further into its use for modifying the rules of the WTO, a few cautionary notes need to be sounded:

First, AI is rendering an opinion as to the importance of itself, AI, to the WTO. Is it biased? My father once warned me about bias: “Who tells us that we should drink more milk? The milkman?” AI may have built in biases that are worth being sensitive to.

Secondly, it would be unwise to put too much trust into AI. As Ronald Reagan warned us repeatedly: Trust but verify. (Taken from the old Russian proverb ([доверяй, но проверяй](#))). AI can provide wrong or misleading information. It comes with no guarantees. In current jargon, it can “hallucinate”.

Third, AI is not yet primarily innovative in a human sense, that is, introducing new ideas; original and creative in thinking, adding to the total of human knowledge, as opposed to innovative as in a product, featuring new methods; advanced and original designs. For the most part, it is a survey or amalgam of existing thought, ranging over wherever the web-scrapers have gone.

These caveats are not to devalue it. It is merely to state that humanity must understand any tool on which it seeks to rely.

The provenance of AI’s statements is often unknown or insufficiently identified. In reproducing the quoted statements from AI, am I unknowingly quoting some person or persons without attribution? AI does not yet stand on the shoulders of all who went before it (assuming it has done the best possible job of surveying prior relevant thought). Instead, it sits rather heavily on the backs of these largely unnamed and potentially unwilling contributors, its choices based on algorithms that may or may not be available to the public. In its favor, it will often assemble existing thought in a highly very manner. Though combining existing sources, it allows material to be viewed in a new light, in unexpected and often helpful ways.

Its potential and its brilliance are not to be discounted. It will collapse hours and days otherwise spent in libraries, some of them remote and not readily accessible, looking for illusive references providing needed factual information. AI can be a polymath on innumerable subjects. What may be missing is the tangential random association, often occurring in the process of human research, the spark that may provide needed but unsought insights.

■ THE AI SUBSIDIES ISSUE

Before setting off on a survey of possible changes in the WTO rulebook and procedures (its *acquis*) to accommodate the emergence of AI as a factor in world trade, a word is in order about limitations of the WTO with respect regulating AI. For example, one could suggest that it would be sensible for there to be limitations on subsidies granted to AI, either in terms of both its development and its deployment. This would address the level playing field objective that the WTO rulebook does not articulate, but which one of its key motivations. As with industrial policy more generally, this is a difficult subject upon which to reach any international agreement.

Whether it is a decision of government or the profit motive in the case of companies that are promoting AI, imposing constraints will not at present prove acceptable to the countries most deeply engaged. A major race is underway to maximize [compute sovereignty](#). The authors of a recent [Oxford University Study](#) describe AI as being “considered by some governments a core axis of global strategic competition, national security and economic innovation”. See for example, the US AI Action Plan entitled “Winning the Race” (July 2025) where President Donald Trump states: “it is a national security imperative for the United States to achieve and maintain unquestioned and unchallenged global technological dominance”. (Note: Achieving global dominance is not among the goals contained in the Marrakech agreements establishing the WTO.) European industry presses for [Eurostack resurgence](#). China’s [aspiration](#) for becoming the global leader in AI is likewise manifest. The purposes of the WTO and national governments will at times be at odds.

This competition is likely to remain among the practices deemed by the members most active in AI development and deployment as exempt from any strictures of the WTO rulebook. AI is addressed by governments in terms that place it at the center of the concerns dealt with by GATT Article XXI. National security is at the unregulated heart of industrial policy of the largest WTO members, perhaps extending to some of the less economically dominant players as well.

It has been estimated that the US and China account for some 90% of AI [compute](#) power globally, with the United States accounting for 75% of the total, and China 15%. Compute power and AI applications have attracted extraordinary amounts of funding, both in terms of government support as well as private investment. China has established a [\\$8.3 billion fund](#) for AI start-ups on top of tens of \$ billions of private state-led investment. The US private sector is investing massively. One US company, OpenAI, announced its [Stargate project](#)’s planned investment of up to \$500 billion over the next four years.

The scale of the AI investments rank among society’s largest during any period of history. One company’s [data centers](#) may be of sufficient size to cover the borough of Manhattan. Another US company, Meta, is planning to invest hundreds of billions of dollars in

“superintelligence” in an attempt to surpass human cognition. It may be that data centers, if they continue to be built in clusters, will be among the manmade features visible from space along with the Great Wall of China.

Given the sums of monies involved and the geostrategic aspects of the competition, constraining this competition is unlikely to succeed in the near or even medium term. Despite the impact on the environment and the drain on the provision of electricity for other purposes, in addition to any concerns over trade distortions, any attempt to provide some limits would almost certainly fail, as surely as the London Naval Treaty of 1930 failed when it sought to set limits on naval armed forces competition among the leading sea powers of that day, the United States, the United Kingdom and Imperial Japan. In terms of WTO history, the scale of the private investments, and government involvement also greatly exceed anything that has hitherto been the subject of WTO dispute settlement, not in the cases dealing with Boeing v. Airbus, or the plethora of cases addressing steel dumping and subsidization over the last half century. This paper does not suggest seeking new subsidy rules for AI, nor suggest that it be a topic for early resolution.

For it’s the organization of its internal operations, the WTO can and must utilize AI as both an aid and a topic for discussion and deliberation to improve the WTO’s functioning, particularly with respect to providing transparency, a platform for international negotiation, and a venue for settling (and diminishing the number of) international trade disputes. How the members of the WTO seek to use the WTO as a forum in which to support and channel AI as an aid to trade will be the subject of other inquiries.

■ PROVIDING TRANSPARENCY

Recommendation: That the WTO constitute a standing horizontal (as opposed to a geographically limited) Trade Policy Review with respect to the trade issues arising with the advent of AI.

A key service the WTO provides to members and the public is the monitoring of trade measures. Its output is made available, for example, for discussion in Trade Policy Reviews, a form of non-adjudicatory peer review. The reviews are conducted focusing on one member at a time, with more frequent reviews of the larger economies. The monitoring was heightened at the onset of the financial crisis in 2008 and in 2020 with the spread of the COVID-19 pandemic. The Secretariat was able to give members a current picture of the trade measures each of these crises produced.

AI gives the possibility of having a closer, more detailed, ongoing look at trade measures, and their effects. AI may be able to perform for the world economy what MRIs have done for

modern medicine. Trade cases give one a view of why trade is distorted to the point of being the alleged cause of injury, in a particular instance. But there is a broader question of why trade takes place and when it does not, outside the scope of trade litigation. It should be able to readily identify trade anomalies by delving more deeply into all available information surrounding the forces that shape trade. It should be able to identify problems quickly. When is there a discontinuity, an anomaly? Is there any identification in published materials of the cause – such as trade coercion, or a natural disaster? Once a potential problem area is identified, applying [forensic analysis](#), taking core samples to provide a deeper understanding of trade flows.

Without AI, concerted efforts have been undertaken in the past to understand trade on a sectoral basis. The United States was the founder of the [OECD Steel Committee](#)². The idea behind formation of the Committee was that with good information, with transparency, investments in steel production made around the world, by both governments and private investors could be made more sensibly. It was thought that the risk of creating future overcapacity could thus be diminished. Overcapacity in steel production, however, remains a persistent problem even after the original major subsidizers -- the UK, Italy, France, and other Europeans) and their co-participants in [restrictive business practices](#) had left the scene. China now accounts for over 50% of global steel production. Steel talks continue, linked to the OECD but in a new forum, the Global Forum on Steel Excess Capacity ([GFSEC](#)), founded in 2016 by the G20 Leaders. It now has 28 members. China was initially a member but disengaged in 2019.

Likewise, an [attempt](#) has been made in the case of global semiconductor competition to provide greater transparency (see, for example, item VIII of [Joint Statement](#) of the World Semiconductor Council in May, 2024). Again, this focused activity occurred among the countries that are the principal producers of the product in question - semiconductors. Six regions account for most of the world's semiconductor production, counting the fabrication of the die and wafers, but not including test and assembly. -- the United States, China, the European Union, Japan, Chinese Taipei, (Taiwan), and South Korea. The respective governments and authorities and their industries agreed in 2017 after a long negotiating process to address subsidies to this sector. The common ground that they reached was an understanding that the competitiveness of industry and not government intervention should determine success in the marketplace. They provided that “upon written request [from a co-signatory, a signatory] is [expected to provide](#) in writing, the information requested regarding a particular support measure, financial assistance program or provision of equity, involving part or all of the semiconductor sector.” The agreement specifies in substantial detail the nature of the information that is to be provided.

² I pressed for its establishment on behalf of the United States and was its first chair.

The fact that achieving disciplines over subsidies in these sectors has not been possible does not obviate the utility of having better information of areas of marked international competition.

AI will play a larger role in both trade and economic development than for a few sectors such as steel or semiconductors. The degree of economic interest in the development and deployment of AI is far more widespread than was the case with respect to either of these product sectors. As AI will affect the economies of all countries, the WTO is clearly a suitable forum for a discussion of industrial policies that support AI's creation and deployment. According to the Oxford University AI Study, at present, just with respect to the cross-border supply cloud compute, eleven countries rely on multiple foreign providers from the US, China or the EU. Eighteen other countries host cloud compute from providers from a single foreign country. The degree to which industrial policy is shaping the global economy through trade is a subject that should be of interest to all 166 WTO members.

As it stands today, the [Trade Policy Review Mechanism](#) (TPRM) is well-suited to providing a focused review of individual WTO member's policies affecting trade. The trade effects of AI require attention that is not limited to any single WTO member's policies. In addition, the need for transparency is continuing and urgent, and not usefully consigned to a periodic review, as developments with respect to AI are occurring with great rapidity. Ongoing analysis and inquiry into how AI is affecting world trade are needed. The TPR process can and should be augmented by aggressive AI – driven self-notification of trade measures. It would then be up to the country imposing the measure to explain why the AI-driving self-notification was erroneous.

The inquiry into national measures for the most part would best be conducted outside of trade litigation. Illumination is needed of what is taking place, including tracking any government measures facilitating or impairing the development and application of AI, regardless of their standing under the WTO's existing set of rules. Moreover, it is essential that the WTO Secretariat have and provide supporting expertise for this endeavor.

To be sure, there are other formats available within the WTO framework. There could be a [Joint Statement Initiative](#), in the form of a Joint Study Group (JSG) perhaps reporting to the [Trade Negotiating Committee \(TNC\)](#) which is chaired by the Director General. However, the trade aspects of AI are not ripe for negotiation, which is what those venues are designed to deal with. The format or placement within the WTO framework is less important than that an AI Joint Study Group meet, for as uninhibited, fully staffed inquiry into the effects of AI on the trading system as is possible. Any need for new rules or adaptation of existing rules to meet the requirements of the trading system with respect to the development and deployment of AI will follow and can be undertaken separately.

A broad inquiry into the effects of AI is not a substitute for the work in specialized focal points within the WTO, such as the work of the Technical Barriers to Trade (TBT) committee, eping and the Committees continuing work on guidance when dealing with adoption and harmonization of standards, certification, and conformity assessment. Prior notifications of standards in draft will continue in the TBT Committee, providing specific standards-related transparency. Specific trade concerns (STCs) will continue to be filed and may largely obviate the need for later dispute settlement over the application of standards. AI will assist members in the regular work of the Committee as well.

A caveat: The monitoring exercise should be carried out by the WTO Secretariat free from any member's political interference. While reports of measures and other trade developments should to the extent possible be verified with the member promulgating them, they should not be screened to avoid giving offense to any member. To the extent possible, the impact of AI on world trade should be tracked and pertinent information disseminated, except for that which is business confidential.

A word is in order about scope. The discussion above started with the political difficulty, if not impossibility, of agreeing to subsidies disciplines. The conflicting interests among members are too great. In the WTO suite of agreements, subsidies are not yet covered in the General Agreement on Trade in Services, but it is in services trade that the advent of AI may be even more dominant than in goods. It is imperative that the use of AI in trade in services receive due attention.

■ AI AS AN AID TO DISPUTE SETTLEMENT.

Recommendation: AI can be a very good briefing mechanism for those who believe that they may have a valid complaint with respect to violations of the rules. As this will be important especially for developing and least developed countries that do not have the resources to evaluate claims, the WTO Secretariat should strive to consider how best to improve AI as a tool for this purpose and have the resources to assist members in its use.

With AI, all of WTO publicly available jurisprudence, past interpretations of agreements, should become readily available. Those who question whether their country/WTO member has experienced an infringement of a right will find relevant materials delivered instantly. This is not a substitute for eventual dispute settlement, if that is desired. A likely accurate preliminary answer to the question of whether a foreign measure raises a serious question of infringement of a WTO obligation can be found in the future online. The availability of sound answers will increase over time with machine learning.

An AI response would not be legally binding. It would be indicative of the direction of available information.

Take as an example the following query: Was President Biden's signature Inflation Reduction Act, granting a subsidy to purchasers of some electric vehicles and not others a violation of the WTO subsidies rules? In fact, at present, drawing on WTO website descriptions and press reports, what AI provides is cautious, overly tepid and somewhat narrowly drawn, but not incorrect:

Multiple nations, including China and the European Union, have raised concerns that the US Inflation Reduction Act's (IRA) electric vehicle (EV) tax credits might violate World Trade Organization (WTO) rules.

Specifically, the IRA ties the EV tax credits to requirements about the sourcing of battery components and critical minerals, excluding vehicles using materials from "foreign entities of concern" like China, Russia, Iran, and North Korea, [according to PBS](#). Critics argue these requirements may constitute discriminatory subsidies or violate WTO rules regarding domestic content or origin-specific conditions for benefits.

In response to these concerns, China has formally initiated a dispute settlement process at the WTO regarding the IRA's EV tax credits and other related measures. According to the World Trade Organization.

To any trained reader of the Agreement on Subsidies and Countermeasures it may be relatively plain that, under the terms of that agreement, granting a subsidy to a purchaser to buy domestic product is prohibited. While there is an obvious US defense of essential security concerns when it is discriminating against a strategic competitor or a hostile country, favoring domestic product, when granting a subsidy to consumers, is a violation on its face of the rules, and requires a defense.

A panel has been composed to hear this case brought by China against the US. (DS [623](#)). The panel was composed on December 19, 2024, of three individuals from states not involved in the litigation. The panel has issued one document, this was on June 17, 2025, explaining that it does not believe that it will be able to provide an answer before the last quarter of 2025. Even when it does have a report ready, the report must be translated into the three official languages of the WTO. The United States can then be relied upon to appeal an adverse finding, albeit notionally (that is, "into the void", there being no Appellate Body and the US not subscribing to the appeals substitute, the Multiparty Interim Agreement – MPIA). Much effort is going to be invested with no likely enforcement in the offing. Moreover, any enforcement, which is only

prospective, may seem irrelevant as an economic matter, as the measures complained of may not still be in place.

Why would this matter be litigated? Bringing a case remains a right, even if the outcome may not lead to enforcement. A member may wish to make clear whether America's Inflation Reduction Act tax credits were justifiable or not in the judgment of a qualified independent panel. There may be future measures that the complainant wishes to try to discourage. In addition, it is not just China and the US who are interested in the panel's answer, but third parties who have filed in this case -- Argentina; Australia; Brazil; Canada; Colombia; Ecuador; European Union; Hong Kong, China; Indonesia; Israel; Japan; Korea, Republic of; Malaysia; Mexico; Norway; Russian Federation; Singapore; Switzerland; Thailand; Türkiye; United Arab Emirates; United Kingdom; Venezuela; and Viet Nam.

The operative AI question here is simply whether AI could do a decent job of ferreting out the applicable arguments to lay before the prospective litigants, the interested parties and the public. Having these in hand might remove some of the incentive to pursue litigation with the dedication of a long-distance runner with no effective resolution in sight. There is a downside to litigating matters having clearly foreseeable outcomes. Doing so may divert resources from subjects where they could be more productively deployed. AI can forecast outcomes. AI can also simplify consideration of a complaint. In WTO dispute settlement, members expect panels and the Appellate Body (AB) to answer all questions put to those sitting on a case irrespective of whether an answer was required to each argument raised in order to resolve the dispute. AI can help facilitate moving to summary judgment based upon a single violation of the WTO's rules without answering all questions put to the panel. Domestic US courts are not bound to supply responses to every claim raised before them. Those interested in settling disputes, not making law, should appreciate a reduction in the scope of litigation.

The lengthy WTO litigation process is the subject of criticism from members. This may not be the fault of either the panel in any given case or the Secretariat. Perhaps the parties are not anxious to press for an early outcome. Perhaps the workload of the Rules or Legal Division, and of the translators, is a cause for delay. Note that the translation of appendices has already moved to machine translation, and the same could occur with the text of the decision itself, with a right in the parties to require expert human translation of particularly important passages by highly trained WTO translators. The EU deals daily with 24 official languages. The WTO Secretariat must be given the resources to deal with its three official languages.

There is a major political problem in the use of AI to guide panelists. It was the contention of the United States that the Appellate Body (AB) engaged in overreach, making law rather than finding the intent of the negotiators and applying the law as the drafters of the rules intended. As a result, the United States refused to allow the appointment of AB members until

there were none serving and the institution itself ceased to exist other than notionally. It will be natural for AI to provide interpretations many of which originated with the AB. This will satisfy fans of the AB and be unacceptable to the US, and perhaps some other members. Here the problem ceases to be one purely of dispute settlement and moves into the realm of policy and requires negotiation.

There are numerous examples of there being no settled outcome of issues that have come before panels: Is a member's judgment that its essential security interests are sufficiently present in a circumstance such that it is rendered free of its other obligations by invoking the exception contained in GATT Article XXI? Is that judgment reviewable or in the sole discretion of the member instituting the measure? When is a measure properly brought under the Safeguard Agreement rather than under the cover of the national security exception? An example that the United States has provided the WTO dispute settlement with is trade in steel. It is interesting to test AI with this question. Was the US within its WTO rights to invoke Article XXI, dealing with essential security interests?

No, the WTO panel ruled in December 2022 that the U.S. steel and aluminum tariffs violated WTO rules by exceeding bound tariff rates and rejecting the U.S. national security justification, as they were not imposed during a time of war or other international relations emergency. While the WTO allows for national security exceptions, the panel found the U.S. did not meet the criteria for this exception.

Google AI is perhaps relying heavily on a [Fordham Law Review](#) Article, which it cites in its notes. The follow-up question is whether new rules can be negotiated. Google further concludes that negotiating new rules on use of Art. XXI is [unlikely](#). It does tell us that the negotiations that did take place with supplying nations dealt with their [agreeing](#) to limits on steel imports into the US.

AI provided a good summary of where matters stand but did not readily provide solutions. This occurred with another issue that remains settled from a WTO dispute settlement point of view but not accepted uniformly by the WTO's members. To the question, "Should the defense of essential security be available to a member that invades the territory of another resulting in a major war?" Google AI responded:

Under Article XXI of the General Agreement on Tariffs and Trade (GATT), Russia might attempt to justify trade restrictions against Ukraine by claiming they are "necessary for the protection of its essential security interests".

However, the invocation of the national security exception under GATT Article XXI is not entirely self-judging and is subject to scrutiny by a WTO panel.

In a dispute between Russia and Ukraine, a WTO Panel previously ruled that Russia's invocation of Article XXI was justified in relation to transit restrictions on goods through

Russia from Ukraine to third countries, citing the "emergency in international relations" and the context of armed conflict at the time. However, critics argue this precedent could be problematic, especially given Russia's actions in starting the conflict.

Furthermore, some argue that Russia's actions in initiating the emergency in international relations undermine its ability to invoke the security exception in good faith, which is a fundamental principle of international law governing treaty obligations.

Therefore, while Russia could invoke Article XXI to justify its trade restrictions, it is important to note that the applicability of the exception in this context is complex and subject to differing legal interpretations and potential challenge, considering the ongoing conflict and the principles of good faith under international law.

AI walks briskly up to the edge of the problem presented to adjudicators but does not resolve it for the member seeking an answer. Its analysis stems not from its own thoughts but in trying to digest and restate prior published pieces considering the subject. That said, AI did a good job of recognizing the system's limitations.

Instances of unsolved questions of this kind abound with respect to the AB, and therefore WTO dispute settlement outcomes. Other examples: What is a "public body" when seeking to determine the applicability of the subsidies code to government sources of funding? Should the transfer of antidumping duties to injured firms and workers be permitted as compensation for the harms they have suffered? Should the availability of safeguards be tied to increased imports attributable at least in part to prior trade concessions?

The shortfall in the utility of using AI is not a defect in its functioning as an aggregator of available thought, but in the material it is scraping off the web. If the members have not provided solutions, AI will not find definitive answers. In addition, there is sometimes little in the public domain that is of use. WTO litigation records are often restricted documents. Business confidential information supplied in the course of litigation is not published. Governments sometimes do not take public credit for the measures they take that inhibit imports. The Peronist government provides an example of informal proceedings where the quid quo pro for a given government action is not public.

On the other hand, while official journals may be silent as to how a government came to a conclusion often public statements of ministers seeking public credit for their actions may be more revealing. In some instances, AI can ferret out information not otherwise available on the

official record. Another use: for complex litigation, AI can also make digesting voluminous filings practical, especially for litigation teams representing smaller countries.

■ AI AS AN AID TO NEGOTIATIONS

RECOMMENDATION: The WTO Director General should draft suggested guidance on the use of AI in support of trade negotiations. While large delegations will certainly draw extensively on AI, the effort should be made through technical assistance for capacity building to make AI useable by smaller delegations, especially from developing and least developed members.

It is rather easier to see AI enhancing two of the WTO's core functions – providing transparency and dispute settlement. Other deficiencies in the functioning of the WTO are less susceptible to being cured in part through the use of AI. For example, AI cannot directly provide an Executive function, nor break the deadlock over the misuse of consensus that prevents formal adoption of new agreements at the WTO. Nevertheless, AI will be of enormous help to negotiators once they sit down to negotiate. AI can generate suggested outcomes based on prior human experience. It can provide alternative formulations for use in drafting an agreement. From the choices thus made available, the hand and mind of the human negotiator will have to find acceptable language. This is an art, not a science. This is what occupies delegations' senior staff members, sitting at Cabinet tables in distant capitals after hours to draft communiqués at summit meetings, or the US president's representatives in a negotiation of a legislative mandate sought from Congress.

An illustration: In a prior time, an impasse occurred in the drafting of the Congressional mandate to be given to the US President for trade negotiations. The exact problem was the relationship between the negotiations on industrial and agricultural issues. US domestic agricultural interests wanted to make sure that they were not left behind and must watch while industrial issues were being addressed in a negotiation. This had happened all too often. At the same time, they really did not want to see agricultural issues negotiated directly in the same room with industry, to avoid cross-sectoral trade-offs that might not be beneficial. One solution might have been to negotiate agricultural issues in parallel with industry. However, that was not deemed feasible as the various interests did not want to see a requirement that industry and agriculture move forward in lockstep which might mean no movement at all. The phrase that worked, that captured what agriculture was seeking but proved to be acceptable to all, was that industry would be negotiated "in conjunction with" agriculture. No one knew exactly what "in conjunction with" meant but it sounded right to all parties and could be given meaning later. It served as the immediate solution.

Similarly, Roberto Azevedo, at one time Ambassador of Brazil to the WTO and later WTO Director General, told the story that the waiver of customs duties with respect to digital commerce could not be agreed to until some softer language was found to cover the concept of e-commerce. The successful formulation found was that no customs duties would be applied to “electronic transmissions”, an invented term whose meaning would have to be worked out later, if at all, as the agreement was applied.

What AI can bring to the negotiator is a massive, extraordinarily well-indexed, briefing book, that may ultimately have everything that human experience can provide. It is something like giving every doctor access to all the case histories in the world for a particular set of symptoms, rather than having her rely solely on the number of cases she comes across herself. From this larger range of experience, a pattern may be more readily discerned and a diagnosis and treatment devised. AI may be able to provide instructions to synthesize new molecules and devise new medicines through its ability to endlessly try different combinations. The same is true of trade negotiations. What combination of concessions, of what is given and what is received, or what formula of words, will appear to the needs of the negotiator? As opposed to the case of medicine, there is no objective outcome: what will be acceptable to a trade negotiator and his constituents is a highly subjective judgment.

Ai may reach a level of balanced ambiguity where Negotiator A's AI application's formulation is acceptable to Negotiator B's AI app. But then, there is another hurdle: their respective masters and constituents, humans, might not accept the result. A few sample tests of the current edition of plain AI can be made.

An example: Question: Under the WTO's rules, must food producing nations share their production with countries that are food insecure due to climate change?

Google AI's response:

No, WTO rules do not mandate food-producing nations to share their production with food-insecure countries, but they do encourage cooperation and recognize the importance of food security. The WTO aims to balance free trade with the need to address hunger and malnutrition, particularly in the face of climate change impacts.

Second question put to AI: Under the WTO's rules, should food producing nations share their production with countries that are food insecure due to climate change?

Under WTO rules, there isn't a direct obligation for food-producing nations to share their production with food-insecure countries specifically due to climate change. However, the WTO does encourage the free flow of agricultural trade and discourages export restrictions that could exacerbate food insecurity. While the WTO's core focus is on fair trade practices, it also acknowledges the importance of food security and has made

provisions for certain situations, including those related to climate change impacts on food production.

Here's a more detailed look [from Google AI]:

- ***WTO and Food Security:***

The WTO's World Trade Organization (WTO) recognizes the importance of food security and has made provisions for it within its rules.

- ***Export restrictions:***

The WTO allows for temporary export restrictions in specific situations, but these should minimize trade distortions, be transparent, and be notified to the WTO, according to the WTO's Food Security Declaration.

- ***Climate Change Impacts:***

Climate change is significantly impacting food production in many regions, leading to increased food insecurity. While WTO rules don't directly mandate sharing, they do emphasize the importance of ensuring that trade flows support food security, especially during times of crisis.

- ***Humanitarian Exemptions:***

The WTO has made exemptions for food procured for humanitarian purposes by organizations like the World Food Programme (WFP).

- ***Beyond WTO Rules:***

Addressing food insecurity requires a multi-faceted approach that goes beyond WTO rules. This includes investments in sustainable agriculture, adaptation to climate change, and addressing the root causes of poverty and conflict.

Pressing AI further, asking Google AI “how could the WTO rules be amended to provide food security” yields the following additional helpful results:

WTO rules could be amended to enhance food security by creating permanent solutions for export restrictions, revising domestic support rules to allow more flexibility for developing countries, and expanding exemptions for public stockholding programs. Amendments could also focus on increasing access to markets for least-developed countries (LDCs), providing more technical assistance to developing nations, and incorporating environmental sustainability and climate resilience into agricultural trade policies.

Specific Amendments to WTO Rules

- **Export Restrictions:**
 - **Permanent Solution:** Develop a permanent, legally binding solution to address the detrimental effects of unilateral export restrictions and ensure stable, predictable food markets.
 - **Emergency Measures:** Ensure that any emergency measures for food security are temporary, transparent, and have minimized trade distortions, as outlined in the 2022 WTO Food Security Declaration.
- **Domestic Support and Public Stockholding:**
 - **Expanded Exemptions:** Provide more permanent exemptions for developing countries to implement public stockholding programs for food security purposes, such as purchasing food from low-income producers at administered prices.
 - **Revised Rules:** Revisit rules on domestic support to create a more favorable environment for LDCs and developing countries, allowing them to use support measures that stabilize local food production.
- **Market Access and Trade Facilitation:**
 - **LDC Market Access:** Improve market access for LDCs by providing greater duty-free market access, especially for agricultural products, and clarifying Sanitary and Phytosanitary (SPS) and Technical Barriers to Trade (TBT) measures to prevent non-tariff barriers.
 - **Technical Assistance:** Increase technical assistance and training for developing countries and LDCs to help them comply with WTO rules and participate more effectively in global trade.
- **Sustainability and Resilience:**
 - **Climate Action:** Align agricultural trade rules with climate goals, encouraging sustainable practices that reduce greenhouse gas emissions and support climate change adaptation.
 - **Investment in Agriculture:** Create rules that attract private investment in agriculture in developing countries by making the sector more profitable and supporting infrastructure, research, and extension services.

Google AI then provided several useful papers, presumably, from which it gleaned the answers it gave. A 2013 paper on *WTO Rules: How Could the G-33 Proposal Affect Food Security?* A CSIS paper, and a paper from the International Institute for Sustainable Development.

This is a good toolkit to approach the subject of negotiating new rules to deal with food insecurity. Perhaps in the sources it cites, there are explanations of the logic behind AI's recommendations: There is potentially a trade-off between agricultural net exporting countries and import dependent countries. Food security rests upon finding the balance of interests and recording it in a fully enforceable agreement.

AI can provide a WTO member's delegation, regardless of size or level of experience, a degree of comparability at the starting point for a negotiation. In this respect it acts as a leveler. There is always the limitation that AI brings us to where we are, not where we must go to solve the world's problems. Nevertheless, AI efficiently brought the researcher to a good point of departure for considering negotiating options. These must be tested against what would be both effective and acceptable.

- **A fourth (unwritten) WTO core function**

- ***There is a need to engage in a process of mapping of existing agreements as to their applicability to AI. It will be found that there is much in the current set of agreements that is relevant to issues arising concerning the use of AI.***

The fourth dimension of the WTO's several functions is the ongoing process of administering the world trading system. The WTO accomplishes this with an ongoing dialogue among its members and the Secretariat about trade issues. Some of this is in silos, in committee work. The ongoing dialogue varies in format. It occurs through discussion of notifications of draft standards and subsidies, in the filing of specific trade concerns (STCs), in meetings of the agriculture committee and the committees in special session who are attempting to ascertain where negotiation is possible. It takes place in dedicated discussions of the Councils on Trade in Services and Trade-related Intellectual Property.

The WTO is more than a rule book or panels dealing with the enforcement of the rules through dispute settlement. There are a myriad of dedicated discussions including on the environment or the accession of new countries – this week on Uzbekistan and continuing Bosnia-Herzegovina. It includes work on capacity building. The output may be manifested in a variety of ways, in the drafting of lists of best practices such as in the work on Technical Barriers to Trade (TBT). There is in many formats an ongoing discussion on the applicability of existing agreements. This is particularly true for AI. This discussion is often fragmented as is the treatment of AI by and among WTO members.

Technology will always outstrip rulemaking, whether in capitals or at the WTO. Only through an ongoing process of international exchange of information and opinion will new rules and lists of best practices be evolved.

■ FOR FURTHER DISCUSSION

As AI is potentially even more disruptive and transformative of world trade than the information/digital/internet revolutions, there is an extensive list of priorities for the WTO to address. One question clearly requiring serious attention within the WTO are the negative trade effects of diverse standards and regulatory fragmentation. As important, market access requires attention to the degree to which cross-border data flows are or should be limited. A third priority area is that of the effects of AI on trade-related intellectual property protection. A fourth is harnessing the power of AI for economic development. A fifth is the impact of the widespread use of AI on employment, a subject that has been given insufficient attention as world trade has grown and been enhanced through revolutionary changes in technology of transportation, communication, and automation.

Economic development can and will clearly benefit through the improvement of technical assistance and education and trade facilitation.

The range of potential and actual enhancements to the functioning of the WTO will continue to emerge as experience with AI continues, most often rapidly.

The evolution of AI and its deployment will easily outstrip AI governance. The world has already some experience with this phenomenon in the emergence of a central role of social media in shaping societies, still poorly understood, and still inadequately regulated, by government or by codes of conduct.

The belief that AI can, like a wild horse, be broken, is overly optimistic. The better analogy would be the safety and reliability of an attempt at domestication of any of the members of the family of large cats. Safety and reliability will be sacrificed to the headlong flight driven by imperatives of obtaining the benefits of AI. There is no alternative to making the attempt and managing societal goals along with technological progress. The WTO has yet to prove itself equal to the tasks it had already been assigned at Marrakech. The momentum the organization had upon leaving the GATT era through the Uruguay Round negotiations needs to be rediscovered. But the challenges AI brings deserves a renewed attempt at achieving the benefits of harnessing the new technology for the trading system. The global challenges brought about by the introduction of AI call for global solutions. The WTO's members should endeavor to make the necessary effort to enable the institution to rise to meet the occasion. AI will in any event be an important part of the institution's future.

